



**3.5.1 Collaborative activities for research, faculty exchange, student exchange,
industry-internship**

INDEX

| SR NO | Name of Collaboration | PAGE NO |
|--------------|--|----------------|
| 1 | Tata Memorial Hospital: Collaborative Projects, Faculty exchange | 1-265 |
| 2 | Collaborative activity with Non communicable disease | 266-335 |
| 3 | British Medicos Camps/ UK Camps | 336-579 |
| 4 | UK student exchange | 580-609 |
| 5 | A Phase I/II clinical trial to examine the safety and efficacy of autologus, cultured disc chondrocytes embedded in PRF transplanted in patients' disc to maintain its function | 610-620 |
| 6 | A Multi-Centric Randomized Controlled Trial to Assess Effectiveness of the Brief Nursing Intervention for Depression in Pregnancy | 621-635 |
| 7 | Design and development of Lateral Flow Assay kit for the detection of salivary hormone levels | 636-669 |
| 8 | TALENT(Collaborative network for adolescent | 670-750 |
| 9 | New Directions for Research in Diabetes in India: The | 751-820 |

Shri Vithalrao Joshi Charities Trust's

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| | | |
|-----------|--|----------------|
| | harbinger of future Diabetes-An Adolescent and preconception Health Perspective (DERVAN cohort) PHASE- 1 | |
| 10 | ABMSS ,PERSISTENT FOUNDATION, Deutsche Cleft German cleft children's Aids society (Cleft Lip and palate surgeries) | 821-826 |
| 11 | Basic surgical skill workshops (Johnson and Johnson Institute) | 827-842 |
| 12 | Gram-Mangal collaborative pilot study | 843-859 |
| 13 | Collaboration with National Health Mission ,Ministry for Monitoring health and family welfare for Monitoring of Health and wellness centers | 860-872 |
| 14 | Internship Transfer | 873-878 |
| 15 | Academic and research collaboration with R. P. Gogate College of Arts and Science & RV.Jogalekar College of Commerce Ratnagiri | 879-895 |



B. K. L. Walawalkar Rural Medical College

Index

Activities in collaboration with TMH Mumbai

| Sr. No. | Title |
|----------------|--|
| 1 | TMC Projects summary Oral cancer screening |
| 2 | Guest Lecture's |
| 3 | KEVAT Project |
| 4 | Cancer Awareness |
| 5 | Faculty exchange form TMH (posting of residents/ faculties to BKLWRMC) |
| 6 | Deputation of Dr Bhushan Warpe for IHC obsevership |

Effect of screening with visual examination on oral cancer mortality in Ratnagiri district, Maharashtra – A cluster-randomized controlled trial

Interim Report for the period 1.1.2010 – 30.6.2020



Tata Memorial Centre (TMC), Mumbai, India
Centre for Cancer Epidemiology (CCE), ACTREC, Kharghar, Navi Mumbai, India
Bhaktshreshtha Kamalakarpant Laxman Walawalkar (BKLW) Hospital, Dervan, Ratnagiri, India
Homi Bhabha National Institute (HBNI), Mumbai, India

Clinical Trials Registry- India (CTRI) No.: CTRI/2019/09/021178

Content

| Sr. No. | Topic | Page No. |
|---------|---|----------|
| | Principal Investigator, Co-Principal Investigators, Co-Investigators of the project | i |
| | Project Inauguration | v |
| 1 | Executive summary | 1 |
| 2 | Background | 3 |
| 3 | Project objectives | 5 |
| 4 | Maharashtra state profile | 6 |
| 5 | Ratnagiri district profile | 8 |
| 6 | Administrative order by the state government for oral cancer screening programme | 11 |
| 7 | Population covered by project | 12 |
| 8 | Methodology | 14 |
| 9 | Data entry process and software used | 25 |
| 10 | Quality control | 31 |
| 11 | Project monitoring | 38 |
| 12 | Results (Provisional) | 40 |
| 13 | All-cause mortality through verbal autopsy | 48 |
| 14 | Project audit | 53 |
| 15 | Challenges in executing screening project | 55 |
| 16 | Project staff training | 60 |
| 17 | Presentation in various conferences | 63 |
| 18 | National and International visitors | 64 |
| 19 | Publication | 67 |
| 20 | Impact of COVID-19 on screening trial | 68 |
| 21 | References | 69 |
| 22 | Acknowledgement | 70 |

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Project inauguration

The project was initiated by Tata Memorial Centre (TMC), Mumbai in collaboration with Bhaktshreshtha Kamalakarant Laxman Walawalkar (BKLW) Hospital, Dervan village, Ratnagiri district of Maharashtra. The project was inaugurated in the presence of Dr. Anil D'Cruz – Director, Tata Memorial Hospital (TMH), Dr. Suyash Kulkarni, Dr. Suvarna Patil, Dr. Sripad Banavli, Dr. Sharmila Pimple, Mr. Anbumani, Mr. Johnson Lukose and Mr. Anil Sathe.



1. Executive summary

- A cluster randomised control trial for oral cancer screening was started in a year 2010 in the Ratnagiri district of Maharashtra state, covering 779 villages.
- The tobacco prevalence is high in Ratnagiri district. Out of 3, 2 individuals are tobacco users in the age group 35-65.
- The inclusion criteria for screening are individuals between 36-65 years of age and at high risk for developing oral cancer- Chronic users of tobacco such as bidi, cigarette, pan, areca nut, gutkha etc. (and/or) alcohol.
- In the first round of the intervention arm, 429 villages have been covered. The total number of high risk population is 74,732; out of which, 52,737 (70.6%) attended screening.
- The total screen positive individuals in the first round are 1,046 (2.0%). 1 in 50 individuals is screen positive. These 1,046 cases were referred to the surgeons. Out of 1046 cases, surgeons verified 955 cases. Out of which, 444 (0.84%) Premalignant disorders (PMDs) were confirmed by surgeons.
- In the first round of screening, 40 (0.08%) oral cancer cases were diagnosed and out of which 30 (75.0%) individuals received treatment. The first round was completed in 2016.
- The second round of the intervention arm started in 2014 is on-going. In the second round, the eligible population is 64,540; out of which screening has been completed for 49,854 (77.2%) participants and it is remaining for 2,883 (5.5%) participants.
- In the second round, there are 548 (1.1%) screen positive cases and these cases were referred to the surgeons. 1 in 91 is screen positive. Out of 548 cases, 404 cases were seen by the surgeons. Out of which, 159 (0.32%) PMDs were confirmed by surgeons.
- In the second round, a total of 31 (0.06%) cancer cases have been diagnosed and out of which 25 (80.6 %) cancer patients have received treatment till now.
- In terms of stage distribution, there is a stage shift in the cancer case presentation. We have detected 24 (60.0%) late stage oral cancers cases out of 40 in the first round while in the second round it is 16 (51.6%) out of 31.
- In control arm, the first round is completed with 350 villages covered. We have covered 52,431 high risk population.
- The second round of control arm is on-going and we have covered 37,179 (70.9%) eligible population. The pending high risk population is 15,252 (29.1%).
- The surveillance round for both the arms has been started from October 2019 and will be completed by 2023.
- In the surveillance round, the high risk population will be followed-up. The status of screen positive participants and also oral cancer patients will be recorded. Moreover, the PMD cases diagnosed both in first and second round will be examined again to know their status. Apart from these, death cases and verbal autopsies will be recorded and documented.
- During project, several group meetings, school awareness programs have been organised. We have raised awareness regarding tobacco hazards, importance of healthy dietary

habits and also importance of early detection of oral cancer in both intervention and control arm.

- During 2010-2018, we have a total number of 224 oral cancer cases in intervention arm and 137 in control arm.
- The oral cancer cases data collection for the year 2019 and 2020 is in process. There is an under-registration and it will improve during surveillance round.
- The programmer of the project has developed three data entry software named Apeksha (for the first round), Pratiksha (for the second round) and Trimurti (for the surveillance round) to speed-up the data entry work. The previous software used for this project had several limitations; hence, it was decided to design in house software.
- In the intervention arm, we have completed the data entry for 418(97%) out of 429 surveyed villages of the first round; while, 186(46.4%) out of 401 surveyed villages in second round.
- Similarly, in control arm, we have completed data entry for 316(90%) out of 350 surveyed villages of the first round whereas 178 (52.8%) out of 337 villages in second round.
- We have also recorded death. During 2010-2019, a total of 21,153 deaths have been recorded. The total number of deaths in intervention and control arm is 12779 and 8374 respectively. Mean age of death for male patient is 67 years and for female patients 70 years. 85% deaths occurred in the House, 11% deaths occurred in the Hospital & 4% in other places. Cancer is the third leading cause of death both in intervention and control arm.
- The study was presented in several well-recognised national and international conferences. Dr Snehal Shah presented a poster on 'Quality Control in Oral Cancer Screening Trial in Rural India' in International Association of Cancer Registries (IACR) 2015 conference organised in Mumbai, India and won the second place in poster presentation. Also, Dr Abhijeet Sawant presented a poster on 'Oral Cancer Screening trial in Rural area of India - A cluster Randomized trial' in Global Academic Programs (GAP) 2017 conference held at MD Anderson Centre Houston, TX USA and won the third place.
- A number of national and international visitors have visited the project site to learn and get trained in screening program.
- There are several challenges in the running the screening program However, due to support of Director of TMC and administration of the TMH and dedication of the staff we are able to execute the project.
- The Project progress report was periodically presented to the Director TMC; the suggestions given by him were very productive in implementing the screening project.

2. Background

Oral cancer is a major public health concern, especially in developing nations. In WHO-South-East Asia region (SEARO) countries including India, oral cancer is among the top four leading cancer sites ¹. In India, oral cancer is the leading cancer site for males with the highest incidence and mortality rates respectively 13.9 and 7.7 per 100,000 population; while for females, it is the fourth leading cancer site with the incidence and mortality rate 4.3 and 3.4 per 100,000 population ¹. Moreover, it is estimated that oral cancer takes five lives every hour every day in India ².

In India, risk factors including cultural and geographic factors, highly prevalent tobacco use and excessive alcohol consumption are mainly responsible for high number of oral cancer cases ³. Tobacco use and excessive alcohol consumption account for over 90% of cancers in the oral cavity ⁴. Apart from these, dietary deficiency, positive family histories of oral cancer, viral infections like HPV, poor oral hygiene are the other causes for oral cancer ⁵. In India, several forms of tobacco are being used such as betel-quid, pan (pieces of Areca nut), processed or unprocessed tobacco, aqueous calcium hydroxide (slaked lime) and some pieces of areca nut wrapped in the leaf of piper betel vine leaf. Additionally, gutka, panparag, zarda, mawa, kharra and khaini are dry mixture of powdered tobacco, lime and Areca nut flakes which are chewed or sucked orally.

Oral cancer can be prevented as the highly associated risk factors like tobacco use are modifiable and the disease has a long preclinical phase which can help in early detection. It is estimated that 1% of Indian population have premalignant conditions ⁶. These conditions include leukoplakia, erythroplakia, oral submucous fibrosis (OSMF), lichen planus, and chronic traumatic ulcers. The estimated annual frequency of malignant transformation of oral precancerous lesions ranges from 0.13% to 2.2% and the most common site involved is buccal mucosa and gingiva ^{7, 8}. Despite improvement in treatment, the 5-year survival of oral cancer has not improved much over the last half century. This is partly due to fact that the majority of oral lesions are detected in late stages.

Visual screening of the oral cavity at early stage has been widely evaluated for its feasibility, safety, acceptability, accuracy and cost-effectiveness to detect oral precancerous lesions and cancer. Visual screening involves systematic visual and physical examination of the intraoral mucosa under bright light for signs of oral potentially malignant disorders (OPMDs) ^{9, 10, 11}. It

is however not known whether screening for these cancers will result in a reduction in oral cancer mortality. A large study from Kerala has shown that screening by visual inspection of the mouth by trained health workers may potentially reduce mortality in high risk groups ¹².

The Global Adult Tobacco Survey (GATS) (2009-2010) indicates high prevalence of tobacco use 31.4% in Maharashtra population ¹³. As per cancer registry data, the age-adjusted incidence rate for mouth cancer for males and females was 8.2 and 4.4 respectively ¹⁴. Therefore, **Tata Memorial Centre (TMC), Mumbai in close collaboration with BKLW Hospital, Ratnagiri has started a screening trial in Ratnagiri District in the year 2010. This screening trial will assess the effect of oral visual examination by trained health workers on oral cancer related mortality.**

Here, a preliminary report of the on-going oral cancer screening project for the period 1.1.2010 to 30.6.2020 is presented.

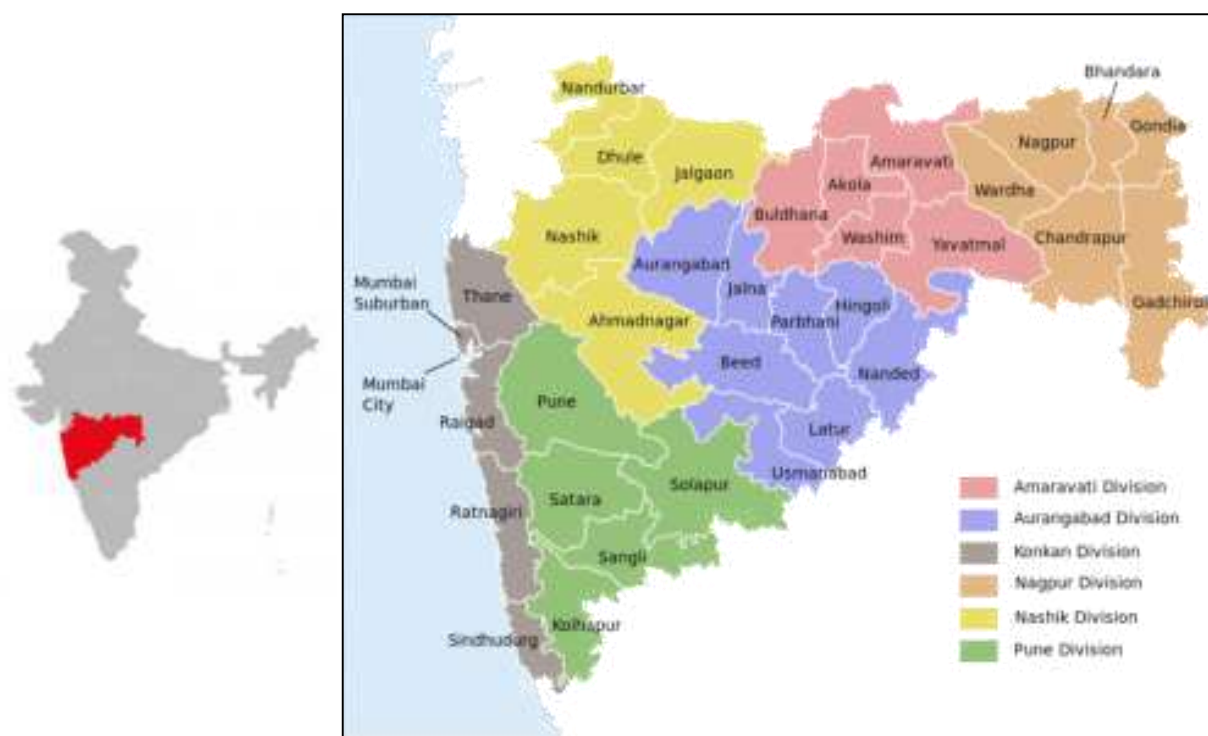
3. Project objective

1. To assess the effect of screening using visual examination by trained health workers on oral cancer-related mortality
2. To assess improvement in survival after a diagnosis of oral cancer
3. To identify possible etiological factors in a high risk rural population in Ratnagiri district of Maharashtra.

4. Maharashtra state profile

Maharashtra is a state in the western peninsular region of India. It is bordered by the Arabian Sea to the west, the Indian states of Karnataka and Goa to the south, Telangana to the southeast, Chhattisgarh to the east, Gujarat and Madhya Pradesh to the north, and the Indian union territories including Dadra and Nagar Haveli and Daman and Diu to the north west. Mumbai, Maharashtra's capital city is the principal financial centre and a major commercial hub of the country.

Figure 1: Location of Maharashtra state, India



As per the Census 2011, Maharashtra is the second largest state in terms of population and the third largest in terms of area. It shares 9.42 per cent of the Indian population and it is spread over 307,713 square kilometres. Total population of Maharashtra state is 11,23,72,972 out of which 5,83,61,397 (51.9%) are Males and 5,40,11,575 (48.1%) are Females. It also has the country's third largest urban population, with about 45 persons out of every 100 living in towns and cities. It has a large migrant population. With a per capita income 40 per cent higher than the all-India average, Maharashtra's income is derived more from the secondary and tertiary sectors ¹⁵.

Maharashtra consists of six administrative divisions: Amravati, Aurangabad, Konkan, Nagpur, Nashik, and Pune. The state's six divisions are further divided into 35 districts, 109 sub-divisions and 357 talukas. The Maharashtra state profile is presented in Table 1 ¹⁵.

Table 1: Maharashtra state population, area in sq.km, literacy, administrative units

| Sr. No. | Characteristics | Value |
|---------|---------------------------------------|----------------------------|
| 1 | Area | 3,07,713 sq. km. |
| 2 | Total Population (2011 Census) | 11,23,72,972 |
| | Rural | 61,556,074 (54.8%) |
| | Urban | 50,818,259 (45.2%) |
| 3 | Density | 365 sq.km |
| 4 | Sex ratio | 929 females per 1000 males |
| 5 | Total Literacy | 82.3% |
| | Male | 88.4% |
| | Female | 75.9% |
| | Rural | 77.0% |
| | Urban | 88.7% |
| 6 | Administrative Units | |
| | Number of Districts | 35 |
| | Number of Sub Districts | 355 |
| | Number of Taluka | 357 |
| | Number of Villages | 43,663 |

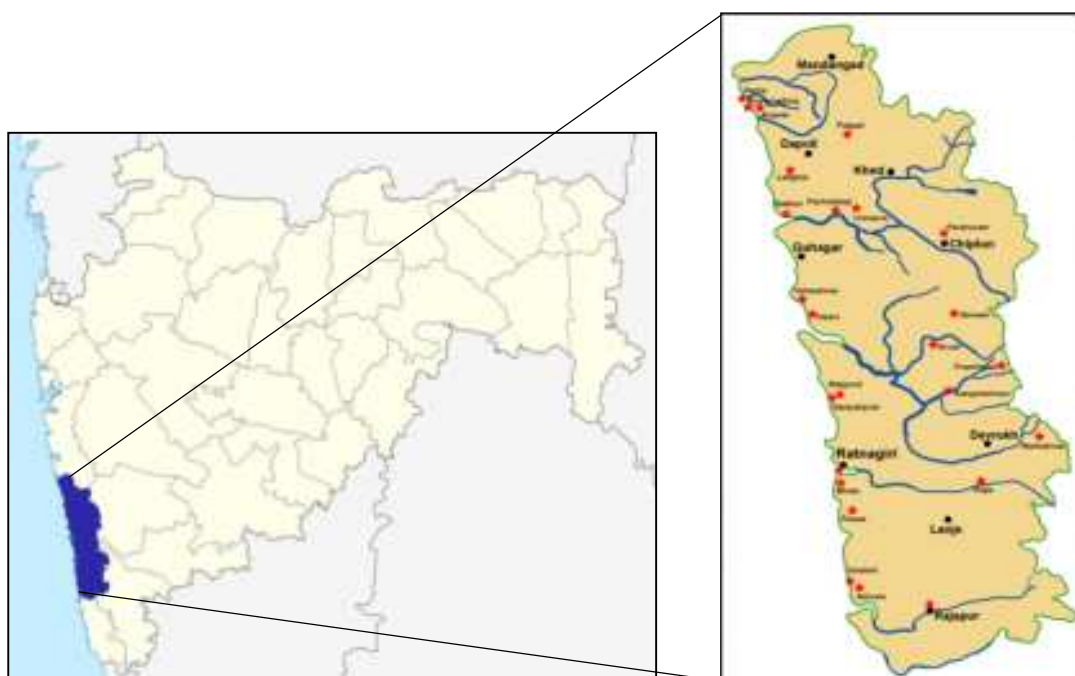
5. Ratnagiri district profile

Ratnagiri district is one of the 35 districts of Maharashtra, India. Ratnagiri taluka is the district headquarter. Chiplun is a financial capital of Ratnagiri. The district is 16.3% urban¹⁶. The district is bounded by the Arabian Sea to the west, Sindhudurg district to the south, Raigad district to the north and Satara, Sangli and Kolhapur districts to the east. This district is part of Konkan division. There are nine talukas in Ratnagiri district including Ratnagiri, Sangameshwar, Chiplun, Khed, Dapoli, Guhagar, Mandangad, Lanja, and Rajapur.

Table 2: Ratnagiri district population and literacy¹⁶

| Sr. No. | Characteristics | Value |
|---------|---------------------------------------|------------------|
| | Total Population (2011 Census) | 16,15,069 |
| 1 | Male | 7,61,121 |
| | Female | 8,53,948 |
| 2 | Literacy | 82.18% |

Figure 2: Location of Ratnagiri district in Maharashtra state



Ratnagiri District: Agriculture and Migration

Ratnagiri district forms a part of the greater tract known as the ‘Konkan’. This tract is historically famous for its long coastline and convenient harbors, together with its comparative nearness to the Arabian Coast. Marine fishery is the most important non-agricultural economic activity of the district. The economy of the district mainly depends on cultivation. The area under cultivation is – 2 lakh 75 thousand hectares. Major crops are - mango, coconut, jackfruit, betel nut, rice, and ragi.

In the Konkan region, 72 per cent population lives in the urban areas and is mainly concentrated in Mumbai, Mumbai suburbs, Raigad and Thane district which are industrially well-developed.

It has also been reported that out of ten migrants from other districts of the state to Mumbai, nine migrants are from Konkan. The male-female migrants from other districts to Mumbai revealed that 50% of migrants were from Konkan region. Economic reasons including search for employment, business and transfer of jobs are the main reasons for such in-migration by males (38%) while marriage is reported as the main factor for in-migration by females (59%)¹⁵.

Table 3: Administrative set-up in Ratnagiri District¹⁶:

| Name of the district/tehsil | Number of villages | Number of towns |
|-----------------------------|--------------------|-----------------|
| Ratnagiri district | 1531 | 16 |
| Mandangad | 109 | - |
| Dapoli | 172 | 4 |
| Khed | 215 | 1 |
| Chiplun | 164 | 2 |
| Guhagar | 121 | 1 |
| Ratnagiri | 196 | 5 |
| Sangmeshwar | 197 | 1 |
| Lanja | 121 | 1 |
| Rajapur | 236 | 1 |

Health infrastructure in Maharashtra and Ratnagiri District (2015)

Ratnagiri district has one district hospital and three sub-divisional hospitals with basic diagnostic and surgical facilities. The district has 8 community health centres, 67 primary health centres and 378 sub-centres. Primary and secondary health care is provided at these hospitals. The Ratnagiri district hospital provides supportive services to cancer cases. Detailed information about the hospital and PHC is presented in the table below.

Table 4: Health infrastructure

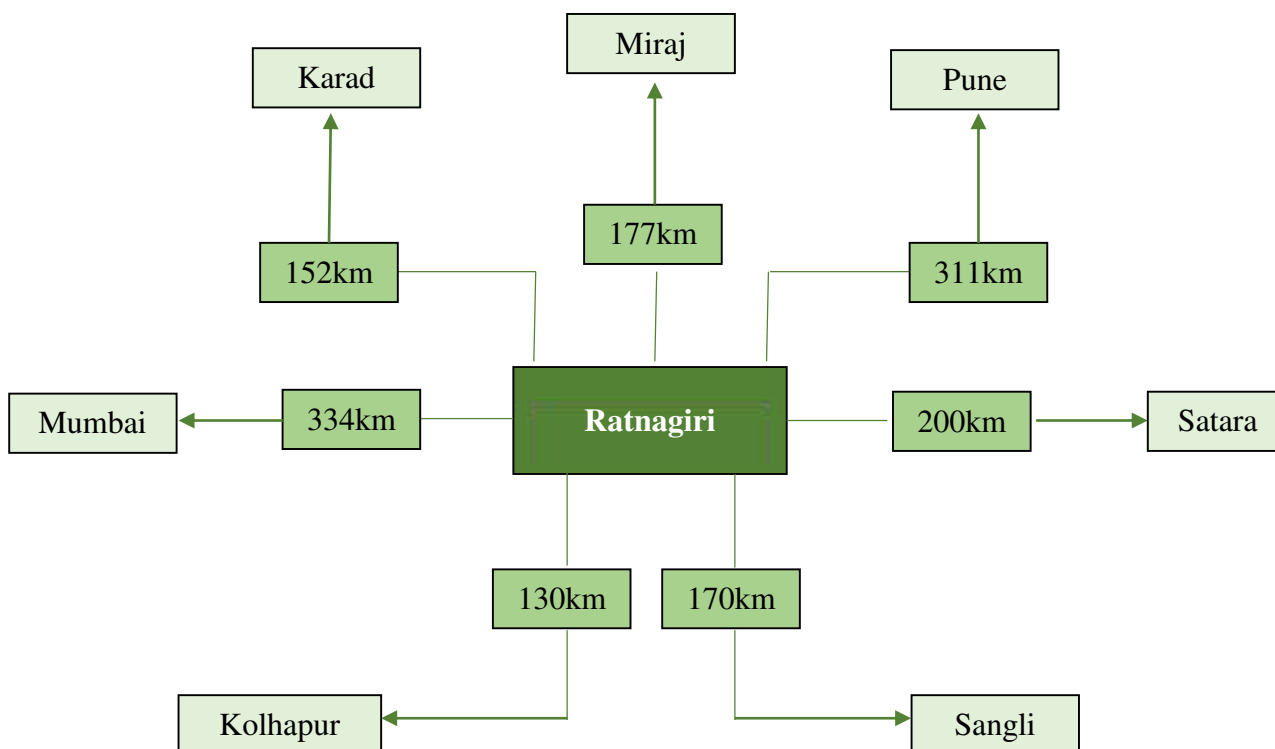
| Sr. No. | Health Institutes | Maharashtra | Ratnagiri |
|---------|--------------------------|-------------|-----------|
| 1 | Sub-Centres | 10580 | 378 |
| 2 | Primary Health Centres | 1811 | 67 |
| 3 | Community Health Centres | 360 | 8 |
| 4 | Sub Divisional Hospital | 86 | 3 |
| 5 | District hospital | 23 | 1 |

Cancer treatment facility is only available at BKLW Hospital which has established itself as a state of Art Cancer Centre providing all Oncology Services. The hospital has surgical, radiotherapy and medical oncology facilities.

Other than that, patients from this district travel to other areas such as Miraj (177km), Kolhapur (130km), Satara (200km), Sangli (170km), Mumbai (334km), Pune (311km) and Karad (152km) for seeking cancer treatment (Figure 3).

Tata Memorial Centre, Mumbai – an autonomous unit of the Department of Atomic Energy, Government of India has strategic partnership with BKLW Hospital Diagnostic and Research Centre for providing cancer treatment.

Figure 3: Distance from Ratnagiri to other cancer treatment centres



6. Administrative order by the state government for the oral cancer screening programme

The Collector and District Magistrate of Ratnagiri district, Maharashtra State has issued an administrative order to all the health authorities, village administrative authorities, PHC staff, village health workers and District President of Indian Medical Association to provide co-operation and support for the project activities. Due to administrative support from government of Maharashtra and Ratnagiri district, we have very good co-operation from all the village administrative authorities and local people.

Figure 4: Administrative Order by the State Government for the Oral Cancer Screening Programme

महत्वाचे/ज्ञापनाचे

क्र.जि.र/ससाशा/कार्या-१३/कवि- ३६८
जिल्हाधिकारी यांचे कार्यालय,
रत्नागिरी दिनांक-२९/०९/२०१३

प्रति,

मुख्य कार्यकारी अधिकारी,
जिल्हा परिषद, रत्नागिरी

जिल्हा सार्वजनिक चिकित्सक, रत्नागिरी

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जिल्हा परिषद, रत्नागिरी

जिल्हास्तराव्यवस्थापन मंडळीकडून अस्तोशिरान,
रत्नागिरी शाखा

विषय:-टाटा मेमोरिअल सेंटर मुंबई यांचे मार्फत घसा व तोंडाच्या अग्रनसिकेचा कार्यक्रम तपासणी व प्रतिबंध प्रकल्प.

टाटा मेमोरिअल सेंटर मुंबई यांचे मार्फत घसा, अग्रनसिका व तोंडाच्या अग्ररोग तपासणी व प्रतिबंध प्रकल्प रत्नागिरी जिल्ह्यात राबविणेत येत आहे. टाटा मेमोरिअल सेंटरने प्राचीन भ्रष्टाचाली जनतेला या रोगाची माहिती देवून या रोगास प्रतिबंध करणेच्यादृष्टीने ग्रामपंचायत प्रशासन, प्राचीन स्तरावरील शासकिय कर्मचारी, नविकेच्या ग्रामीण, सुदूर, प्राथमिक आरोग्य केंद्रातील कर्मचारी, खाजगी वैद्यकिय महाविद्यालयातील प्रसिद्धित डॉक्टरां/प्रसिद्धित शिक्षक, अंगणवाडी कर्मचारी, मेडीकल अस्तोशिरान यांचा या संस्थेच्या प्रसार व अग्ररोग नियंत्रण कार्यात सहभाग असणे आवश्यक आहे.

टाटा मेमोरिअल सेंटर मुंबई संस्थेच्या या सामाजिक उपक्रमात आपण आपल्या संबंधित यंत्रणांनी सहभागी होवून संस्थेला व या सामाजिक उपक्रमास सहकार्य करावे. टाटा मेमोरिअल संस्थेच्या दिनांक १९/०९/२०१३ च्या पत्राची प्रत सोबत आहे.

जिल्हाधिकारी रत्नागिरी,

प्रत-डॉ. आर.जे. बडवे, डायरेक्टर टाटा मेमोरिअल सेंटर, मुंबई यांस माहितीसाठी

प्रत-योग्य रथा कार्यवाहीसाठी

१) सहस्रीलदार (सर्व)

२) उपसिनागिय अधिकारी (सर्व)

7. Population covered by project

Ratnagiri district is divided into nine blocks: Dapoli, Sangameshwar, Guhagar, Lanja, Khed, Mandangad, Rajapur, Chiplun and Ratnagiri. As per the 2011 census, the total population of Ratnagiri district was 1,615,069. Of the total population, 47% are males and 53% are females. Of the total population, 1,351,346 (83.1%) is rural and 2, 63,723 (16.3%) is urban. The population as per the 2011 census is mentioned in Table 5.

Table 5: Ratnagiri district population as per census 2011¹⁶

| Area | No. Of Households | Total | Male | Female |
|--------------|-------------------|----------------|---------------|---------------|
| Rural | 333807 | 1351346 | 630213 | 721133 |
| Urban | 61588 | 263723 | 130908 | 132815 |
| Total | 395395 | 1615069 | 761121 | 853948 |

Out of 9 blocks, we have covered 6 blocks of Ratnagiri district (Dapoli, Guhagar, Lanja, Mandangad, Rajapur and Ratnagiri). As this is the cluster randomised control trial, we have taken 8 clusters in the intervention arm and 8 clusters in the control arm. The eligible population are of 35-65 years of age and chronic user of tobacco and/or alcohol. The cluster-wise population covered in both intervention and control arm is presented in Table no 6 and 7 respectively.

Table 6: Cluster-wise population covered in Intervention arm

| Cluster No. | Intervention Arm | Total Population | Eligible population |
|-------------------------|------------------|------------------|----------------------|
| 1 | Dapoli – I | 30529 | 7682 (25.2%) |
| 2 | Dapoli – II | 30798 | 6413 (20.8%) |
| 4 | Guhagar – I | 44454 | 11593 (26.1%) |
| 7 | Lanja – II | 32752 | 8382 (25.6%) |
| 9 | Mandangad – II | 30028 | 7296 (24.3%) |
| 11 | Rajapur – II | 32730 | 10419 (31.8%) |
| 13 | Ratnagiri – I | 44001 | 11040 (25.1%) |
| 14 | Ratnagiri – II | 47287 | 11907 (25.2%) |
| Total population | | 292579 | 74732 (25.5%) |

Table 7: Cluster-wise population covered in Control arm

| Cluster No. | Control Arm | Total Population | Eligible population |
|-------------------------|-----------------|------------------|----------------------|
| 3 | Dapoli – III | 30158 | 6587 (21.8%) |
| 5 | Guhaghar – II | 31741 | 7561 (23.8%) |
| 6 | Lanja – I | 27368 | 7621 (27.9%) |
| 8 | Mandangad – I | 23426 | 7795 (33.3%) |
| 10 | *Rajapur – I | - | - |
| 12 | Rajapur – III | 27507 | 7705 (28.1%) |
| 15 | Ratnagiri – III | 39001 | 7529 (19.3%) |
| 16 | Ratnagiri – IV | 38320 | 7633 (19.9%) |
| Total population | | 217521 | 52431 (24.1%) |

*We could not cover Rajapur-I cluster as local people opposed the project due to some political issue. It was discussed with the external data monitoring committee. The point was mentioned in the audit report.

8. Methodology

A prospective, community-based cluster randomized controlled trial is being conducted in Ratnagiri district of Maharashtra. The base hospital for the trial is BKLW Hospital, Dervan village, Chiplun taluka, Ratnagiri district.

Ethical clearance

The study was approved by the Tata Memorial Hospital Human Ethics Committee as per the principles laid down in the Declaration of Helsinki and as per the Indian Council of Medical Research guidelines for biomedical research 2006.

The study was also registered under Clinical Trial Registry No - CTRI/2019/09/021178.

Staff recruitment

Project staff were recruited locally. The selected staff members were medical officer, medical social workers, health workers, helpers, survey cum registration clerk and drivers. Patient coordinators and office staff for data entry were also recruited at BKLW Hospital.

Staff training

Health workers training at Preventive Oncology Department, TMH, Mumbai

Under the guidance of the Dr Sharmila Pimple, Professor of the Department of Preventive Oncology (TMH), the staff training was carried out. All the health workers were given training and were re-trained on rotation bases for the identification of oral premalignant conditions at the Preventive Oncology Department, TMH. Details are given in Table no 8.

Table 8: Staff training in Preventive Oncology department, TMH under the guidance of Dr Sharmila Pimple

| Training Period | Total No. of Days | Total No. of Staff Trained | Total Clinical Skills Training hrs (6 hrs /day) | Total Lecture sessions conducted |
|---|-------------------|----------------------------|--|----------------------------------|
| 16 th June – 5 th July 2014 | 18 | 15 | 108 | 36 |
| 7 th -26 th July 2014 | 18 | 15 | 108 | 36 |
| 11 th -16 th August 2014 | 5 | 13 | 30 | 5 |
| 28 th - 30 th October 2014 | 3 | 15 | 18 | 6 |
| 17 th - 24 th November 2014 | 7 | 10 | 42 | 12 |
| 5 th - 24 th January 2015 | 18 | 1 | 108 | 6 |
| 2 nd - 14 th February 2015 | 12 | 13 | 72 | 12 |
| 3 rd - 14 th August 2015 | 11 | 11 | 66 | 12 |
| 11 th -23 rd January 2016 | 12 | 13 | 72 | 13 |
| 1 st -13 th February 2016 | 12 | 14 | 72 | 13 |
| 15 th -23 rd May 2017 | 8 | 8 | 48 | 11 |
| 1 st -10 th August 2017 | 8 | 8 | 48 | 12 |
| 10 th -20 th April 2018 | 11 | 8 | 54 | 12 |
| Total | 143 | 144 | 846 | 186 |

The health workers were trained to undertake oral visual inspection, to identify lesions suggestive of being precancerous in the oral cavity (eg. homogeneous leukoplakia, erythroplakia, oral submucous fibrosis) and to identify oral cancer by visual methods. A manual on visual inspection with colour photographs and descriptions of oral lesions was also provided to the health workers for reference.

Moreover, health workers were also taught to record blood pressure by both palpatory and auscultatory method and blood sugar level with the help of a blood glucose meter ACCU-CHEK.

After the theoretic teaching, they were given field training including how to conduct home visits and data collection. Health workers were evaluated at the end of the training. Those scoring less than 80% points were kept under close supervision and underwent retraining.

Consent

Community consent was taken from village leader(s) and individual consent from the subjects before initiating the study.



Taking consent from the participants

Inclusion criteria

Individuals between 35 and 65 years of age, at high risk for oral cancer-Chronic tobacco users (and/or) betel and areca nut chewers (and/or) alcohol use.

Exclusion criteria

Patients with pre-existing symptoms of oral cancers, oral ulcers and growths and individuals medically unfit for anti-cancer treatment.

A detailed history including any symptoms, past history of tobacco, betel nut, areca nut and alcohol use was recorded on presentation in a predesigned case record form.

The Ratnagiri district oral cancer screening trial study design is described in Figure 5. **All people are followed up for occurrence of oral cancer, mortality and cause of death for a ten-year period.**

Figure 5: Study Flow Chart

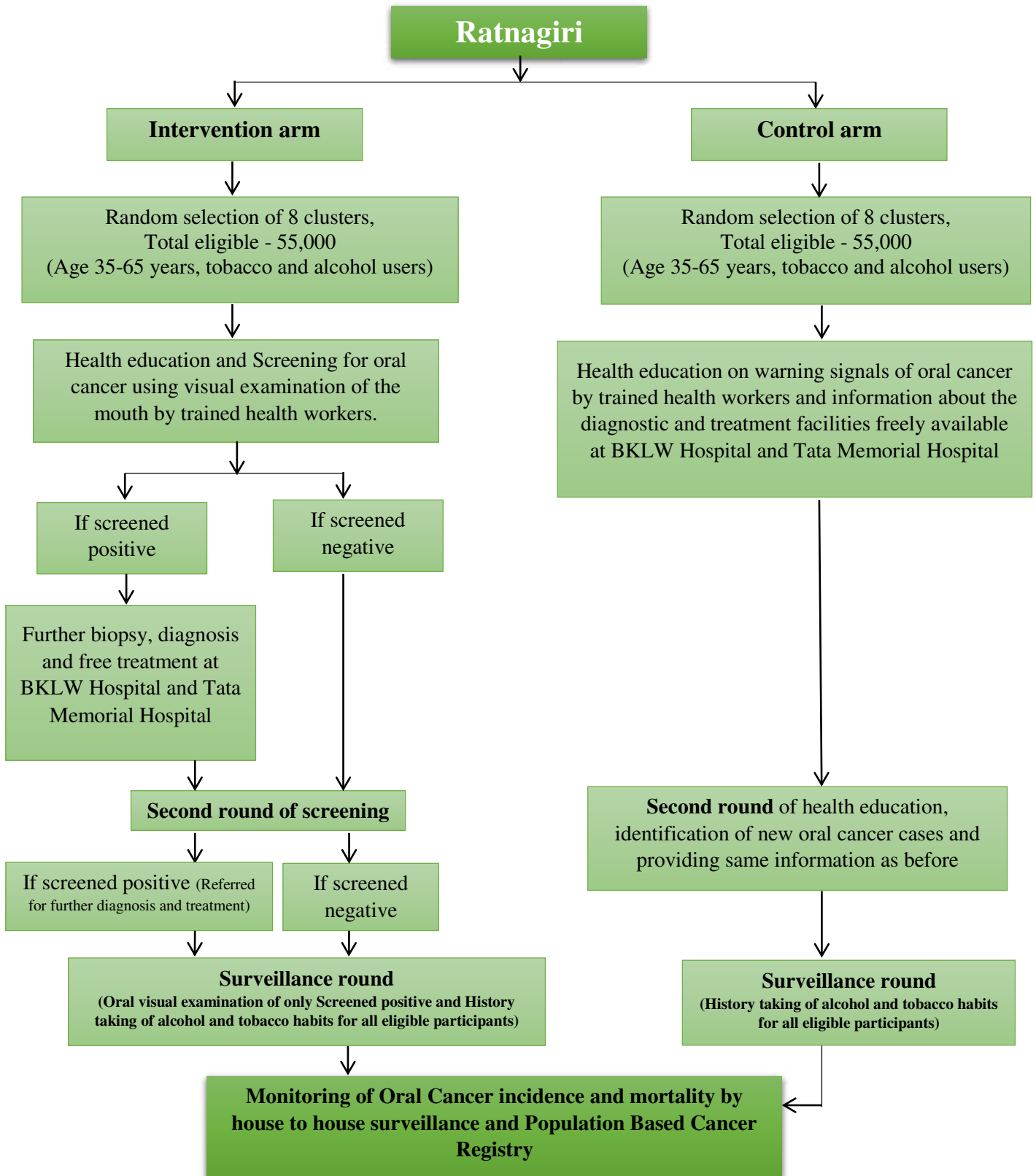
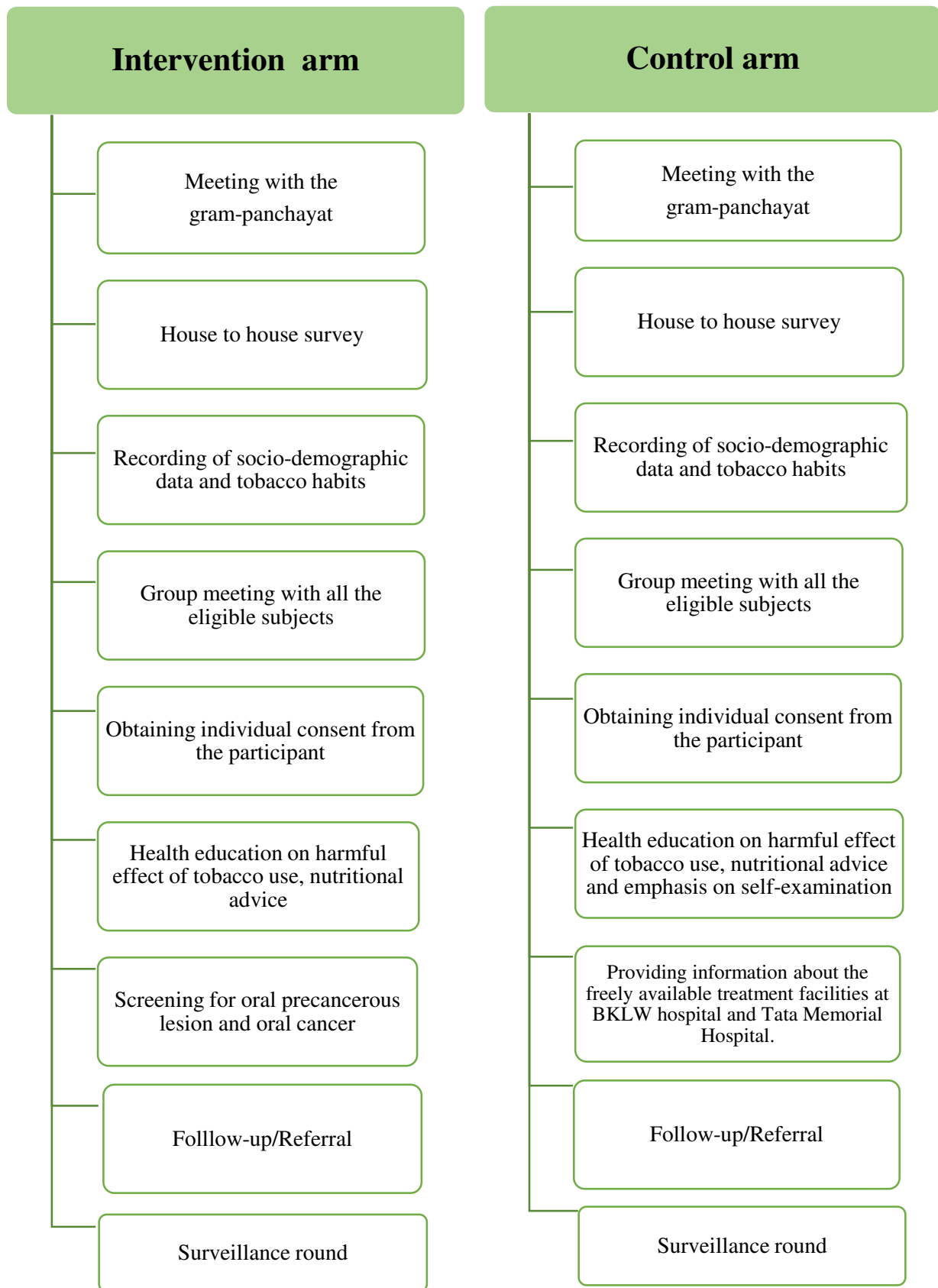


Figure 6: Procedural steps of the study



Planning

Firstly, approval for conducting oral cancer screening is taken from the village leaders. A meeting is held with the members of the gram panchayat and school teachers 3-4 days prior to the screening and they are informed about the study procedure, harmful effects of tobacco and the need for carrying out oral cancer screening. Consent is taken from the village leaders.



Meeting with the village sarpanch

Enumeration

Information regarding households such as location, house number, address, type of house, household income and also name, age, and personal habits of all subjects in the households are filled in the 'Household Form' by a trained health worker. This is done for all the study clusters.



Filling of household form and recording of socio-demographic data

The study procedure is then explained to the eligible subject. Each eligible subject is assigned a unique number based on the panchayath, ward. Further, these subjects are interviewed for details regarding occupation, personal history of past or current illness and personal alcohol and tobacco consumption habits including smokeless-form (pan and gutkha chewing) and smoked-form (bidi and cigarette smoking). The responses are recorded in an individual form.

Implementation

Intervention arm

Oral visual inspection is carried out in bright light and with the additional use of a flashlight. All the intraoral sites are carefully examined and are palpated. The neck is also palpated to check lymph node involvement. Screen positives are the subjects showing any signs and symptoms of oral cancer and precancerous lesion.



Screening of eligible participants

The findings are recorded as a white patch, ulcerated white patch, verrucous lesion, submucous fibrosis, red patch, suspicious ulcer or growth.



Leukoplakia



Oral Submucous fibrosis



Verrucous leukoplakia



Suspicious growth



Erythroplakia



Erythroleukoplakia

Oral precancerous lesions identified during screening



Blood pressure, blood glucose and anthropometric measurements

Anthropometric measurements (height, weight and body mass index), blood pressure and blood glucose levels are also measured for all subjects. Subjects having lower/higher values other than normal are referred to a nearby PHC.

The harmful aspects of tobacco or alcohol use are explained and those participants with habits are advised to stop and others were encouraged not to start these habits.



Participant receiving toothpaste, tooth brush and pamphlet



Pamphlet of warning signs of oral cancer

A toothbrush and toothpaste are given as an incentive to all the participants along with instructions regarding good oral hygiene practice and a pamphlet on warning signs of oral cancer. Survey, counselling and screening activities are being done concurrently.

Confirmation of the screen-positive cases

Subjects with referable lesions are given appointments for confirmatory examination by surgeons. All the screen positive cases are seen by the Head and Neck surgeons. The surgeons visit the house of each screen positive case for verification. After performing a thorough clinical examination for each case, the surgeons confirm the PMDs. If they find any suspicious lesion, they refer the patient to the BKLW Hospital or TMC, Mumbai for further evaluation. Moreover, confirmed cancer patients are also referred to these both hospitals for treatment. Treatment is provided free of cost for cancer patients of both intervention and control arm.

Control arm

Before starting any procedure, a group meeting is conducted and individual consent is taken from each eligible subject in the control arm. The health workers collect information on socio-demographic factors, tobacco or alcohol habits, medical history, and record the information on a structured form.

The participants identified during house visits in the control arm are not screened; however, they continuously receive routine awareness messages on warning signals of oral cancer by trained health workers and information about the diagnostic and treatment facilities freely available at BKLW Hospital and Tata Memorial Hospital.

Health education using an overhead projector is given in each village of both control and intervention arms. The project supervisor explains the objective of the study, harmful effects of tobacco, benefits of early screening and free treatment facilities available at Tata Memorial Hospital and BKLW Hospital to the villagers



Health education in the village

Other activities

1. Oral Cancer Awareness Program in Schools

School Health Education Program on Tobacco Hazards is conducted in several schools of Ratnagiri District. Till now, the program has been organised in 22 schools and more than 2500 students have benefited. We have distributed prizes to more than 100 students.



Health talk on oral cancer awareness in school



Tobacco quiz organised in the school

2. Distribution of Testimonial certificate

A certificate of appreciation is given to the chief contact person of the village including panchayat leaders and also to the social workers and school teachers for their help in arrangement of facilities such as lights, tables and carpets required during the activities of the screening. We have distributed a total of 648 certificates.



Certificate of appreciation to the village leaders

3. Distributing tobacco quitline service card

All the participants both in intervention and control arms are given a tobacco quitline service card (a free helpline number 1800-11-2356 available for quitting tobacco use - initiated by Govt. of India). Participants are encouraged to quit tobacco through telephonic counselling which is available in regional language (Marathi).

Timeline of the project

First round

The first round of both the intervention and control arm has been completed. In this round, all the eligible participants were screened (only in intervention arm) and given health education (both the arm) is provided. First round was started in the year 2010 and was completed by the year 2016.

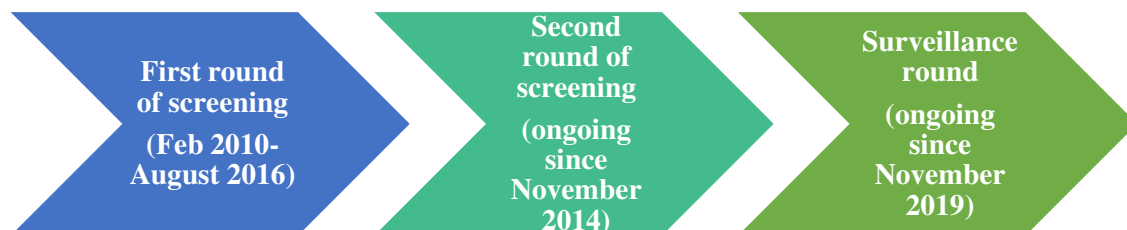
Second round

The second round is on-going for both the arm. In this round, all the eligible participants from the first round are re-screened. This round was started in the year 2014 and is currently on-going in 5 clusters (3 intervention arm and 2 control arm). It will resume once lockdown restriction due to COVID-19 will be eased and it will take nearly three months to complete. It will be followed by four more years of surveillance.

Surveillance round

In the surveillance round, the high risk population will be followed-up. The status of screen positive participants and also oral cancer patients will be recorded. Moreover, the PMD cases diagnosed both in first and second round will be examined again to know their growth. Apart from these, mortality and cause of death will be documented. The surveillance round was started in November 2019 and is currently on-going in 2 clusters (1 intervention and 1 control).

Figure 7: Timeline of screening rounds



Management of screen positive cases

- Patients with abnormal findings on oral examination undergo clinical examination by a clinician (specifically trained in diagnosing early cancers and precancerous lesions of the oral cavity) and biopsy of the suspicious or definite abnormalities at the base hospital.
- Patients with a biopsy-proven oral cancer undergo routine staging investigations including a contrast enhanced computed tomography (CECT) scan of the anatomical area of interest or any relevant radiographic technique.
- Patients with localized disease are offered radical treatment including surgery, chemoradiotherapy, radiotherapy or multimodality treatment regimens depending on the stage of disease and the performance status of the patient.

- Follow up of treated patients is done to evaluate overall and disease-free survival. The cost of the treatment is borne from the project funds.

Interval cancers

Patients diagnosed with oral cancer in the inter-screening period are carefully evaluated to ascertain whether cancer could have been missed at initial screening. Treatment is offered to patients with interval cancers depending on the stage of disease and performance status of the patient. (Screen positive cancer patients in the inter-screening period are carefully evaluated to ascertain whether the cancer could have been missed at initial screening)

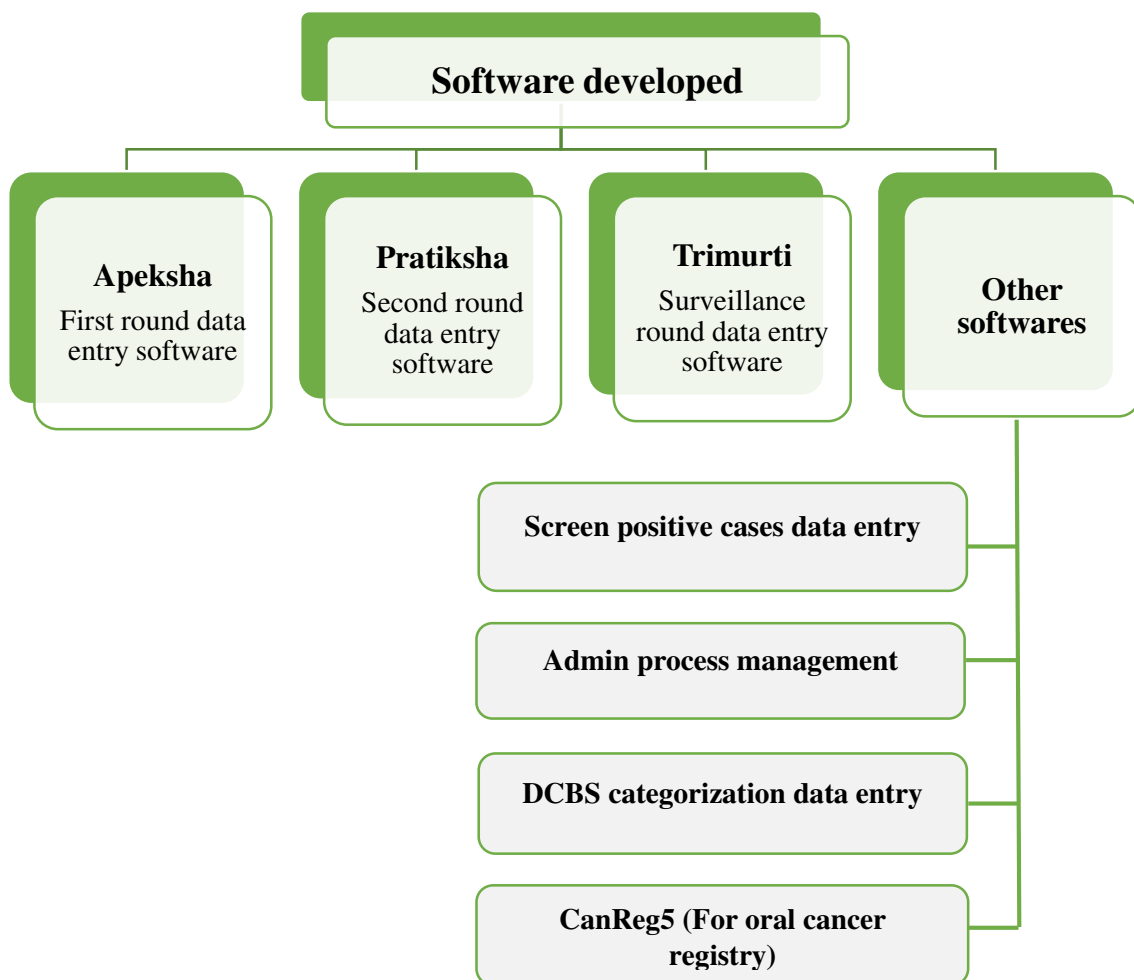
Follow up

Subjects are followed up by community health workers based on the death records from the registry and the local panchayat. Concerted efforts are made to identify the actual cause of death in the population. Verbal autopsy is performed whenever possible.

9. Data entry process and software used

Data collected during survey and screening process of each round including First, Second and Surveillance round are filled in different forms. Later, data entry of these forms is performed by the Data Entry Operators (DEOs). Different approaches have been used for data entry process and each one is explained further. **Special software is developed by Programmers of the project for each of the rounds (Figure 8); these software with some modification can be used in our country for Oral Cancer Screening.** Various appropriate validations are implemented in the software to avoid inconsistency in the data entry process.

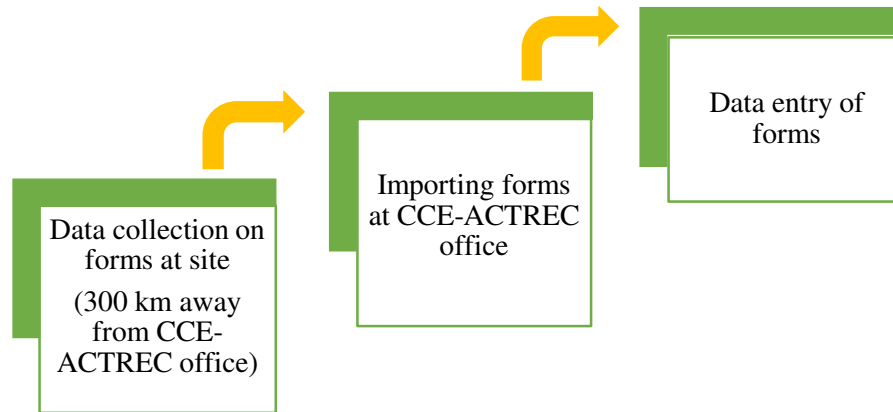
Figure 8: Software developed by the programmers of project



Apeksha – First round data entry software

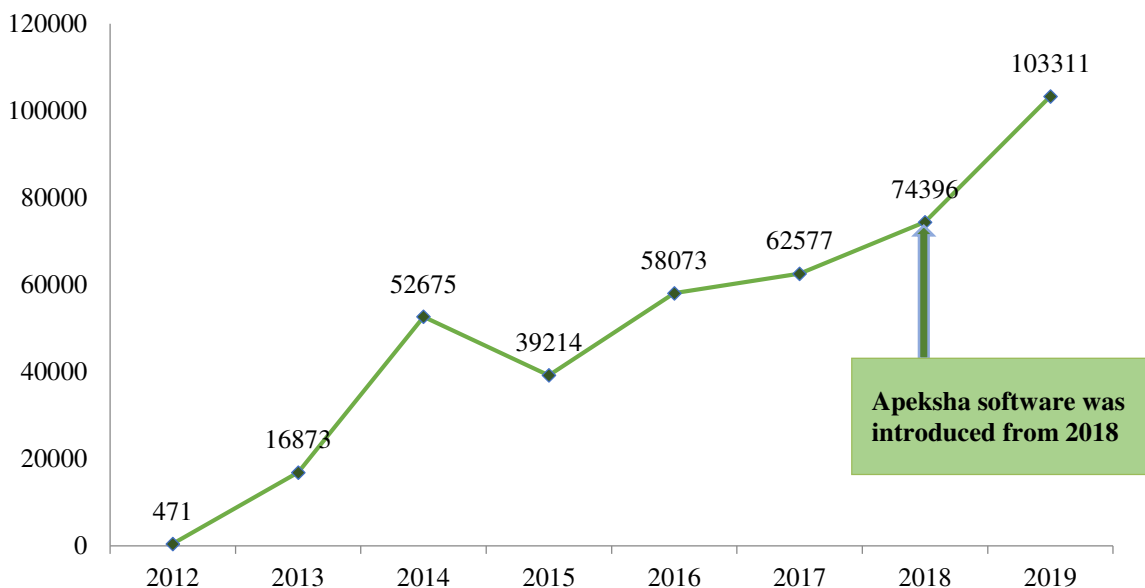
The data entry of First round forms has been done at CCE-ACTREC office; forms are brought to the office from different project sites.

Figure 9: Data entry process flow



Earlier, different software named Apex was used for the data entry process. However, it was not efficient enough and caused issues such as inconsistent data, slow data entry, missing data and data management issues. Later, Programmers of the project developed new software named Apeksha which overcame the above drawbacks. The data entry trend is shown in Figure 10.

Figure 10: First round data entry trend

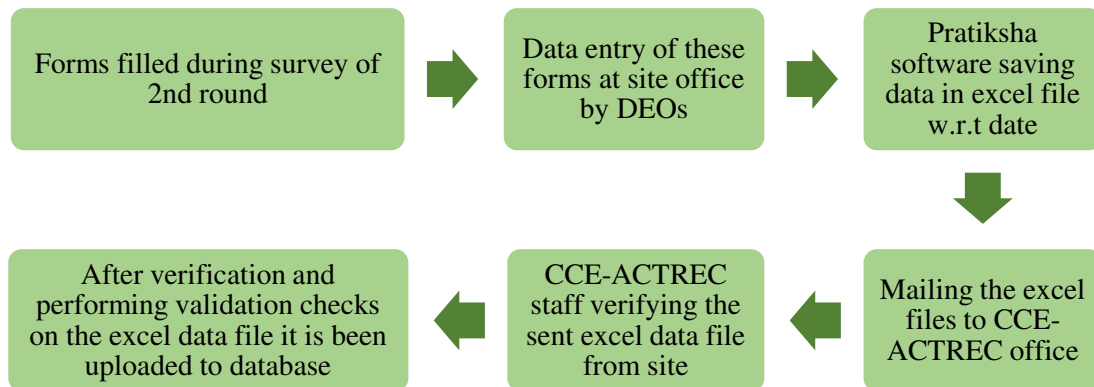


Pratiksha – Second round data entry software

The second round data entry is performed both at CCE-ACTREC office and also at each site-office. The process of second round data entry at CCE-ACTREC office is similar to the

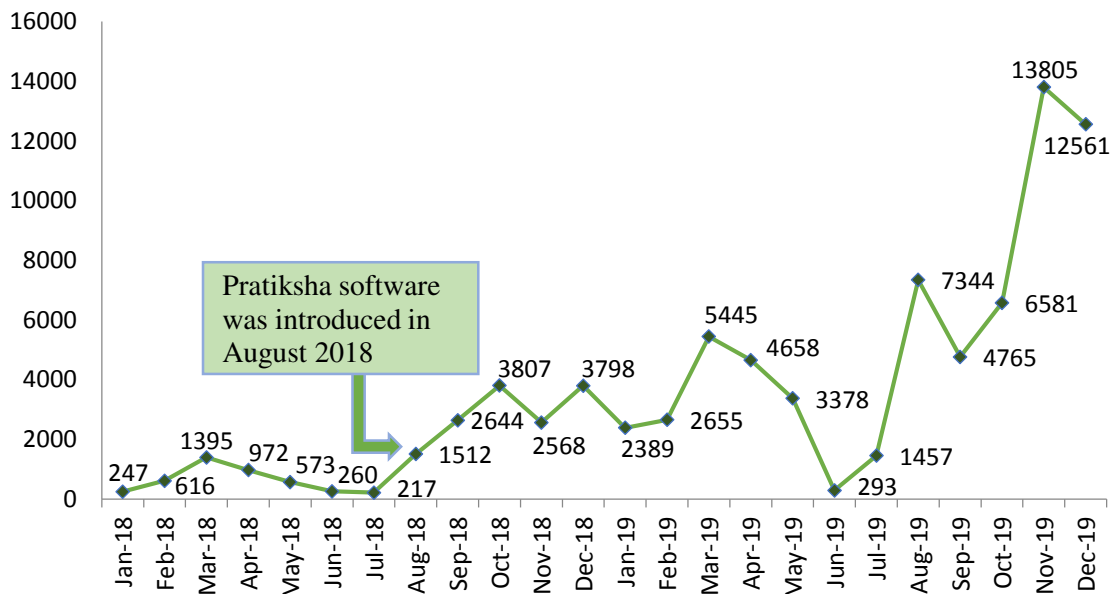
process of first round data entry. The process of second round data entry at site-office is explained in Figure 11.

Figure 11: Second round data entry process flow



Data entry trend of the second round is shown in Figure 12 which indicates the growth in data entry when the Pratiksha software was introduced.

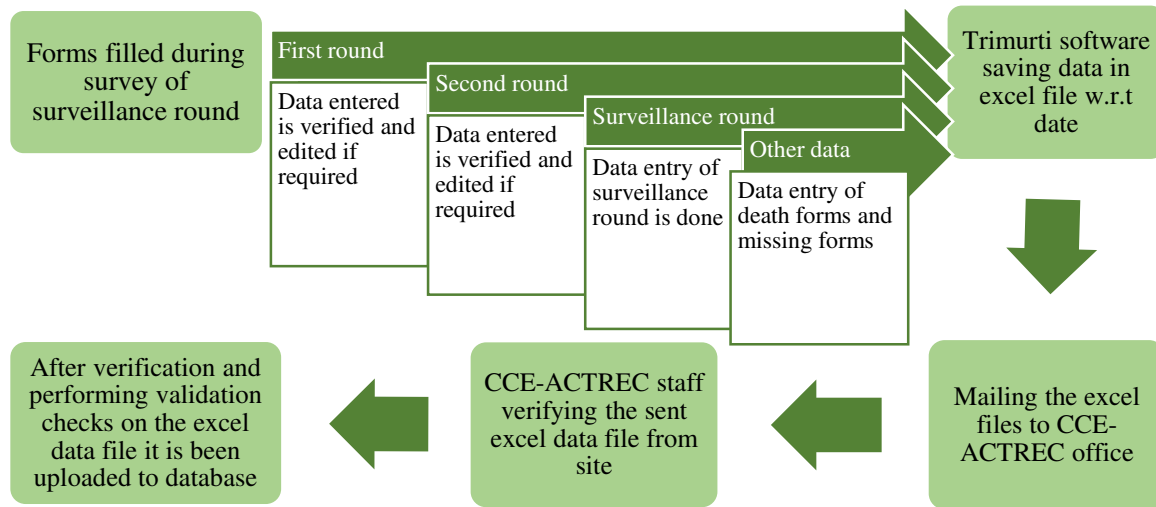
Figure 12: Second round data entry trend (Duration 1 year: Jan 2018 - Dec 2019)



Trimurti – Surveillance round data entry software

Trimurti software is used for surveillance round data entry. It is also useful to verify and to update the first and second round data entry. Missing data or forms, invalid data, mismatch data, and any other form of error in the first and second round data entry can be identified and updated through this software. Trimurti software ensures consistency, completeness and accuracy of the data. Data entry of surveillance software is done at site.

Figure 13: Surveillance round data entry process flow



Other software

CanReg5 for Cancer Registry – Oral Cancer Registry of Ratnagiri district was established through this project; CanReg5 Software has been created for the same. CanReg5 software is an open-source tool approved by the International Agency for Research on Cancer (IARC) specially designed to input, store, check and analyzed registry data.



CanReg5 software logo

Data entry for screen positive cases– A special software is developed to store all the details of screen positive cases of both first and second round. Multiple lesion, multiple sites of lesion, biopsy impression associated with each screen positive case of each round can be saved through this software.

Admin Process Management – To handle admin processes and to minimize manual work, Admin Process Management software was developed. This software is a great help to the admin as it notifies, monitors and acts as a one-stop point for all employees and project data.

Training of Data Entry Operators (DEOs):

All DEOs are given data entry training for specific software. The concept and process of different project rounds, form filling and questionnaire are explained to all the DEOs. Data entry practice is carried out during the training process. Later, doubts and queries of DEOs are addressed. Moreover, required or requested changes are done in the software based on the training. After providing training to the DEOs, the data entry has been started at CCE-ACTREC office and also at Ratnagiri site offices including Dapoli, Mandangad, Rajapur, Lanja, and BKLW Hospital, Dervan site office.



Training of Data Entry Operators by Programmer at field site-offices

Server Management

Data entry performed by the DEOs is saved in a centralized database that is installed in the server. Periodic maintenance of the servers is carried out to ensure their functionality. The Comprehensive Annual Maintenance Contract (Comprehensive AMC) of the servers is done.

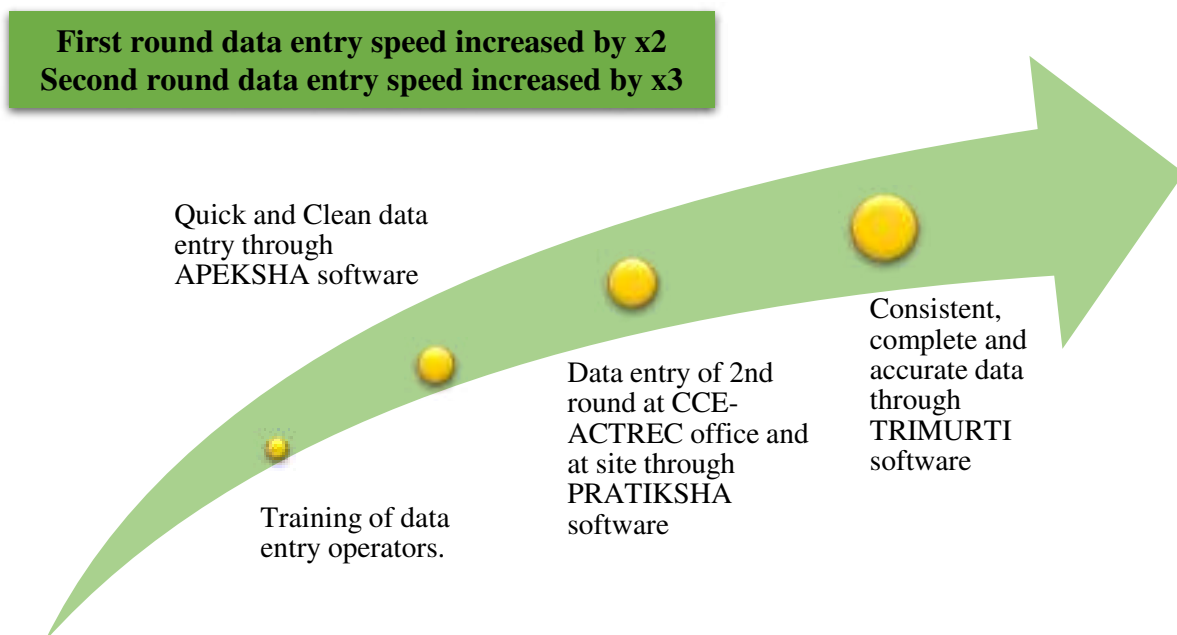
Database backup

As data entry is performed on a daily basis, data backup is also done daily. Copy of the database backup is stored in the external hard drive on a weekly basis.

Reason for software development

On the field site, many times internet service and also electric power supply are interrupted. Due to these reasons, we were unable to create website for data entry. Creating website is an optimal solution for data entry process in screening as it combines the data of multiple project sites and presents it as a centralised database. However, due to network and power supply issue it was not a feasible option. Hence, we decided to create software (Apex and Apeksha) to carry out the data entry at CCE-ACTREC office and new software (Pratiksha and Trimurti) was created specifically for data entry at Ratnagiri field sites.

Figure 14: Reasons leading to increase in data entry



Data entry Status

The project has been severely affected by COVID-19 pandemic. Both field work and office work were interrupted. The data entry work was also greatly affected and delayed. Staff were unable to work efficiently from their home due to insufficient resources and also could not travel to the field/office place due to restriction on commute. Details of data entry status for both the arm is given in table no 9 and 10.

Table 9: Intervention arm: Data entry status till 18th August, 2020

| | Round 1 | Round 2 |
|---------------------------|----------------|----------------|
| Intervention arm villages | 429 | 401 |
| Data Entry Complete | 418 (97%) | 186 (46.4%) |
| Pending | 11 (3%) | 215 (53.6%) |

Table 10: Control arm: Data entry status till 18th August, 2020

| | Round 1 | Round 2 |
|----------------------|----------------|----------------|
| Control arm villages | 350 | 337 |
| Data Entry Complete | 316 (90%) | 178 (52.8%) |
| Pending | 34 (10%) | 159 (47.2%) |

10. Quality control

In order to ensure quality control of the data collected through the screening process, various quality control measures are performed at every step of screening and data collection.

1. Oral cancer screening process

Field training and supervision is conducted by Surgeons and Dentist during field visits in order to improve the diagnostic skills of health workers.

Additionally, quality control exercise was also performed by blinding the observers including health workers, medical officer and oral cancer surgeon at field site. All of them were given clinical photographs of previously diagnosed screen positives and screen negatives from screening cluster and were asked to give diagnosis. Later the results of medical officer and health workers were compared with the results of oral cancer surgeon. The data was entered in SPSS and Sensitivity, Specificity, and Kappa score were calculated. Based on this exercise, retraining was conducted for the health workers who diagnosed poorly.

Apart from these, re-training programmes are organised for the health workers at preventive oncology unit, TMH periodically for the improvement in the quality of the screening programme.

2. Data entry, verification and maintenance

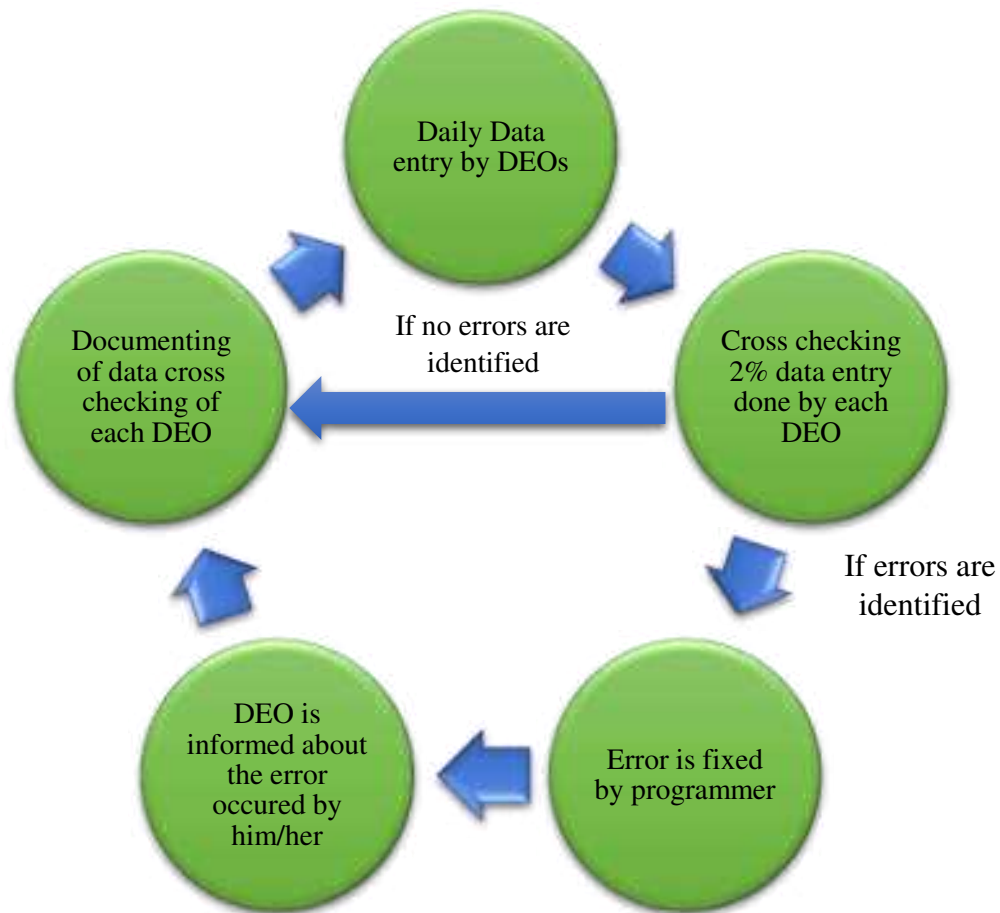
Measures have been taken to maintain the consistency, completeness and accuracy of data. Programmers and statistician use various techniques to ensure that data qualify the mentioned properties. The following techniques are used and are explained in details below;

- A. 2% data entry cross-checking
- B. Data verification before uploading (for data entry at the site)
- C. Data verification at site (for data entry at site)
- D. Error register maintenance
- E. Monthly error and performance report
- F. Cross-checking data entry summary with actual data summary
- G. Cancer cases and Screen Positive cases data cross-checking by Surgeons

A. 2% data entry cross-checking

Data entry is performed by Data Entry Operators (DEOs) on daily basis. To ensure that DEOs are entering the accurate and complete data, Programmers of our project cross-check 2% data of total data entry performed by each DEO. Process is illustrated in Figure 15.

Figure 15: Data entry cross checking process cycle



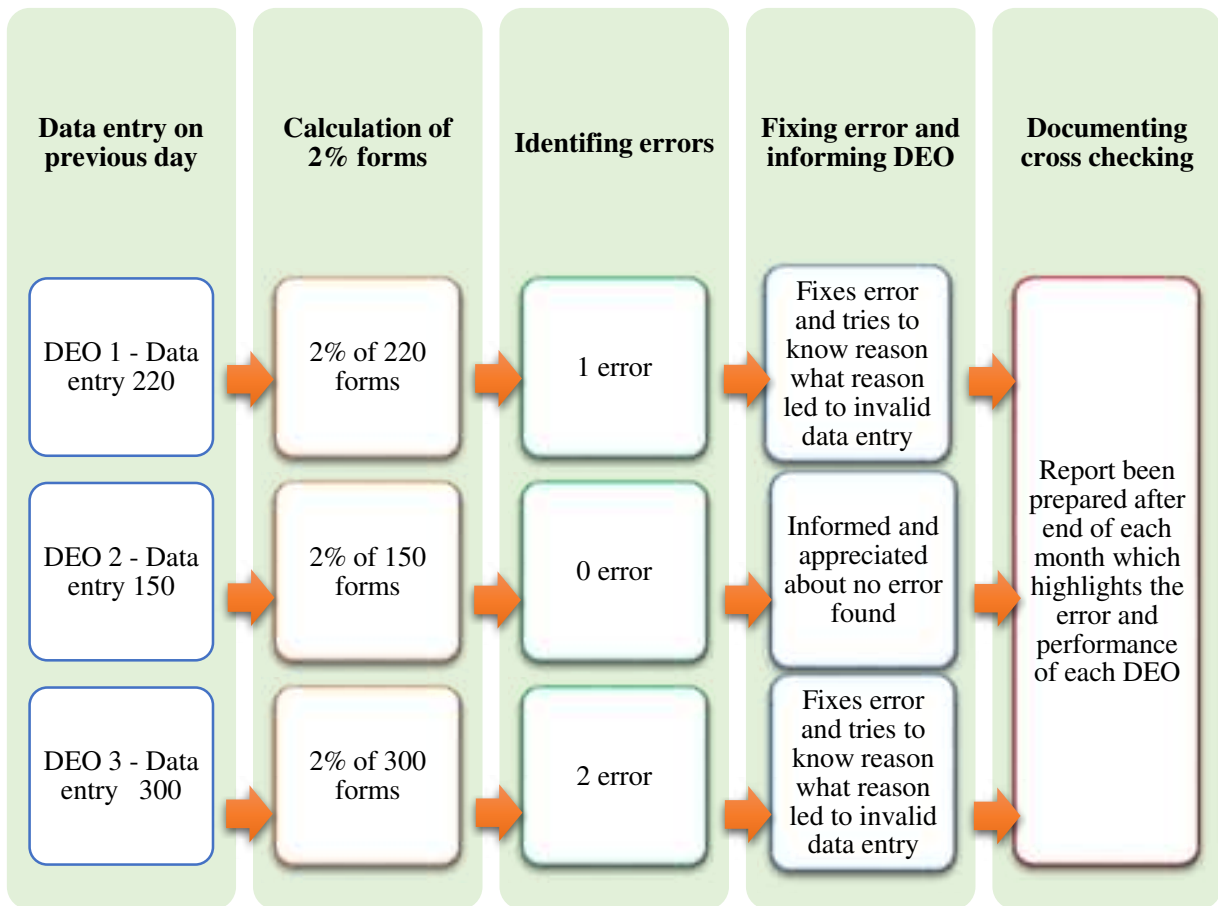
The detailed process of data entry cross checking -

On present day, programmer calculates 2% count of forms out of total data entry done by each DEO on previous day, formula for the same is mentioned below,

$$Total\ forms\ to\ be\ selected = Total\ data\ done\ by\ DEO \times \frac{2}{100}$$

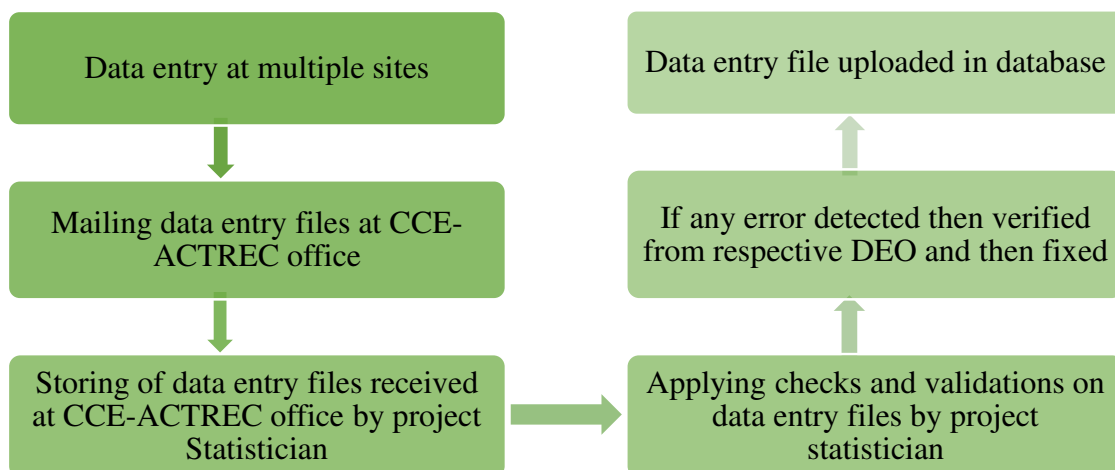
Later, programmer selects 2% random forms and examines whether the data entered by DEO match with the data present on the forms. If there is a mismatch then that error is reported, fixed and further informed to the respective DEO. The programmer also tries to know the reason behind the error. This process is carried out daily and after end of every month a report is prepared which shows the summary of identified errors by each DEO.

Figure 16: Detailed process of data entry cross checking



B. Data verification before uploading (for data entry at the site)

Figure 17: Detailed process flow of Data verification before uploading site data



DEOs send data entry files from their respective sites to CCE-ACTREC office. Statistician verifies these files by applying various checks and validations, and if an error is detected then it is verified by contacting the respective DEO and is fixed.

After performing checks and validations on these files, files are uploaded in the database. In this approach, data entry done on previous day is verified and uploaded on next day.

C. Data verification at site (for data entry at site)

Programmers and statistician visit project site regularly once in a month. During their visit, they monitor the process of form filling and data entry to ensure that all the work is carried out in defined flow and manner.

- Filled forms are randomly selected and data entry of same are verified to monitor the accuracy & data consistency.
- During survey the form filling process of interviewer is observed and the information is verified with the filled information.
- DEO's data entry is observed to verify that the data entry done is proper or not.

D. Error register maintenance

Data entry errors may occur due to various reasons by DEOs. The errors are fixed by the programmers; however, to monitor these errors an 'Error Register' is maintained. This error register records each error occurred by DEOs while performing data entry at CCE-ACTREC office.

Table 11: Example of the recording errors in the register:

| Error occurred date | Error description and reason | Error solved date | DEO Signature | Programmer signature |
|---------------------|---|-------------------|-----------------------------------|--|
| 01-01-2020 | Interview date entered wrong of household 181760305132 | 01-01-2020 | <Signature of DEO> <DEO `name> | <Signature of Programmer> <Programmer name> |

E. Monthly error and performance report

In order to monitor each DEO performance and productivity, a monthly report is generated. This report shows total entries, total errors and overall other work done by each DEO of a respective month. These identified errors are later rectified. This report is presented in the monthly meeting before project officials and other project staff at the end of the month. This report helps to understand the productivity and capability of DEOs and creates awareness amongst all DEOs that they are being monitored and the casual approach will not be tolerated in the project by the officials.

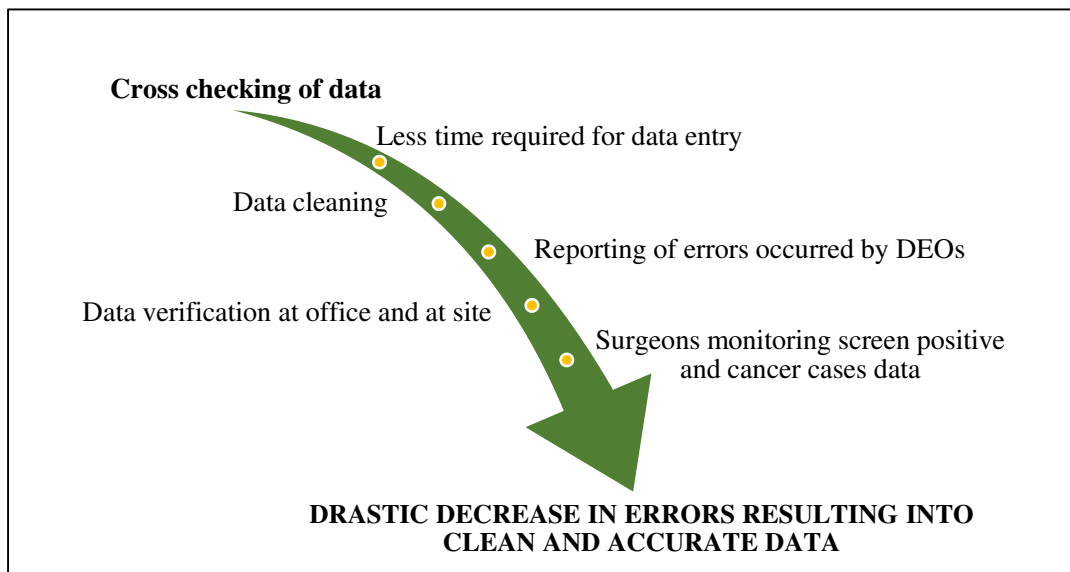
F. Cross-checking data entry summary with actual data summary

We perform the data entry on a daily basis; however, the entered data should match with the actual data that exists. For example, if there are 1047 screen positive persons in Village 1 then there must be total entries of those 1047 screen positive persons in database. The total screen positive persons in database should not be less or more than the actual data. Hence, we perform the cross-checking of the entered data each month. If data mismatch is found then certain steps are taken to correct those mistakes. This technique ensures us that the data entered in database matches with the actual data.

G. Cancer cases and Screen Positive cases data cross-checking by Surgeons

Cancer cases and screen positive cases found during survey and screening are maintained separately. For data accuracy, Project's Surgeons verify these cases. The surgeons check whether the data are logically correct or not and also examine staging of cancer cases. The surgeons advise to get the required information if any variance exists and also check whether the data entered of these cases are correct. Surgeons observe each Screen Positive and Cancer case data file which is present at CCE-ACTREC office. Surgeons visit CCE-ACTREC office at least once in a month to work on these cases.

Figure 18: Reasons for downfall of errors leading to good quality of data



3. Timely visits to field sites

We conduct monthly visits to field sites to monitor the work. Each month our Programmer, Statistician, Research fellow, Administrator and Surgeons visit the different site offices and attend screening/survey done at respective sites.

The motive of visiting field sites is to

- Check the workflow
- Check the quality of work
- Understand actual ground situation and difficulties
- Plan for upcoming targets
- Track individual performance of each staff
- Give timely training to staff for maintaining quality of work
- Visit screen positive and cancer patients

After each visit, a meeting is conducted to discuss visit experience and to take decisions as per the current situations.

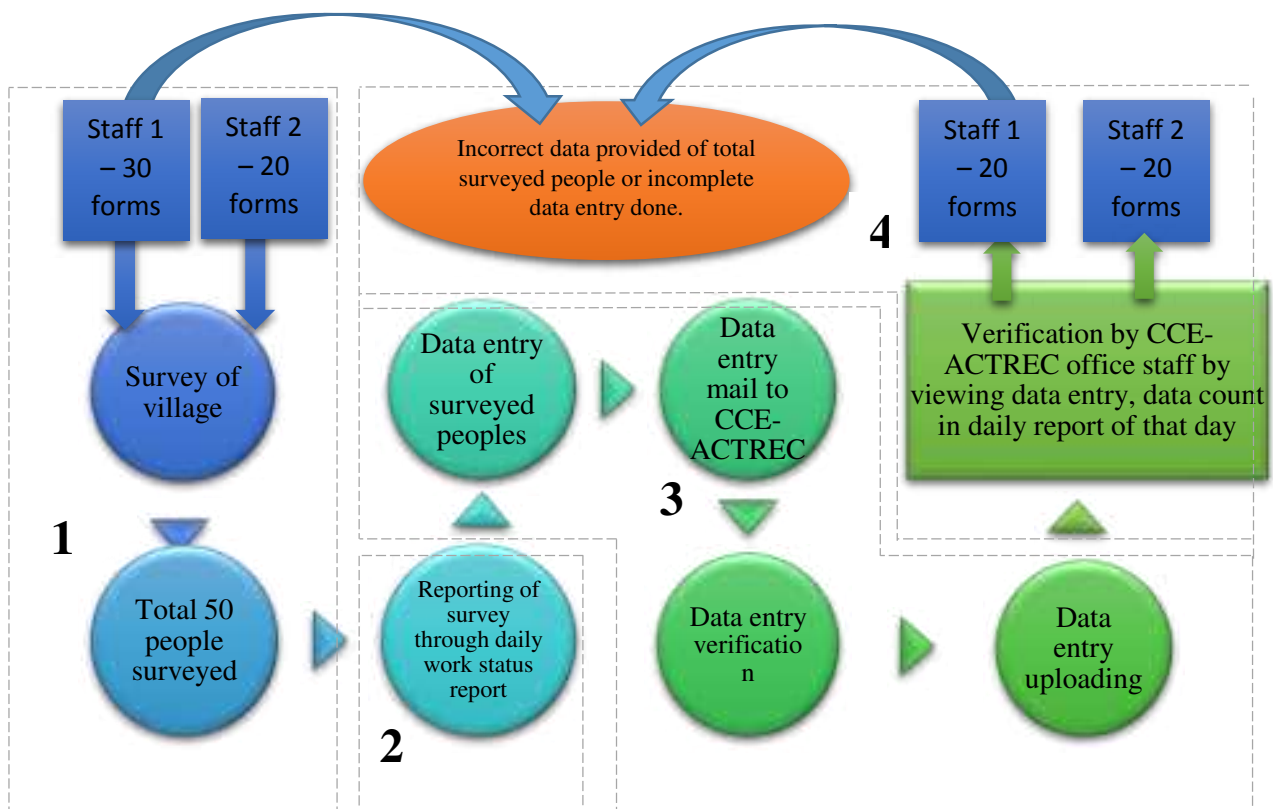


Monitoring of work during screening

Tracking of work done by each staff

Daily work done report is sent by both field site and CCE-ACTREC office staff. Daily work status mail is sent to the reporting authority of the project which shows what work is done by each individual. In this process of reporting, we do the cross verification of work done at field site to monitor whether there is any variation of figures/data provided.

Figure 19: Process flow showing cross verification of data provided by site field Team Leader through daily work status reporting.



Cross verification of the work done

- Data entry of surveyed village on the next day and mail the data entry files on the same next day. The same data will be uploaded.
- Verifying whether the reports sent by team leaders in daily work status match with the data entry.
- For Example –
 1. On 01 July 2019, a total survey of 50 people was done by two interviewers
STAFF 1 surveyed 30 people and
STAFF 2 surveyed 20 people.
 2. People surveyed by each staff are sent to us through daily report format.
 3. Data entry is done on the very next day of those surveyed people and is sent to CCE-ACTREC where the data is uploaded.
 4. We then verify that whether the actual data entered in forms and data count presented to us in daily work report.

11. Project monitoring

Project work is closely monitored to ensure that the work carried out on the field and at office is performed appropriately. Such close monitoring allows us to recognize the strengths and weaknesses of the project. It also helps to keep the team focused without adopting any casual approach towards the project work.

Monthly meeting of site Team Leaders at CCE-ACTREC and TMH, Parel, Mumbai

After the end of every month, a meeting is conducted for all site Team Leaders at CCE-ACTREC and TMH, Parel. Here, the summary of work done in previous month is discussed and next month's work plan is presented by each Team Leader of respective sites. This helps to understand and monitor the progress of the project and also to plan as per the situation or priority.



Monthly meeting of office & site project staff with Dr. C S Pramesh, Director of TMH



Dr Suyash Kulkarni Co-Principle Investigator of the project and Mr Anbumani (Former CEO, TMC) discussing the project progress report

Distribution of project report to the key persons of the project

Project report is generated on quarterly basis and is sent to the key persons or officials of project i.e., PI and Co-PI of project. Project report consists of progress report and basic analysis of data which represent the current status or situation of the project. This helps key persons of project timely informed and updated about the project progress.



Dr. Atul Budukh and Dr. Abhijeet Gundale presenting monthly report to Dr. Suvarna Patil (Director, BKLW Hospital)

12.Results (Provisional)

NOTE: Results are generated from database (on-going first and second round data entry) and from manual data maintained by staff. Results may vary after completion of project.

Intervention Arm

Total number of villages covered in the intervention arm is 429. In intervention arm, the first round is completed with 52,737 high risk population screened. Based on the first round results, 1046 participants were screened positive. Out of 1046 cases, 955 cases were examined by the surgeons. Out of which, surgeons confirmed 444 premalignant disorders in first round. Moreover, 40 oral cancer cases were diagnosed and out of which 30 patient received treatment.

Similarly, in the on-going second round (results up to 18th March 2020) 49,854 eligible participants were screened. Out of 49,854, 548 were screen positive. Out of 548 cases, 404 cases were checked by the surgeons. The PMDs and oral cancer cases diagnosed in second round were 159 and 31 respectively. Out of 31 cancer patients, 25 patients have received treatment. Details are given in table number 12.

Table 12: Results from Intervention arm

| | First round | Second round | Surveillance round (re-screening of screen positives only) |
|---------------------------------|--------------------------------------|---------------------------------------|---|
| Total villages covered | 429 | 401 (on-going) | 32(on-going) |
| High Risk Population (35-65) | 74,732 | 64,540 | 4,386 |
| Screened | 52,737 (70.6%) | 49,854 (77.2%) | 63 (1.4%) |
| Screen Positive | 1046 (2.0%) | 548 (1.1%) | 34 (54.0%) |
| Cancer Cases Detected | 40 (0.08%) | 31 (0.06%) | - |
| Clinically confirmed PMD | 444 (42.4% of screen positive) | 159 (29.1 % of Screen Positive) | - |
| Treatment Completed | 30 (75.0%) | 25 (80.6%) | - |
| Survey pending | - | 10,192 (13.6%) | 70,346 (94.1%) |
| Screening Pending | - | 2,883 (5.5%) | 983 (60%) |

Table 13: Intervention arm: Details of the premalignant disorders detected in first and second round

| Premalignant Disorder | First round | Second round |
|-------------------------|--------------------|--------------------|
| Total Eligible Screened | 52,737 (70.6%) | 49,854 (77.2%) |
| Leukoplakia | 205 (0.39%) | 73 (0.15%) |
| SMF | 182 (0.35%) | 70 (0.14%) |
| Melanoplakia | 35 (0.07%) | 9 (0.02%) |
| Erythroplakia | 8 (0.02%) | 5 (0.01%) |
| Erythro-Leukoplakia | 8 (0.02%) | 1 (0.00) |
| Lichen Planus | 6 (0.01%) | 1 (0.00) |
| Total | 444 (0.84%) | 159 (0.32%) |

In the intervention arm, a total of 444 premalignant disorders were diagnosed in the first round indicating one in 119 is at risk of developing PMD. In the second round, in total 159 PMD were found which indicates one in 313 is at risk of developing PMD.

The commonly prevalent PMDs are Leukoplakia, SMF and Melanoplakia found both in first and second round.

Table 14: Intervention arm: Stage distribution of oral cancer cases detected in first and second round

| Stage Distribution of Oral Cancer cases | First round | Second round |
|---|-------------|--------------|
| Early | 15 (37.5%) | 15 (48.4%) |
| Late | 24 (60.0%) | 16 (51.6%) |
| No Information | 1(2.5%) | - |
| Total cases | 40 | 31 |

A major reduction of late stage oral cancer case presentation is seen in second round (n=16) compared to first stage (n=24).

Figure 20: Stage distribution of oral cancer cases diagnosed in first and second round

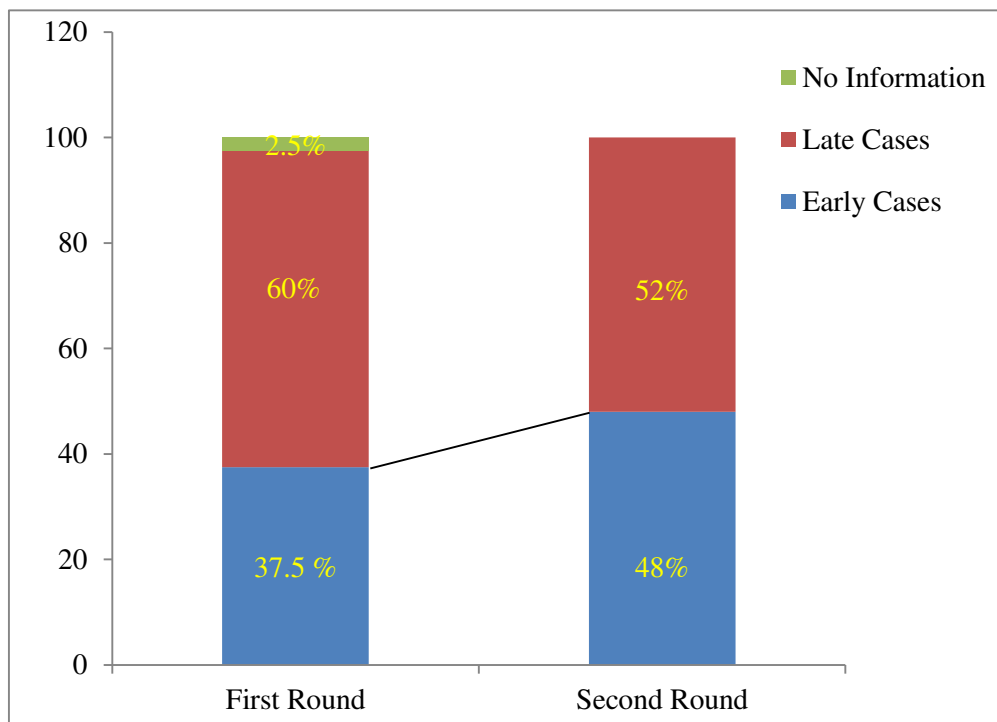


Table 15: Intervention arm: Treatment provided to the cancer patients during screening trial

| | First round | Second round |
|---------------------------|---------------------|----------------------|
| Total cancer cases | 40 | 31 |
| Treatment Received | 30 (75.0%) | 25 (80.6%) |
| Surgery | 10 (25%) | 14 (45.2%) |
| Surgery +RT | 10 (25%) | 6 (19.4%) |
| Surgery + CT | - | 1 (3.2%) |
| Surgery +CT+RT | 9 (22.5%) | 1 (3.2%) |
| CT | - | 2 (6.5%) |
| NACT f/b Surgery | 01 (2.5%) | - |
| Pall+ RT | - | 1 (3.2%) |
| Treatment Refused | 10 (25%) | 6 (19.4%) |

The cancer cases diagnosed during first and second round of screening were referred to the BKLW Hospital, Ratnagiri and TMH, Mumbai for treatment. Most of the cancer patients received cancer treatment.

Figure 21: Screen positive cases diagnosed in second round and their diagnosis in the first Round

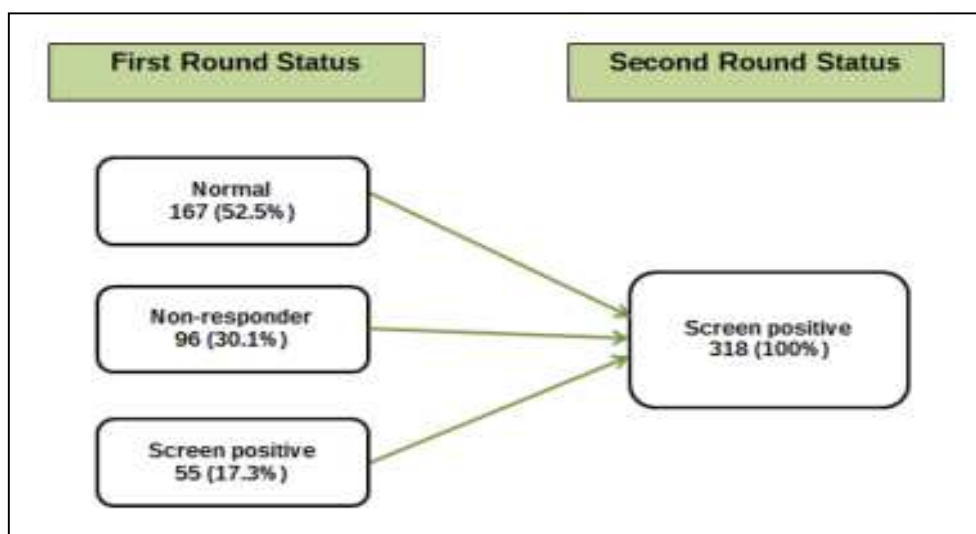
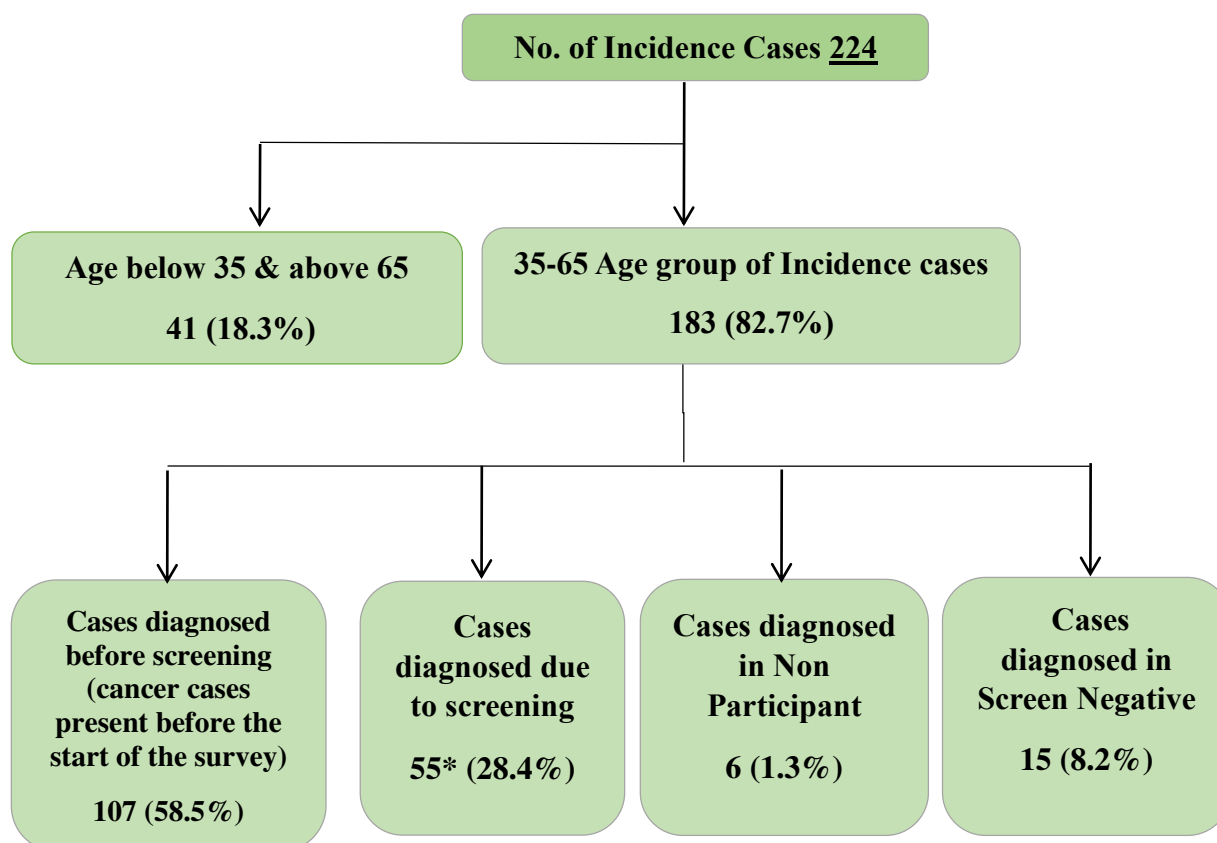


Figure 22: Oral cancer incidence cases in Intervention arm (2010-2018)



Note: The data verification through Registry and Private Hospital is under process (Provisional figures).

Table 16: Average time gap between first round and second round for oral cancer

| First round diagnosis | Second round diagnosis | Average time gap |
|-----------------------|------------------------|------------------|
| Normal | Cancer | 3.6 years |
| Non participants | Cancer | 3.8 years |
| PMD | Cancer | 2.9 years |

Compliance in Second Round

- 86% of high risk population has attended the Screening at least once.
- 53% high risk population has attended the Screening 2 times.
- Of the total high risk population, deaths were 4% and migration was 6%.

Concordance rate Between Health Workers and Surgeons Diagnosis

First round: Based on 955 Screen Positive cases data of Health Worker. 346 cases matched with Surgeon Diagnosis

Concordance rate - 36%

Second round: Based on 404 Screen Positive cases data of Health Worker. 156 cases matched with Surgeon Diagnosis

Concordance rate - 38%

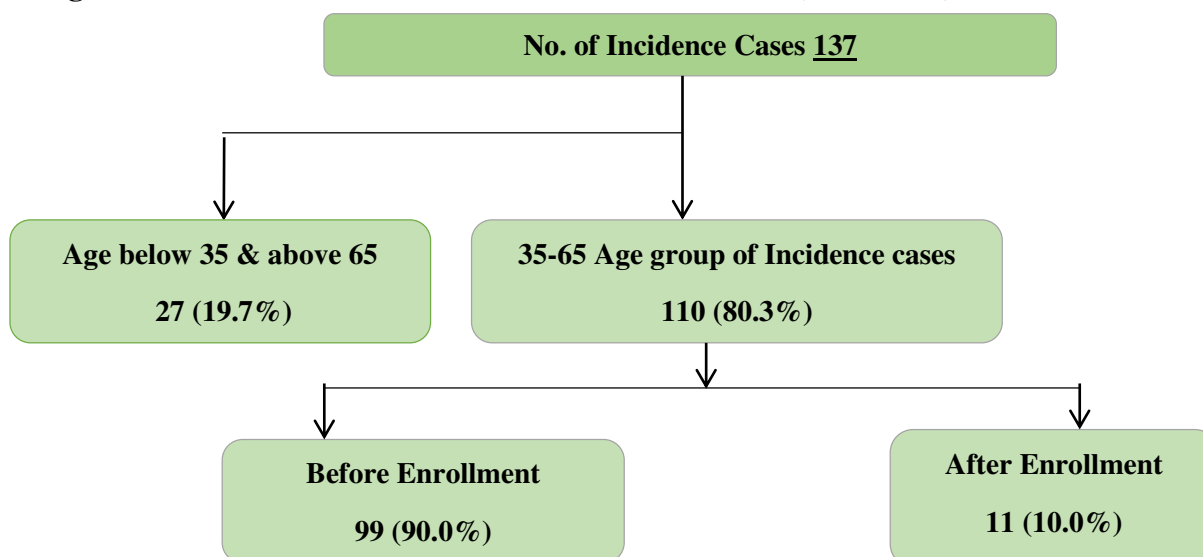
The major confusion for the Health Workers in both the rounds was differentiating between Leukoplakia and Tobacco Pouch Keratosis.

Control Arm

Table 17: Results of control arm

| | First round | Second round | Surveillance round |
|--|-------------|----------------|--------------------|
| Total villages covered | 350 | 337 (on-going) | 26 (on-going) |
| Completed High Risk Population (35 – 65) | 52,431 | 37,179 (70.9%) | 2,832 (5.4%) |
| Pending High Risk Population (35 – 65) | - | 15,252 (29.1%) | 49,599 (94.6%) |

Figure 23: Oral cancer incidence cases in Control Arm (2010-2018)



Note: The data verification through Registry and Private Hospital is under process (Provisional figures)

Oral cancer incidence and Mortality rate

The data collection is in process. The tables below describe the provisional incidence and mortality rates. These rates should not be considered as the final rate.

Table 18: Oral cancer incidence rate for both intervention and control arm in all age groups

| Intervention Arm | | | |
|-------------------------------------|-------------|------------|-------------|
| All age Groups | Male | Female | Total |
| Total Population | 1,07,599 | 1,31,675 | 2,39,274 |
| No. of Cases (2010 – 2018) | 128 | 96 | 224 |
| Average Incidence Rate per 1,00,000 | <u>13.2</u> | <u>8.1</u> | <u>10.4</u> |

| Control Arm | | | |
|-------------------------------------|-----------|------------|------------|
| All age Groups | Male | Female | Total |
| Total Population | 93,679 | 1,09,955 | 2,03,634 |
| No. of Cases (2010 – 2018) | 84 | 53 | 137 |
| Average Incidence Rate per 1,00,000 | <u>10</u> | <u>5.4</u> | <u>7.5</u> |

Table 19: Oral cancer incidence rate for both intervention and control arm for age groups 35-65 years

| Intervention Arm | | | |
|-------------------------------------|-------------|-------------|-------------|
| 35-65 Age Group | Male | Female | Total |
| Total Population | 40,779 | 55,467 | 96,246 |
| No. of Cases (2010 – 2018) | 106 | 77 | 183 |
| Average Incidence Rate per 1,00,000 | <u>28.9</u> | <u>15.4</u> | <u>21.1</u> |

| Control Arm | | | |
|-------------------------------------|-------------|-------------|-------------|
| 35-65 Age Group | Male | Female | Total |
| Total Population | 32,778 | 41,683 | 74,461 |
| No. of Cases (2010 – 2018) | 68 | 42 | 110 |
| Average Incidence Rate per 1,00,000 | <u>23.1</u> | <u>11.2</u> | <u>16.4</u> |

Table 20: Number of oral cancer incidence cases by site and gender in intervention arm

| ICD 10 | Site | Male | | Female | | Total | |
|--------------------------|--------|------------|------------|-----------|------------|------------|------------|
| | | Number | % | Number | % | Number | % |
| C00 | Lip | 5 | 3.9 | 6 | 6.3 | 11 | 4.9 |
| C01-02 | Tongue | 20 | 15.6 | 10 | 10.4 | 30 | 13.4 |
| C03-06 | Mouth | 103 | 80.5 | 80 | 83.3 | 183 | 81.7 |
| Total (C00 - C06) | | 128 | 100 | 96 | 100 | 224 | 100 |

Table 21: Number of oral cancer incidence cases by site and gender in control arm

| ICD 10 | Site | Male | | Female | | Total | |
|--------------------------|--------|-----------|------------|-----------|------------|------------|------------|
| | | Number | % | Number | % | Number | % |
| C00 | Lip | 6 | 7.1 | 2 | 3.8 | 8 | 5.8 |
| C01-02 | Tongue | 12 | 14.3 | 11 | 20.8 | 23 | 16.8 |
| C03-06 | Mouth | 66 | 78.6 | 40 | 75.5 | 106 | 77.4 |
| Total (C00 - C06) | | 84 | 100 | 53 | 100 | 137 | 100 |

Oral Cancer Mortality Rate

Table 22: Oral cancer mortality rate for both Intervention and Control arm

| All Cluster | Intervention Arm | | | Control Arm | | |
|------------------|------------------|--------|--------|-------------|--------|--------|
| | Male | Female | Total | Male | Female | Total |
| Number of cases | 66 | 45 | 111 | 38 | 33 | 71 |
| Population | 107599 | 131675 | 239274 | 93679 | 109955 | 203634 |
| CR per 1,00,000 | 6.8 | 3.8 | 5.2 | 4.5 | 3.3 | 3.9 |
| AAR per 1,00,000 | 5.1 | 2.5 | 3.6 | 3.4 | 2.5 | 2.9 |
| TR per 1,00,000 | 12.9 | 6.0 | 9.0 | 8.2 | 6.9 | 7.5 |

CR: Crude Incidence Rate per 100,000, AAR: Age-Adjusted Rate per 100,000, TR: Truncated Incidence Rate per 100,000 Population

Mortality is under reported in the control arm, there will improvement in the death registration in the surveillance round.

13. All-cause mortality through verbal autopsy

Verbal autopsies have been adopted as a practical means of determining the cause of death based on an interview with the caregiver of the deceased. It has been utilized to estimate the burden and causes of mortality. Experience in India and other countries has shown that trained, non-medical surveyors can collect information on the signs and symptoms of illness preceding death. Assignment of cause of death by health professionals on the basis of the verbal autopsy report prepared by trained surveyors has been found to give reliable information on cause of death in most cases, especially in young and middle age (before age 70).

Since there is limitation in death registration system in the rural areas, we have adopted verbal autopsy technique to know the cause of death.

In the present study, health workers were trained to carry out verbal autopsies with the following objectives,

1. To gather complete and reliable information on the events, signs and symptoms leading to death.
2. To emphasis on obtaining a clear narrative by using the 5 interview steps
3. To use the Cardinal Symptom List to obtain the narrative.

Verbal Autopsy Training

Techniques utilized in the training sessions included lectures, group discussions and practical exercises. The trainers conducted quality assurance exercises including direct observation of verbal autopsy interviews.

The community health workers were trained to interview the next-of-kin using the World Health Organization's (WHO) 2014 verbal autopsy questionnaire, which helps determine the cause of death based on the symptoms present at the time of death.

Training community health workers to perform verbal autopsy interviews capture more accurate and complete data about the number and causes of deaths in a rural setting like Ratnagiri district.

Coding of Verbal autopsies

Physician-coded verbal autopsy (PCVA) is the most widely used method to determine causes of death (CODs) in countries where medical certification of death is uncommon. This method is traditionally used to code verbal autopsy (VA) results to the WHO International Classification of Diseases (ICD-10).

The ICD is an internationally agreed scheme used to code diseases in a standardized fashion.

Overview of ICD-10 classification

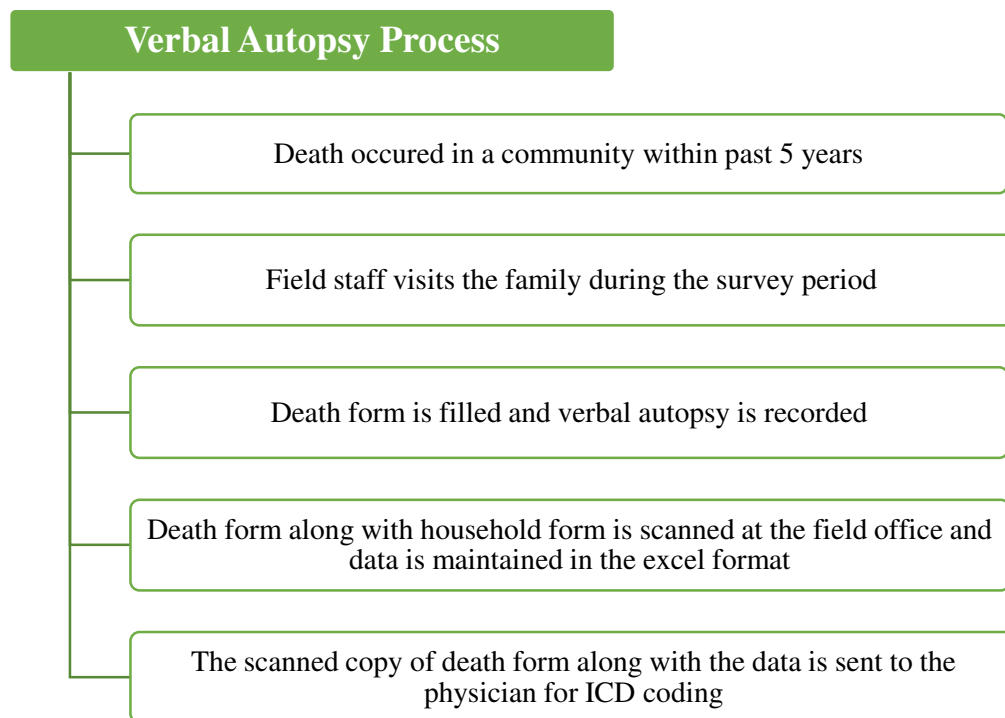
In ICD-10, diseases and their causes are grouped for practical and epidemiological reasons as follows:

- Communicable diseases
- General diseases that may affect the whole body

- Localized diseases arranged by site 3
- Developmental diseases
- Injuries
- External causes

VA relies on non-medical field staff to conduct structured interviews of living family members of the deceased to document the key symptoms of the illness (or episode) that led to death that includes past medical and treatment history and additional details. Trained physicians then use this information to assign causes according to ICD-10.

Figure 24: Verbal autopsy process



Statistical Analysis of Death

A total of 21,153 deaths have been recorded.

- Mean age of death patient for Male: 67 years, Female: 70 years.
- 31% Deaths occurred between age of 35-65 years, 4% deaths occurred below the age of 35 years and 64% death occurred above the age of 65 years.
- In the intervention arm – highest rate of death was found in the year 2015 among male (1108, 15.4%) and in the year 2016 among female (999, 17.9%)
- In the control arm – highest rate of death was found in the year 2016 (843, 17.2%) and (610, 17.5%) among both male and female respectively.
- 85% deaths occurred in the House, 11% deaths occurred in the Hospital & 4% deaths occurred in other places.

Table No 23: Total no of deaths in the study population for all age group

| Arm | Year | Male | Female | Total |
|--------------|-----------|------------|------------|--------------|
| Intervention | 2010-2019 | 7195 (56%) | 5584 (44%) | 12779 (100%) |
| Control | 2010-2019 | 4892 (58%) | 3482 (42%) | 8374 (100%) |

Table No 24: Total no. of ICD 10 Coding done in intervention and Control arm

| Arm | Male | Female | Total |
|--------------|--------------|--------------|------------|
| Intervention | 1197 (56%) | 942 (44%) | 2139 (100) |
| Control | 1521 (58.5%) | 1083 (41.5%) | 2604 (100) |

ICD 10 Coding is done for 4743 Death Cases.

Table No 25: Leading Causes of Death in Intervention arm.

| Diagnosis | Male | Female | Total |
|-----------|------------|------------|------------|
| AMI | 250 (20.9) | 160 (17) | 410 (19.2) |
| Stroke | 148 (12.4) | 82 (8.7) | 230 (10.8) |
| COPD | 50 (4.2) | 65 (6.9) | 115 (5.4) |
| Cancer | 35 (2.9) | 44 (4.7) | 79 (3.7) |
| Other | 714 (59.6) | 591 (62.7) | 1305 (61) |
| Total | 1197 (100) | 942 (100) | 2139 (100) |

Table No 26: Leading Causes of Death in Control arm.

| Diagnosis | Male | Female | Total |
|-----------|------------|------------|-------------|
| AMI | 284 (18.7) | 200 (18.5) | 484 (18.6) |
| Stroke | 244 (16) | 126 (11.6) | 370 (14.2) |
| Cancer | 52 (3.4) | 60 (5.5) | 112 (4.3) |
| COPD | 58 (3.8) | 49 (4.5) | 107 (4.1) |
| Other | 883 (58.1) | 648 (59.8) | 1531 (58.8) |
| Total | 1521 (100) | 1083 (100) | 2604 (100) |

Figure 25: Leading Causes of Death in Intervention arm

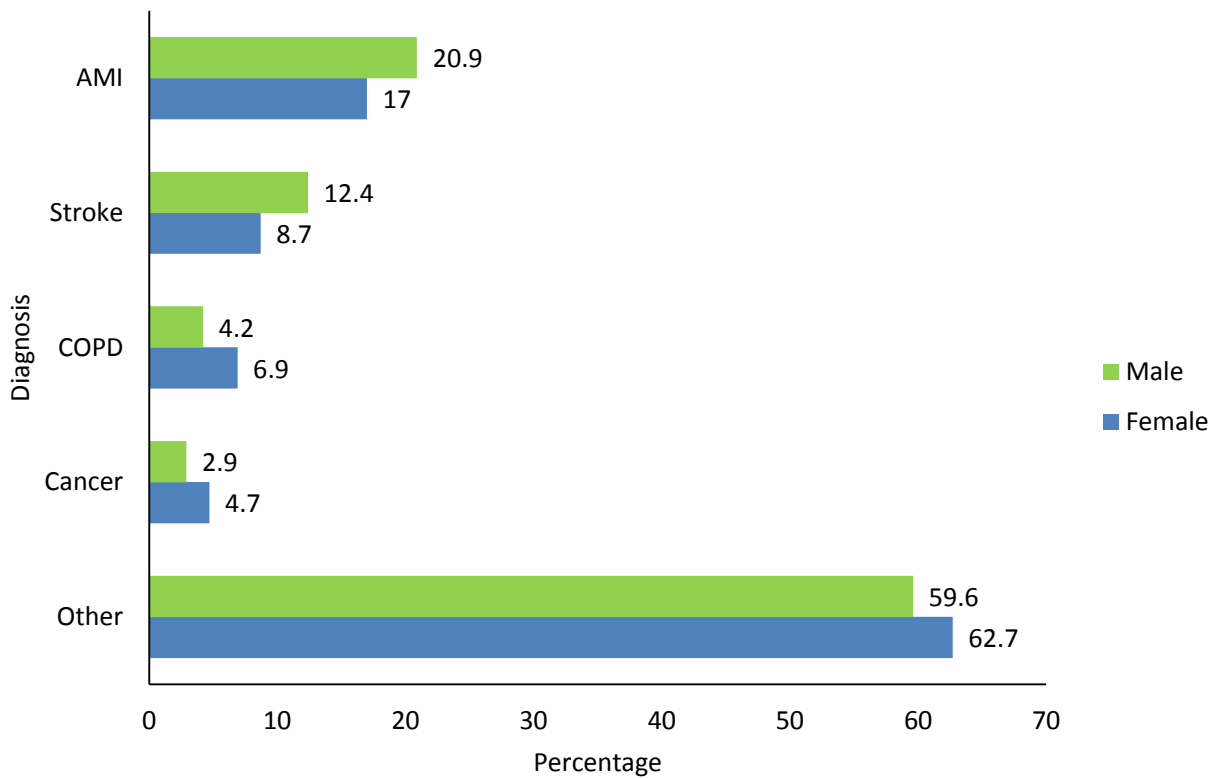
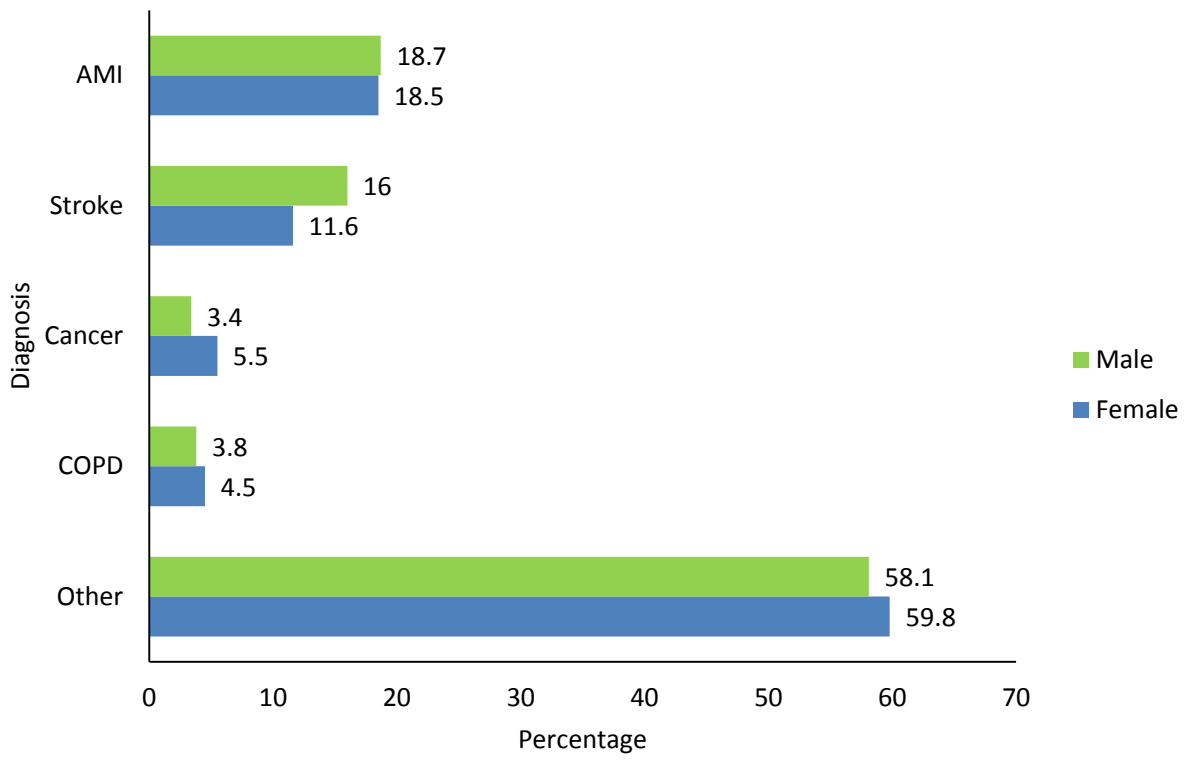


Figure 26: Leading Causes of Death in control arm



14. Project audit

DSMU conducts an external audit to monitor the project. External board members are appointed to review the project; these members review the project work, quality of work, documentations, events of project, data, etc. Comments are given in audit reports by the board members who summarize the project objectives & methodology and mention the points to be reviewed and verified. Measures are taken later by project PI and Co-PI to clarify those comments given by external board member in audit.

Table 26: Details of data monitoring

| Sr. No. | Date of monitoring | Monitored by | Designation |
|---------|----------------------------|------------------------|--|
| 1 | 16 th Feb 2015 | Dr. Gouri Pantvaidya | Assistant Professor and Assistant Surgeon of Head and Neck Service, Surgical Oncology, TMH, Mumbai |
| | | Dr. Gauravi Mishra | Assistant Professor and Assistant Physician, Preventive Oncology, TMH, Mumbai |
| 2 | 30 th July 2019 | Dr. Yogeshwar Kalkonde | Team Lead, Rural NCD Research Programme, SEARCH, Gadchiroli |
| | | Dr. Shivkumar | Head and Neck Surgeon, TMH, Mumbai |
| | | Dr. Rahul Gajbhiye | Department of Clinical Research, ICMR-NIRRH, Mumbai |

External Audit



Dr. Yogeshwar Kalkonde and Dr. Rahul Gajbhiye auditing the project

Actions taken as per the audit reports:

- Increased staff for completing survey and screening work as quick as possible.
- Increased staff for completion of data entry.
- Daily data entry verification.
- Code book was created for definition of each question asked in forms.
- Demographic data of both arms were tabulated to check whether any baseline imbalances exist or not.
- Second round screening was speeded up
- Data entry was speeded up
- 2% of randomly selected household were independently visited by the field supervisors to ensure quality of work done.
- Re-screening of 2% of household was performed in order to ensure the accuracy of data filled by health workers.
- To improve data entry accuracy, cross-checking was done by selecting random sample of screening with the entered data in the database.
- Verified if there are any changes in risk factors of oral cancer death patients.
- Patients receiving oral cancer treatment at different facilities were followed up to see the effect of place of treatment on cancer mortality.
- Statistical analysis plan was prepared as per the recommendation.

15. Challenges in executing screening project

“Success is to be measured not so much by the position that one has reached in life as by the obstacles which he has overcome.” – Booker T. Washington.

We have to overcome many hurdles and obstacles which lie on the path of the project work. These hurdles and obstacles impact project work and result in delay and incompleteness of work. These hurdles can be widely categorized as

- a) Administrative hurdles
- b) Commuting through villages
- c) Manual work process of survey
- d) Maintenance of files
- e) Patient treatment completion
- f) Patient refusal for treatment
- g) Interrupted power supply
- h) Interrupted internet services
- i) Accommodation issues
- j) Maintenance of computers and other electronics
- k) Restrictions from people regarding survey

However, such challenges did not affect the progress of the project and extra efforts were taken by the staff in order to overcome these hurdles. Each hurdle is explained further.

a) Administrative hurdles

In order to conduct and manage survey and screening process, patient treatment, accommodation of staff, staff salary, maintenance of project assets, etc., we need timely approvals, sanctions and finance. There were situations where the need for such approvals, sanctions and finance were not met on the required time due to administrative hurdles which led to delay of project work. These hurdles are caused due to

- ❖ Prolonged process of approvals
- ❖ Certain constraints and limitations that cannot be applied on site
- ❖ Salary issues of site staff

b) Commuting through villages

The majority of villages in Ratnagiri district are situated in a hilly area where vehicles cannot be reached and to reach such villages only option is walking. Project staff has to carry all the survey and screening required materials and travel to the particular village. Vehicle can only make it to the region where road exists there after we have to walk to reach the village. Some villages are 4-5 kms away from nearest road which includes steep climbing of mountains and crossing small rivers



Project staff traveling to remote villages for the survey

c) Manual work process of survey

In survey, we have to visit each house of a village and take interview of individuals present in the house. We also have to conduct screening after completion of survey on the same day. This whole process is carried out manually with the help of forms and files, no electronic media device is used to maintain and conduct survey & screening data. This manual process of maintaining survey and screening data is very time consuming and tedious job. Also, staffs have to carry these forms, files along with the screening materials.



Form filling of participants by project staff

d) Maintenance of files

There are large numbers of files which are stored at Dervan office, ACTREC office and at each site office. Maintenance, tracking, handling and shifting of these files is a very difficult task. Special separate room at each office (Site, ACTREC and Dervan offices) is allocated to store these file. It is recommended that large intervention trial should have database and should be stored in computer rather than manual working.



File room at CCE-ACTREC and BKLW Hospital office, Dervan

e) Patient treatment completion

Patient treatment gets delayed as the required date of admission, test, surgery, operation are continuously delayed by the hospital. One of the factors for the delay is the burden of a high number of cancer patients in TMH. Unavailability of water supply in hospital led to delay in operation. Such delay affects patients' health condition and increases the severity of cancer. Also, many a times patient's relative deny for the treatment.



Patients and their relatives staying on footpath outside TMH, Parel

f) Patient refusal for treatment

Screen positive and malignant patients do not cooperate in treatment process. Malignant patients who need treatment on urgent basis deny treatment provided by the project which is completely free. Major reasons for refusal of treatment are social insecurity and fear of rejection by surrounding people and society, other reason is non-cooperation by patient's relatives in order to stay with patient during the whole process of treatment. This directly affects on the results of the project. Due to treatment incompleteness, survival of cancer patients reduces which affects the incidence and mortality rate.

g) Interrupted power supply

Ratnagiri, being a rural area, there are frequent electric power cuts due to which no electronic machine can be used. Data entry and other office work get delayed because it is completely dependent on electric power supply.

h) Interrupted internet services

Mobile network availability is interrupted and is available only in specific areas. Also, there is no internet broadband services provider at some sites. Hence, sharing of files from office to site cannot be done quickly. One has to transfer the files from computer to mobile and then mail the file from mobile when reached to an area where network is available.

i) Accommodation issues

In order to conduct survey and screening on different villages and tehsils, we have to search office space and accommodation for site staff. Getting office room and accommodation for males and females is not so easy task. As stay at a respective site is not permanent and varies from 6 months to 1 year, landlord denies our request of accommodation. Also many landlord demands deposit amounts, electric bill payment and other amounts in order to be tenant, these conditions does not comes under rules and regulations provided by our Administrative Dept. Hence, room selection becomes difficult as we cannot accept landlord's conditions.

j) Maintenance of computers and other electronics

Service centres and repairing stores are rare to find in such rural areas. In order to repair, replace, or buy any electronic device, we have to travel to an urban area like Ratnagiri City or Mumbai because of unavailability of stores and service centres. It is not feasible to travel at these cities just for repairing hence we have to wait and this affects the project work.

k) Restrictions from peoples regarding survey

Due to political reasons or because of some other reasons, we are not allowed to conduct survey and screening in some regions. Survey and screening have not been conducted in cluster Rajapur – I, due to local peoples who are opposing Jaitapur nuclear power plant as Jaitapur region lies under Rajapur – I cluster.



Protestors opposing the Jaitapur nuclear power plant

16. Project staff training

The need for training arises due to advancement in technology, need for getting better performance or as part of professional development. Benefits of training are intangible and investing in training benefits both organization and employees for a long period. Training enhances a worker level of skills.

To learn project related new technology and techniques, project staff were asked to join multiple courses. Moreover, as a part of the quality improvement of the project, an intensive training was provided to the health workers on a regular basis. Following are the courses:

1. Training at Preventive Oncology Department

All the health workers were regularly trained and re-trained at the preventive oncology department, TMH under the guidance of Dr. Sharmila Pimple – Professor, Preventive oncology department.

2. Cancer Registry Course

To update the skill of staff, 3 staff were deputed to attend Cancer Registry Course held at CCE-ACTREC mainly to improve understanding of oral cancer registry work. Oral Cancer Registry has been established in Ratnagiri where cancer cases are stored in software CanReg5. Our staffs are now trained in cancer cases registration process with knowledge of ICD coding.

| | |
|------------------------------|--|
| Course venue | Centre for Cancer Epidemiology, ACTREC, Kharghar, Navi Mumbai |
| Course held on | 16 th December to 21 st December 2019 |
| Staff attended course | 1. Mr. Prathmesh Darves 2. Dr. Barkha Tiwari 3. Dr. Priyal Chakravarti |

3. PubMed Training

PubMed is a free search engine accessing primarily the MEDLINE database of references and abstracts on life sciences and biomedical topics. PubMed training was conducted at Tata Memorial Hospital, Parel where training was given on how to use the basic and advanced functionality in PubMed. Two staff attended the training learned the use of PubMed and gained understanding of literature search.

| | |
|------------------------------|--|
| Course venue | Choksi Auditorium, Tata Memorial Hospital, Parel, Mumbai |
| Course held on | December 2018 |
| Staff attended course | 1. Mr Pratik Sawant, Programmer & Asst. Data Manager 2. Mr Arpit Singh, Research Fellow (Non-Medical) |

4. Verbal Autopsy Training

Training for verbal autopsy was organized by Society for Education, Action and Research in Community Health (SEARCH) at Gadchiroli, Maharashtra.

| | |
|------------------------------|--|
| Course venue | Society for Education, Action and Research in Community Health (SEARCH) at Gadchiroli, Maharashtra |
| Course held on | December 2016 |
| Staff attended course | <ol style="list-style-type: none"> 1. Dr. Suralkar, Medical Officer 2. Dr. Samidha, Medical Officer 3. Miss. Seema Pange, Project Co-ordinator 4. Miss. Vinaya More, Female Health Worker 5. Miss. Savita Rade, Female Health Worker 6. Mr. Dhiraj Dhule, Male Health Worker |

All the medical officers and health workers of the project attended the training. This training helped our staff to understand different scenarios and techniques used at different regions to grab the important information through communication by asking different types of question. Medical officer also attended the ICD coding course.

5. Good Clinical Practice (GCP) Training

Good Clinical Practice (GCP) training was held at ACTREC. GCP is an international ethical and scientific quality standard for the performance of a clinical trial on medicinal products involving humans. Staff attended the training are known to the standards and steps that to be followed during different scenarios and situations while taking verbal autopsies.

| | |
|------------------------------|---|
| Course venue | Tata Memorial Centre, Mumbai |
| Course held on | 17 th November 2018 |
| Staff attended course | <ol style="list-style-type: none"> 1. Dr. Shradda Raut, Medical officer 2. Dr Rohini Shinde, Medical officer 3. Miss. Seema Pange, Project Assistant 4. Mr. Arpit Singh, Research Fellow (Non-Medical) 5. Mr Anil Londhe, Medical Social Worker 6. Mr. Sameer Mhadaye, Jr. Medical Social Worker 7. Mrs. Vinaya More, Female Health Worker |

| | |
|------------------------------|---|
| Course venue | Khanolkar Shodhika, ACTREC, Kharghar, Navi Mumbai |
| Course held on | 26 th February 2019 |
| Staff attended course | <ol style="list-style-type: none"> 1. Mr. Prathmesh Darves, Asst. Statistician 2. Mrs. Pallavi Mulik, Programmer 3. Mr. Pratik Sawant, Programmer & Asst. Data Manager |

6. Computational Biostatistics and Survival Analysis Workshop

Computational Biostatistics and Survival Analysis workshop was organized and held at Section of Biostatistics, CCE, ACTREC, TMC where training was given on how to use R software.

| | |
|------------------------------|---|
| Course venue | CCE, ACTREC, Kharghar, Navi Mumbai |
| Course held on | 23 rd & 24 th December 2019 |
| Staff attended course | 1. Mr. Prathmesh Darves, Asst. Statistician |

17. Presentations in various conference

Table no. 27: Poster presentation attended by the project staff

| Poster Presentations | | | | | | |
|----------------------|--|---|---------------------------------|---------------------------------|--|--|
| Sr. No. | Name of the Conference | Topic | Date of the Conference | | Place | Presented By |
| | | | To | From | | |
| 1 | GAP 2014 | Oral Cancer screening– a preliminary report of a cluster randomized trial in rural India | 1 st May, 2014 | 3 rd May, 2014 | Grand Hilton Seoul hotel, Seoul, Korea. | Dr. Snehal Shah |
| 2 | IACR 2015 | Quality Control in Oral Cancer Screening Trial In Rural India | 7th October 2015 | 10th October 2015 | Hotel Taj Mahal Palace , Mumbai | Dr. Snehal Shah |
| 3 | Scientific Symposium "Frontiers In Epidemiology" | Oesophageal Cancer Screening with Double Contrast Barium Swallow (DCBS) in Rural area of Ratnagiri District, Maharashtra, India | 6th March 2017 | 7th March 2017 | Choksi Auditorium TMH Parel, Mumbai And Main Auditorium ACTREC Kharghar, Navi Mumbai | Dr. Abhijeet D. Sawant |
| 4 | Scientific Symposium "Frontiers In Epidemiology" | Oral Cancer Screening in Rural area of Ratnagiri District, Maharashtra, India | 6th March 2017 | 7th March 2017 | Choksi Auditorium TMH Parel, Mumbai And Main Auditorium ACTREC Kharghar, Navi Mumbai | Dr. Abhijeet Sawant, Dr. Samidha Gangan, Ms. Seema Pange |
| 5 | GAP 2017 | Oral Cancer Screening trial in Rural area of India - A cluster Randomized trial | 5th May 2017 | 11th May 2017 | MD Anderson Centre Houston, TX USA | Dr. Abhijeet D. Sawant |

Dr Snehal Shah presented a poster on ‘Quality Control in Oral Cancer Screening Trial In Rural India’ in IACR 2015 organised at Hotel Taj Mahal Palace, Mumbai and won the second place in poster presentation.

Dr Abhijeet D Sawant presented a poster on ‘Oral Cancer Screening trial in Rural area of India - A cluster Randomized trial’ in GAP 2017 conference held at MD Anderson Centre Houston, TX USA and won the third place.

18. National and International visitors

Other than survey and screening we also train international and national candidates who wish to learn and get trained in screening program. Following are the international and national visitors.

1) International Visitors



Ms. Elizabeth from London School of Economics with the project staff

Ms. Elizabeth from London School of Economics visited Oral Cancer Screening site Dapoli in May 2016. She was very much impressed by the hard work done by the Health Workers.



Visitors from NCI, US and Tata Trust with the project staff



Ms. Krisha Patel from Yale School of Public Health, USA visited Oral Cancer Screening Site Guhagar in July 2017. Her main objective was learning the application of Screening Principles, data collection methods and to observe the oral cancer screening programme



Dr. Chaitali, Dr. Mausam and Ms. Chaitrali with project staff

As a part of fellowship training program, two research fellows from the College of Public Health and Social Justice, Saint Louis University, USA and one from Manipal Academy of Higher Education completed their two months internship from June 2018 to August 2018 with the aim of learning epidemiological concepts and planning and monitoring screening program under the guidance of Dr Atul Budukh. During their internship, they visited Ratnagiri District to learn screening program practically.

2) National visitors

Ms Arfa Vasim Aowte, an engineering student (specialization in Information Technology) of Finolex Academy of Management and Technology, Ratnagiri completed her internship under the guidance of Dr Atul Budukh (from 7th June 2019 to 15th June 2019). During the internship, Ms Arfa learnt key concepts of epidemiology, screening procedures, and also about the software that were used in cancer screening program. Under the guidance of the programmer of project, she also developed screening software as a part of her internship.

3) Visit by TMC key persons



Mr. Anil Sathe (CAO, TMC, Mumbai) and Mr. Suryakant Mohapatra (JCFA, TMC, Mumbai) felicitated by village chiefs during project site visit

19. Publication

- During oral cancer screening project, several school awareness programs were conducted in the schools of Ratnagiri district to raise awareness of harmful effect of tobacco and its role in developing oral cancer and importance of healthy diet.

A publication on ‘Tobacco and cancer awareness programme among school children in rural areas of Ratnagiri district of Maharashtra state in India’ has been accepted in the Indian Journal of Cancer.

20. Impact of COVID-19 on the screening trial

- The project has been severely affected by COVID-19 pandemic. Both field and office work have been interrupted.
- For the first few months (March 2020- May 2020), a nationwide lockdown was imposed by the government, allowing only work from home. The second round of the screening trial was planned to complete in the first week of April, 2020. Because of the lockdown, it has been delayed.
- Even though there was an ease in the lockdown restriction after May 2020, only 10% of staff were allowed.
- Restriction on public transport caused difficulties for the project staff to travel to the office and/or to the project site. Moreover, in the time of pandemic most of the staff were not willing to travel for work due fear and anxiety.
- The data entry work has also been greatly affected and been delayed. Staff were unable to work efficiently from their home due to insufficient recourses and also could not travel to the field/office place due to restriction on commute.
- Network interruption and other technical difficulties due to which data transfer and communication was affected.
- Field work has been completely stopped due to restriction on community-based trials. Field staff have been assigned to data entry and data checking work.
- The overall work of the project has been delayed.

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22. Acknowledgement

We are thankful to the Department of Atomic Energy, Government of India for the financial support. We gratefully acknowledge the support given by Ratnagiri District Collector and Magistrate, all the Medical Officers of Primary Health Centre, school teachers and village leaders.

We would like to acknowledge the following dignitaries for their inputs, and assistance in facilitating the project.

Tata Memorial Hospital, Mumbai

Mr. Sanjeev Sood – Director
Administration (Project)
Dr Pankaj Chaturvedi, Dy Director, CCE-
TMC
Mr. Anil Sathe, CAO – TMC
Mr. Suryakant Mohapatra, JCFA – TMC
Mr. T Anbumani – Project Counsultant
Mr. Vijendra Tiwari, DCA
Mr. Benny George, HRD Officer
Mr. Chandrakant Shetty, Jr AO
Mrs. Anagha Kadam, AAO
Mr. Johnson Lukose, Security Officer
Mr. VN Marathe, IT Head,
Department of IT
Mrs. Varsha Patil, Stenographer – TMH

Advanced Centre for Treatment, Research and Education in Cancer, Kharghar, Navi Mumbai

Dr. Sudeep Gupta, Director
Dr. HKV Narayan, Dy. Director
Dr. Navin Khattry, Dy. Director, CRC
Dr. Prasanna Venkatraman, Dy Director,
CRI
Mr. Umesh Kumar V. Mote – Sr. AO
Mrs. Anuradha Narayanan – DCA
Mr. Prasad Kanwinde – OIC, IT
Department
Mr. Anand Jadhav – Scientific Officer - IT
Department
Department of IT
Mrs. Bhagyashree Tillu, Medical Social
Worker

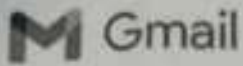
Bhaktshreshtha Kamalakarpanth

Laxman Walawalkar Hospital, Dervan, Ratnagiri, Maharashtra

Shree Kaka Maharaj - Chief Trustee
Mr. Vikasrao Walawalkar - Managing
Trustee
Dr Abhay Desai - General Surgeon ,
Mr. Prafull Godabole - Administrative
Officer ,
Mr. Milind Yashwantrao, Admin/Account
Officer

Centre for Cancer Epidemiology, Kharghar, Navi Mumbai

Mrs. Kusum Pednekar – Jr. PO
Mr. Tukaram H Medar – AAO
Mr. Suryakant Shedde- Asst Accts Officer



ravikiran kamate <ravikiranpadmakar@gmail.com>

invitation for lecture

Asawari Modak <asawarimodak30@gmail.com>

Mon, Dec 6, 2021 at 12:05 PM

To: atul.budukh@gmail.com, "Dr. Suvama Patil" <director.bklwmc@gmail.com>, ravikiran kamate <ravikiranpadmakar@gmail.com>

Respected Sir,

We are honored to invite you as a guest lecture for our interns and medical students.

Topics-

- 1) Cancer Registry & Awareness
- 2) Cancer Control Programme by TMH

Date -7/12/2021

Time -9.00am

Venu -

B.K.L.Walawalkar Rural Medical College

Lecture Hall No-1

Regards & Thanks

Dr Asawari Modak

8446377515

BKL WALAWALKAR RURAL MEDICAL COLLEGE, SAWARDE



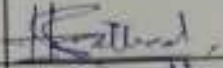





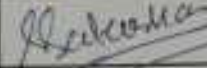
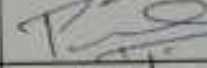

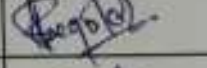
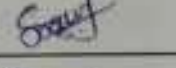
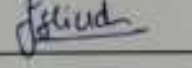
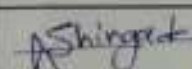


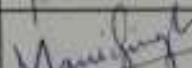

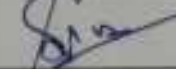
Dept. of Community Medicine





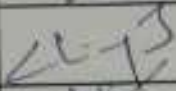

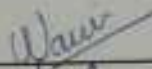
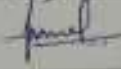

Guest Lecture - Cancer Control Programme

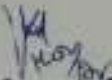
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| Sr. No. | Roll No | Name of the students | Signature |
|---------|---------|--------------------------|-----------|
| 1 | 16046 | KUKYAN DARSHAN J. | |
| 2 | 16047 | KULKARNI GAURI UMASHEKAR | |
| 3 | 16048 | KUTE AKASH DATTATRAY | |
| 4 | 16049 | MAHADKAR PANKAJ UTTAM | |
| 5 | 16050 | MAKANI PALLAV KIRIT | |
| 6 | 16051 | MALHAR ANAND MURANJAN | |
| 7 | 16052 | MASKE RUTUJA VIKAS | |
| 8 | 16053 | MAYEKAR TRUSHNA AJIT | |
| 9 | 16054 | MIRAJKAR AJINKYA DEEPAK | |
| 10 | 16055 | MOGAL SNEHAL SURESH | |
| 11 | 16056 | NADAR ROHIT THANGADURAI | |
| 12 | 16057 | NATHE PANKAJ C. | |
| 13 | 16058 | NICHAT DARSHAN SANJAY | |
| 14 | 16059 | PACHINDRE RUSHIKESH ANIL | |
| 15 | 16060 | PARULEKAR RIDDHI P. | |
| 16 | 16061 | PATHAK SALONI SUNIL | |
| 17 | 16062 | PATIL SAURABH SHAHAJI | |
| 18 | 16063 | PENDHARKAR NIKHIL | |
| 19 | 16064 | PHADTARE GAUTAMI VILAS | |

Absent for Nos 21, 22, 36, 43, 44, 48 + 50
(Total 7)

| | | | |
|----|-------|--------------------------|--|
| 20 | 16065 | RAHATGAONKAR NIVEDITA M. |  |
| 21 | 16066 | RAJPUT KUNAL RAJENDRA | — |
| 22 | 16067 | RAMBADE TANMAYI MAHESH | — |
| 23 | 16068 | RANE DEVESH DILIP |  |
| 24 | 16069 | RATHOD HIMANSHU S. |  |
| 25 | 16070 | SALUNKHE SARTHAK PRAVIN |  |
| 26 | 16071 | SALVE SAGAR MADHUKAR |  |
| 27 | 16072 | SALVI MANASI VISHAL |  |
| 28 | 16073 | SANAP PANKAJ VISHNU |  |
| 29 | 16074 | SANKHOLKAR CHARVI |  |
| 30 | 16075 | SATARKAR SAMITA MANOJ |  |
| 31 | 16076 | SAWANT PRATHAMESH S. |  |
| 32 | 16077 | SHAH KAJOL KALPESH |  |
| 33 | 16078 | SHEGOKAR AJINKYA |  |
| 34 | 16079 | SHET RAHIL HARESH |  |
| 35 | 16080 | SHINDE PRATHAMESH S. |  |
| 36 | 16081 | SHINDE VIGHNESH VIJAY | — |
| 37 | 16082 | SHINGADE VISHAL BABASO |  |
| 38 | 16083 | SHIRSHETTY ARNAV YASHAYA |  |
| 39 | 16084 | SINGH ARTI PRAMOD |  |
| 40 | 16085 | SINGH MANSI |  |
| 41 | 16086 | SINGH PIYUSH RAJESH |  |
| 42 | 16087 | SINGH SATYAM RAMESH |  |
| 43 | 16088 | SONAWANE PRIYANKA M. | — |
| 44 | 16089 | SUBHEDAR SHRAVANI BIPIN | — |

| | | | |
|----|-------|-------------------------|---|
| 45 | 16090 | SURANGIWALA BUSHRA S. |  |
| 46 | 16091 | SURVE SAURABH R. |  |
| 47 | 16092 | THAKRE YOGESH GANPATRAO |  |
| 48 | 16093 | THORAT RIYA | — |
| 49 | 16094 | TIRODKAR AAKASH G. |  |
| 50 | 16095 | TIRODKAR BHAKTI RAJAN | — |
| 51 | 16096 | TORNE CHINMAY SAMAR |  |
| 52 | 16097 | WAGH SHEFALI DEEPAK |  |
| 53 | 16098 | WAMIKA RAVINDRANATH |  |
| 54 | 16099 | YENDE MRUNAL PRASHANT |  |
| 55 | 16100 | ZANWAR AKASH P. |  |


Professor & Head
 07/12/2021
Department Of Community Medicine

Shri Vithalrao Joshi Charities Trust's

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



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Website : www.walawalkarmedicalcollege.com

To

Date – 7/12/2021

Dr Atul Budukh,

Professor Epidemiology

Center for Cancer Epidemiology

Mumbai

Respected Sir,

On behalf of the Principal, staff and Interns of the college we would like to thank you for the informative lecture and the valuable time you spent in our college .

Once again thank you very much from faculty of the Department of Community Medicine.

Regards and Thank you

Dr N/K Sharma

HOD , Community Medicine Dept

BKL Walawalkar Rural Medical College

Dervan

**Dr. Atul Budukh, Guest Lecture on Cancer Control Programme
by TMH On 7/12/2021**



Dr. Shripad Banavali

Director – Academics: Tata Memorial Center

Professor, Dept. of Medical & Pediatric Oncology
Coordinator, TMC-Rural Outreach Programme
Ex-Convener, Pediatric Hemato-Lymphoid DMG
Tata Memorial Center. Parel, Mumbai 400 012.
Convener, Board of Studies (Health Sciences) of
Homi Bhabha National Institute
Chairman, Indian Pediatric Oncology Group



Date: 30/03/2021 Tuesday Time: 9 to 10 AM

Venue: B.K.L.W.R.M.C.

Topics: Hallmarks of cancer,


Acute leukemia

First MBBS, second MBBS, faculties, PG Students are requested to attend the talk.




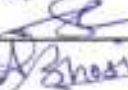
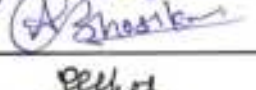



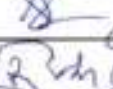
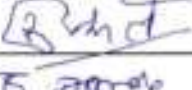
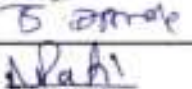


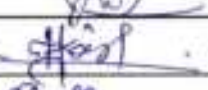



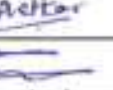


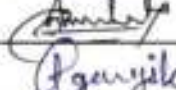
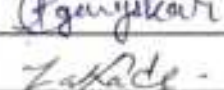
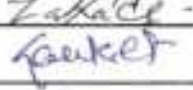
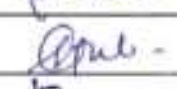
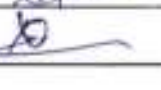

A handwritten signature in blue ink, appearing to read 'Suvarna Patil', written in a cursive style.

**Dr. Suvarna Patil
Medical Director**


B.K.L.Walawalkar Rural Medical College & Hospital, Sawarde
DEPARTMENT OF General Surgery

| | | |
|-----------------------------|------------------------|---|
| Date - 30.03.2021 | Speaker | Signature |
| Topic - Hallmarks of Cancer | Dr. Shripad Banavali - |  |



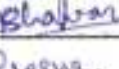
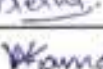
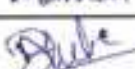

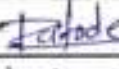
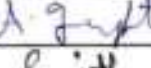
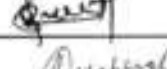


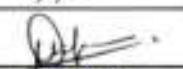

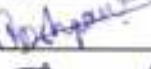

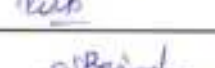
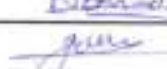

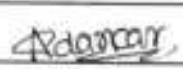
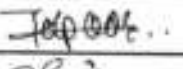
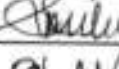
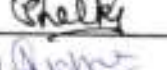



Attendance

| SrNo | Name of the Students | Designation | Signature |
|------|-------------------------|-----------------------|---|
| 1 | DR. KHUSHBOO P. VOTAVA | JRI ↓ SURGERY |  |
| 2 | DR. NIKHIL JADAV | JRI ↓ Radiology |  |
| 3 | Dr. Shivakumar N. Yadav | JRI ↓ Anaesthesia |  |
| 4 | Dr. Sameer Kadam | Faculty (Pathology) |  |
| 5 | Dr. Abhijeet Bhusiker | JRI Gen. Med |  |
| 6 | Dr. Prateek Shete | JRI Pathology |  |
| 7 | Dr. Saurabh Lakade | JRI Anaesth |  |
| 8 | Dr. Chandresh Chaudhary | JRI radiology |  |
| 9 | Dr. Smriti Sharma | JRI Med |  |
| 10 | Dr. Jitendra Desale | JRI Inmed |  |
| 11 | Dr. Pavan Deshpande | JRI Anaesthesia |  |
| 12 | Dr. Neha Patil | JRI Pathology |  |
| 13 | Dr. Harman Memun | JRI ↓ medicine |  |
| 14 | Dr. Abhishek Nanyar | JRI Inmed |  |
| 15 | Dr. Kailash Gidi | JRI-II + medicine |  |
| 16 | Dr. Pradnya Bhise | JRI Pathology |  |
| 17 | Dr. Sachin Sechar | JRI Inmed |  |
| 18 | Dr. Gurusdev M. Swami | JRI ↓ patho |  |
| 19 | Dr. Nivedita S. Kettar | Faculty PSM |  |
| 20 | Dr. Ratan Rajwade | JRI ↓ Surgery |  |
| 21 | Nishant Tewade | 2nd MBBS |  |
| 22 | Tanmay Gangikar | MBBS-II |  |
| 23 | Ashutosh Lakade | II nd MBBS |  |
| 24 | Santosh Chmali | II MBBS |  |
| 25 | Shub Gulgi | II MBBS |  |
| 26 | Aarushi Agavekar | II MBBS |  |

B.K.L.Walawalkar Rural Medical College & Hospital, Sawarde
DEPARTMENT OF General Surgery

| | | |
|-----------------------------|------------------------|---|
| Date - 30.03.2021 | Speaker | Signature |
| Topic - Hallmarks of Cancer | Dr. Shripad Banavali - |  |

Attendance

| SrNo | Name of the Students | Designation | Signature |
|------|----------------------|---------------------------|---|
| 27 | Divya Chikhalkar | BPTH II nd yr. |  |
| 28 | Madhura L. Gawas. | BPTH II yr |  |
| 29 | Sanidhi J. Bhavai | 2nd M.B.B.S. |  |
| 30 | Prerna M. Murkute | 2nd MBBS |  |
| 31 | Vaishnavi Kamdi | 2nd MBBS |  |
| 32 | Ankita Dhule | 2nd MBBS |  |
| 33 | Gaurav Kile | 2nd MBBS |  |
| 34 | Pallavi Dohode | 1st MBBS |  |
| 35 | ARUSH GUPTA | 2nd MBBS |  |
| 36 | Aakanksha Shirsath | 2nd MBBS |  |
| 37 | Aditi Nakhate | 1st MBBS |  |
| 38 | Vaishnavi Kadam | 1st MBBS |  |
| 39 | Angha wagh | 1st MBBS |  |
| 40 | Deepika Padavala | 2nd MBBS |  |
| 41 | Jahnavi N Patil | 2nd MBBS |  |
| 42 | Vaidehi G. Deshpande | 2nd MBBS |  |
| 43 | Bhawini Dhole | 2nd MBBS |  |
| 44 | Rohit Pawde | 2nd MBBS |  |
| 45 | Neta Bawwal | 2nd MBBS |  |
| 46 | Gaurav Patil | 2nd MBBS |  |
| 47 | Suabhi Kumar | 1st MBBS |  |
| 48 | Ankita Adarkar | 1st MBBS |  |
| 49 | Tanishkour Kapoor | 1st MBBS |  |
| 50 | Shruti Thote | 1st MBBS |  |
| 51 | Shreaddha Shelke | 2nd MBBS |  |
| 52 | Jyotina Vekha | 2nd MBBS | |

B.K.L.Walawalkar Rural Medical College & Hospital, Sawarde
DEPARTMENT OF General Surgery

Date - 30.03.2021

Speaker

Signature

Topic - Hallmarks of Cancer


Dr. Shripad Banavali -



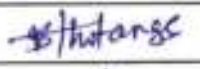

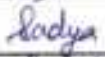



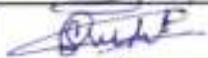


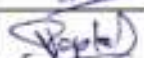
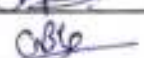
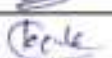
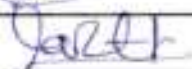

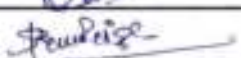

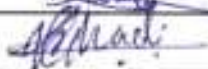


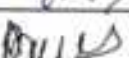

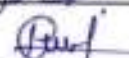
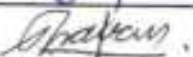

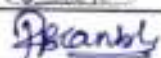
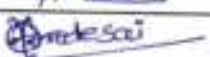
Attendance

| SrNo | Name of the Students | Designation | Signature |
|------|----------------------|--|---------------------|
| 53 | Sakshi Suresh Kault | ^{year} I st B.PTh | Sakshi |
| 54 | Apurva Milind Kadam | BPTH P.Y | Kadam |
| 55 | Vaibhav Ramesh Wagh | MBBS II nd | Wagh |
| 56 | Shripad N. Morewar | MBBS II nd year | Morewar |
| 57 | Pravin Maddewad | MBBS II nd year | Pravin |
| 58 | Vatsal Bhalodi | MBBS II nd year | V.Bhalodi |
| 59 | Smitoj Butore | II nd MBBS | Butore |
| 60 | Rushikesh Ghalipkar | I st BPTH | Rushi |
| 61 | Maulik Shah | II BPTH | Shah |
| 62 | Riya Zohre | I st BPTH | Riya |
| 63 | Aishwarya Maumkar | I st BPTH | Maumkar |
| 64 | Saloni Vengutekar | I st BPTH | Saloni |
| 65 | Swastika S. Gujar | I st BPTH | Swastika |
| 66 | Tanvi K. Khedekar | I st BPTH | Khedekar |
| 67 | Neha S. Bambade | I st BPTH | Neha |
| 68 | Madiba M. Babhe | I st BPTH | Babhe |
| 69 | Durga B. Shinale | I st BPTH | Durga |
| 70 | Alisha S. Memon | I st BPTH | Alisha |
| 71 | Sanskriti K. Jadhav | I st MBBS | Jadhav |
| 72 | Vaishnavi B. Gite | I MBBS | Gite |
| 73 | Janhavi N. Patil | I st MBBS | Janhavi |
| 74 | Sanyukta G. Aher | I st BPTH | Sr Aher |
| 75 | Lamiya A. Shaikh | I st BPTH | Shaikh |
| 76 | Mansi R. Sonwale | I st BPTH | M.R.Sonwale |
| 77 | Tanvi S. Mallik | I st BPTH | Tanvi |
| 78 | Gmran Sawant | I st MBBS | Sawant |

B.K.L.Walawalkar Rural Medical College & Hospital, Sawarde
DEPARTMENT OF General Surgery

| | | |
|-----------------------------|----------------------|---|
| Date - 30.03.2021 | Speaker | Signature |
| Topic - Hallmarks of Cancer | Dr. Shripad Banavali |  |

Attendance

| SrNo | Name of the Students | Designation | Signature |
|------|---------------------------|-------------|---|
| 79 | Vaishnavi Thotange | 2nd MBBS |  |
| 80 | Sakshi Pote | 2nd MBBS |  |
| 81 | Jyots Sadya Kazi | 2nd MBBS |  |
| 82 | Vaidehi Mokale | 2nd MBBS |  |
| 83 | Mrunal Korde | 2nd MBBS |  |
| 84 | Chetan Sakate | 2nd MBBS |  |
| 85 | Saushli Sharma | 2nd MBBS |  |
| 86 | Shivani Khandare | 2nd MBBS |  |
| 87 | Aarja Kosame | 2nd MBBS |  |
| 88 | Vedanti Sapkal | 2nd MBBS |  |
| 89 | Geetanjali Kapse | 2nd MBBS |  |
| 90 | Brahmaspati Kale | 1st MBBS |  |
| 91 | Rajwankar Parth | 1st MBBS |  |
| 92 | Ajay Madhwar | 1st MBBS |  |
| 93 | Parag Vasave | 1st MBBS |  |
| 94 | Durvesh Gurap | 2nd BPTH |  |
| 95 | Aakash Ahadigawkar | 2nd BPTH |  |
| 96 | Satyam A. Kulkarni | II MBBS |  |
| 97 | Chimmay A. Kosabe | II MBBS |  |
| 98 | Nilesh J. Yande | I MBBS |  |
| 99 | Yogesh Narayan Bhise | I MBBS |  |
| 100 | Pankaj Pandurang Binodkar | I MBBS |  |
| 101 | SARWJEET MELIND CHAVAN | 1st MBBS |  |
| 102 | Shreyash Vijay Bhosale | I MBBS |  |
| 103 | Rohan Kamble | IInd BpTh |  |
| 104 | Ojaswini Teredesai | IInd BpTh |  |

1

B.K.L.Walawalkar Rural Medical College & Hospital, Sawarde
DEPARTMENT OF General Surgery

Date - 30.03.2021

Speaker

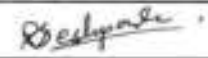
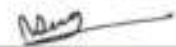





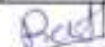
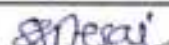
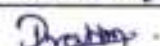


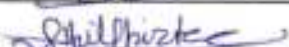


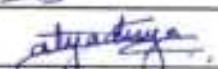
Signature

Topic - Hallmarks of Cancer

Dr. Shripad Banavali -



Attendance

| SrNo | Name of the Students | Designation | Signature |
|------|------------------------|----------------------------|---|
| 105 | Sharvasee R. Deshpande | 1 st year MBBS |  |
| 106 | Nikita Dattu Wanve | 2 nd year MBBS |  |
| 107 | Mansi Nagvekar | II nd year MBBS |  |
| 108 | Ashlesha Pawale | II nd year MBBS |  |
| 109 | Smarnika Walmuskar | II nd year MBBS |  |
| 110 | Aarushi Agrekar | II nd yr MBBS |  |
| 111 | JATIN RAUT | II nd yr BPTH |  |
| 112 | Pratham S. Parab | II yr BPTH |  |
| 113 | Shraddhesh Desai | II nd year MBBS |  |
| 114 | Pratik Apte | II nd year MBBS |  |
| 115 | Kuchekar Kartik | 1 st year BPTH |  |
| 116 | Tejas Pawar | 1 st year BPTH |  |
| 117 | Sahil Shinde | 1 st year BPTH |  |
| 118 | Sangam Bavanang | 1 st year BPTH |  |
| 119 | Rohit Sale | 1 st year BPTH |  |
| 120 | Satyadnya Ghalsasi | II nd year BPTH |  |
| 121 | | | |
| 122 | | | |
| 123 | | | |
| 124 | | | |
| 125 | | | |
| 126 | | | |
| 127 | | | |
| 128 | | | |
| 129 | | | |
| 130 | | | |



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(ISO 9001-2015 Certified)

Shreekshetra Dervan, Tal:- Chiplun, Dist.:- Ratnagiri, Pin
415606

Ph.02355-264137/264149, Fax-02355-264181

Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer

Name: Apurva Milind Kadam

Contact No: 8530935596 **Date of Lecture:** 30.03.2021

Email: apurvakadam208@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): B.PTh. F.Y.

Feedback

It was a great experience to have. It was really amazing to know that the cancers which were said to be uncontrolled can be controlled by the different physiological and Biological mechanism. It was an honour to have this session with Prof. Shripal Sir.

Signature

www.walawalkarhospital.com, info@walawalkarhospital.com



Shri Vithalrao Joshi Charities Trust's

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Shreekshetra Dervan, Tal:- Chiplun, Dist.:- Ratnagiri, Pin
415606

Ph.02355-264137/264149, Fax-02355-264181

Feed Back Form - 30.03.2021

Topic :- hallmarks of cancer.

Name: Madiha Mukhtar Bobe.

Contact No: 7387293566

Date of Lecture: 30.03.2021

Email: madihabobe@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): BPTH 1st year.

Feedback

The lecture about hallmarks of cancer was very much interesting. As now-a-days cancer has become a common disease. We have always heard that the cancerous cells are unreversible. But today we got to know the fact that they are curable.


Signature

www.walawalkarhospital.com, info@walawalkarhospital.com



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Shreekshetra Dervan, Tal:- Chiplun, Dist.:- Ratnagiri, Pin
415606

Ph.02355-264137/264149, Fax-02355-264181

Feed Back Form - 30.03.2021

Topic :- Hallmarks of cancer

Name: Neha Shridhar Bambade

Contact No: 9102103537

Date of Lecture: 30.03.2021

Email: nehabambade123@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): BPTH 1st year

Feedback

The lecture was very informative. Sir gives already much information about the cancer cell

Neha
Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer.

Name: Tanvi Kishor Khedekar

Contact No: 9370109389

Date of Lecture: 30.03.2021

Email: tanavig12003@gmail.com.

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): BPTH . 1st year .

Feedback

Lecture was very informative. It was very grateful to attend the lecture.


Signature

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Feed Back Form - 30.03.2021

Topic :- *Physiology*

Name: *Rohit Mahadev Sale*

Contact No: *8421748765*

Date of Lecture: 30.03.2021

Email: *rohitsale310@gmail.com*

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others ✓

(Specify): *BPTH*

Feedback

It was interesting information about cancer and its different types. Cancer is abnormal disease. Listening new aspect of cancer and mechanism of cancer.

Thank you

Rohit
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Feed Back Form - 30.03.2021

Topic :- *Physiology (cancer)*

Name: *Sangam Uday Ravanang*

Contact No: *7262059130*

Date of Lecture: *30.03.2021*

Email: *Sahgamravanang591@gmail.com*

Designation: *M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others* ✓

(Specify): *BPTH*

Feedback

*It was very good lecture. It was
interesting lecture about cancer
and different types.*

[Signature]
Signature

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Feed Back Form - 30.03.2021

Topic :- Physiology (cancer)

Name: Tejas Ashok Pawar

Contact No: 9359018314

Date of Lecture: 30.03.2021

Email: tejapawar195@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others ✓

(Specify): BPT

Feedback

It was a very good lecture. we
came to know to some new terms
and new concepts. It was a very
great lecture about what is cancer
actually actually


Signature



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Feed Back Form - 30.03.2021

Topic :- *Physiology (Hallmarks of Cancer)*

Name: *Sahil Shashikant Shirke*

Contact No: *9075313366*. **Date of Lecture:** *30.03.2021*

Email: *sahilshirke736@gmail.com*

Designation: *M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others*

(Specify):

Feedback

The lecture was very interesting. The way one cell is developed in cancer cell and all that stages in that growth phases are very interesting to hear. Thank you to sir who gave us lecture on cancer cells.

Sahil Shirke
Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of cancer.

Name: Kuchekar Kartik Manohar

Contact No: 7720860285 **Date of Lecture:** 30.03.2021

Email: kartik.m.kuchekar@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): B.P.T.H.

Feedback

Session is very helpful for understanding. basic cancer cell biology.

The lecture is very useful for me. I will understand all things.


Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks Of Cancer.

Name: ~~Shri~~ ~~Santanu~~ ~~Diagnosist~~ TANVI S. MALLIK.

Contact No: 7756819166

Date of Lecture: 30.03.2021

Email: ~~tanvisantanu~~ tanvi.santanu24@gmail.com.

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): BPT.

Feedback

The given every information was very interesting,
It contained all the important and descriptive knowledge.

Through this session, I can conclude that
there is a vast scope in oncology.

We, the upcoming generation can say,
"Every disease is curable, no disease is incurable!"

THANK YOU!


Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of cancer

Name: Mansi Ramesh Sonwale

Contact No: 9011811435 **Date of Lecture:** 30.03.2021

Email: mansisonwale108@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): BPT

Feedback

It is very interesting for me
It was very nice for me.
It Increase our knowlege.

M.R.Sonwale
Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer

Name: Sanyukta Gajendra Aher

Contact No: 8452808359 **Date of Lecture:** 30.03.2021

Email: sanyukta.aher1409@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): BPTth (1st year)

Feedback

It was nice and interactive session.
We got a very much interesting knowledge
about cancer and how it cause.

Sr Aher.
Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of cancer.

Name: Lamiya Aslam Shaikh.

Contact No: 9067525661 **Date of Lecture:** 30.03.2021

Email: lamiyacustom2002@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): B.P.T.H (first year)

Feedback

We got knowledge about cancer. This session was helpful for our study. It was very interesting.


Signature

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Feed Back Form - 30.03.2021

Topic :- *The Hallmarks of Cancer*

Name: *Janhavi Patil*

Contact No: *9890218388* **Date of Lecture:** *30.03.2021*

Email: *Patil jppatil9421@gmail.com.*

Designation: *M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others*
(Specify):

Feedback

*I attended the seminar and came across
hallmarks of cancer. Seminar was very
informative.*

Janhavi
Signature

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Feed Back Form - 30.03.2021

Topic :- *The Hallmarks of Cancer*

Name: *Vaishnavi Jite*

Contact No: *9552252087* **Date of Lecture:** 30.03.2021

Email: *vaishnavijite3@gmail.com*

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

This session was very informative.
I thought cancer is uncontrollable
but no, it is surely controllable.
Enjoyed the session.

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Feed Back Form - 30.03.2021

Topic :- The Hallmarks of Cancer.

Name: Sanskruti Kantilal Jadhav.

Contact No: 7498717644 **Date of Lecture:** 30.03.2021

Email: sanskrutijadhav0212@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

I got knowledge about the hallmarks of
cancer from this lecture. I learnt about
how the cancer develops at the level of
cell. Initially I thought that cancer is
uncontrollable, but today I got that it
is controllable to some extent. The
presentation
is very simplified.

Sanskruti
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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer.

Name: Pratik Tushor Apte

Contact No: 9511614951

Date of Lecture: 30.03.2021

Email: pratikapte10@gmail.com.

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify):

Feedback

Session was very helpful in understanding basic cancer cell biology. Very basic topics like apoptosis, regulatory mechanisms are covered which really helps in understanding pathology of neoplasia.

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer

Name: Dr. Sameer Kadam

Contact No: 9920852582 **Date of Lecture:** 30.03.2021

Email: sak77kadam.slk@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): Faculty (Pathology)

Feedback

One of the simplest lecture on
cancer physiology & biology. It will
definite help in our teaching to
MBS students.

Signature

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Feed Back Form - 30.03.2021

Topic :- Acute leukemia & hallmark of Cancer.

Name: Dr. Pratap Shete.

Contact No: 904908019, **Date of Lecture:** 30.03.2021

Email: pratap.shete45@gmail.com.

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

Lecture was helpful for understanding the mechanism & growth of the cancer. Sir explained the various mechanisms of cancer formations which was not known to me personally


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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer by Dr. Banawali

Name: Dr. Abhijeet Bhosikar

Contact No: 9585152680 **Date of Lecture:** 30.03.2021

Email: abhijeetmbhosikar@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): SR J Gen. Med.

Feedback

- Very informative, would love to hear & interact to Honourable Sir; more about oncology.
- Will be very kind if ppt is shared on PG WhatsApp Group. as must don't get to attend due to duties.


Signature

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Feed Back Form - 30.03.2021

Topic :- Acute leukemias & hallmarks of cancer

Name: Dr. Guninder Swami

Contact No: 7020545128

Date of Lecture: 30.03.2021

Email: guninderswami713@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify):

Feedback

Very valuable information on leukemias & hallmarks of cancer. It was very informative & interesting lecture. Thank you very much Sir.

Hope you will tend to more to us by taking more lectures


Signature

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Feed Back Form - 30.03.2021

Topic :- *Hallmarks of cancer and Acute Leukaemia*

Name: *Dr. Yada Shivakumar Velude*

Contact No: *7206558232* **Date of Lecture:** *30.03.2021*

Email: *shivamagnatron@gmail.com*

Designation: *M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others*
JRI ↓ Anaesthesia
(Specify):

Feedback

*Innovative and Informative lecture on cell cancer
physiology and pathogenesis. Looking forward
more lectures.*

Shri
SRI ↓ Anaesthesia
Signature



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Feed Back Form - 30.03.2021

Topic :- *Hallmarks of cancer*

Name: *Dr. Pavan Deshpande*

Contact No: *8600288736*

Date of Lecture: 30.03.2021

Email: *pavansd 95@gmail.com*

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): *~~MR~~ Anaesthesia (JR1)*

Feedback

- Good and important Topic, explained nicely

Signature

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Feed Back Form - 30.03.2021

Topic :- *The hallmarks of Cancer*

Name: *Vaishnavi Jite*

Contact No: *9552252087*

Date of Lecture: 30.03.2021

Email: *vaishnavijite3@gmail.com*

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

This session was very informative.
I thought cancer is uncontrollable
but no, it is surely controllable.
Enjoyed the session.

Signature

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Feed Back Form - 30.03.2021

Topic :- The Hallmarks of Cancer.

Name: Sanskruti Kantilal Jadhav.

Contact No: 7496717644 **Date of Lecture:** 30.03.2021

Email: sanskrutijadhav0212@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

I got knowledge about the hallmarks of
cancer from this lecture. I learnt about
how the cancer develops at the level of
cell. Initially I thought that cancer is
uncontrollable, but today I got that it
is controllable to some extent. The
presentation
is very simplified.

Sanskruti
Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer.

Name: Pratik Tushor Apte

Contact No: 9511614951

Date of Lecture: 30.03.2021

Email: prabkaptelo@gmail.com.

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify):

Feedback

Session was very helpful in understanding
basic cancer cell biology, to very basic
topics like apoptosis, regulatory mechanisms
are covered which really helps in understanding
pathology of neoplasia.

Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer

Name: Dr. Sameer Kadam

Contact No: 9920852582 **Date of Lecture:** 30.03.2021

Email: sak77kadam, sk@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): Faculty (Pathology)

Feedback

One of the simplest lecture on
cancer physiology & biology. It will
definite help in our teaching to
MBBS students.

Signature

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Feed Back Form - 30.03.2021

Topic :- Acute leukemia & hallmark of Cancer.

Name: Dr. Pratap Shete.

Contact No: 904908019, **Date of Lecture:** 30.03.2021

Email: pratap.shete 45@gmail.com.

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

Lecture was helpful for understanding the mechanism & growth of the cancer. Sir explained the various mechanisms of cancer formation which was not known to me personally


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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer by Dr. Banawali.

Name: Dr. Abhijet B. Bhosikar.

Contact No: 7588152680 **Date of Lecture:** 30.03.2021

Email: abhijetmbhosikar@gmail.com.

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): SRJ Gen. Med.

Feedback

- Very informative, would love to hear & interact to Honourable Sir, more about oncology.
- Will be very kind if ppt is shared on PG whatsapp group. as must don't get to attend due to duties.

Signature



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Feed Back Form - 30.03.2021

Topic :- Acute leukemias & hallmarks of cancer

Name: Dr. Guninder Swami

Contact No: 7020545128 **Date of Lecture:** 30.03.2021

Email: guninderswami713@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

Very valuable information on leukemias & hallmarks of cancer. It was very informative & interesting lecture. Thank you very much sir.

Hope you will teach more to us by taking more lectures


Signature

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Feed Back Form - 30.03.2021

Topic :- *Hall marks of cancer and Acute Leukaemia*

Name: *Dr. Yada Shivakumar Veludes*

Contact No: *7206558232* **Date of Lecture:** *30.03.2021*

Email: *shivamegnettron@gmail.com*

Designation: *M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others*
JRI & Anaesthesia
(Specify):

Feedback

*Innovative and Informative lecture on cell cancer
Angiology and pathogenesis. Looking forward
more lectures.*

Yada
JRI & Anaesthesia
Signature

Shri Vitthalrao Joshi Charities Trust's



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Feed Back Form - 30.03.2021

Topic :- Hallmarks of cancer

Name: Dr. Pavan Deshpande

Contact No: 9600288936

Date of Lecture: 30.03.2021

Email: pavansd95@gmail.com

Designation: M.B.B.S / M.D / M.S / D.N.B / D.M / M.C.H / Others

(Specify): ~~MB~~ Anaesthesia (JR₁)

Feedback

- Good and important Topic, explained nicely

Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer

Name: Dr Saurabh Lakade

Contact No: 8087256615 **Date of Lecture:** 30.03.2021

Email: dr.saurabhlakade@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): J.R. Ananth

Feedback

Elaborate. nicely explained


Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer

Name: Dr. Hannan Y. Memon

Contact No: 9428386097 **Date of Lecture:** 30.03.2021

Email: Hannan86memon@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify): F.C.P.S Medicine

Feedback

Very Informative


Signature



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Feed Back Form - 30.03.2021

Topic :- Hallmarks of cancers and Cancer Biology

Name: Dr. Nivedita Sanjay Ketkar

Contact No: 7261983168 **Date of Lecture:** 30.03.2021

Email: kettarnivedita26@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): MBBS

Feedback

lecture was very informative and will definitely
help in making concepts more clear and also will
help in PG^{entrance} preparation for sure

M. Ketkar
Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer, Acute leukaemia.

Name: Dr. Chandresh Chaudhary

Contact No: 9512061007 **Date of Lecture:** 30.03.2021

Email: cchaudhary11@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify): Junior Resident - Medicine

Feedback

Very informative lecture.


Signature

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Feed Back Form - 30.03.2021

Topic :- Tumour markers and Morphology

Name: Dr. Akash Narayane


Contact No: 9762223449 **Date of Lecture:** 30.03.2021

Email: akashnarayane6199@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify): Medicine

Feedback

Very Valuable lecture. Thanks for enlighten
and overview the basic of Cell:apoptosis
and role of ct/pt in Cancer.


Signature

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Feed Back Form - 30.03.2021

Topic :- Tumor markers & morphology (Acute leukemia)

Name: Dr. Sachin Suman

Contact No: 7798166947 **Date of Lecture:** 30.03.2021

Email: sachinsuman7@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): IR medicine

Feedback

- Very informative lecture


Signature



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Feed Back Form - 30.03.2021

Topic :- *Hallmark of Cancer, Acute Leukemia*

Name: *Dr. Smriti Sharma*

Contact No: *8554077354*

Date of Lecture: 30.03.2021

Email: *smritis543@gmail.com.*

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): *JR, & Gen. Medicine.*

Feedback

- Very Inspiring

- Very informative

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Feed Back Form - 30.03.2021

Topic :- Hallmark of cancer, Acute leukemia

Name: Dr. Pradnya Anun Bhise

Contact No: 93 2279 0230 **Date of Lecture:** 30.03.2021

Email: pradnya.bhise99@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

It was very informative & useful lecture.
It cleared the idea about leukemia
pathology & physiology.

Thank you sir for the wonderful session.


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Feed Back Form - 30.03.2021

Topic :- Hall mark of cancer, acute leukemia

Name: Dr. Neha Patil

Contact No: 9552562262

Date of Lecture: 30.03.2021

Email: nehacausiugpatil@gmail.com.

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): MD Pathology.

Feedback

Very Useful lecture, Got to know the
physiology of cancer.
Nicely explained cell cycle
& development of cancer.


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Feed Back Form - 30.03.2021

Topic :- *Hallmarks of Co. & Leukemia*

Name: *Dr. Khushboo P.V.*

Contact No: *8898876388* **Date of Lecture:** 30.03.2021

Email:

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): *JRI & Surgery*

Feedback

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer

Name: Dr. Nikhil Joshi

Contact No: 7028579896 **Date of Lecture:** 30.03.2021

Email:

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): Radiology

Feedback

Good


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Feed Back Form - 30.03.2021

Topic :- *Hallmarks of Cancer.*

Name: *Ratan Rajwanshi.*

Contact No: *7447447303* **Date of Lecture:** 30.03.2021

Email: *dr.ratan.raj.wanshi@gmail.com.*

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): *MBBS, MR, & Surgery*

Feedback

*Eye Opening Approach towards Physiology
& Pathology of Cancer.
Clinical etiology correlated well.*


Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmark of cancer.

Name: Dr. Kailash Tukaram Gite.

Contact No: - 8208137605. **Date of Lecture:** 30.03.2021

Email:- kailashgite1992@gmail.com.

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): M.B.B.S, F.C.P.S (medicine) II year.

Feedback

Very elaborate. Explained the
details of cell cycle, apoptosis,
carcinogenesis & metastasis.

Signature

Dr. II & medicine.

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Feed Back Form - 30.03.2021

Topic :- Hallmark of Cancer, Acute leukemia

Name: Dr. Shant Desale

Contact No: 9404239904 **Date of Lecture:** 30.03.2021

Email: shantdesale1234@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): (MD Gen-med JK 1)

Feedback

Very informant lecture, basic of
tumour, cell cycle, its regulation
was teach right.

Signature
Dr. Shant

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Feed Back Form - 30.03.2021

Topic :- Hallmark of Cancer

Name: Nishant V. Tawade.

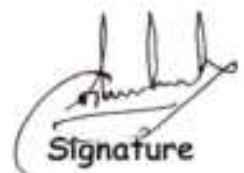
Contact No: 8552852795 Date of Lecture: 30.03.2021

Email: nishant.tawade@gmail.com.

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

It was ~~not~~ Nice session. In first
time ~~know~~ come to know that tumour
formation is not uncontrollable because
it just properly like change for existence.
I personally liked the session.
loved. It. Thank you Sir


Signature

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Topic :-

Name: Gangikar Tanmay Ghandrakant

Contact No: 9011034604

Date of Lecture: 30.03.2021

Email: tanmaygangi31@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify):

Feedback

This session of Dr. Banawale will help in the
future understanding of various types of
neoplasms. The session was good & there is
well teaching of neoplastic cell physiology.
The normal apoptotic pathway & abnormal
apoptotic pathway will help in the understanding
of normal body physiology in medicine therapy.


Signature



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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer

Name: Sujit Tanaji Gulye

Contact No: 8329022237 **Date of Lecture:** 30.03.2021

Email: sujitgulye3@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): IInd MRBS

Feedback

Good lecture. Got glimpse of Hallmarks
of Cancer. The cell cycle and Apoptosis.
Hope that there will be other lecture
also in future

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Feed Back Form - 30.03.2021

Topic :-

Name: Santket Hiralal Ekmalli

Contact No: 9604488375

Date of Lecture: 30.03.2021

Email:

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify):

Feedback

Today session was very interactive,
informative.
Very happy about lecture

Signature

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Feed Back Form - 30.03.2021

Topic :-

Name: Ashutosh Anandrao Lakade .

Contact No: 9378803059. Date of Lecture: 30.03.2021

Email: ashutoshds01@gmail.com .

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify): M.B.B.S

Feedback

It was wonderful lecture .
Beautifully explained hallmarks
of cancer .


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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer.

Name: Vaibhav Raosaheb Wagh

Contact No: 9888238809 **Date of Lecture:** 30.03.2021

Email:

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

- Nice session
- Introduce the basic of Cancer.
- got some idea how it take place & its itiology.
- Thank you.


Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer.

Name: Vatsal Bhalodi

Contact No: 7083537474 **Date of Lecture:** 30.03.2021

Email: vatsalbhalodi1234@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify): IInd yr.

Feedback

The session was great with lot of knowledge
It was great listening your lecture.


Signature



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Topic :- Hallmark of cancer

Name: Shripad Morewar

Contact No: -

Date of Lecture: 30.03.2021

Email: -

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): IInd year

Feedback

The session was great. with a lot of
knowledge. It was great listening sir's
lecture.


Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of cancer

Name: Aarushi Agavekar

Contact No:

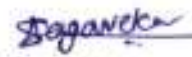
Date of Lecture: 30.03.2021

Email:

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others II MBBS
(Specify):

Feedback

The lecture was very informative & well -
demonstrated by Dr. Banavali. It will definitely
help us understand our syllabus better.


Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of cancer

Name: Nikita Dattu Wanve

Contact No: 8010517976

Date of Lecture: 30.03.2021

Email: wanvenikita2911@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

The session about cancer was very informative. I came to know much about cancer that we didn't know earlier. It was really nice experience and useful also. We wish to attend the more seminars like this. Very thankful


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Feed Back Form - 30.03.2021

Topic :- Hallmarks of cancer

Name: Sharvaree Rajendra Deshpande

Contact No: 8975304288

Date of Lecture: 30.03.2021

Email: sharvareedeshpande7@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

The session was very interesting and useful for us. Thank you so much for such an informative session. It we wish to attend more seminars like this. Thank you so much.


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Feed Back Form - 30.03.2021

Topic :- Hallmarks Of Cancer.

Name: Simran Sawant

Contact No: 7208155036 **Date of Lecture:** 30.03.2021

Email: simsaw1011@gmail.com.

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

Thank you for such an informative
session which helped us understand
the nitty-gritties of cancer at a
much deeper level. This was a much
needed lecture for us budding
medicos.

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of cancer.

Name: Rushikesh Gautam Golipkar

Contact No: 8424977483 **Date of Lecture:** 30.03.2021

Email: rushigolipkar@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify): I B P H

Feedback

There is a treasure of the cancer cell's & information about mitosis & further cell's division. I got too much information through this seminar.

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Topic :- Hallmarks of Cancer

Name: Riya Ganpat Zore

Contact No: 8007013424

Date of Lecture: 30.03.2021

Email:

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): B.P.T 1st year

Feedback

It was very good lecture. I learnt
Hallmarks of Cancer and reason of
cancer. I was really very grateful to
attend this lecture.

Riya

Signature

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Topic :- Hallmarks of cancer

Name: Aishwarya Pramod Murumkar

Contact No: 9096229607 **Date of Lecture:** 30.03.2021

Email: murumkaraishwarya22@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): B.P.T 1st year

Feedback

It was very good lecture. I learnt
cellular and subcellular mechanisms
and I also learnt hallmarks of
and reasons of cancer. I
was really very grateful to
attend this lecture.

Aishwarya
Signature



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Feed Back Form - 30.03.2021

Topic :- Hallmark of cancer

Name: Swastika . S . Gujar

Contact No: 9137638980

Date of Lecture: 30.03.2021

Email:

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): B.P.T 1st year

Feedback

It was a great lecture. really grateful
to attend the lecture. Sir explain the
complex oncology pancreatic process in
Simplex term which was really helpful
to understand.


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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer

Name: Saloni Dnyaneshwar Vengurlekar

Contact No: 9167153341 Date of Lecture: 30.03.2021

Email: saloni12vengurlekar@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others Bpth

(Specify): BPTH 1st year

Feedback

It was an interesting and knowledgeable lecture. I
came to know more about cell division and mainly
about how cancer develops and types. It was
really necessary at begin to clear new topic in
syllabus as maam told. It was worth and I am
really grateful to attend today's lecture. Thank
you sir and maam for arranging it

Saloni
Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmark of cancer.

Name: Duvvish G. Gurap

Contact No: 8659032800

Date of Lecture: 30.03.2021

Email: duvveshgurap@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): I B PTH

Feedback

The lecture was very good & helpful.

I came to know more about
cancer & it can be controlled.

I loved it. very nice & ~~the~~ good

Thank you

D. Gurap
Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer .

Name: JATIN RAUT

Contact No: 7506433406

Date of Lecture: 30.03.2021

Email: jatindraut23@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others ✓

(Specify): II BPTM.

Feedback

Yes, indeed it was a nice presentation
which highlighted the importants of cancer.

Thank You

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of cancer

Name: Pratham S Parab

Contact No: 9324871190

Date of Lecture: 30.03.2021

Email: Prathamparab2001@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): II Bpt B.P.Th

Feedback

Good, It was a nice presentation
sir didnt miss any points

~~Thank you~~ Thank you

Prath

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Feed Back Form - 30.03.2021

Topic :- Hallmark of cancer

Name: Maulik Shah

Contact No: 7045544664 **Date of Lecture:** 30.03.2021

Email: shahmaulik232@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): II BPTA

Feedback

Pathogenesis of Cancer and the
physiology of cell was learnt. There
were new concepts known. The
lecture was knowledgeable.

Thank you

Shah
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Feed Back Form - 30.03.2021

Topic :- Hallmarks of cancer.

Name: Ojaswini Teredesai

Contact No: 9309995077 **Date of Lecture:** 30.03.2021

Email: ojaswiniteredesai30@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify): BPT

Feedback

Session on hallmark of cancer was
good & more informative.
It will help us in our further
studies
Thank you.


Signature



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Feed Back Form - 30.03.2021

Topic :- Hallmark of cancer

Name: Rohan Kamble

Contact No: 9930350252 **Date of Lecture:** 30.03.2021

Email: rkrohankamble470@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others / BpTh
(Specify):

Feedback

The lecture was very helpful.
came + Today I came to know
that cancer can be controlled
and not uncontrolled.

Thankyou

Rohankamble
Signature



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Feed Back Form - 30.03.2021

Topic :- Hallmark of cancer

Name: Satyadnya Ghalsasi

Contact No: 9881665132 **Date of Lecture:** 30.03.2021

Email: Satyadnyoghalsasi@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others ✓

(Specify): BPTn

Feedback

The lecture was very different.
I came to know many new
terms in cancer. Sir explained
it in a very nice & innovative
manner. Such types of lectures
are very helpful.

Thank you


Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer

Name: Durva Shinde

Contact No: 7522962382 **Date of Lecture:** 30.03.2021

Email: durvashinde1901@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others ✓

(Specify): BPh.

Feedback

It was a very wonderful & helpful lecture. I got to know for the first time how are the cancerous cells proliferate & all about their mechanism. As a therapist, it was very helpful to me also in future. Thank you sir!


Signature 30/3/21



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Feed Back Form - 30.03.2021

Topic :- Hallmark^{of} Cancer

Name: Sakshi suresh Raut

Contact No: 8208079196 **Date of Lecture:** 30.03.2021

Email: sakshi.raut134@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify): B.PTh

Feedback

Nice lecture about hallmark^{of} cancer.
Excellent lecture. feeling amazing to
attend this lecture.
Nice ppt and explanation. It was great
to have you as a Guest lecturer.


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Feed Back Form - 30.03.2021

Topic :- Hallmark of cancer

Name: Shradhesh Desai

Contact No: 8788657746 **Date of Lecture:** 30.03.2021

Email: shradheshdesai21@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): 2nd Year MBBS student.

Feedback

session regarding the Hallmark
of cancer was very good.

ShDesai

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Feed Back Form - 30.03.2021

Topic :-

Name: Smarnika Walruskar

Contact No: 8104331508 Date of Lecture: 30.03.2021

Email: smarnika21walruskar@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

It was a very helpful, informative
seminar. We learnt a lot about
that topic & all aspects of it.


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Feed Back Form - 30.03.2021

Topic :-

Name: MANSI NAGVEKAR

Contact No: 9819348824 Date of Lecture: 30.03.2021

Email: mansinagvekar25@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

It was a very informative session.
We learnt a lot about the topic
and all aspects of it

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Feed Back Form - 30.03.2021

Topic :-

Name: *ASHLESHA POWALE*

Contact No: *9892994919*

Date of Lecture: 30.03.2021

Email: *ashleshap17@gmail.com*

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify):

Feedback

It was a very informative session.
We learnt a lot about the topic &
all aspects of it.

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Topic :- Hallmarks of cancer, acute myeloid leukemia.

Name: Satyen A. Kulkarni.

Contact No: 9970605354. **Date of Lecture:** 30.03.2021

Email: satyengkulkarni1@gmail.com.

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

It was an extremely informative session which dealt with the aetiology of cancer and its pathogenesis. The correlation of this with physiology was not only essential but also necessary and informative.


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Feed Back Form - 30.03.2021

Topic :- *Hallmarks of cancer & AML*

Name: *Chimmay .A. Kosate*

Contact No: *7350268986*

Date of Lecture: 30.03.2021

Email: *chimmaykosate@gmail.com*

Designation: *M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others*
(Specify):

Feedback

The session was very informative. The topic was made very easy to understand & was well explained. Certain facts that were told were definitely to keep in mind.


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Feed Back Form - 30.03.2021

Topic :- Hallmark of cancer & Acute Leukemia .

Name: Geetanjali Bhimashankar kapse .

Contact No: 4514815562.

Date of Lecture: 30.03.2021

Email: gbkjesta@gmail.com.

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): IInd M.B.B.S.

Feedback

I feel very happy to attend this lecture.
We come to know something new about
cancer cell mechanism & it will definitely
useful in future.


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Topic :- Hallmark of cancer.

Name: Vedanti Prakash Sapkal

Contact No: 7841990629

Date of Lecture: 30.03.2021

Email: vedantisapkal01@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify): Ind

Feedback

It was a very informative lecture. Many
important topics were introduced briefly.
This was very great experience and
will help us in future studies.


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Feed Back Form - 30.03.2021

Topic :- Cancer (oncology)

Name: Aakash R. Ahadigawkar.

Contact No: 8850309456 **Date of Lecture:** 30.03.2021

Email: aakashghadigawkar@gmail.com.

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify): 2nd year BPT (Physiotherapy).

Feedback

It was a quiet interesting
& informative lecture regarding
oncology carcinogenesis.
Adding & boosting up knowledge
regarding cell life & physiology
& pathology
Thank you !!


Signature



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Feed Back Form - 30.03.2021

Topic :- Dr. Banavali Sir Seminar (Cancer)

Name: SANAJEET CHAVAN

Contact No: —

Date of Lecture: 30.03.2021

Email: —

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

Nice to hear about the thing of even actual
importance which could be some help to us.
Need more lectures about Research
development and cure of diseases actually
causing problem.


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Feed Back Form - 30.03.2021

Topic :- *Cancer*

Name: *Pankaj Panditrao Biradar*

Contact No: *7218087583* **Date of Lecture:** *30.03.2021*

Email: *pankajbiradar220@gmail.com*

Designation: *M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others*
(Specify):

Feedback

Thanks sir for this session
we got information about cancer
how it occurs, carcinogenic agent,
treatment.

This is very important for us.

Thanks sir

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Feed Back Form - 30.03.2021

Topic :- Cancer

Name: Nilesh Galindar Yeole

Contact No: 9657053740 **Date of Lecture:** 30.03.2021

Email: nileshyeole197@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

Thank you so much sir, because of give the
lot of information about cancer cell, apoptosis,
to us and also say's how to cancer cell
process which receptor use in which which
drugs available for the treatment of cancer
patient. I understand very well hence again
thank you so much !!!

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Feed Back Form - 30.03.2021

Topic :- Carcinoma (Oncology)

Name: Palwankar Parth Alhad

Contact No: 9309173819 Date of Lecture: 30.03.2021

Email: palwankar.parth@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

This is very interesting seminar about
the carcinoma. I think that earlier
that cancer is uncontrolled but Dr.
Shripad Bhanavli Sir explains very clearly
that the process, mechanism &
all the information regarding cancer so
now, I came to know that cancer
is also a curable.


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Feed Back Form - 30.03.2021

Topic :- Cancer, its causes & Treatment

Name: Bhise Yogesh Narayan

Contact No: 9422021252 **Date of Lecture:** 30.03.2021

Email: bhiseyogesh6211@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.M.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

Thanks sir,
For tell us more about
the causes, treatment of cancerous
cell.
We all are very thankful of you
for giving very important information
regarding to
cancer which is most deadly disease in
India.


Signature



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Feed Back Form - 30.03.2021

Topic :- Cancer.

Name: Brahaspati Tukaram Kote

Contact No: 9788559649

Date of Lecture: 30.03.2021

Email:

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify):

Feedback

Very good lecture. Dr. Banvale sh
give us a general idea of cancer.

Kote
Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer

Name: Ajay Madhewar

Contact No: 9922260088

Date of Lecture: 30.03.2021

Email: ajay.jmadhewar@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

Today's session on Hallmarks of Cancer by respected Dr. Shripad Banavali was very interesting. I got to know the facts about cancer its effect and mechanism of its formation. Earlier, I thought that cancer is uncontrolled growth of cell but I know (now) that it is abnormal but controlled at some extent.


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Feed Back Form - 30.03.2021

Topic :- Hallmarks of cancer.

Name: Parag Nebaji Vasave

Contact No: 97709684081 **Date of Lecture:** 30.03.2021

Email: paragvasave09@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

Today's seminar was very interesting.
I got the information about
cancer. cause of cancer. and
also know about the phenomenon
of Apoptosis.

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Feed Back Form - 30.03.2021

Topic :- CANCER

Name: SHREYASH V. BHOSALE

Contact No: 8275952468

Date of Lecture: 30.03.2021

Email: shreyashbhosale721@gmail.

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

Great Lecture. Got to know about more
such complications of Cancer and various
diseases.

Really great session
Waiting for more such sessions.

Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer

Name: Anuja Kosane

Contact No: 988912400

Date of Lecture: 30.03.2021

Email: kosaneanuja2409@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

The lecture was informative &
I found it very interesting.


Signature



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Feed Back Form - 30.03.2021

Topic :- *Cancer*

Name: *Shivani Raju Khandwe*

Contact No: *7666126675* **Date of Lecture:** 30.03.2021

Email: *shivani.khandwe1994@gmail.com*

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

The lecture was vely helpful for
us

Shivani
Signature

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Feed Back Form - 30.03.2021

Topic :- *Cancer*

Name: *Srushti V Sharma*

Contact No: *7066707360*

Date of Lecture: 30.03.2021

Email: *srushti20042001@gmail.com*

Designation: *M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others*
(Specify):

Feedback

Amazing lecture on cancer which
uncovered the pathophysiology of
the disease!

Srushti V Sharma
Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer

Name: CHETAN. DHANPAL. SAKATE

Contact No: 8766450897

Date of Lecture: 30.03.2021

Email: chetansakate09@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

Was a very overwhelming experience to get learned from such a great doctor. It gave us a lot of knowledge about cancer & created an amount of interest in oncology. I would be amenable to choose oncology as my career pathway.


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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer

Name: Mrunal Manish Korde

Contact No: 836981455

Date of Lecture: 30.03.2021

Email: kordemrunal4@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

The session helped us know about initiation of
cancerous growth. It was very informative.


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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer

Name: Sadya A. Kazi

Contact No: 8390602944 **Date of Lecture:** 30.03.2021

Email: sadyakazi@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): II Year MBBS

Feedback

_____ This session was very informative
_____ and helpful to us. The session gave
_____ us the knowledge about cancer which
_____ is important in nowadays life.

Sadya
Signature

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Feed Back Form - 30.03.2021

Topic :-

Name: Sakshi S. Pote

Contact No: 9359178170

Date of Lecture: 30.03.2021

Email: sakshipote2070@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

It was very interactive & informative
session. I learnt a lot about career.
Thank you!


Signature

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Feed Back Form - 30.03.2021

Topic :-

Name: Shraddha Shelke

Contact No: 9307033657 Date of Lecture: 30.03.2021

Email: shraddhashelke63@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

It was very informative &
helpful session.

Shelke
Signature

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Feed Back Form - 30.03.2021

Topic :-

Name: *Vaishnavi Thotange*

Contact No: *7721930379* . Date of Lecture: 30.03.2021

Email: *thotangevaishnavi@gmail.com*

Designation: *M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others*
(Specify):

Feedback

It was very interesting & Helpful.

Signature
Signature

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Feed Back Form - 30.03.2021

Topic :-

Name: *Jyotna Sairatna Vetecha*

Contact No: *9307873735*

Date of Lecture: 30.03.2021

Email: *jyotna2000@live.in*

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

The session was interesting & very helpful

Jyotna
Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer

Name: Ankita Adarkar

Contact No: 9833431908

Date of Lecture: 30.03.2021

Email: ankita.adarkar@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): MBBS I yr.

Feedback

It was a very informative lecture. Got to know more about the importance of cell & its physiology.

Ankita Adarkar

Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of cancer.

Name: Smiley Thote

Contact No: 9930845395 **Date of Lecture:** 30.03.2021

Email: smileythote@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): 1st year MBBS.

Feedback

It was a very informative session.


Signature



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Feed Back Form - 30.03.2021

Topic :- *Hallmarks of cancer*

Name: *Tanishkour D. Kapoor*

Contact No: *9422923395*

Date of Lecture: 30.03.2021

Email: *tanukapoor2407@gmail.com*

Designation: *M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others*

(Specify): *1st year.*

Feedback

It was very informative.

Tanishkour
Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of cancer.

Name: Surabhi Kuwas

Contact No: 7977749911

Date of Lecture: 30.03.2021

Email: nalinikuwas@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): MBBB 1st year.

Feedback

This lecture was extremely informative. What little knowledge we had of cancer was enhanced and even certain misunderstandings and the physiology of the cancer cells was understood.


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Feed Back Form - 30.03.2021

Topic :- Leukemia

Name: Gourav Vosudev Patil

Contact No: 8007909069 **Date of Lecture:** 30.03.2021

Email: gouravpatilgb@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

Lecture on leukemia was a
great learning lecture. Hon. Dr. Shripad sir
told about different aspects of leukemia.
Pathogenesis of CML was told by them.
It was nice to listen new things about
leukemia that was I don't know before.
Thank you sir.


Signature



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Feed Back Form - 30.03.2021

Topic :- Leukemia - (Cancer)

Name: Rohit Rajesh Pawde

Contact No: 7020322449

Date of Lecture: 30.03.2021

Email: Reditpawde123@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): IInd phase

Feedback

It was an ~~en~~ ~~extra~~ enjoying session
we learnt alot about cancer's pathogenesis
cleared our concepts doubts & many things
new showed us the way towards a new
field which needed to be explored. Hope you

r
more of such sessions, Thankyou for much

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Feed Back Form - 30.03.2021

Topic :- *Hallmarks of Cancer*

Name: *BHAWINI DHOLE*

Contact No:

Date of Lecture: 30.03.2021

Email: *bhawinidhole22@gmail.com*

Designation: *M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others*

(Specify): *2nd year*

Feedback

*It was an honour to get being
taught by Dr. Banavate sir. We were
amazed by his achievements in life.
It definitely added much more to
our knowledge. Thank You!*

Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of cancer

Name: Vaidehi G. Deshpande

Contact No: 7666428182 **Date of Lecture:** 30.03.2021

Email: vgdeshpande2008@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

The lecture was so much interesting and we came to know a lot of things about development of cancer, apoptosis and that the cancer is No.1 cause of death in USA & it's the incurable disease. So, we got to know the importance of cancer - how we should do the research is very important for the branch of cancer - to give people better life expectancy.


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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer.

Name: Jahnavi. N. Patil

Contact No: 9921251695

Date of Lecture: 30.03.2021

Email: patiljahnavi27@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

The lecture was amazing. It was very informative. I liked it a lot.
The cell physiology & carcinogenesis was explained in amazing way


Signature



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Feed Back Form - 30.03.2021

Topic :- Hallmark of Cancer

Name: Deepika Padavala

Contact No: 808072776

Date of Lecture: 30.03.2021

Email: deepalura99@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

Through this session I came to know more about the neoplasia, leukemia & other cancers. Cancer 'thought to be the uncontrolled growth' can be controlled. This was really a productive lecture, came to know new things.


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Feed Back Form - 30.03.2021

Topic :- Hallmarks of cancer, Acute leukemia.

Name: Vaishnani Balasahab Kadam

Contact No: 9309848807 **Date of Lecture:** 30.03.2021

Email: vaishnani.kadam707@gmail.com,

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

→ The session was really helpful in knowing the 6 hallmarks of cancer, the role of apoptosis in cancer, and the stages of cancer and which this it can be controlled in a effective way.


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Feed Back Form - 30.03.2021

Topic :-

Name: Wagh Angha Kakasaheb

Contact No: 9890862733 Date of Lecture: 30.03.2021

Email: anghawagh6@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

The session was really helpful in understanding the mechanism of cancer. Before the session I like that cancer is not treatable but now I know that cancer is treatable in some amount


Signature

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Feed Back Form - 30.03.2021

Topic :- *Cancer*

Name: *Aditi Hanumanant Nakhate*

Contact No: *9922913979* **Date of Lecture:** 30.03.2021

Email: *aditinakhate2001@gmail.com*

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

*This session was really helpful
in understanding the causes &
mechanism of developing cancerous
cells to us.*

Aditi Nakhate
Signature



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Feed Back Form - 30.03.2021

Topic :- Hallmarks of cancer acute leukemia

Name: Aakarshika Ranjak Shisath

Contact No: 8698512711

Date of Lecture: 30.03.2021

Email: aakarshashisath2000@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

It was very good session. I have learnt lot of things which help in my further studies.


Signature

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Feed Back Form - 30.03.2021

Topic :-

Name: ARUSH GUPTA

Contact No: 9167989195

Date of Lecture: 30.03.2021

Email: arush2001@gmail.com

Designation: (M.B.B.S) M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify):

Feedback

It was an extremely informative and an
interesting lecture.

A. Gupta
Signature

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Feed Back Form - 30.03.2021

Topic :-

Name: *Sanidhi Bhavar*

Contact No: *74100 00 443*

Date of Lecture: 30.03.2021

Email: *sanidhibhavar@gmail.com*

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others
(Specify):

Feedback

The lecture was very informative. I got to
learn about the mechanism ~~for~~ about cancer.
I would like to attend more such lectures

Bhavar
Signature

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Feed Back Form - 30.03.2021

Topic :-

Name: *Prerna Murubate*

Contact No: *9819630716*

Date of Lecture: **30.03.2021**

Email: *prernamurubate161@gmail.com*

Designation: *M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others*

(Specify): *2nd MBR3*

Feedback

The session was very informative & helpful. It helped
integrated oncology with physiology. Sir highly simplified
the topic for us.

Prerna

Signature

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Feed Back Form - 30.03.2021

Topic :- Hallmarks of cancer

Name: Madhura Laxman Gawas.

Contact No: 8291514719 **Date of Lecture:** 30.03.2021

Email: gawasmadhura@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): BPTH (Ind)

Feedback

It was very valuable lecture, got to know about interesting information, points about cancer. Knowledge I perceived from this lecture will help in future.

positive and very helpful. Thank you.

Madhura
Signature



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Feed Back Form - 30.03.2021

Topic :- Hallmarks of Cancer.

Name: Diya Pradeep Chikhalkar.

Contact No: 8459636619. **Date of Lecture:** 30.03.2021

Email: dpchikhalkar06@gmail.com.

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): BPTth (2nd yr)

Feedback

It was really interesting to learn more about cancer, and it being controlled. Very informative and valuable knowledge. I hope we get to learn from you in future.
Thank you.

Signature

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Feed Back Form - 30.03.2021

Topic :-

Name: Ankita Dhile

Contact No: 7498818961

Date of Lecture: 30.03.2021

Email: ankita.dhile2000@gmail.com

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify): IInd MBBS

Feedback

The session was very informative and interesting.

Signature

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Feed Back Form - 30.03.2021

Topic :-

Name: *Vaishnavi Anulrao Kamde*

Contact No: *7262071821*

Date of Lecture: *30.03.2021*

Email: *kamdevaishnavi1226@gmail.com*

Designation: *M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others*

(Specify): *IInd MBS*

Feedback

The session was very informative. It gave us a lot of knowledge about oncology.

N. Kamde
Signature

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Feed Back Form - 30.03.2021

Topic :-

Name:

Contact No:

Date of Lecture: 30.03.2021

Email:

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify):

Feedback

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Feed Back Form - 30.03.2021

Topic :-

Name:

Contact No:

Date of Lecture: 30.03.2021

Email:

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify):

Feedback

Signature

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Feed Back Form - 30.03.2021

Topic :-

Name:

Contact No:

Date of Lecture: 30.03.2021

Email:

Designation: M.B.B.S/ M.D/ M.S/ D.N.B/ D.M/ M.C.H/ Others

(Specify):

Feedback

Signature

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Dr. Shripad Banavali , Guest Lecture on Hallmarks of cancer, Acute leukaemia On 30/03/2021



B.K.L Walwalkar Rural Medical College
&
Hospital, Sawarde, Tehsil -Chiplun, District-Ratnagiri.

Project report on

“To promote and motivate patients and caregivers for completion of treatment.”

(21st March 2021 to 27th March 2021)

Submitted By-

Patient Navigators

(KEVAT)

Abhishek Singh CC. No.658421

Alok Kumar Mishra CC.No.658422

Prakash Kumar CC.No. 658437

Yogita Singh CC.No. 658445

TATA MEMORIAL HOSPITAL

PAREL, MUMBAI

ACKNOWLEDGEMENT

We would like to express special thanks of gratitude to Dr. (Mrs.) Suvarna Patil, the Medical Director, and Dr. Asawari Modak, our project coordinator; B.K.L. WALAWALKAR RURAL MEDICAL COLLEGE AND HOSPITAL and Dr. Rajender A. Badwe, Director TMC, Mumbai, Dr. Shripad D. Banavali, Academic Director, TMC MUMBAI and Mrs. Nishu Singh Goel, program head KEVAT, who gave us the golden opportunity to do this wonderful out posting project on the topic “ To promote and motivate patients and caregivers for completion of treatment”. This project also help us to do other activities that are useful for patients and their caregivers and while doing this we were able to know new things and for that we are really thankful to them.

Secondly, we would also like to thank all the medical staff of this hospital, social workers specially Mr. Sanket Jambhale and our project coordinator Bhagyashree Parkar and Mrs. Amita - KEVAT fellow of TMH, Mumbai who helped us a lot in finalizing this project within the limited time frame.

Introduction: As a part of our course curriculum, four of us Patient Navigator (KEVAT) Prakash Kumar, Abhishek Singh, Alok Mishra, Yogita Singh posted in B.K.L. Walawalkar Rural Medical College and Hospital, Dervan, Ratnagiri district of Maharashtra; a multi-specialty hospital, managed by Shri Vithalrao Joshi charitable trust. We were here to observe and learn the hospital processes in general and cancer treatment for a week.

After visiting the hospital, we met Medical Director Ma'am Dr. (Mrs.) Suvarna Patil. After brief introduction with director Ma'am about our Patient Navigators roles and responsibilities and our purpose of hospital visit. Then we met Dr. Asawari Modak Ma'am, our coordinator in the hospital. She briefed us about the history of the hospital and its aim and objectives. After that, we observed the services, location of different departments, OPDs, IPDs, Wards, ICUs, NICUs, diagnostic labs, MSW and coordination among the departments to provide smooth flow of services to the patients and their caregivers assisted by a social worker (Mr. Sanket Jamvhale). Being acquainted with locations and general hospital process, we started our observations in wards and OPDs one by one from next day. Once we started our work in hospital, we received the feedback of the hospital and the staffs. This encouraged us to get more experience and learning within the hospital.

As a Patient Navigator, our role and responsibility were to interact with patients and their caregiver, once patient enter in the hospital, we assist them from first day till follow-up. We educated patient and caregivers, provide information about diagnosis, different modalities treatment, we also addressed various myth, misconception, fear and social stigma about disease and their treatment. We encouraged patients to take informed decision about their treatment of disease, different processes involved in the hospital, empower them to optimum utilization of resources within the hospital. We were not only focused on patient treatment needs but also counseled patients and their families emotionally, psychologically, financially, and social support for better adjustment across the treatment continuum or journey in the hospital. Our objective was to convey and motivate patients and care givers that proper completion of the treatment leads to normal and happy life ahead. We as a "Kevat" emphasis not only for treatment completion but also for the follow-ups. and we encouraged them to be self-dependent.

Aim of the Project: To focus on those patients who are under diagnosis and under treatment and motivate as well as emphasize them to complete their ongoing diagnosis and treatment without fail at its maximum.

While discussing with Medical Director Ma'am, we came to know that it is a serious challenge for the hospital to retain the patients who have once started the cancer treatment but defaulted in between. Such patients were encouraged by various means through the hospital for completion of their respective treatment, but still some patients fail to complete the treatment knowingly or unknowingly. So, we decided to work on such patients who were under diagnosis and under treatment to decrease the case of defaults as much as possible with acknowledgement of Director and our project coordinator.

Approach for the project

1. *Collection of data* - The collection of data has been taken from wards of male and female with prior consent from the authority of concern, patients and their caregivers as well .
2. *File exploration* - The clinical data has been collected from the case file of the patient.
3. *AKITF and MJPJAY counter visit* – Assured and get informed about the schemes, assistance provided to number of patients keeping in mind that at least financial burden should not be the cause of default.
4. *Medical staff interaction* – Interact with clinicians, nurses, and other staffs to clarify the particulars in the patient case file for our requirements.
5. *Outreach Program*- We visited PHC Rampur and Angnvadi Marul, we gave health talk about different cancer and cancer awareness.

| | | | | FINANCIAL ASSISTANCE | |
|--------|-------------------------|-------------------------|---------------------|----------------------|-----------------|
| SL.NO. | PATIENT ID/ NAME | DIAGNOSIS | TREATMENT/f/u | DIAGNOSIS | TREATMENT |
| 1 | 893285 | Ca Tongue | CTRT | AKITF | MJPJAY |
| 2 | 854974 | Rt. BM | CTRT | AKITF | MJPJAY |
| 3 | 893285 | Lip cancer | f/u | AKITF | MJPJAY |
| 4 | 350318 | Ca SCC recurrence | On observation | AKITF | MJPJAY |
| 5 | 1014553 | Ca rt. BM | Surgery | AKITF | MJPJAY |
| 6 | 974330 | Ca lt.BM | Surgery | AKITF | MJPJAY |
| 7 | 1011992 | Ca rt. BM | Surgery | AKITF | MJPJAY |
| 8 | 1008723 | Ca lt. BM | Surgery | AKITF | MJPJAY |
| 9 | 1001628 | Ca Lt BM | Surgery | AKITF | MJPJAY |
| 10 | 984755 | Ca GYN | Chemo | AKITF | MJPJAY |
| 11 | 981740 | Ca CERVIX | NACT | AKITF | MJPJAY |
| 12 | 943518 | Ca OVARY | NACT & Surgery | AKITF | MJPJAY |
| 13 | 878562 | Ca Rt. Breast (Mets) | NACT & Surgery | AKITF | MJPJAY |
| 14 | 870778 | Ca Lt breast | MRM & CTRT | AKITF | MJPJAY |
| 15 | 878578 | Ca Rt Breast | MRM & CTRT | AKITF | MJPJAY |
| 16 | 999016 | Ca Esophagus | NACTRT | AKITF | MJPJAY |
| 17 | 993886 | Ca Rt BM | Surgery & CTRT | AKITF | MJPJAY |
| 18 | 1013901 | Adv. RT BM | Pall RT | AKITF | MJPJAY |
| 19 | 1008844 | Ca Lt Tongue | RT | AKITF | MJPJAY |
| 20 | 957420 | Ca. BM | CTRT | AKITF & SELF | MJPJAY |
| 21 | 892752 | Ca. Rt. BREAST | MRM & Adj. chemo | AKITF | MJPJAY |
| 22 | 998378 | Ca liver | pending | AKITF | pending |
| 23 | 1015378 | Ca Ovary | pending | AKITF | MJPJAY(PENDING) |
| 24 | Bhuwad Rajni Babu | Ca Breast | chemo | Self | ICS&MJPJAY |
| 25 | 958197 | Ca Supraglottic | Chemo | AKITF | MJPJAY |
| 26 | 969606 | Ca upper alveolus | CTRT | AKITF | MJPJAY |
| 27 | 1019702 | NHL | Under diagnosis | AKITF | pending |
| 28 | 967815 | BST | RT | AKITF | MJPJAY |
| 29 | 1019027 | Ca lung | RT | AKITF | Rajiv Gandhi |
| 30 | 952455 | Ca lower Alveolus | RT | AKITF | MJPJAY |

| | | | | | |
|----|----------|--------------------|---------------|-------|------------|
| 31 | 10011628 | Ca. BM | Surgery | AKITF | MJPJAY |
| 32 | 1022786 | Ca Breast | Recurrence | AKITF | MJPJAY |
| 33 | 637018 | Ca Endometrium | RT | AKITF | MJPJAY |
| 34 | 891623 | Ca Esophagus | CTRTR | AKITF | Self |
| 35 | 1003587 | Ca Breast | CT | AKITF | MPJAY |
| 36 | 879067 | Ca Esophagus | CTRTR | AKITF | MPJAY |
| 37 | 875752 | Ca Breast | CT | AKITF | MJPJAY |
| 38 | 946000 | NA | CT | AKITF | MPJAY |
| 39 | 764669 | Ca Bladder | CT | AKITF | MJPJAY |
| 40 | 896511 | Ca BST | CT | AKITF | MJPJAY/ICS |
| 41 | 885228 | Ca Tt. BREAST | CT | AKITF | MJPJAY |
| 42 | 974303 | Ca. Bladder | CTRTR | AKITF | MJPJAY |
| 43 | 1017856 | Ca Ovary | CT | AKITF | MJPJAY |
| 44 | 964907 | Ca Cervix | CTRTR | AKITF | MJPJAY |
| 45 | 952455 | Ca BM | Post of CTRTR | AKITF | MJPJAY |
| 46 | 990648 | Ca Mets oropharynx | CT | AKITY | MJPJAY |
| | | | | | |
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Analysis:

- More case of buccal mucosa has been observed.
- Almost all patients have been beneficiary of financial schemes like AKITF, MJPJAY and ICS in diagnosis and treatment.
- Multimodality treatment followed.
- Palliative treatment provided by the hospital as well.

Interventions:

- Visited each cancer ward and OPDs (we interacted with patients and their caregivers to know how much they know about the disease and prognosis and according to their understanding we provided relevant information so that they became more aware about their disease and it's management.)
- While seeing patients file, we were able to understand their diagnosis, treatment and follow ups (by observing patient file we came to know that some patients has done their diagnosis outside and they were referring to this hospital. we knew the time gap between to start the treatment and diagnosis which were done outside.
- Patients queries were resolved after this. (we answered patients and caregivers queries like what is chemo, radiation and along with it's side effects and complication. They were more concern about the prognosis, for this we encouraged them to consult concerned doctor.
- We did counsel of patients and their care givers (**Psychological-** Patient asked why me and some patient blaming themselves about their karma- we as a Kevat, first listened them deeply without any interruption with empathy and compassion and later we provided information that this disease can happen to anyone. Even child develops cancer without any risk factors. **Emotional-** Patients who have disfigurement due to treatment, they became disheartened and demotivated towards the life. For such type of patients, we motivated caregivers to support patient as much as possible in every walk of life like a pillar. We encouraged patient that this is not the end of life rather they could start a new journey of life with full of positivity by the support of their loved ones and could focus on their dream ahead. **Social support-** Support group – cancer survivors, patients and care givers discuss their story, share the whole journey of treatment and motivate each other.)
- Financial information (Provided information about different government schemes and their prerequisites).
- After our interventions, some patients agreed to undergo required treatment in the hospital.
- Clinical counselling was done by us, informed about the different modalities of treatment and their respective side effects and its management.
- As per our project motive, we emphasized more on care givers regarding completion of treatment of their patients.

- The required information given by Kevat that helped to take their own decision.
- As we know in cancer, it requires long and continuous treatment so, its importance shared with patients and their caregivers to encourage them to take continuous treatment and attend regular follow-ups without fail.
- We have also shared the government polices and schemes and benefits which will help in rehabilitation process.
- The people coming to the hospital is daily earner, so it becomes important to provide them some financial help for livelihood.
- We asked questions about how much the patient know about disease and prognosis. We provided them more information about their disease wherever they are lacking and required.
- For a destitute case, we intervened differently for the patient and arranged foods and liaison the social worker for patient's rehabilitation.
- We established good rapport first with caregivers for those patients who were tough to counsel.

Result: We would like to follow up the hospital regarding the number of patients that we have intervened as per our project motive and note how many patients have completed their treatment and how many have defaulted at last.

Challenges:

- Language barrier (For Patient Navigator)
- Transportation (Patients and Caregivers)
- Lack of awareness, Health illiteracy, myths and misconceptions, fear, social stigma about disease.

Solutions:

- We faced language barrier most, for this we taken the help of other people or hospital staff who knew Hindi. In some cases where we did not have any

option, we used written chart and figures and pictures through drawing as possible).

- Taken the help from other caregivers and medical staff who knows both Hindi and Marathi.
- We have suggested daily transportation from a near by main center that is Chiplun.
- Due to rural area; far away from the city; suggested the hospital administration to provide the basic needs in the hospital premises only. To encourage different stake holders to provide basic infrastructure around the hospital premises.
- In this hospital, hospital administration can work on for travel concession for bus and train.
- Distribution of Pamphlets, sign board information, during the camps and around the hospital.

Summary: During our stay in the hospital and observations, we found the following features of the hospital:

- Less waiting time for diagnosis and treatment.
- Good overall satisfaction level of patient and caregivers.
- Patient centric work culture.
- Every patient was attended by specific social worker to address their needs and concern.
- The outreach planned are well focus on the general population, ANC, Nutrition camp, screening camps etc.





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|  | <h2>प्राथमिक आरोग्य केंद्र सायले</h2> <p>ता.संगमेश्वर जि.रत्नागिरी पिन को.४१५८०४</p> |  |
| <p>ई मेल:- sayale.sangameshwar.rtn@gmail.com फोन नं:- (०२३५४)२६३८८८</p> | <p>जा.क्र/प्राभाकेंसा/आस्था.१/४६/२०१७ प्राथमिक आरोग्य केंद्र सायले ता.संगमेश्वर जि.रत्नागिरी दिनांक:-१३/०२/२०१७</p> | |

प्रति,

मा.डॉ.सुवर्णा पाटील मॅडम

वालावलकर रुग्णालय डेरवण

विषय - आरोग्य शिबीराबाबत.

महोदया,

उपरोक्त विषयान्वये प्रा.आ.केंद्र सायले ता.संगमेश्वर येथे दि.१८ फेब्रुवारी

२०१७ रोजी सकाळी ०९.०० वाजता एन.सी.डी (नॉन कम्युनिकेबल डिजीज) बाबत

आरोग्य शिबीर आयोजित करणेत आलेले आहे तरी या शिबीरात आपल्या मार्फत

मधुमेह, कर्करोग, हृदयरोग, पक्षाघात या आजारांच्या तपासणीसाठी सहकार्य मिळावे

हि विनंती.


 Hs Medical Officer
 Primary Health Center SAYALE
 Tal. Sangameshwar, Dist. Ratnagiri

| प्राथमिक आरोग्य केंद्र चिखली ता.गुहागर जि.रत्नागिरी | | |
|--|-------------------|---|
| वैद्यकीय अधिकारी कार्यालय दूरध्वनी क्र. - | (०२३५९) २४४४५४ | प्राथमिक आरोग्य केंद्र चिखली मु.पो. चिखली, ता.गुहागर जि.रत्नागिरी पीन कोड-४१५७१९ E-mail chikhali.guhagar@gmail.com |
| आरोग्य सेवा | ▼ | जा.क्र./प्राजाके/आस्था १ / ७९८ / १७ प्राथमिक आरोग्य केंद्र चिखली, दिनांक :- २९ / ०३ / २०१७ |

प्रति,

मा. डॉ. सौ. सुवर्णा पाटील (संचालिका)
भक्तश्रेष्ठ बी.के.एल. वालावलकर हॉस्पिटल,
डेरवण, ता. चिपळूण

विषय :- राष्ट्रीय असंसर्गजन्य रोगनियंत्रण कार्यक्रमान्तर्गत मोफत आरोग्य
शिविरासाठी तज्ञ डॉक्टरांस मिळणेबाबत.

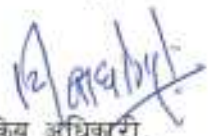
महोदय,

वरिल विषयान्वये दिनांक ३१/३/२०१७ रोजी प्राथमिक आरोग्य केंद्र चिखली येथे ठिक ११:००
वाजता राष्ट्रीय असंसर्गजन्य रोग नियंत्रण उपचार शिविर आयोजित करणेत आले आहे. त्यामध्ये मधुमेह,
रक्तदाब, कॅन्सर इत्यादी आजारांवर तपासणी व मोफत औषध उपचार करण्याचे योजिले आहे.

तरी संदर्भिय विषयान्वये आपणास डॉ. आर. व्ही. पवार यांनी दिनांक २९/३/२०१७ रोजी सायंकाळी
दूरध्वनी वरून संपर्क केलेला आहे.

तरी संदर्भिय आजारावरिल उपचार करणारे तज्ञ डॉक्टरांस आपणाकडून मिळावेत ही विनंती.

आपला विश्वासू,


वैद्यकीय अधिकारी,
प्रा.आ.केंद्र चिखली

९९६०८८०३०६ - सतिशकुमार

21/03/2024

ना.प्र.प्र.वा.क./स/आर्या/८४/२०१५
प्राथमिक आरोग्य केंद्र खारवते
तारीख 21/3/2024

प्रति,

शा.संचालक,
सी.के.एल.पालावकर रुग्णालय,
डेरवण, ता.चिपळूण,

विषय :- असंसर्जन्य रोग निदान -
शिबिराबाबत....

महोदय,

उपरोक्त विषयावचे प्राथमिक आरोग्य केंद्र
खारवते, ता.चिपळूण येथे दिनांक २६/३/२०१५ रोजी
वार बुधवार सकाळी १० ते दुपारी १ वा. या वेळी
असंसर्जन्य रोग निदान शिबिराबाबत असंसर्जन्य
(दमा, रक्तदाब मधुमेह, कर्करोग,) निदान शिबिराचे
आयोजन केलेले आहे.

तरी आपण सदर शिबिरासाठी पत्रक
(सोपव्यावर) पाहणे किंवा विचारणीय आहे.


Medical Officer Group - A
P.H.C. Kharawate,
Tal. Chiplun, Dist. Ratnagiri.

16th August

पालगड

16.08.2019

Dattoli

नाव

सही

- | | | |
|----|------------------------------|-------------------------|
| 1 | सौ. शिल्पा सायबन कदम | |
| 2 | सौ. दर्शनी दयाकर कदम | |
| 3 | सौ. पार्वती गोपाळ शाहूकर | पावती गो. सांकर |
| 4 | सौ. वाळी रघुनाथ सावडेकर | वा. र. सावडेकर |
| 5 | सौ. डायली इमंजत मोरे | सौ. डं. ज. मोरे |
| 6 | सौ. वनिता मंगळ पवार | वडमंगळ |
| 7 | सौ. रिधी बाहुळ संपाळ | रिधाबाहुळ |
| 10 | सुपर्णा गुठांब खोशे | सुपर्णा |
| 11 | सौ. उज्वला विलास कदम | उज्वला |
| 12 | सौ. संगिता अनंत पाडेकर | संगिता अनंत पाडेकर |
| 13 | सौ. दिपाती दिदीप पवार | सौ. दिपाती दि पवार |
| 14 | सौ. ज्योती संजय गुरव | सौ. ज्योती संजय गुरव |
| 15 | सौ. स्वविता संभाजी गायकवाड | सौ. स्वविता सं. गायकवाड |
| 16 | सौ. शशीकला रघुनाथ पवार | सौ. शशीकला रघुनाथ पवार |
| 17 | सौ. आनंदी शांताराम मानत | सौ. आनंदी शांताराम मानत |
| 18 | सौ. कुंदा दगडू कदम | सौ. कुंदा डी. कदम |
| 19 | स.भा. भागीबाई पादुरंग रहारवठ | भागीबाई रहारवठ |
| 20 | सौ. मनिषा मंगेश गावडे | सौ. मनिषा म. गावडे |
| 21 | सौ. मृती राजेंद्र पेडनेकर | मृती |
| 22 | सौ. गीता बळीराम भेकत | गीता व भेकत |
| 23 | विठाबाई गणपत पवार | विठाबाई |

| गाव | गाव | गाव | गाव |
|----------------------------------|--------------------------|-------------------------------|--------------------------|
| 28) सौ. पार्वती सहादेव चौगुले | पार्वती सहादेव चौगुले | 28) सौ. वसुधा विस्वास दळवी | सौ. व. वि. दळवी |
| 29) सौ. कविता किशोर चौगुले | कविता | 29) सौ. रमिका स्वजित आनविलकर | R. R. Khanavikar |
| 30) सौ. स्वप्नाली सुदुलकर | सौ. स्वप्नाली सुदुलकर | 30) सौ. अर्चना शंताशंकर पाटील | अर्चना शंकर पाटील |
| 31) सौ. विनीता सुदुलकर | विनीता सुदुलकर | 31) अर्चना हवोजे | अर्चना हवोजे |
| 32) सौ. अंजली भा. सावंत | अंजली भा. सावंत | 32) चंद्रकाळा चंद्रकांत भुवड | चंद्रकाळा चंद्रकांत भुवड |
| 33) जिनता मुखार अ. मालवणकर | Malwanekar | 33) रंजित ललन शेंदे | रंजित ललन शेंदे |
| 34) सौ. अर्चना व. सुदुलकर | अर्चना व. सुदुलकर | 34) AKI. A. Shalki Hawa | A. S. Hawa |
| 35) सौ. भारती हरिचंद्र गजरे | सौ. भारती हरिचंद्र गजरे | 35) स्वर्णिता लक्ष्मी ठेडका | स्वर्णिता |
| 36) सौ. विमल तुकाराम मोरे | सौ. विमल तुकाराम मोरे | 36) सुवसुधा अ. मुनाफ नागुणे | R. M. Nagutkar |
| 37) सौ. सुधा दलंत जावडे | सौ. सुधा दलंत जावडे | 37) सुमलका रमेश शंकर पाटील | सुमलका रमेश शंकर पाटील |
| 38) सुनिता काकाशे नाकाजाधव | सुनिता काकाशे नाकाजाधव | 38) सुनिता सुभाष लक्ष्मी | सुनिता सुभाष लक्ष्मी |
| 39) सौ. ललिता देवराज गजरे | ललिता देवराज गजरे | 39) सौ. माधवि महादेव मळेकर | सौ. माधवि. म. मळेकर |
| 40) सौ. रंजिता सिद्धार्थ गजरे | रंजिता सिद्धार्थ गजरे | 40) सौ. आनंदी तुकाराम चौगुले | सौ. आनंदी तु चौगुले |
| 41) सौ. स्वप्नाली राजकुमार सावंत | स्वप्नाली राजकुमार सावंत | 41) सौ. अर्चना ह. धाडवे | सौ. अर्चना ह. धाडवे |
| 42) सौ. मनिषा अलोक गजरे | मनिषा अलोक गजरे | 42) सौ. जमिता लक्ष्मण गोवळकर | सौ. जमिता लक्ष्मण गोवळकर |
| 43) सौ. मनिषा सुरेश मोरे | Mismore | 43) सौ. अनिता अजय कदम | सौ. अनिता अजय कदम |
| 44) सौ. भारती भगवान पाटील | भारती भगवान पाटील | 44) सौ. सावित्री हंसराज भुवड | सावित्री हंसराज भुवड |
| 45) सौ. प्रनाली प्रविण सांचे | प्रनाली प्रविण सांचे | | |

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६३) सौ. सारिका अनिल मोहिते

सारी
Sarikha

६४) सौ. दिक्षा दिगंबर सकपाळ

Diksha

६५) सौ. संगिता संजय सकपाळ

संगिता. सं. सकपाळ

६६) जैतून खलीम हुवा

ज. स हुवा

६७) रशाला हुसन पटकर

रशाला हुसन पटकर

६८) ~~शंभुकांत हुसन पटकर~~

ABHAWA
~~शंभुकांत हुसन पटकर~~

६९) शंभुकांत हुसन पटकर

S. H. Patker

७०) रिहाना अंका कौर हुवा

R.K. / Mawar

७१) सुख्य गहजरा हुवा

Sukhy

७२) नसरीन तविर हुवा

Nasrin

७३) सौ. जैतून उस्मान पेठकर

Jaiyoon

७४) सौ. दिलशाह फैवाज नागुरणे

Dilshah

७५) ही हनीफा झेहर हुवा

Haniya

७६) रशीदा अ पेठकर

Rashida

७७) H.A. Navathe

Director
Jawalkar Rural Medical Centre
Sawade, Kasarwadi, Pin-412201, Nargothane

७८) सुनिता प्र सावदेकर

सुनिता प्र सावदेकर

- | | | |
|------|--|---------------------------|
| 91) | नाम नफीसा गुलजार पेडेकर | राशि Nafisa |
| 92) | अनेवर अणुषकर जोगिलकर | A |
| 93) | सुमीया अफ्कार जोडेकर | S.A.K |
| 94) | पद्मिनी साहिर पेडेकर | P.J.P |
| 95) | जुवेदा मियाज पेडेकर | जु.मि.पे |
| 96) | Naziya Bilal Hawa | Naziya |
| 97) | Nadiya Tauheed Naguthama | Nadiya |
| 98) | ASEIYA. A. SAMAD. Hawa | ASEIYA |
| 99) | Fairoza Mukhtar. Hawa | Fairoza |
| 100) | अनवरी रफीक साउदानी | Anavari |
| 101) | सौ सारिता कुंदन जाधव (सातगेकी बोंबवडी) | Sarita |
| 101) | सौ. प्रेमा सुशिल मोरे (जामगे बोंबवडी) | प्रेमा सु. मोरे |
| 102) | सौ प्रजा योगेश जाधव | - 11 - प्रजा जाधव |
| 103) | सौ विद्या रामदास पवार | - 11 - विद्या रा. पवार |
| 104) | सौ वर्षा संजय जाधव | - 11 - वर्षा स जाधव |
| 105) | सौ धनश्री धर्मा जाधव | - 11 - धनश्री ध जाधव |
| 106) | सौ प्राज्ञेला प्रमोद कुवडे | = 11 = प्र. कुवडे |

| क्र. | नाव पत्ता | संपर्क नंबर | गाव वाडी | पद | सही |
|------|-----------------------------|-------------|----------------------|-----------------------|---------------------|
| 38 | श्यामिनी तुकाराम भामनामनवार | | खेडी | | |
| 39 | रोवती रंकर मादव | | खेडी | | शेवती श. मादव |
| 40 | सौ. अर्चना हरिचंद्र भुवड | | खेडी | | सौ. अ. ह. भुवड |
| 41 | सुधाभा उमेश आवडी | 8411097492 | भावली पाचवली | | |
| 42 | जीमती पी. एम. पाडवी | 7218651555 | दापोली | I.C.D.S. पर्यवेक्षिका | शिवडी |
| 43 | सौ. योगीला पांडुरंग कांदे | | | | |
| 44 | सौ. ममता मंगेश शिंदे | 9168220047 | आसूद | पं. स. सदस्या | शिवडी |
| 45 | | 9421878138 | पं. स. कापोली उळवे | पं. स. सदस्या | शिवडी |
| 46 | सौ. स्नायली संजयराय कुदम. | वव21689218 | खेडी खेडी | | शिवडी |
| 47 | सौ. सुजाता विजय ताव | 9323396453 | शिहवरी दापोली | माजी डि. पं. सदस्या | शिवडी |
| 48 | सौ. राजेशी राहुल रणे | | पिसई बौद्ध वाडी | ग्रामपंचाय सदस्य | रा. रा. रणे |
| 49 | सौ. अर्पणा अरुण जोधवे | | खेडी ग. प. | सदस्या | सौ. अ. अ. जोधवे |
| 50 | सौ. सुविष्ठा नमोदा शिवगावकर | 9545216941 | खेडी | ग्रामसेवक | शिवांगवले |
| 51 | सौ. शशी सचिन चौपडे | 90498599704 | खेडी ग. प. | सदस्या | सौ. शा. स. चौपडे |
| 52 | सौ. उषा आरु. आंबेरकर | 9764542299 | आरोज्यलेविका खेडी | आरोज्यलेविका खेडी | शिवडी |
| 53 | सौ. अर्चना हरिचंद्र भुवड | | खेडी | | सौ. पार्वती ए. वेकर |
| 54 | सौ. पार्वती लक्ष्मण वेकर | | खेडी | | वनीता व. वेकर |
| 55 | वनीता अचव वेकर | | खेडी | | |
| 56 | कनावती कारीराम वेकर | | खेडी | | सौ. सारिका सं. वेकर |
| 57 | सौ. मारिका संदीप वेकर | | खेडी | | सौ. विना. रा. वेकर |
| 58 | सौ. विना राजेंद्र वेकर | | खेडी | | सौ. सुवर्णा क. वेकर |
| 59 | सौ. सुवर्णा कृष्णा वेकर | | खेडी | | |

Signature
Director
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| क्र. | नाम | पता | संपर्क नंबर | गाव वडी | पद | सही |
|------|---|---------|-------------|----------------------|-----------------|-------------------------|
| 1 | सौ. मेधा महेश महाडीक | महाडीक | 8545347658 | नवानगर | बँक सचिव | सौ. मेधा महेश महाडीक |
| 2 | सौ. उत्कल उदय महाडीक | महाडीक | 8554807290 | नवानगर | C.R.P | Umesh |
| 3 | सौ. अर्चना अनंत महाडीक | महाडीक | 8008205998 | नवानगर | सार्चिव | डा. अ. महाडीक |
| 4 | सौ. मेधा संतोष महाडीक | महाडीक | | नवानगर | सदस्य | सौ. मे. सं महाडीक |
| 5 | सौ. दिपिका दिपक महाडीक | महाडीक | 8411899898 | नवानगर | सदस्य | महाडीक |
| 6 | सौ. रजनी रंजन खापर | खापर | | नवानगर | सदस्य | र. र. खापर |
| 7 | सौ. मीना संतोष महाडीक | महाडीक | | नवानगर | सदस्य | म. सं. महाडीक |
| 8 | सौ. दक्षिणा दिगंबर महाडीक | महाडीक | 88888898 | नवानगर | अध्यक्ष | द. दि. महाडीक |
| 9 | सौ. सुप्रिया जयदेव महाडीक | महाडीक | 8998083899 | माटवण | अध्यक्ष | सौ. सु. जी. महाडीक |
| 10 | सौ. लक्ष्मी प्रकाश भोसले | भोसले | 6906836688 | वडवळी | अध्यक्ष | सौ. लक्ष्मी. प. भोसले |
| 11 | सु. सुभाष हेबल मोरे | मोरे | | वडवळी | | सुभाष हेबल मोरे |
| 12 | सौ. राजेशी राजाराम मोरे | मोरे | 899888280 | वडवळी | | सौ. राजेशी राजाराम मोरे |
| 13 | सौ. स्वप्ना संतोष चव्हाण | चव्हाण | | श्रीपथ | अंगणवाडी सेविका | सौ. स्व. सं. चव्हाण |
| 14 | सौ. माधवी मधुकर जाधव (अं. सेविका) | जाधव | 8552949684 | टांगर कदमवाडी | अं. सेविका | m. m. Bhat |
| 15 | आश्विनी आनंद मोरे | मोरे | 8698577463 | टांगर गावठाण | अं. सेविका | अ. अ. मोरे |
| 16 | गीता सिताराम कदम | कदम | 8411811762 | टांगर गणपतीपुळे | अं. सेविका | सौ. गीता सि. कदम |
| 17 | सौ. शान्ता शाहीकांत चव्हाण (अं. सेविका) | चव्हाण | 8007896113 | शिबरोली (गावठाण) | अं. सेविका | शान्ता चव्हाण |
| 18 | सौ. कान्हा देवराव डोळार (अं. सेविका) | डोळार | 7763863056 | भानडर गावठाण | अं. सेविका | क. दे. डोळार |
| 19 | म. अंजलि अमरा महाडीक | महाडीक | 3145271061 | नवानगर - लानडाकांड | अं. सेविका | अं. अं. महाडीक |
| 20 | संगीता रमनाथ चव्हाण | चव्हाण | 3158742144 | नवानगर - लानडाकांड | अं. सेविका | S. Phani |
| 21 | मिना रजनीकांत मोरे | मोरे | 8007992252 | बांडवळी (भोरगावकांड) | अं. सेविका | S. R. More |
| 22 | सुवर्णा भगतान कदम | कदम | 8898187386 | लानडाकांड (नवानगर) | अं. मदलनीस | सु. म. कदम |
| 23 | सौ. भारत भारती साळवंडी | साळवंडी | 9209857633 | माटवण (गावठाण) | अं. सेविका | सौ. भार. भार. साळवंडी |
| 24 | सौ. जयश्री जयदेव माटवणकर | माटवणकर | 9209898854 | पाचवळी गावठाण | अं. मदलनीस | सौ. ज. ज. माटवणकर |
| 25 | सौ. सुभाषी सुभाष साळवंडी | साळवंडी | 8380662880 | वडवळी | अं. मदलनीस | सौ. सु. सु. साळवंडी |
| 26 | सौ. लिली गणेश मेहता | मेहता | 8390391728 | वडवळी | C.R.P. | सौ. ल. ग. मेहता |
| 27 | सौ. प्रतिक्षा प्रदीप भोसले | भोसले | | वडवळी | | सौ. प्र. प्र. भोसले |
| 28 | सौ. उत्कल उदय महाडीक | महाडीक | | वडवळी | सदस्य | सौ. उत्कल उ. महाडीक |
| 29 | निखा निलेश मेहता | मेहता | 8806449306 | माटवण | अ. अ. | N. N. Mehete |
| 30 | सौ. ज्योति दिपक सिंगवण | सिंगवण | 9673160152 | पाचवळी | (आवा) | सौ. ज्योति दिपक |
| 31 | स्वीम. पी. व्ही. निवकर | निवकर | 7798973365 | माटवण | ANM (meh) | स्वीम. पी. व्ही. |
| 32 | Secy Nilkanth Nilkanth | निवकर | | | | निवकर |

| क्र.सं. | नाम | मो.नं. |
|---------|------------------------------|-------------|
| 1) | सा. प्रेम लाल महाडिक | |
| 2) | सा. ब्राह्मिणी लुणगाथ महाडिक | |
| 3) | सा. रोहानी रामेंद्र शानपिठकर | 7083775295 |
| 4) | सा. रमेशा श्रीराम चव्हाण | 2542 26 20 |
| 5) | सा. शकुंतला महाडिक | |
| 6) | सा. सिता रजनीकांत मोरे | 8007792252 |
| 7) | सा. सखी कृष्ण पवार. | |
| 8) | सा. प्रतिभा मधुशर्मा शेलार. | |
| 9) | सा. कदना रघुनाथ चव्हाण. | |
| 10) | सा. सुकाश सुकाराम शेलार. | |
| 11) | सा. अचला अदुन पवार | |
| 12) | सा. लक्ष्मी हरि महाडिक | 9545166727 |
| 13) | सा. मृगाली उमेश साठवी | 8411097492 |
| 14) | सा. सोनली अजय साठवी | 8806639918 |
| 15) | सा. रजनी राम रमाडवी | 8698451443 |
| 16) | सा. दिपाली दिलीप साठवी | |
| 17) | शशीकला अनंत साठवी | |
| 18) | मेरिया लक्ष्मण घडवले | |
| 19) | मनवी मंडुदेव मांडवकर | |
| 20) | सरिता सुप्रभा वरकर | |
| 21) | माधवी महादेव वाळंज | |
| 22) | सा. सोजण संदिप पवार | |
| 23) | शुभांगी लखन मळेकर | |
| 24) | सा. स्नेहल शशिकांत शिभण | 93087 63088 |
| 25) | रुपजाणी लखन मनवळ | |
| 26) | जयश्री तुकाराम मनवळ | |
| 27) | आर्जुना आत्माराम शिभण | |
| 28) | दिपाली दिलीप पवार | 8806422205 |
| 29) | लैशाली विजय नांदे | |
| 30) | संगिता संतोष माने | 7447345030 |
| 31) | शितल संतोष लेहप | |
| 32) | सुनिता काशिराम शिभण | |
| 33) | पार्वती शंकर शिभण | |

| नाम वाडी | पद | सही. |
|----------------|-------------------|---------------------|
| सा. महाडिक | | सा. प्रभा. महाडिक |
| नवा नगर | नचत गट उपअध्यक्ष. | शांतीका शिभण |
| पाचवली (गावठा) | नचत गट सदस्य | Shanvi Kor. |
| ठागा/सागर | नचत गट सदस्य | श्री. श्री. लक्ष्मी |
| नवानगर | ग.पं.जाईत उपस्था | शकुंतला महाडिक |
| नवानगर | अंगणवाडी - सोवला | अरमण |
| श्री. नंदर | नचत गट सदस्य | श. स. ल. पवार. |
| श्री. नंदर | नचत गट सदस्य | सा. प्रशान्त |
| श्री. नंदर | | श. स. र. चव्हाण |
| श्री. नंदर | | सा. ल. शेलार |
| श्री. नंदर | | अ. अ. पवार |
| नवानगर | अंका | क्र. 2 |
| पाचवली | | |
| पाचवली | कुषी सखी | |
| पाचवली | C.R.P. | Sohani A. Salvi |
| | नचत गट अध्यक्ष | श्री. श्री. साठवी |
| | नचत गट सदस्य | श. अ. साठवी |
| | नचत गट सदस्य | श्री. ल. घडवले |
| | नचत गट सदस्य | मं. मं. मांडवकर |
| | नचत गट सदस्य | सा. द. नंदर |
| पाचवली | नचत गट उपअध्यक्ष | सा. मं. वाळंज |
| पाचवली | अंगणवाडी मरतनीस | S.S. Phadke |
| बोडिवली | नचत गट सदस्य | शं. व. मळेकर |
| बोडिवली | नचत गट सदस्य | श. श. शिभण |
| बोडिवली | नचत गट सदस्य | श. व. ल. मनवळ |
| बोडिवली | नचत गट सदस्य | ज. तु. मनवळ |
| बोडिवली | नचत गट सदस्य | अ. आ. शिभण |
| बोडिवली | नचत गट सदस्य | दि. दि. पवार |
| बोडिवली | नचत गट उप अध्यक्ष | वै. वि. नांदे |
| बोडिवली | नचत गट सदस्य | S.S. Mane |
| बोडिवली | नचत गट B.K | श्री. मं. लक्ष्मी |
| बोडिवली | नचत गट सदस्य | शु. का. शिभण |
| बोडिवली | नचत गट सदस्य | पार्वती. अंका. शिभण |

श्री. गणेश शिवराज चव्हाण
श्री. कामेश्वर कामरु शेठ
श्री. शिवा सुनिन गण्टे
श्री. संजिवा संतोष भोजाल

श्री. देवी वधन शिंदे
श्री. अशोक शिंदे
श्री. संजिवा भोजाल

श्री. देवी वधन शिंदे

श्री. दे. व. चव्हाण
श्री. अ. शिंदे
श्री. शिवा सु. गण्टे


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१९५
५०
६०
१३५

| क्र.सं. | नाव | मो. नंबर | गाव वाडी | पद | वारी |
|---------|------------------------------|------------|--------------------|----------------------------|--------------------------|
| | दे गाव वैजंती व. घाणेकर | | नारे वाडी | सदस्य | सौ. वैजंती वसंत घाणेकर |
| 1 | जोडे वैजंती वसंत घाणेकर | ८८०६८१६८९९ | गोरीवाडी वाडी | अध्यक्ष | सौ. सु. स. राजिवले |
| 2 | जोडे भाविका भरत विठ्ठल | १५५५२२८२६ | गोरीवाडी वाडी | सचिव | सौ. भा. भ. विठ्ठले |
| 3 | जोडे संजीवनी भालचंद्र पाटील | ८००७११५७८४ | गवळवाडी | सचिव B.R | Sarfaraz |
| 4 | जोडे सजे जयश्री गजाराय पाटील | १६७३११०९८५ | गवळवाडी | उप. अध्यक्ष | सौ. स. पाटील |
| 5 | जोडे सलोनी योगेश गावडे | ११६८१४२३१८ | गोरीवाडी वाडी | उप. अध्यक्ष | सौ. स. यो. गावडे |
| 6 | जोडे सुहाणी सुहारा मुरार | १५५५०९२५१५ | तेळीवाडी | सचिव व वि.के. = B.K | सौ. सुहाणी सु. मुरार |
| 7 | जोडे करुणा जोडे घोडेराव | १५५५५०५८४३ | जोडे शिगवणवाडी | अ. सेविका | सौ. करुणा जोडे घोडेराव |
| 8 | जोडे सुगंधा श्रीराम घोडेराव | १६१९९७६४१३ | जोडे सरोदेवाडी | ग्रामपंचायत सदस्य | सु. श्री. घोडेराव |
| 9 | जोडे अंकिता अनिल गावडे | ७६२०७०३८५८ | जोडे मदननिस गावडे | मदननिस | सौ. अ. गावडे |
| 10 | जोडे वैजवी वसंत महाडीक | ७७६९८६३५७३ | जोडे लेलीवाडी | अंगणवाडी सेविका | सौ. वैजवी महाडीक |
| 11 | जोडे ममिका सुविकार रहाटे | ७०३०५८५५७३ | जोडे लेलीवाडी | व्यतगट उपसदस्य | सौ. सु. सु. रहाटे |
| 12 | जोडे गौरी गोकुळ जाधव | ८३९०३५८६३६ | जोडे वांढववाडी | व्यतगट सचिव | गौरी गौ. जाधव |
| 13 | जोडे लता लक्ष्मण कासार | ८६९८०५४४४० | जोडे वांढववाडी | मदननिस | लता क. कासार |
| 14 | जोडे समिधा सुधीर कासार | | जोडे वांढववाडी | व्यतगट सदस्य | स. सु. कासार |
| 15 | जोडे मनिषा महेश निकम | | जोडे शिगवणवाडी | व्यतगट सचिव | म. म. निकम |
| 16 | जोडे अरुणा चंद्रकांत शिगवण | | जोडे शिगवणवाडी | व्यत सदस्य | अरुणा चं. शिगवण |
| 17 | जोडे समिधा सुधास शिगवण | | जोडे शिगवणवाडी | व्यत सदस्य | समिधा सु. शिगवण |
| 18 | जोडे सुनंदा रामचंद्र शिगवण | | जोडे शिगवणवाडी | व्यतगट सदस्य | सु. स. शिगवण |
| 19 | जोडे भारती सुरेश कासार | | जोडे शिगवणवाडी | व्यत अ. मदननिस | भारती सु. कासार |
| 20 | जोडे परिधी प्रसाद पवार | १५०५८९१४२२ | उन्हवरे तळवटकरवाडी | अ. सेविका | सौ. परिधी प्र. पवार |
| 21 | जोडे स्नेहा सं. जाधव | १५०५९६०१६३ | उन्हवरे तळवटकरवाडी | व्यत गट सदस्य | सौ. स्नेहा सं. जाधव |
| 22 | जोडे प्राची संदेश पवार | ८९९९६२६७०८ | उन्हवरे तळवटकरवाडी | व्यत गट सदस्य | |
| 23 | जोडे प्राज्जल प्रविण पवार | ८२७५०१७५३५ | उन्हवरे तळवटकरवाडी | व्यत गट सदस्य | |
| 24 | जोडे लुनी संजय तळवटकर | १५०५६७३५१० | उन्हवरे तळवटकरवाडी | व्यत गट सदस्य | |
| 25 | जोडे कविता पुराम पवार | | उन्हवरे तळवटकरवाडी | व्यत गट अध्यक्ष | सौ. क. प. पवार |
| 26 | जोडे पूवा मंगेश जाधव | ८२७५०१७५३२ | उन्हवरे तळवटकरवाडी | उन्हवरे C.R.P. व्यतगट सचिव | P. M. Jadhav |
| 27 | जोडे सुमित्रा शोडु कदम | | उन्हवरे तळवटकरवाडी | व्यत गट सदस्य | सुमित्रा धो. कदम |
| 28 | जोडे ममुरी मनोहर तळवटकर | १५२०१३१३०२ | उन्हवरे तळवटकरवाडी | व्यत गट सदस्य | सौ. ममुरी म. तळवटकर |
| 29 | जोडे प्रतिष्ठा प्रविण कासार | ८२७५०१८४३२ | उन्हवरे जागृतीवाडी | व्यत गट (CRP) सदस्य | प्रतिष्ठा |
| 30 | जोडे अनिता अनंत निकम | | उन्हवरे जागृतीवाडी | व्यतगट सदस्य | |
| 31 | जोडे सुप्रिया संतोष कागिम | | उन्हवरे जागृतीवाडी | व्यतगट अध्यक्ष (वृषीवती) | सौ. सुप्रिया संतोष कागिम |
| 32 | जोडे सुजाता मोहन पानकर | | उन्हवरे जागृतीवाडी | व्यतगट अध्यक्ष | |

मो. नंबर

| क्र | नाम | पता |
|-----|-------------------------------|-------------|
| 36 | सरस्वती राजाराम पवार तांबे | |
| 37 | वदना शांताराम तांबे | |
| 38 | मौ. सुप्रिया सुरेश तांबे | |
| 39 | सावित्री बांगाराम वारे | |
| 40 | मौ. शारदा शांताराम पायटकर | |
| 41 | मौ. प्रमदा सुरेश पायटकर | |
| 42 | | |
| 43 | | |
| 44 | सायली दलाराम वारे | |
| 45 | मौ. सरिना संजय वारे | 9923493619 |
| 46 | मौ. अपर्णा अरुण वारे | 9545400511 |
| 47 | मौ. जरीना अ. लालकृष्ण देवर्षी | 9421166135 |
| 48 | मुलाजार मुजादर खोल | 9421161904 |
| 49 | स्वाधा इंदुलक्ष्मी रेवा | |
| 50 | नवीला मासूम खोल | |
| 51 | दीपदी बांगाराम वाईले | |
| 52 | निकिता नितिन शेंकर | 8698174113 |
| 53 | पुजा प्रकाश वेडे | |
| 54 | तेजस्वीनी उमेश वेडे | |
| 55 | स्वाती दलाराम विचने | 9049853765 |
| 56 | अमृता अमृतमय शिंदे | 97499395147 |
| 57 | सुजाता सुरेश कदम | |
| 58 | सुनंदा रामचंद्र केळकर | |
| 59 | अश्विनी अमिकेत वानरकर | |
| 60 | वनिता अनंत मांडवकर | |
| 61 | अनुराधा मधुराम गावण | |
| 62 | प्रभा प्रमोद फारकर | |
| 63 | वसुंधरा शंकर महाडिक | |
| 64 | गोण्टी शंकर गाडग | |
| 65 | रसिका रविंद्र गावण | |
| 66 | अशोभा मनिंद्र शंकर | |
| 67 | निकिता दलाराम शेंकर | |
| 68 | | |

Director
B.K.L. Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606

| गाव वाडी |
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| उन्हवे लोहवाडी |
| उन्हवे लोहवाडी |
| उन्हवे लोहवाडी |
| देगाव |
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| दाभील |
| दाभील |
| देगाव |
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| देगाव |
| फारार खोल वाडी |
| खोल वाडी फारार |
| खोल वाडी फारार |
| देगाव |
| फारार |
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| पंच |
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| बचत गट सदस्या |
| बचत गट सदस्या |
| बचत गट अध्यक्ष |
| बचत गट सदस्या |
| बचत गट उपाध्यक्ष |
| बचत गट सदस्य |
| बचत गट सदस्या |
| बचत गट सदस्या |
| बचत गट सचिव |
| बचत गट सचिव (CR.P) |
| बचत गट अध्यक्ष |
| बचत गट अध्यक्ष |
| बचत गट उपाध्यक्ष |
| बचत गट सदस्या |
| बचत गट |
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| पता |
|---------------------|
| म.रा. तांबे |
| वदना. शा. तांबे |
| सु.सु. तांबे |
| सावित्री गं. वारे |
| शा.शा. शा. पायटकर |
| म. सु. पायटकर |
| मौ. अनंता अनंत मोरे |
| मौ. अनिता ग. कलंबटे |
| सायली दवारे |
| सरिना सं. वारे |
| अ. अ. वारे |
| खोल |
| ल. म. क |
| R. J. K |
| Nithab |
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| अ.क्र. | नाम | मो. नंबर | शा. व. वाडी | पद | सही. |
|--------|--------------------------|------------|-----------------|--------|------------------|
| 71 | दिव्या देवेन्द्र भाडविकर | | शिरवणे कोडवाडी | सहाय्य | दिव्या 301 |
| 72 | भारती बाळकृष्ण टेंकर | | शिरवणे कोडवाडी | | भारती वा टेंकर |
| 73 | संजीवनी संतोष भोसले | | फुलासु वेडेवाडी | | संजीवनी स. भोसले |
| 74 | वासुती वसुंत भोसले | | फुलासु वेडेवाडी | | वासुती व. भोसले |
| 75 | अंजना विप्रेय पाचवाल | | फुलासु वेडेवाडी | | अं. वि. पाचवाल |
| 76 | रिया विकास जालगुडे | 7448099440 | फुलासु वेडेवाडी | सहाय्य | रिया |
| 77 | वेशाली विकास भोसले | 9764224966 | फुलासु वेडेवाडी | आशा | वेशाली वि. भोसले |
| 78 | हर्षला संजय जांबे | | फुलासु वेडेवाडी | आशा | हर्षला सं. जांबे |
| 79 | सुखमा बाळकृष्ण वाळुकर | | फुलासु वेडेवाडी | आशा | सुखमा वा. वाळुकर |
| 80 | शोभा लक्ष्मीकाजी वाडकर | | | | |
| 81 | अनिता राविस | | | | |
| 82 | स्वनिता लक्ष्मण नाडव | | | | |
| 83 | लक्ष्मी शोतराम भागणे | | | | |
| 84 | सरिता विठ्ठल भागणे | | | | |
| 85 | पावनी लक्ष्मण जरे | | | | |
| 86 | संजिविनी संतोष निवाले | | | | |
| 87 | स्वमित्रा लक्ष्मण भागणे | | | | |
| 88 | भूपरी कुमेश महेश धाणेकर | | | | |
| 89 | मोनिका मोहन भोसले | | | | |
| 90 | नेहा रामचंद्र भोसले | | | | |
| 91 | निर्मला भोसले | | | | |
| 92 | स्वलोचना सुरेश भागणे | | | | |
| 93 | स्वभावा लक्ष्मी देवाळे | | | | |
| 94 | प्रणिता प्रदिप धाणेकर | | | | |
| 95 | स्वलोचना मनोहर बाहेल | | | | |
| 96 | दिप्ती भोसले | | | | |
| 97 | वासुती उके | | | | |
| 98 | अंजना परदळे | | | | |
| 99 | स्वभावा परदळे | | | | |
| 100 | अशुभला भावळे | | | | |
| 101 | शर्मिष्ठा परदळे | | | | |
| 2 | इल्लप्रभा परदळे | | | | |
| 2 | अनिता भोसले | | | | |

Director
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Sawarde, Kasarwadi, Pin - 415606

Director
B.K.L. Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606

106 कशना भोंगरे.
7 सौगिता भोंगरे.
8 मनिषा जंभम.
9 पार्वती पारदळे.
10 लक्ष्मी जावळे.
11 दिक्षा जावळे.
12 शकुंतला जावळे.
13 लक्ष्मी जावळे.
14 आनंदी जावळे.
15 लक्ष्मी शिंदे.
16 लक्ष्मी करजकर.
17 सिता जावळे.
18 निमिना जावळे.
19 सांघि पाथरडे.
20 अमिता अंत करजकर.
21 सुजायना जाधव.
22 राजश्री पाथरकर.
23 आरती जावळे.
24 सरस्वती भोंगरे.
25 सुजायना ठुव.
26 चंद्रभागा जावळे.
27 मनिषा बाईत.
28 शेवंती जावळे.
29 निमिना जावळे.
30 निमिना बनुरे.
31 विराथा भोंगरे.
32 पार्वती भोंगरे.
33 शकुंतला सुरे.
34 सजिवनी भोंगरे.
35 निमिना भोंगरे.
36 अयश्री भोंगरे.
37 प्रमिना राऊत.
38 विपानी भोंगरे.

141 अनुसया भोंगरे.
42 सवित्री रेवळे.
43 प्रतिक्षा पारदळे.
44 मिताली पारदळे.
45 सुशिला पारदळे.
46 सिता पारदळे.
47 सुमित्रा पारदळे.
48 गिता भागवे.
49 लक्ष्मी भागवे.
50 लक्ष्मी भागवे.
51 सुमित्रा भोंगरे.
52 शेवंती भागवे.
53 शुरामा भागवे.
54 मिठन जावळे.
55 निमिना भोंगरे.
56 ललिता भागवे.
57 रेशमा पोतनाक.
58 चंद्रभागा भांगरेकर.
59 अनश्री भोंगरे.
60 अनिशा भागवे.
61 रत्नप्रभा भागवे.
62 सुरेखा सुमित.
63 भागवे.
64 विपानी भागवे.
65 प्रमिना भागवे.
66

166 जरीजा रवळे.
67 गुलजार रवळे.
68 सुश्री रवळे.
69 अंजना रवळे.
70 सजिवनी रवळे.
71 फरिदा साखरकर.
72 सुरेखा रवळे.
73 कुलसुम रवळे.
74 रामशाह रवळे.
75 हरेबाण साखरकर.

करारे रवळे वाडे

| क्र. | नाम | मो. नंबर |
|------|------------------------------|-------------|
| 1 | मौ. स्वराजी संदीप मोहित | 9545634520 |
| 2 | मौ. कृष्णाजी बाबू मोहित | 9545634520 |
| 3 | मौ. शिवा मिह्याय गभरे | 02358236027 |
| 4 | मौ. शिवराज मदानंद धोत्रे | 02358236024 |
| 5 | मौ. शिमता सुनील गभरे | |
| 6 | मौ. प्रमिता पांडुरंग मुकुल | |
| 7 | मौ. वनिता प्रभाकर वागवे | |
| 8 | मौ. चंद्रभागा रामचंद्र मुकुल | |
| 9 | मौ. ललिता मंगेश गभरे | |
| 10 | मौ. निता नरेश मळेकर | 9011575651 |
| 11 | मौ. इशिता सुलोक तलवकर | |
| 12 | सौ. अश्विनी चंद्रकांत धागे | |
| 13 | सौ. मानवी मनोज मळेकर | 7507708051 |
| 14 | मौ. अंजली केदार मळेकर | |
| 15 | प्रार्थना प्रकाश जोशी | |
| 16 | पार्वती बंकर तलवकर | |
| 17 | सुपणा सुनील मळेकर | |
| 18 | मौ. प्राजक्ता पांडुरंग मळेकर | |
| 19 | मौ. निमीता निमन मळेकर | |
| 20 | मौ. मानिका मधुकर जाधव | |
| 21 | मौ. ममिता संदीप मळेकर | |
| 22 | पार्वती महादेव मळेकर | |
| 23 | लक्ष्मी बाळू भोगल | |
| 24 | कु. आरती अनंत राजपुरे | 9545490573 |
| 25 | मौ. अनिता बाबू राजपुरे | |
| 26 | मौ. सपना बाबाय राजपुरे | 866972056 |
| 27 | सुषमा सुभाष शिंदे | |
| 28 | नम्रता नारायण देवघरे | 9080395879 |
| 29 | प्रीती चंद्रकांत महाडिक | |
| 30 | प्रतिष्ठा प्रकाश महाडिक | |
| 31 | पद्माला वसंत महाडिक | |
| 32 | राधिका रा. सुनील | |
| 33 | लक्ष्मी का. शिंदे | 90194949410 |

| गाव वाडी | पद | नाम |
|-----------------|------------------------|-----------------------|
| सांरंग वौधवाडी | स्वयंसेवायता CRP | S.S. mobile |
| सांरंग वौधवाडी | स्वयंसेवायता सेचीव | B.R. Mahale |
| सांरंग वौधवाडी | स्वयंसेवायता अध्यक्ष | शि. वि. गभरे |
| सांरंग वौधवाडी | स्वयंसेवायता उपअध्यक्ष | शि. व. धोत्रे |
| सांरंग वौधवाडी | अंगणवाडी मदतवीस | शिवा सु. गभरे |
| सांरंग वौधवाडी | स्वयंसेवायता सदस्या | |
| सांरंग वौधवाडी | स्वयंसेवायता सदस्या | |
| सांरंग वौधवाडी | स्वयंसेवायता सदस्या | |
| सांरंग वौधवाडी | स्वयंसेवायता सदस्या | |
| अडखळ पाटील वाडी | स्वयंसेवायता सदस्या | शि. व. मळेकर |
| अडखळ पाटील वाडी | स्वयंसेवायता सदस्या | इ. व. तलवकर |
| अडखळ पाटील वाडी | स्वयंसेवायता सदस्या | आ. व. इशारे |
| अडखळ पाटील वाडी | स्वयंसेवायता सदस्या | भा. म. मळेकर |
| अडखळ पाटील वाडी | स्वयंसेवायता सदस्या | अ. के. मळेकर |
| अडखळ पाटील वाडी | स्वयंसेवायता सदस्या | प्र. प्र. जोशी |
| अडखळ पाटील वाडी | स्वयंसेवायता सदस्या | पा. बा. तलवकर |
| अडखळ पाटील वाडी | स्वयंसेवायता सदस्या | कु. कु. मळेकर |
| अडखळ पाटील वाडी | स्वयंसेवायता सदस्या | प्र. पा. मळेकर |
| अडखळ पाटील वाडी | स्वयंसेवायता सदस्या | नि. की. मळेकर |
| अडखळ पाटील वाडी | स्वयंसेवायता सदस्या | म. म. जाधव |
| अडखळ पाटील वाडी | स्वयंसेवायता सदस्या | श. म. मळेकर |
| अडखळ पाटील वाडी | स्वयंसेवायता सदस्या | पा. मळेकर |
| अडखळ पाटील वाडी | स्वयंसेवायता सदस्या | ल. व. शिंदे |
| कळेवर | | A.A. Rajpure |
| कळेवर | | अ. व. राजपुरे |
| कळेवर | | सपना सं. राजपुरे |
| कळेवर | | सु. सु. शिंदे |
| कळेवर | | ना. म. देवीजी |
| कळेवर | | सौ. प्रमिता पा. मळेकर |
| वाघवे | | |
| वाघवे | | |

| अ. क्र. | नाम | पता | मो. नंबर | गाव | वाडी | पद | प्रा. वि. |
|---------|--|-----|------------|------------------------|------|---------------------------|------------------------|
| 36 | सविता मनोडा शिर्के | | | महेसोडे | | | स. प्र. शिर्के |
| 37 | मनिषा महेरा शिर्के | | | महेसोडे | | | म. म. शिर्के |
| 38 | आश्विनी प्रकाश शिर्के | | | महेसोडे | | | आ. प्र. शिर्के |
| 39 | शिखा शिरिव शिर्के | | | महेसोडे | | | शि. रि. शिर्के |
| 40 | श्री. सुताला सुरेंद्र शिर्के | | 7057275764 | महेसोडे | | | <u>शिर्के</u> |
| 41 | श्री. मनिषा मनाहर मोगव | | | | | | |
| 42 | श्री. लक्ष्मी बांधू कोठवाल | | | | | | |
| 43 | श्री. अनिता अशोक म्हावडी | | | | | | |
| 44 | श्री. वडावो दिलीप लीके | | | महेसोडे | | | श्री. व. दे. लीके |
| 45 | श्री. संमहदी स्पजिल शिर्के | | | | | | श्री. ज. प. महेडिक |
| 46 | श्री. जयश्री प्रकाश महेडिक | | | वाघवे | | | श्री. मा. म. शिर्के |
| 47 | श्री. माधवी मधुकर शिर्के | | | वाघवे | | | |
| 48 | श्री. सुपना संतोष पाळभाकर | | | सावंग प्रा. म्हा. वाडी | | | श्री. सु. सं. पाळभाकर |
| 49 | श्री. माला पुष्पलता शैल्य मर्कर | | | अडवळ पा. म्हा. वाडी | | | पु. म. मर्कर |
| 50 | श्री. सुजाला सोमू राजपुरे | | | | | | |
| 51 | श्री. अर्पना अनंत मोगव | | 9225242401 | वाघवे | | अ. से. | <u>मर्कर</u> |
| 52 | श्री. गीता शिरिव मरजन | | 916136940 | मळेवट | | अ. से. मळेवट | <u>मळेवट</u> |
| 53 | श्री. कौसल्या कामळकर शिर्के | | | नांदे | | मदनगिर | श्री. का. शिर्के |
| 54 | श्री. सुरेश सुरेश पांडे | | | पांडेवाडी | | महेसोडे | श्री. सुरेश सुर. पांडे |
| | श्री. लीला संवपाल पांडे | | 7066569131 | ता. 10 वाघोली | | आबा सुपवायडर दोपेली (BCM) | <u>दोपेली</u> |
| | श्री. लीला संवपाल मुलावली. नि. म. ग्राम पंचायत | | | सावंग | | सावंग | <u>सावंग</u> |

सुरवात दि. 22-1-98 रोजी आसावर मंडळने
सुवा चंगळी महिला आरोग्य केंद्र विली.
चंगळी प्रकारे मा. म. व. नि. म. - आसावर प्रकारे
आसावर मंडळने महिला विली. विली. विली.

अपना रीतिप राजपुरे 22-1-98 रोजी आसावर मंडळने
श्री. आल्या व आम्हाला आरोग्या विषय व महामोने
आसावर मुला करे आसावर द्यावे व त्यामुळे कोणारे फायदे
आगले रागिलले असे आम्हाला माहिती देत आसावर

[Signature]
Director
B.K.L. Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606

22.08.19.

सोने दापोली

Date: _____
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| क्र.सं. | नाव | सो. नंबर. | गाव वाडी | पद | सही |
|---------|--------------------------------|-------------------------|------------------------|-----------------------|--------------------|
| 1) | संलोधी धनराज सावंत | 9049874237 / 7745886086 | नवाजगर दापोली | अं.सेविका | Balwant |
| 2) | मरीयम मन्नाबाब मनिवार | 8421961193 | चिंसाणी मोहल्ला दापोली | बचाव सहस्रक | मरीयम |
| 3) | सविदा मोहम्मद - 12 | --- | --- | महिला सहस्रक | मनीषा |
| 4) | त्रेगी ममली ठुमता | 9922083200 | --- | बाह्या प्रशासन सहस्रक | मनीषा |
| 5) | रमला स. करीम कलवान | --- | --- | अध्यक्ष | --- |
| 6) | हुसना स. करीम कलवान | --- | --- | सहस्रक | H. A. Kaldane |
| 7) | हानीया रहमान मेन्साही | --- | --- | सहस्रक | Manifa |
| 8) | मनिका कुंदुप माधव | 77458066086 | नवाजगर, दापोली | मदतणीस | M. M. Jadhav |
| 9) | सिमरन सिवावर इस्हे | 7715832521 | भारतनगर दापोली | महिला सहस्रक | --- |
| 10) | सापरीन खानदेशी | --- | दापोली | --- | --- |
| 11) | संगीता संभाजी स्वयंसेविका | 99172066384 | मं. कोड दापोली | अं. मदतणीस | संगीता स. सावरकर |
| 12) | मेघना अनिल कुमाळ | 9637243596 | म. कोड कोल्हापूर | अं. सेविका | मेघना |
| 13) | सौ. मेघना रविंद्र पांगत | 9923097787 | दा. काळकडे कोड | अं. सेविका | म. र. पांगत |
| 14) | सौ. वेदना उषस भंडारी | 9168341892 | शिवाजीनगर कोंडाजी | अं. सेविका | वेदना |
| 15) | सौ. गितांजली गंगाजी लालेकर | 9043636230 | वसंत लालेकर | अं. सेविका | --- |
| 16) | सौ. भस्मुरी मंगेश लोकरे | 7378315174 | चणंद उषकाडी | अं. सेविका | भवानी |
| 17) | संध्या रोश्नल पुताभा | --- | जोगळे पाटीमवाडी | अं. सेविका | संध्या |
| 18) | चंद्रभागा चंद्रकांत नावले | --- | --- | म. मदतणीस | च. चं. नावले |
| 19) | सौ. सपना सादिव तेईवे | 9806246429 | दापोली वाडी नर | अं. सेविका | सपना |
| 20) | शर्मिष्ठा सुमदा शंकर दुर्गावळे | --- | --- | अं. मदतणीस | श. दु. दुर्गावळे |
| 21) | सौ. मेधा नितिन उक्तावळे | 7720806211 | शिवाजीनगर किरांबा | --- | मेधा |
| 22) | सौ. दिपाली दिलीप भांबडे | 8408967678 | शिवाजीनगर (किरांबा) | --- | दिव्या |
| 23) | सौ. लक्ष्मी नारायण भांबडे | 7768808795 | शिवाजीनगर (किरांबा) | --- | लक्ष्मी |
| 24) | सौ. पुजा शशांक लालावळे | 9803505115 | शिवाजीनगर (किरांबा) | अं. सेविका | पुजा |
| 25) | सौ. सखती गणपत लाले | --- | शिवाजीनगर (किरांबा) | अं. सेविका | सखती |
| 26) | सौ. दिविका दिवीप फुलेकर | 9049905205 | दापोली | अं. सेविका | दिविका |
| 27) | सौ. रमेश धनेश राडत | 7507780853 | --- | अं. मदतणीस | रमेश |
| 28) | श्रीम वषी विजयपुकर | 7714973145 | अं. कोकवाडी | अं. सेविका | वषी |
| 29) | सुमंदी मारुती धामणे | --- | --- | अं. मदतणीस | सुमंदी |
| 30) | सौ. दशांता देवजी देवकर | 7030402970 | अ. जोगळेपार दापोली | अं. सेविका | Dalata |
| 31) | सौ. सुमेधा मनीषा खानावळे | 9158115285 | शिवाजीनगर दापोली | अं. मदतणीस | S.S. Khanavale |
| 32) | सौ. उषला उषस जालगावकर | 9213421978 | आपुला | अं. से | सौ. उ. उ. जालगावकर |
| 33) | अश्विनी गजानन कामणे | 8888305259 | शिवाजी | अं. से | Ashwini |

Director Medical Col Pin-41

| क्र.सं. | नाम | सोनाई नंबर | टा.प. नं. | गाव नावी | पद | सही |
|---------|-----------------------------|------------|-----------|------------------------------------|-------------|---------------------------|
| 43 | सौ. आरती काम रणरा | 7057722098 | | दापोली वाजारपेट | अं.सेविका | A. U. Jadhav |
| 44 | श्रीम. नयना वि. चव्हाण | | | | अ.महागौरव | -/06/07 |
| 45 | सौ. मेधा रविंद्र शुभर | 9960995484 | | कै.पैली माळ | अं. सेविका | Prayashant |
| 46 | सौ. मंजरी प्रकाश केळकर | | | | महागौरव | सौ. मंजरी प्र. केळकर |
| 47 | सौ. सुदर्शना सुहाकर माणे | 942188610 | | शिवाजीनगर | अं.सेविका | |
| 48 | सौ. रेश्मा समीर महापाळ | 8552020554 | | मौजे दापोली | अ.शा.सेविका | Rushika |
| 49 | सौ. शिवा संजय बुरटे | 9209274745 | | मौजे दापोली | सदस्य | सौ. शि. सं. बुरटे |
| 50 | सौ. अंजलि सुरज बुरटे | 7875641550 | | मौजे दापोली | | अ.सेविका |
| 51 | सौ. भावेला व्यंजेंद्र बुरटे | | | मौजे दापोली | | मौ. व. बुरटे |
| 52 | सौ. मावली महेश म्हसकर | | | मौजे दापोली | | मा. म. म्हसकर |
| 53 | सौ. निलीमा दिलीप म्हसकर | | | मौजे दापोली | | सौ. नि. दि. म्हसकर |
| 54 | सौ. रमेश रमेश परव | | | | | |
| 55 | प्रितीमा - प्रकाश तांबे | | | मौजे दापोली चौधवडी | सदस्य | प्रि. प्र. तांबे |
| 56 | विजयती. विजय. तांबे | | | मौजे दापोली चौधवडी | सदस्य | प्रि. प्र. तांबे |
| 57 | सौ. सुहासिनी सुहासपाळे | 9075395822 | | मौजे दापोली चौधवडी | अं. सेविका | सौ. सु. इ. सुहास |
| 58 | सौ. सुवर्णा संतोष भुवड | 9270092487 | | मौजे दापोली विजयवाडी | | सौ. सु. सं. भुवड |
| 59 | सौ. उज्वला उमेश गावडे | | | मौजे दापोली विजयवाडी | अध्यक्ष | सौ. उ. उ. गावडे |
| 60 | सौ. मंदा महादेव पवार | | | मौजे दापोली विजयवाडी | | मं. म. पवार |
| 61 | सौ. सजना संतोष भुवड | 9764355669 | | मौजे दापोली विजयवाडी | | सौ. स. सं. भुवड |
| 62 | सौ. जयवंती सत्यराज भुवड | | | मौजे दापोली विजयवाडी | | सौ. ज. स. भुवड |
| 63 | सौ. पूजय परेका माणे | | | मौजे दापोली विजयवाडी | | सौ. पू. प. माणे |
| 64 | सौ. उमाशं. पी. जावकर | | | मौजे दापोली साई नगर. | | वि. सं. जयवंती. पी. जावकर |
| 65 | सौ. निकिता नंदकुमार जाधव. | 9159828008 | | मौजे दापोली साई नगर | | वि. सं. जाधव |
| 66 | वंचना वसंत भंडारी | 9226252768 | | मौजे दापोली विजयवाडी | अं. सेविका | वी. वी. भंडारी |
| 67 | सौ. मनिषा. गणेश. गणेश | 2209249030 | | मौजे दापोली साई नगर | प्रधान | सौ. म. ग. गणेश |
| 68 | परवीण इरफान पावसकर | 7276200593 | | मौजे दापोली आलमदीना मोहल्ला | | प. इ. पावसकर |
| 69 | समीरा रिजवान पावसकर | 8149861431 | | मौजे दापोली आलमदीना मुसलीम मोहल्ला | | स. रि. पावसकर |
| 70 | सुखसार रिजवान शादुल्ला | 8605453466 | | मौजे दापोली आलमदीना मुसलीम मोहल्ला | | Shachelle |
| 71 | शासमीन सफीकदर पावसकर | 9545002923 | | मौजे दापोली आलमदीना मुसलीम मोहल्ला | | शा. स. पावसकर |
| 72 | वैजंती विनोद पवार | | | मौजे दापोली | | सौ. वै. वि. पवार |

TATA MEMORIAL CENTRE

TATA MEMORIAL HOSPITAL

AND

ADVANCED CENTRE FOR THE TREATMENT, RESEARCH & EDUCATION IN CANCER
(A Grant-in-Aid Institute under Department of Atomic Energy, Govt. of India)

Dr. Shripad D. Banavali
MD (Med; Bom), BC(Ped; USA),BE(Hem-Onc; USA)
Director-Academics
Prof, Department of Pediatric Oncology
Tata Memorial Centre
Dr. Ernest Borges Road,
Parel, Mumbai - 400 012. INDIA



Tel : +91 22 2417 7217
Fax: +91 22 2414 6937
Email : banavali_2000@yahoo.com

20/07/2022

Dr. Suvarna Patil.
Medical Director,
BKL Walawalkar Hospital,
Dervan: Tal Chiplun
Email: dr.suvarnapatil@gmail.com

Dear Dr. Suvarna Patil.

Please find the name and contact details of Specialist Registrar in Department of Medical Oncology at Tata Memorial Hospital who is being posted in your institute from 26/07/2022 to 31/07/2023

| Sr. No | Name of the Doctor | E-Mail | Mobile | Period |
|--------|-------------------------------------|--|------------|-----------------------------|
| 1. | Dr.Ashutosh Jain cc. no.: 305504 | ashu.ims07@gmail.com | 9838462323 | 26/07/2022 to 31/07/2023 |

Please contact me, if you need any further information.

Thanking you,

Yours sincerely,

(Prof. Shripad Banavali,MD.)

Prof. S. D. Banavali
Director - Academics, TMC
Mumbai - 400012.

ShriVithalrao Joshi Charities Trust's

B. K. L. Walawalkar College of Physiotherapy

At /Post - Sawarde, Taluka- Chiplun, District-Ratnagiri -415606, Maharashtra State,
India

Phone – 9075430137 Fax 2355 264181.

Outward No. SVJCT's B.K.L W COPT OFFICE 01/22 Date:-25/01/2022

To,
Medical Director,
SVJCT's B.K.L Walawalkar C.O.P.
Sawarde.

Subject: - Regarding Schedule of posting in Oncology Department for our
Physiotherapy College staffs & students along with External faculty
Dr. Chaudhary M Abbas.

Respected Madam,

Greetings, herewith we are sending the schedule of time table for the
above mentioned subject. The postings will be from 9am to 1pm & any lecture
by the external faculty can be taken with his consent.

Kindly accept it do the needful.

Thanking You.

Yours Sincerely,



PRINCIPAL

Principal

B.K.L. Walawalkar

College of Physiotherapy
Kasarwad - Sawarde


Date:-25/01/2022

**SVJCT'S B.K.L. WALAWALKAR COLLEGE OF PHYSIOTHERAPY
POSTING FOR STAFFS & 3RD YEAR STUDENTS IN ONCOLOGY FOR FEB 2022**

| DATE | GROUP | STAFF NAME |
|--|-----------|---------------|
| 1 st FEB To 5 th FEB | GROUP I | DR.SWATEJA |
| 7 th FEB To 12 th FEB | GROUP II | DR.AKHILESH |
| 14 th FEB To 19 th FEB | GROUP III | DR.PRATIKSHA |
| 21 th FEB To 28 th FEB | GROUP IV | DR. PREMSAGAR |

NOTE:-Group I to IV is the regular (III Year) students groups.

- Each group consists of 7 to 8 students.


25/01/2022
PRINCIPAL
Principal
B.K.L. Walawalkar
College of Physiotherapy
Kasarwadi - Sawarde

TATA MEMORIAL CENTRE

TATA MEMORIAL HOSPITAL

AND

ADVANCED CENTRE FOR THE TREATMENT, RESEARCH & EDUCATION IN CANCER

(A Grant-in-Aid Institute under Department of Atomic Energy, Govt. of India)

Dr. Shripad D. Banavali
MD (Med; Bom), BC(Ped; USA), BE(Hem-Onc; USA)
Director-Academics
Prof, Department of Pediatric Oncology
Tata Memorial Centre
Dr. Ernest Borges Road,
Parel, Mumbai - 400 012. INDIA



Tel : +91 22 2417 7217
Fax: +91 22 2414 6937
Email : banavali_2000@yahoo.com

05/04/2022

Dr. Suvarna Patil,
Medical Director,
BKL Walawalkar Hospital,
Dervan: Tal Chiplun
Email: dr.suvarnapatil@gmail.com

Dear Dr. Suvarna Patil,

Please find the name and contact details of Specialist Registrar in Department of Medical Oncology at Tata Memorial Hospital who is being posted in your institute from 23/04/2022 to 31/07/2022

| Sr. No | Name of the Doctor | E-Mail | Mobile | Period |
|--------|--|--|-------------|-----------------------------|
| 1. | Dr. Aditya Pawan Kumar Kanteti cc. no.: 305223 | kantetiaditya@gmail.com | 09855292345 | 23/04/2022 to 31/07/2022 |

Please contact me, if you need any further information.

Thanking you,

Yours sincerely,

(Prof. Shripad Banavali, MD.)

Prof. S. D. Banavali
Director - Academics, TMC
Mumbai - 400012.



TATA MEMORIAL CENTRE
टाटा स्मारक केन्द्र
TATA MEMORIAL HOSPITAL
टाटा स्मारक अस्पताल

AA No. 503363

21st December, 2020

Dr. Suvarna Patil,
BKL Walawalkar Hospital
At Post & Village – Sarvada,
Taluka – Chiplun,
Dist. – Ratnagiri – 415 606.

Dear Dr. Patil,

Dr. Manish Bhadane, Senior Resident (Bonded) in the Department of Radiation Oncology at this hospital has been posted to BKL Walawalkar Hospital, The Rural Outreach Programme of TMC for a period of 6 months and later from 1.1.2021. Please send his monthly attendance and the performance.

I will be happy if you kindly send your acceptance.

Thanking you,

Yours sincerely,

Dr. J.P. Agarwal
Prof. & Head, Dept. of Radiation Oncology

Copy to : Dr. S.D. Banavali, Director, Academics
Dr. Sarbani Ghosh Laskar, Academic Co-ordinator
Dr. Manish Bhadane, Senior Resident

Encl: Letter of permission from Dr. R.A. Badwe, Director, TMC

Dr. E. Borges Marg, Parel
Mumbai - 400 012, India.
Phone : +91-22-2417 7000
Fax : +91-22-2414 8937

E-mail : medinai@tmc.ernet.in
Website : <http://tmc.gov.in>

डॉ. ई. बोर्जेस मार्ग, परेल,
मुंबई - ४०० ०१२, भारत.
दूरभाष : +९१-२२-२४१७ ७०००
फैक्स : +९१-२२-२४१४ ८९३७

Cancer is curable, if detected early.

क्यान्सर इलाज होने पर कैंसर ठीक हो सकता है।

TATA MEMORIAL HOSPITAL
(Dept. of Medical Oncology)

December 4, 2020

To,
Dr. R.A. Badwe
Director, TMC.

Re: Posting of one Radiotherapy Resident at BKL Walawalkar Hospital.

Dear Dr. Badwe,

Over the years, Tata Memorial Hospital has helped develop cancer facilities at the BKL Walawalkar Hospital, The Rural Outreach Programme of TMC.

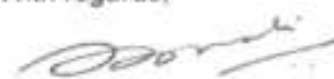
Due to this, hundreds of rural cancer patients are getting treated at their doorsteps and do not have to go to cities for treatment. This was especially highlighted during the lockdown, when patients could not travel. Thus, though the number of patients decreased in TMH, the patient number actually increased at the BKL Walawalkar Hospital. More importantly, unlike cancers advanced in patients in many 2nd & 3rd tier cities, patients here could get timely treatment.

Most, if not all, patients receiving radiotherapy at BKL Walawalkar Hospital get free treatment through the MJPJAY Scheme, at fraction of the cost to the Government. I am writing this letter requesting your permission to post a Radiotherapy SR at the BKL Walawalkar Hospital on rotational basis. This will not only help improve the RT facilities at BKL Walawalkar Hospital, but also help radiotherapy Residents gain experience in working independently in a Rural Setting.

This is being done in consultation with Dr. J.P. Agarwal, HOD, Radiation Therapy.

Please do the needful & oblige.

With regards,


Dr. Shripad D Banavali, MD
Coordinator, Rural Outreach Program; TMC.

↓
To go to
600000
J.P. Agarwal
4/12

TATA MEMORIAL CENTRE

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AND

ADVANCED CENTRE FOR THE TREATMENT, RESEARCH & EDUCATION IN CANCER

(A Grant-in-Aid Institute under Department of Atomic Energy, Govt. of India)

Dr. Shripad D. Banavali
MD (Med; Bom), BC(Ped; USA),BE(Hem-Onc; USA)
Director-Academics
Prof, Department of Pediatric Oncology
Tata Memorial Centre
Dr. Ernest Borges Road,
Parel, Mumbai - 400 012. INDIA



Tel : +91 22 2417 7217
Fax: +91 22 2414 6937
Email : banavali_2000@yahoo.com

29th January, 2021

Dr. Suvarna Patil,
Medical Director,
BKL Walawalkar Hospital,
Dervan: Tal Chiplun

Dear Dr. Suvarna Patil,

Please find the name and contact details of 4th year DM students of Tata Memorial Hospital who is being posted in your institute from 30/01/2021 to 30/07/2021

| Sr. No | Name of the Doctor | E-Mail | Mobile | Period |
|--------|--------------------|--|------------|--------------------------|
| 1. | Dr. Abhinav Zawar | abhinav.zawar@gmail.com | 9901835738 | 30/01/2021 to 30/07/2021 |

Please contact me, if you need any further information.

Thanking you,

Yours sincerely,

(Dr. Shripad Banavali,MD.)

TATA MEMORIAL CENTRE

TATA MEMORIAL HOSPITAL

AND

ADVANCED CENTRE FOR THE TREATMENT, RESEARCH & EDUCATION IN CANCER
(A Grant-in-Aid Institute under Department of Atomic Energy, Govt. of India)

Dr. Shripad D. Banavali
MD (Med; Bom), BC(Ped; USA), BE(Hem-Onc; USA)
Director-Academics
Prof, Department of Pediatric Oncology
Tata Memorial Centre
Dr. Ernest Borges Road,
Parel, Mumbai - 400 012, INDIA



Tel : +91 22 2417 7217
Fax: +91 22 2414 6937
Email : banavali_2000@yahoo.com

9th December, 2021

Dr. Suvarna Patil,
Medical Director,
BKL Walawalkar Hospital,
Dervan: Tal Chiplun
Email: dr.suvarnapatil@gmail.com

Dear Dr. Suvarna Patil,

Please find the name and contact details of Adhoc Assistant Professor of Tata Memorial Hospital who is being posted in your institute from 18/12/2021 to 30/04/2022

| Sr. No | Name of the Doctor | E-Mail | Mobile | Period |
|--------|--------------------|--|------------|--------------------------|
| 1. | Dr. Rahul Ravind | rahulravind@gmail.com | 9400332824 | 18/12/2021 to 30/04/2022 |

Please contact me, if you need any further information.

Thanking you,

Yours sincerely,

(Prof. Shripad Banavali, MD.)

Prof. S. D. Banavali
Director - Academics, TMC
Mumbai - 400012.



टाटा स्मारक केन्द्र
TATA MEMORIAL CENTRE

टाटा स्मारक अस्पताल
TATA MEMORIAL HOSPITAL

AA No. 893057

ए. ए. ई. भारत सरकार का एक सहायता अनुदान प्राप्त संस्थान
A GRANT-IN-AID INSTITUTE OF THE DEPARTMENT OF ATOMIC ENERGY, GOVT. OF INDIA

4th June 2019

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Dr. Bhushan Warpe** has completed **Observership** in the **Department of Surgical Pathology** of the **Tata Memorial Hospital** from **26.05.2019** to **04.06.2019**.
(INTERNATIONAL CHEMISTRY)

Dr. Anuja Deshmukh
Prof. Head & Neck Surgery
Dept of Surgical Oncology
Observer Cell Co-Ordinator

Dr. E. Borges Marg, Parel
Mumbai - 400 012, India
Phone: +91-22-2417 7000
Fax: +91-22-2414 6937

डॉ. ई. बोरजेस मार्ग, पारेल
मुंबई - ४०० ०१२, भारत
दूरभाष: +९१-२२-२४१७ ७०००
फैक्स: +९१-२२-२४१४ ६९३७

Shri Vithalrao Joshi Charities Trust's
B. K. L. WALAWALKAR HOSPITAL,
DIAGNOSTIC & RESEARCH CENTRE
Shreekshetra Dervan, Tal- Chiplun, Dist-Ratnagiri 415606

Dr. Suvarna Patil,
Medical Director,
B.K.L. Walawalkar rural medical college and hospital,
Shreekshetra Dervan,
Date: 14 /05/2019

To,
The Academic director,
Tata Memorial Hospital, Parel, Mumbai

Subject: Regarding permission for training/observership in IHC for TEN days for
Associate Professor, Pathology, BKLWRMC
(Through proper channel).

Respected Madam,


Our growing B.K.L. Walawalkar rural medical college and hospital is a peripheral attachment of the prestigious Tata Memorial Hospital, Parel, Mumbai.

We want our Associate Professor, Pathology named 'Dr. Bhushan M. Warpe' to get trained in Immunohistochemistry [IHC] for following TEN days from 26/05/2019 to 4/06/2019.

So kindly grant our above mentioned pathologist, the required permission to do so.

Thanking you, with warm regards.

Yours faithfully,


Dr. Suvarna Patil,
Medical Director, BKLWRMC

Director
B.K.L. Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



At Kasarwadi, Post Sawarda, Taluka Chiplun,
Dist. Ratnagiri - 415606, Maharashtra State, INDIA
Tel. : +91 02355 264636 / 264637
Fax : +91 02355 264693 Email : info@bklwrmc.com
Website : www.walawalkarmedicalcollege.com
www.bklwrmc.com

Date: 30/12/2019

Report of Activity done as part of collaboration with

“National program for control of non-communicable diseases “

VIA training for staff nurses and primary health center staff

| SR NO | CONTENT |
|-------|--|
| 1 | Letters and communication , program schedule |
| 2 | Feedback forms |
| 3 | Sample Photos |

TATA MEMORIAL CENTRE

TATA MEMORIAL HOSPITAL
CENTRE FOR CANCER EPIDEMIOLOGY

Dr Atul Budukh
Professor Epidemiology F
Centre for Cancer Epidemiology
E mail: atul.budukh@gmail.com
Phone No. 02227405000



Sector 22, Ustav Chowk, CISF Road
Kharghar, Navi Mumbai, 410 210, India.
Fax: 91-22-2416 8440/ 2414 6937
www.tatamemorialcentre.com

05.04.2021

To,
The Chief NCD Division
Public Health Department,
Government of Maharashtra,
India

Reference: Letter number 9427-9429 dated 28.09.2020

Subject: Summary report of Surveillance and Control rounds of the Oral Cancer Screening Project, Ratnagiri district

Dear Sir,

We are grateful to you for granting us the permission to undertake surveillance and control round surveys of the Oral Cancer Screening Project, Ratnagiri district. After obtaining permission for the period 01/03/2021 to 31/03/2021, under surveillance round we have covered 7 villages in Rajapur area, 3 villages in Guhagar area and in control round, we have covered 4 villages in Pali area. All the necessary precautions were taken as per the government guidelines advised for the COVID-19 while conducting the surveys and also physical distancing was maintained at all the field sites.

During the survey, we have provided person-to-person health education on harmful effects of tobacco and alcohol as well as on the oral cancer to the eligible individuals. Also, the data regarding already diagnosed cancer cases and deaths occurred between the previous survey and present one were documented.

The summary of the project data for the month of March 2021 is enclosed herewith for your information.

Thanking You,

Yours Sincerely,

Dr. Atul Budukh
Co-Principle Investigator

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



Kasarwadi, At-Post Sawarde, Taluka Chiplun,
Dist. Ratnagiri - 415606, Maharashtra State, INDIA
Tel. : +91 02355 264636 / 264637
Fax : +91 02355 264693 Email : info@bklwmc.com
Website : www.walawalkarmedicalcollege.com

Notice

Date: 10.12.2019

As per the letter attached from Director of health services, Maharashtra, following faculty is deputed to conduct VIA training workshop for nurses under Population based Screening program 1st Batch (10 Oct 2019- 19 Oct 2019), 2nd Batch 14 Nov. 2019- 24 Nov 2019), 3rd Batch (16 Dec.2019-25 Dec 2019)

Faculty from Tata Memorial Center

- 1.Dr Pratibha Patil (Medical officer)
- 2.Dr Amey

Faculty from B.K.L.Walawalkar Rural Medical College-

- 1.Dr Vasant Kawade (Professor, Obgy)
- 2.Dr.Abhijit Ambike (Assistant Professor,Obgy)
- 3.Dr.Nandkumar Bhosale (Assistant professor, Obgy)
- 4.Dr Kiran Joshi (SR, Obgy)
- 5.Dr Asawari Modak

Thanks,


DR Suvamta Patil,
Medical Director,
B.K.L.Walawalkar Rural Medical College

Director
B.K.L.Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606



**DIRECTORATE OF HEALTH SERVICES
(Maharashtra State)**

National Programme for Control of Non Communicable Diseases
Arogyabhavan, St. George's Hospital Compound, P.D'Mello Road, Mumbai-400 001.

Directorate-22621031-36,
Director-22620292
Website: <http://maha-arogya.gov.in>

Jt. Director (NCD) - 22653460
Asst. Director - 22621047
State NCD Cell - 22623222
Email : ncd03.mumbai@gmail.com

No. DHS/NCD/F.No- / 1545 2019
328-3 Date: 28/6/2019

To,
✓ Dr. ~~Su~~parna Patil
Director,
B. K. L. Walawalkar Rural Medical College & Hospital, *Chiplun*
Ratnagiri

Subject: Request to conduct VIA trainings for Staff Nurses.

Madam,

B. K. L. Walawalkar Rural Medical College & Hospital is one of the pioneer institutes providing the oncology services in the state of Maharashtra. Along with the medical services, your institute also conducts trainings.

Government of Maharashtra is implementing Population-based screening program for Non communicable diseases control and prevention all over Maharashtra. All the 30+ population is screened for diabetes, hypertension and three common cancers under this program. For cervical cancer screening at community level, VIA technique is recommended and to perform it correctly an extensive hand on training is required. The expected duration of the training is of two weeks, as per GoI guidelines.

Hence we request you to schedule VIA training batches for our PHC staff nurses at your institute. It would be great if the accommodation facility is made available from your side. Also kindly let us know the estimated expenditure.

Waiting for your positive reply. If any query feel free to contact.

Regards,

W
28/6/19
Dr. Sadhana Tayade
Joint Director (NCD)
Mumbai

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



Kasarwadi, At-Post Sawarda, Taluka Chiplun,
Dist. Ratnagiri - 415606, Maharashtra State, INDIA
Tel : +91 02355 264636 / 264637
Fax : +91 02355 264693 Email : info@bklwrmc.com
Website : www.walawalkarmedicalcollege.com

**VIA Training under Population based Program by Director of Health services,
Maharashtra.**

Training of ANM/PHC staff nurses at B. K. L. Walawalkar Hospital & Diagnostic Research Centre
At Dervan by Faculty from Tata memorial Centre and B.K.L.Walawalkar Rural Medical College.

Dates for the training:

Batch I - 16th Monday December- 25th Wednesday December 2019

Contact details: 1)Dr. Asawari Modak- 8446377515

2) Aishwarya Pendase - 9767323845

**Venu - B. K. L. Walawalkar Hospital & Diagnostic Research Centre
Hospital OPD building 1st floor pediatric demo room.**

Reporting time -8.30am

Day -1 16/12/2019

Faculty from B.K.L.Walawalkar Rural Medical College,

Dr.Vasant Kawade (Professor.Ob-Gyn)

**Dr.Abhijit Ambike(Assistant professor Ob-gyn),Dr Nandkumar Bhosale(Assistant Professor),Dr
Kiran Joshi(SR-Obgy)**

| Time | Topic | Faculty |
|------------------|--|---------------------------------|
| 8.30am-9.00am | Registration ,Completion Of Administrative Formalities ,Pre Test | Dr. Asawari, Aishwarya Pendase, |
| 9.30 am-10.00am | What is cancer (common cancer, types, prevalence, importance of early detection) | Dr. Dolorosa/Dr. Amey |
| 10.00am -10.45am | Anatomy of cervix ,physiology &pathology /cervical cancer screening test(PAP,HPV/VIA/VILI) | Dr. Dolorosa / Dr Amey |
| 10.45 am-11.00am | Tea break | |
| 11.am -11.30am | Methods of early detection & prevention of cervix cancer | Dr. Pratibha |
| 11.30am -12.00pm | Risk factors & signs & symptoms of uterine cervix cancer | Dr. Pratibha |
| 12.00pm-12.30pm | Health talk with flip chart on cervical cancer | Dr. Pratibha |
| 12.30pm -1.00pm | How to prepare VIA,VILLI, Acetic acid, Lugol's iodine | Dr. Dolorosa/Dr. Amey |
| 1.00pm -2.00pm | Lunch break | |
| 2.00pm -2.30pm | Preparation of tray : PAP/HPV demonstration | Dr. Dolorosa/Dr. Amey |
| 2.30pm -3.30 | Common early warning signs of cancer & health education | Dr. Dolorosa/Dr. Amey |
| 3.30pm -3.45pm | Tea break | |
| 3.45pm-5.00pm | Recap of the day | |

Director
B.K.L.Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606

Day-2 17/12/2019

| Time | Topic | Faculty |
|------------------|---|----------------------------------|
| 9.00am-1.30pm | Practical session Batch -1 rotation in OPD/OUTSIDE 1.CBE 2.SBE 3.health education of oral, breast & cervical cancer 4.cervical cancer screening | Dr. Dolorosa , Rupa, Darshana |
| 10.45 am-11.00am | Tea break | |
| 1.30pm -2.30pm | Lunch break | |
| | Batch -2 | |
| 9.00am-9.30 am | Health education on breast cancer | Dr. Pratibha |
| 9.30 am-10.45am | Anatomy & Physiology of breast | Dr. Pratibha |
| 10.45 am-11.00am | Tea break | |
| 11.am -11.30am | Risk factors, signs, symptoms of breast cancer | Dr. Pratibha |
| 11.30am-12.30pm | Methods of early detection &prevention of breast cancer | Dr. Pratibha |
| 12.30pm-1.30pm | Demonstration of breast self examination | Dr. Pratibha |
| 4.30pm -5.00pm | Recap of the day | |


Director
B.K.L.Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606

Day – 3 18/12/2019

| Time | Topic | Faculty |
|---------------|--|----------------------------------|
| 9.00am-9.30am | Batch -1 Tobacco cessation | Ashok Patil |
| 9.30-10.00am | Anatomy of oral cavity | Dr. Pratibha |
| 10.00-10.30am | Risk factors & sign & symptoms of oral cavity cancer | Dr. Pratibha |
| 10.30-10.45am | Tea break | |
| 10.45-11.30am | Method of early detection & prevention of oral cavity cancer | Dr. Pratibha |
| 9.00am-1.30pm | Practical session Batch -2 rotation in OPD/OUTSIDE 1.CBE 2.SBE 3.health education of oral, breast & cervical cancer 4.cervical cancer screening | Dr. Dolorosa , Rupa, Darshana |
| 1.00-2.00pm | Lunch break | |
| 2.00 -3.30pm | Understanding VIA/VILI test results | Dr. Pratibha |
| 3.30-3.45pm | Tea break | |
| 3.45-5.00pm | Discussion of all sessions. | |

Day – 4 19/12/2019

| Time | Topic | Faculty |
|-----------------|--|---------------------------------|
| 9.00am- 1.30pm | Practical session Batch rotation in OPD/OUTSIDE 1.CBE 2.SBE 3.health education of oral, breast & cervical cancer 4.cervical cancer screening | Dr. Pratibha, Rupa, Darshana |
| 1.30pm- 2.30pm | Lunch break | |
| 2.30pm- 3.30pm | Practical training of how to make swabs & preparation of tray for VIA/VILI,PAP &HPV CBE,SBE,&OPD | Dr. Pratibha, Rupa, Darshana |
| 3.30pm - 4.00pm | Revision of factors, Signs and symptoms of cervix, breast & oral cancer | Dr. Pratibha |
| 4.00pm- 4.15pm | Tea break | |
| 4.15pm- 5.00pm | Recap of the day | |



Director

B.K.L.Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606

Day -5 20/12/2019

| Time | Topic | Faculty |
|------------------|--|---------------|
| 9.30 am-10.00am | What is cancer (common cancer, types, prevalence, importance of early detection) | Dr. Pratibha, |
| 10.00am -10.45am | Anatomy of cervix ,physiology &pathology /cervical cancer screening test(PAP,HPV/VIA/VILI) | |
| 10.45 am-11.00am | Tea break | Dr. Pratibha, |
| 11.am -11.30am | Methods of early detection & prevention of cervix cancer | Dr. Pratibha |
| 11.30am -12.00pm | Risk factors & signs & symptoms of uterine cervix cancer | Dr. Pratibha |
| 12.00pm -1.00pm | Recap of till date | Dr. Pratibha |

Day – 6 21/12/2019

| Time | Topic | Faculty |
|----------------|--|---------------|
| 9.00am-1.30pm | Practical session Batch rotation in OPD/OUTSIDE 1.CBE 2.SBE 3.health education of oral, breast & cervical cancer 4.cervical cancer screening | Dr. Pratibha, |
| 1.30pm-2.30pm | Lunch break | |
| 2.30pm-3.30pm | How to prepare VIA,VILLI,Acetic acid,Lugols iodine | Dr. Pratibha, |
| 3.30pm -4.00pm | Revision of factors, Signs and symptoms of cervix, breast & oral cancer | Dr. Pratibha |
| 4.00pm-4.15pm | Tea break | |
| 4.15pm-5.00pm | Recap of the day | |

Day-7 22/12/2019

| Time | Topic | Faculty |
|----------------|--|---------------|
| 9.00am-1.30pm | Practical session Batch rotation in OPD/OUTSIDE 1.CBE 2.SBE 3.health education of oral, breast & cervical cancer 4.cervical cancer screening | Dr. Pratibha, |
| 1.30pm-2.30pm | Lunch break | |
| 2.30pm-3.30pm | How to prepare VIA,VILLI,Acetic acid,Lugols iodine | Dr. Pratibha, |
| 3.30pm -4.00pm | Revision of cervical cancer causes, risk factors | Dr. Pratibha |
| 4.00pm-4.15pm | Tea break | |
| 4.15pm-5.00pm | Recap of the day | |



Director
B.K.L.Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606

Day-8 23/12/2019

| Time | Topic | Faculty |
|----------------|--|---------------|
| 9.00am-1.30pm | Practical session Batch rotation in OPD/OUTSIDE 1.CBE 2.SBE 3.health education of oral, breast & cervical cancer 4.cervical cancer screening | Dr. Pratibha, |
| 1.30pm-2.30pm | Lunch break | |
| 2.30pm-3.30pm | How to prepare VIA,VILLI,Acetic acid,Lugols iodine | Dr. Pratibha, |
| 3.30pm -4.00pm | Revision of cervical cancer health talk | Dr. Pratibha |
| 4.00pm-4.15pm | Tea break | |
| 4.15pm-5.00pm | Recap of the day | |

Day -9 24/12/2019

| Time | Topic | Faculty |
|----------------|--|---------------|
| 9.00am-1.30pm | Practical session Batch rotation in OPD/OUTSIDE 1.CBE 2.SBE 3.health education of oral, breast & cervical cancer 4.cervical cancer screening | Dr. Pratibha, |
| 1.30pm-2.30pm | Lunch break | |
| 2.30pm-3.30pm | How to prepare VIA,VILLI,Acetic acid,Lugols iodine | Dr. Pratibha, |
| 3.30pm -4.00pm | Revision of cervical cancer health talk | Dr. Pratibha |
| 4.00pm-4.15pm | Tea break | |
| 4.15pm-5.00pm | Recap of the day | |

Day -10 25/12/2019

| Time | Topic | Faculty |
|------------------|---|--------------------------|
| 9.00am-11.00am | Revision of all sessions/summarizing of all session | Dr. Pratibha |
| 11.00am -12.00am | Post Test | Dr. Pratibha, Dr Asawari |
| 12.30pm-1.30pm | Results of test and discussion | |
| 1.30pm -2.30pm | Lunch break | |


 Director
 B.K.L.Walawalkar Rural Medical College,
 Sawarde, Kasarwadi, Pin - 415606

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"
Batch- 1 Raigad district from 10th October -19th October 2019

NAME :- Smt - Rajani Anil Patil

Contact details :- 9422359639

COMMENTS :-

- 1) पहिल्या दिवशी डॉ. अमेय व डॉ. प्रतिभा पुर्वे यांनी काळूर या विषयावर चांगला प्रचार लिखित दिले.
- 2) नंतर प्रत्येकाल शिकविलेला असलेला चांगला माहिती दिली ही काळूर आम्ही काधी शिकले जेव्हा त्याचा उपयोग आम्ही स्वतःसाठी आम्हाला जातवार्दिकासाठी, समजासाठी करू.
- 3) वातावरणकार हायपरिऑल मधील सर्व स्टाफ चांगला आहे. पेश्या बोलताना, दोनो समजावून सांगताना आतशय नम्रतेने आपुलकाने प्रेमाने वागतात.
- 4) VIA देखील डॉ. डॉ. डॉ. लावणी स्वतः पेश्याची VIA देखील केली. या देखील मुळे लवकर निदान होवून पुढील गुंतागुंत टाळता येईल.
- 5) काळूर डेनिंग हे फार महत्वाचे आहे पण हे 90 दिवसांचे नको. 9 आठवड्यांचे स्वरूप होईल असे मला वाटते.

THANKING YOU

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"

Batch- 1 Raigad district from 10th October -19th October 2019

NAME :- Kalpana Jambhavan Shirke

Contact details :- 8087430421

COMMENTS :-

दीर्घा व वक्रांश रूप धारण आहे. इयला परिवार
 रचना रूप रूप धारण आहे. इय आलेल्या कोलामाही प्रेम
 साठी इयत्या रचनांचे आकाराचे रूप धारण सहाय्य
 आहे. माणसाची जशा मुलभूत गरज असत ती ओळखूनच
 इथले वक्रांकु केले जाताना हे निश्चितच इय येव्यासही
 पुस्तक करव्यास कोणतीही अज्ञाना नालत नाही इयला पुस्तक
 रचना म्हणजे ही रचना मध्यमार्थी व आपल्या हॉस्पिटलचा रचना
 सर्वच धारण व शान आहेत सहाय्याची भावना अस्थारे आहेत.
 आकाराला पुस्तक कोलावल्यास आम्ही पुस्तक आवडने पुस्तक
 येवु आपला हा उपक्रम रूप धारण आहे.
 हया कॅम्पासमध्ये लाभार्थीची सर्वात सेवा केली
 जाते हे सर्वोत्तम धारण आहे.

THANKING YOU

Handwritten title or header text, possibly including a date or page number.

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FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"
Batch- 1 Raigad district from 10th October -19th October 2019

NAME :- Smt - Shashikala Bhanudas Patil

Contact details :- 9604792671

COMMENTS :-

जीशेप्र डेरवण चालावकर कुणालय येथे दिनांक
वाणधान्य रोगी प्रदान आला. दिनांक 10/10/2019 रोजी कलाप
मध्ये आधी लेक्टर वाणधान्य पथक लेक्टर मुकेशील अंटेड
केले. नसेच आम्हाला डा. अमित कोठ सर, डा. प्रानभा प्रडम
ची शिरोऊ पायेल सर, शिगी विठ्ठला पायेल मंडम जीजी. भाडु
प्रडम यांनी नसेच हॉरपील सई स्थॉफु यांनी आम्हाला स्वर्गी
चांगल्या प्रकारे कॅन्सर विषयी माहिती दिली नसेच प्रॅक्टील
चांगले सिद्धवले. हे सर्व ज्ञान आम्ही आम्हाला कापलेमान चांगल्या
प्रकारे पार पाडू. व अर्धदिनांतील गोद गरिबांची चांगल्या प्रकारे
सेवा करू नसेच त्यांना इनपर्यात आगल्याचा प्रपल करू
आम्हाला सर्व जेवणी शेष राटबाधी सोय तसेच मार्गस्थि
चांगल्या प्रकारे केले येथील फॅमिलर चांगल्या प्रकारे आहे
देशची कृपा विसा पारिलर आहे. निवर्गरम्य अले
वानावरप स्वाभान चांगले आहे
(मिवाभा i.s. प्रवाह) हेतय इग वेळ
अशीच आम्हाला पुन्स घेवणी येथी प्रिक्ती
हेतय एडिश्नर चरणी चार्जन ?

THANKING YOU

Shashikala Bhanudas Patil

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"

Batch- 1 Raigad district from 10th October -19th October 2019

NAME :- Minaaj Jamal Shikalgar

Contact details :- 9260216782 Alp- kapode Bc Tal- Poladpur
Dist- Raigad

COMMENTS :-

आमी स्वर्जन दि 10.10.2019 रोजी लजर झालो डॉ. मोक्ष मेडम यांची झोड्य झाली त्यानंतर त्यांनी NMFA Hospital च्या Dr. Pratiksha Patil व Dr. Arney यांनी लम्बि आम्हाला Anatomical पायुण ते VIA, VILI Test करी करायची आवर झोड्यर जाण लीने व आमचे technical पण हाण पद्वारीने करण होतल. हा विषय आम्हाला पुढापणे नविन होतल. Mr. Ashob यांनी यांनी Oral Cancer कडून झु हाण माहिती दिनी. Dr. Sanjeev यांनी आम्हाला Colorectal Cancer कडून झुप हाण मार्गदर्शन केले. डॉ. मोक्ष मेडम यांनी शक्य होईल्ल्या सवेर आम्हाला जाण मिळेल यासाठी प्रयत्न दिने. आपले Hosp चे Dean Dr. Padil

मॅडम यांनी मोडये आम्हाला आम्हाला निव्वळ्याचा विषय म्हणजे गरोदर माता. सर या गरोदर माता चे मानसिक गुणवत्ता बरे शक्यते, इती असगीरण, मरिद योजना, इती हुडु योजणा, यहाण गुणवत्ता वाढविषय इती वेगवेगळ्या तरावर्ये हापरण पहायना व डगुअवघायना मिळाले. Kishor यांनी Pratiksha यांनी दिने. Dr. Arney यांनी आम्हाला technical पण ते पुढा हांथील्ले करुन माहिती दिनी शक्य त्यांनी आम्हाला आम्हाला आम्हाला आम्हाला पुढा काळजी होतली. झुप हाण स्वच्छ, सुदुर. निगरीय THANKING YOU पडीयर पायुण मग आराबुण होने. इयल्या staff नी पण न शकायना झुप यांणने शक्यार केने. अरुप निहावेने घळने. पंनु. वेळअगि विडु नारनेवळी इयव.

शुभेनी धन्यवाद

Nandkumar
Alp Kapode Bc

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"
Batch- 1 Raigad district from 10th October -19th October 2019

NAME : Smt. Sangita Ambarao Belambe (ANM)

Contact details :- 7588266143 | 9404587487

COMMENTS :-

आम्ही दि १० ऑक्टोबर पासून काळूकलकर हॉस्पिटल मध्ये पॉप्युलेशन बेस स्क्रीनिंग अंतर्गत (VIA) प्रशिक्षणासाठी हजर आलो. हजर झाल्यापासून आम्हाला डॉ. प्रतिभा, डॉ. अमेय, श्री अशोक यांनी खूप चांगल्या प्रकारे समजेल अशा पद्धतीने कॅन्सर या आजाराविषयी सखोल माहिती दिली. PPT, Practical द्वारे आम्हाला VIA, VILI प्रोसिजर विषयी सांगितले आले. तसेच आमच्या सर्वांच्या तपासणी करून देण्यात आल्या. डॉ. मोडक मॅडम यांनी आमचे प्रशिक्षण चालू झाल्यापासून आजपर्यंत नियोजनबद्ध असे प्रशिक्षण राहिल्याची, जेवणाची सोय याकडे खूप काळजीपूर्वक लक्ष देऊन आम्हाला कोणतीही अडथळ येणार नाही असे पाहिले. हॉस्पिटल OPD, IPD विभाग तसेच झोपनालवापरियर खूप छान, स्वच्छ तसेच नियोजनबद्ध आहे. खूप छान वाटले. आज डॉ. सुवर्णा मॅडम यांनी खूप छान मार्गदर्शन केले. प्रशिक्षणाबरोबरच आपल्या आंगातील रुग्णांकरिता ज्या योजना राबविल्यात तेव्हा त्या योजनांची माहिती देऊन त्याचा लागू होण्याविषयी सांगितले

THANKING YOU

खूप छान प्रकारे आमचे १० दिवसांचे VIA प्रशिक्षण पूर्ण झाले.
सर्वांचे धन्यवाद

संगिता
19/10/19

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"

Batch- 1 Raigad district from 10th October -19th October 2019

NAME :- Mrs Subha Subhash Khode

Contact details :- 7045162044

COMMENTS :-

Lecture is very good

Very good soundings

Very good ~~know~~ knowledge

very good practical

THANKING YOU

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"
Batch- 1 Raigad district from 10th October -19th October 2019

NAME :- Smt. Ashwini Anant mahadik

Contact details :- 7506832364

COMMENTS :-

वर्कशॉप रुप होत आहे आपला कामकाज
वैनीशिय कामात असा रुप मांडात उपयोग होईल
प्रतिकार करायला व लालागी अणोपण दिवशीनी
व डोवरीनी (पावले मोक) मांडात अणोपण मांडात
अणोपण शिकायली व जेवणायली, ताका रुप मांडात
प्रकारे जवळी आहे. डॉ. मोडक मंडात योनी व रज
होमपिन मंडात ली मंडात मोक, लिटर योनी मांडात
मांडात यारकाय केळे हे कामी केवळ विवक राका जाली
शेकीत पाकिर रकड व रुप होत आहे

THANKING YOU

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"
Batch- 1 Raigad district from 10th October -19th October 2019

NAME :- Shubhadini Suthis Gawavale

Contact details :- At- R.Z.P. Dispensary Chonelhi - PHC. Dhokawale
9881915211 Tal - Alibag - Raigad

COMMENTS :-

VIA चे 10 दिवसांचे प्रशिक्षण हे उत्तम
रीत्या पार पाडले गेले त्यामध्ये प्रशासकाने दिलेले
प्रशिक्षण हातक आकडेवारी त्यामध्ये आजार माहिती
प्राथमिक शाराच्या अवयवांचे सर्वस्वर माहिती किंवा
त्या आजारवाच्या सर्वस्वर माहिती आमच्या रक्षक
सुद्धर सांगितले. पुढील माहिती सांगितली. आम्हाला
सुद्धर आकडेवारी प्राथमिक केले त्यामुळे शिक्षण सर्व
पुढील लक्षात राहिले
हॉस्पिटलवर राहण्याची सोय जेवणाची सोय
उत्तम रीत्या केली गेली
त्याबद्दल धन्यवाद.

THANKING YOU
Shubhadini

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"
Batch- 1 Raigad district from 10th October -19th October 2019

NAME :- मीमिनी ~~खोस~~ शारदा कारिकाश मकर

Contact details :- 9403068468

COMMENTS :-

मी दिनांक 10/10/2019 पासून काळगाकर हॉस्पिटल मध्ये कॅन्सर प्रशिक्षण होण्यातून हजर जाते. खुप चांगल्या प्रकारे माहिती मिळते. डॉ. प्राणेश पारीत व डॉ. अशोक शिंदे ह्यांचे आभार खुप चांगल्या प्रकारे कॅन्सर विषयीचे लेख, माहिती मिळते तसेच डॉ. पाटवकर सारंगी खुप खूपजणे शिखा गावमध्ये समजावून देऊन केवळ माहिती दिली. तसेच तोंडच्या कॅन्सर विषयी माहिती डॉ. आशोक शारंगी चांगल्या प्रकारे माहिती देऊन केले.

तसेच मेल्याचे मेळा डॉ. आशोक शिंदे मंडळ आभार खुप काही शिकवून गेले तसेच वही दिवस आभार चांगल्या प्रकारे उपस्था कोरी आभार आभार्या सारंगी तपासण्या करून घेऊन त्यांचे आभार खुप खुप आभार आभार. तसेच काळगाकर हॉस्पिटल माहिती सारंगी देऊन शिखा मी काळगा करीत आहे पुढा एका सारंगी आभार माहिती आहे.

THANKING YOU

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FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"

Batch- 1 Raigad district from 10th October -19th October 2019

NAME :- Shilpa a. Shivanme

Contact details :- 8237110800

COMMENTS :-

- १) वक्रीकॉप ग्रूप घान घेतले
- २) नवीन काहीतरी शकला सायबे पाटले
- ३) डॉ. पावली मंडम, डॉ. मोडक मंडम यांना ग्रूप चांगला प्रफुल्लित करायला गोष्टी, उदा. हॉस्पिटल मध्ये फेरांची वागण्याची पद्धत बदलून घेणे वीरल कोलमाची पद्धत ग्रूप-ग्रूप घान घेतले
- ४) जेवणाची, चहाची, राहण्याची ग्रूप घान व्यवस्था होती. (ग्रूप स्वच्छता)
- डॉ. मोडम मंडम यांचा ग्रूप घान सहकारित करणे १० दिवस हे वक्रीकॉप झाले वसमजले नाही.

THANKING YOU

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"
Batch- 1 Raigad district from 10th October -19th October 2019

NAME :- श्रीमि मिना राधसिंग पारिळ

Contact details :- 9975170180

COMMENTS :-

निसर्गरम्य असलेल्या ठिकाणी प्राणवल्कार डॉस्पिटल आहे. सर्व सुविधांनी परिपूर्ण आहे अशा ठिकाणी आरम्य प्रशिक्षण हे आरम्य साठी अतिशय चांगले आहे.

येथे राहुण्याचे व खाण्याचे चांगले सोय आहे. आम्हाला 90 दिवसांमध्ये डॉ. मोडक मैडम यांनी चांगले सहकार्य केले.

प्रत्येक वेळी यांनी आम्हाला अतिशय चांगल्या पध्दतीने समजावून सांगितले. कॅन्सर या विषयावर चांगले शिकवले. कॅन्सर टेस्ट सुरवातीपासून चांगले तपासण्या करताही विद्वानां सिरस्ट यांनी चांगले शिकवले. मा. मोडक मैडम यांनी सांगितले सर्व सिरस्ट यांना सांगितले कि तुम्ही सुध्दा तपासणी करायला घेणे गरजेचे आहे. सांगण्याचे वेळ दिला.

हे प्रशिक्षण घेतल्याने याना चांगला उपयोग कार्यक्षेत्रात करू. कारण जोकांचे आरोग्य निरोगीकरी शकिले. मा. पारिळ मैडम यांनी अतिशय मोठ्या भावनेने केलं.

THANKING YOU

IRASHI

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique" Batch- 1 Raigad district from 10th October -19th October 2019

NAME :- Savita Uttam Rankhambe

Contact details :- 7066025480

COMMENTS :-

मी सविता उत्तम राखंबे PHD आहे तामाळगाव जि. रायगड दि. ठाणगाव ते ठाणगाव पासून ३० दिवसांचे ट्रेनिंग होस्पीटल वालावळकर येथे आले था ३० दिवसांमध्ये आम्हाला रजुप मोलाचे मागविले असेल आता पर्यंत केंसर माहित होता परंतु पण तो डिटेक मध्ये डॉ प्रतिभा पविते व डॉ समेश कोळ यांनी मदती विलीव प्राक्टिकल घेतले त्यामुळे केंसर कसा ओळखायचा हे समजणे केंसर वर होण्यासाठी येथे सर्व प्रकारचे उपचार उपलब्ध आहेत डॉ असावरी मोडक मंडळ यांनी ३० दिवसांमध्ये आमची रजुप चांगली व्यवस्था केली. वटाके विकसुलगा व रिमिता वेडेक यांनी. आम्हाला रजुप संस्कार केले व आम्ही येथून गेल्यावर आम्हाच्या काय शैक्षणिक जागा गरज आहे उपचारांची त्यांना आवश्यक पाठ्य. तुम्ही आम्हाला ३० दिवसां रजुप मोलाचे मागविले केण्याबद्दल मी तुम्हाला आभारी आहे

THANKING YOU

Rankhambe

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Batch- 1 Raigad district from 10th October -19th October 2019

NAME :- Smt Hemlata S. Wadekar

Contact details :- 9272634080

COMMENTS :-

निसर्गिभ्य वातावरणात असलेले पालाणवळर हॉस्पिटल सधे मुख्य सुविधाना परिपुर्ण आहे. अशा ठिकाणा आभवे प्रसिद्धे ह आभवा सति अनिशय चांगली गिष्ट वार. येथे शहव्याप्तो व व्याप्याप्तो अनिशय सुंदर व्यकर्या आहे.

पहिल्या दिवशी तर शेथेपर्यंत डॉ मोडक मेडम यांनी आभवा अनिशय चांगले सहकार्य केले.

प्रत्येक लेक्चरर यांनी आभवा अनिशय सुंदर आभवा सभजेन या आबिल फॅन्सर या विषयावर शिकविले.

वृषसस्ख्या टेस्टर कुकुवातिविभि पाश्कळ कर्या तपासण्या करतात या वावात विवेकलता सिद्धरीनी अनिशय सोप्या व सभजेन कर्या अघित सभजाविभि व प्रथिके कडून प्रसिद्धी करण घेतले. येथे सवे प्रकारचे रुग्ण तपासले जातात व सुप्रका मानसिक सभायाण मिळते.

THANKING YOU तसवे डॉ. सुवर्णा पारिल मेडम यांनी आभवा अविश्व मोलस्ये साग्वरीन केने. धन्यवाद


Smt Hemlata Wadekar

Handwritten title or header text, possibly including a date or page number.

Main body of handwritten text, consisting of several paragraphs of cursive script. The text is mostly illegible due to fading and blurring.

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Batch- 1 Raigad district from 10th October -19th October 2019

NAME :- Kalpana Shishish Mhatre

Contact details :- At. Alibaug PHC Pedhambhe sub-NavKhar Raigad.

COMMENTS :-

VIA 10 दिवसांची कार्यशाळा आयु-वांगणी होती ज्या ज्या शिक्षांनी आम्हांला शिकवले. ते. आयु-वांगणी पद्धतीने समजून शिकवले. ही शिक्षणाचा उपयोग माझ्या व माझ्या घरवालांनुसार सर्व लोकांना होऊ शकते. त्याच प्रमाणेही जोडक गेडमने आयु-वांगणी प्रकारे मनेज करून शगळ्या/मोठी नेदीज आम्हांला कुण कुण घेतले. सर्व परिश्रमाविरिती सुद्धा सर्व लपालकां कुण घेतल्या शगळी घरच्या व्यक्ती काळजी घेताने लसे लानी आम्हांला 10 दिवस सोडवले. या शिक्षणाचा उपयोग ही लकावांगणीय क्षमताला कसा होईल याकडे ही लका घेईल. व-या आजारांची प्रतिबंधात्मक लपालकी करून घेऊन व आरोग्य शिक्षण करून शाश्वत ज्ञान या आडाकापासून संरक्षण मिळेल हे पाहिले. ही आवडत सर्व लपालकांकर लसीएम-चे लवार्थी आभारी आहे. धन्यवाद.

THANKING YOU



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NAME :- Smt. Pushpa vithalrao Dharmann

Contact details :- AH Post Srinwarshan. PHC. Wadwadi Dis- Raigad.

COMMENTS :-

10 दिवसांची कार्यशाळा उत्तम होती या कार्यशाळेमध्ये जे जे शिक्षण मिळाले ते माझ्या आयुष्यामध्ये खुपच उपयोगात येणार आहे. मी पुढारच्या शरणांना पवित्रा खेळामध्ये उपचारा खाती जाणव्याचा पुढा प्रयत्न करीव लोकांचे समुपदेशन करवाकरीता मला या कार्यशाळेचे खुपच उपयोग होईल. लक्ष्मीच मा. श्रीमती डी. मोडक मंडळ यांनी आमची राहण्याची चहा नाराजा जेवणाची वेळवेळी आजी धेतली व उत्तम रित्या सरकारचे केले. मा. श्रीमती प्रतीमा पाटील, डॉ. अमेय ओक लक्ष्मी श्रीम विद्युक्ता, शिमला सिस्टर यांनी आमलाक वाडिमध्ये खुप चांगले प्रावैकीक करव्याक मदत केले. मेरा मधीक कुमचारी यांनी आमलाक उत्तम सरकार केले. मी. व्ही. के. पुढ वानवीककर हरवीलकी मलापाखुप

THANKING YOU आभार मानते

Pushpa vithalrao
AH Post Srinwarshan
Dis Raigad.

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Batch- 1 Raigad district from 10th October -19th October 2019

NAME :- MRS. Himjavari Hemant Rane.

Contact details :- 9209873726

COMMENTS :-

1) प्रखरत वातावरण: नपनरम्य निरोगी व परिलर स्वयता वरवाठाय्या जोगी आहे.

२) शिवाली संकुल व व्यापी रचना चांगली आहे.

३) जेवण, नाश्ता व चहाची व्यवस्था सुपय वान

४) गुरवरी व व्यापे मागिरिशीन आमिशय उतम प्रकारे केले आहेत.

५) नसेच हास्पिटल मधील सर्व कर्मचाऱी हेर आमिशय नम्र व मागिरिशीन कणोरे आहेत.

६) कुठळि नाव ठेवण्यालाखरेवे नाही. ल्यातुवे दहा दिवस कसे ठेवे हे कळणेय नाही.

७) शक्यपार . श्री खाती समर्थ, जय गजानन श्री गजानन.

THANKING YOU

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NAME :- श्रीमती शिलाबाई चंद्रसेखर कावभारी

Contact details :- 9284231345

COMMENTS :-

गिरेग रम्य वातावरणात असलेले वालावरकर हॉस्पिटल सर्व प्रकारच्या सोयी सुविधांचे उपलब्ध आहे. आरोग्य तिकाणी आमचे प्रशिक्षण होणे हे आमचे भाग्य आहे. यशस्वी विकासामुळे वहाच्या विकास पथेत राहणे, रक्षणपीठे राहणे उत्तम सोय .

इथे आरोग्याच्या श्रीदकांनी आम्हाला आमच्या मापनेल समजेल उपदे प्रसंग करुन आम्हाला शिकविले .

सिस्टमांनी प्रॅक्टिकल्स आतंशय मांजला प्रकार आमच्या करुन करुन घेणे . ग्रुप . इंगुप . दान्यवाद .

[Handwritten signature]

THANKING YOU

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Batch- 1 Raigad district from 10th October -19th October 2019

NAME :- Anjali Anant manchekar. 8554003058

Contact details :- At post - pahar, Tal. Mahala Dist. Raigad.

COMMENTS :-

V. I. A ट्रेनिंग दि 30/10/2019 रोजी सकाळी प्रथम दिनी ट्रेनिंगची सुरुवात दिप प्रजलपित करून करवात आली आणि ही वेळ आली

V. I. A ट्रेनिंग डॉ. ओंकर आणि डॉ. प्रतिभा पतिंग यांनी केंद्राची तपासणी व लवकर निदान करण्याची चाचणी लेबर व पुढील कामे ह्या प्रकारे शिकविले. व ते आम्हाला समजले. याचा उपयोग आम्ही आमच्या कार्यक्षेत्रात करून लोकांची लवकर निदान करून त्यांचा जीव वाचवू. येथील डॉ. भास्कर मोडक मॅग्याने चांगल्या प्रकारे ट्रेनिंगचे नियोजन केले व आम्हाला चांगल्या प्रकारे माहिती दिले. तसेच विद्युत्ता पथिप व स्मिता मिसराचे माहितीलावळकर हॉस्पिटल चा परिचा रूप ह्यान आले हॉस्पिटलची सोय रूप ह्यान आहे. हॉस्पिटल मधील सर्व स्टाफ ने चांगल्या प्रकारे माहिती दिले. तसेच हे ट्रेनिंग रूप सुंदर होते याचा उपयोग आमच्या भविष्यात सगळ्यांना उपयोग होईल.

THANKING YOU

ट्रेनिंग चांगल्या प्रकारे झाले. लाभावळकर हॉस्पिटल आम्ही आभारी आहोत

Anant
A. M.
Pahar

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Batch- 1 Raigad district from 10th October -19th October 2019

NAME :- Smit. Kamana Ananda Lokhande

Contact details :- At Post Jambhulpada. PHC.

COMMENTS :- Phone No. 927601774

दि० फा० २०१९ रोजी डेरून येथे उवा. हजर झाले
जवळ आगा व कोठाची ही सोबत नाही पंरतु प्रत्येक
व्यक्तिला विचारले असता जातबाबत नमूदने उत्तर देत होते.
व पत्ता विचारले असता व्यक्तींनी पत्ता माहिती पत्त होते.
श्वेत प्रथम मा० मोडक मंडम वरोवर सोबत सली व

त्यांनी दया ट्रेनिंग क्वल र-विक्टर सांगितले तीच प्रथम डोळख
घेऊन आपला कोषी आहे त्याच्या कडे वधून त्याची सोबत घेऊन
कसे 10 दिवस संपले कळलेच नाही.

- * उत्तम नाष्ट्य * उत्तम जेवण असायना.
- * प्रशिक्षण देवील वेळार प्रत्येक सांगले होते.
- * प्रत्येकल आमच्या कडून सांगल्या प्रकारे करून घेतले
जे प्रशिक्षण त्याही घेऊन घेऊन आत आलेत ते प्रशिक्षण
आयुष्य असे पर्यंत विखरलाच नाही हे खरे.

"धन्यवाद"

THANKING YOU

Smit Lokhande

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Batch- 1 Raigad district from 10th October -19th October 2019

NAME :- Smti - Tamuja Purushottam Mure.

Contact details :- At Post TALA. PH.C Tala Dist - Raigad.

COMMENTS :-

मीडिकाक बाजु उरोगी इके भाके असता, माझी कोणाशी जोडवू नसली. इकडेची माझी प्रत्येक माजसता विचारली असता (यांच्या कडून) अतिशय गंभूतणे माझीत मिकळ घेता.

इतलम उताम नाह्या मिकळ घेता -

कालात जेवण मिकळ घेतणे. स्वच्छता अतिशय चांगली घेता.

अतिशय चांगल्या प्रकारे हात, मिकळ.

प्रत्येकीक व्यथन मिकळ.

डा. अशावरी मेडिक मंडळ यांची आपली अतिशय उत्तम

स्त्रिये रीतीने व्यवस्था घेतली. प्रत्येक अडचणी अतिशय

सहज पणे सोडविल्या.

Mure
19/10/19

THANKING YOU

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"

Batch- 1 Raigad district from 10th October -19th October 2019

NAME :- Nisha. G. Kawaji

Contact details :- 9873147717

COMMENTS :-

पहिल्या दिवशी आम्ही एवाडमध्ये आल्यावर आर्था-यापे स्वागत शाळे वाळेवडकार हॉस्पिटल मधील माहेरी देव्यात आले. तसेच TATA.M. डॉ. अमेय भोक. व डॉ. प्रातभा पार्ले यांशी प्रोजेक्ट दमवपूण लेक्यर होतले. तसेच देखांनी प्राक्तीकाल शिकवले.

मी. स्वतः VIA व VILI द्वारे लावली व पेशन्टची रजवा / डिस्क / VUS ची प्राक्तीकाल केली.

हे शिक्षण NCC मध्ये प्रोडि कार शाळे होते. पण येथे खेळण पूर्ण शिकवले.

तुम्हा मोठ्या डॉक्टरांचे आम्हाला चांगले मार्गदर्शन शाळे. तुम्ही जे शिकवले त आम्ही आम्हाला इन्ट्रिज मध्ये चांगला उपयोग करू व लवचक व लवचक

ज. प्रथम लपसची गवज किती महत्वाची आहे हे पडवून देऊ. व आम्हाला यांचे आर्थिक, सामाजिक करणे वाचेल याची माहेती देऊ.

THANKING YOU

सह धन्यवाद

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"

Batch- 2 Palghar District 14th November Till 24th November 2019

NAME :- स्वामी सुधिर चारी

Contact details :- 7507014192

COMMENTS :-

१) आमी १० दिवस प्रशिक्षणासाठी आले पण हे वातावरण
 खूप चांगले होते. ते वधुन आमी आनंदमयी आले
 पण आमच्या मर्यात ह्या प्रशिक्षणाविषयी हाकसुकुल
 होती पण हे दहा दिवसात आमी एवढे लेखन फ्री जोड
 हे प्रशिक्षण आम्हाला हलत खेळत घेणे आले
 लैमेव आम्हाला बुद्धर वापरत आज चांगल्या प्रकारे दिव
 आमच्या वधुन चांगले पुढील काम घेतले
 व आमच्या आंगात चांगल्या प्रकारे शर पडली
 ह्या वदल कामां मंडम व रंगण लोकाना चांगल्या प्रकारे
 साहकार्य केले
 हे प्रशिक्षणा नंतर आमी आमच्या कार्यक्षेत्रात चांगल्या मोठ्या
 पद्धतीने पेशरला समजुन त्याची लपामणी करायाम पुढत कळ
 हे प्रशिक्षण आमच्या हल्लीने खूप महत्वाचे आहे

THANKING YOU

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"
 Batch- 2 Palghar District 14th November Till 24th November 2019

NAME :- श्रीमती - आर. एल. साडे

Contact details :- 9665577423

COMMENTS :-

सर्वप्रथम जेव्हा लचीपळूची प्रारीक्षणालाठी ऑर्डर काढी तेव्हा खुप टेंशन काढते, पण प्रत्यक्षात मेघे प्रवेशकामानंतर (लचीपळूसा) मॅडमला मी फोन केला कसे साम्ये वगैरे मावेमेसा मॅडमी काढ्यास खुपच चांगले सहकार्य केले. आमची वाड्याची, खाव्यापीयाची सोम इतर सर्व गोष्टींकडे जातीने लक्ष द्या. वाढ्यास मॅडमचे धन्यवाद. प्रारीक्षण कॅन्सर रोगाचे ममा काही कोसळीना नाचि ही भीती होती. परंतु सर्वच लीक्षणंती इतके काही सर्व सोप्याभाषेत समजावून लीकलीत की ते मी माझ्या कामद्वारेनात वाक्यी-याचा सदुपयोग करीत व लक्षणात लवकर करण रोखून माना उपचारकासाठी काढून घे करणाचा प्रयत्न करीन. प्रकृतीका सुध्द घात जाते. सर्व स्थाप काढ्याशी उत्तम प्रेमाने व कामे पणते वागते सामुचे परके ठरते नाच्येच नाचि. मात जसा कळवलीतुसा लीक्षणंचे चांगले सहकार्य मीसाते. || धन्यवाद ||

THANKING YOU

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"
Batch- 2 Palghar District 14th November Till 24th November 2019

NAME :- Pradnya Bhaurao Tayade

Contact details :- 9225879953

COMMENTS :-

- 1) VIA/VILI - प्रशिक्षण - विशेष - कुटीलांन साठी मतिशय गरजेचे - व प्राधान्य - महत्वाचे आहे
- 2) VIA/VILI प्रशिक्षण देणाऱ्या मंडळ - व सिग्नल स्टॉप यांची देखरेख, वागवून, सामावून घेवारी - होती.
- 3) स्टॉपच्यामध्य - सहकार्य करण्याची - भावना होती.
- 4) राहण्याची व प्रेवनाची व्यवस्था - चांगल्याप्रकारे होती.
- 5) तसेच प्रत्येक मंडळीवर - मोडु मंडने मात कुण मासाला चांगल्या प्रकारे मिळवले - ज्ञान दिले.
- 6) मातपर्यंत कुकुरोग महिती मिळता परंतु - कुकुरोग कोणते - हे होऊ नये म्हणून काय काय काळजी घ्यायची - इतपामुळे उशी करायची. मोसदापचार या काळीत चांगल्या प्रकारे माहिती दिली इ मासाला चांगल्या प्रकारे सहकार्य केले.
- 7) याचा उत्तम उपयोग इयिहायान करणार माघेत.

THANKING YOU

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"

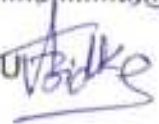
Batch- 2 Palghar District 14th November Till 24th November 2019

NAME :- Archana Baburao Tidke

Contact details :- 9764558461

COMMENTS :-

मी श्रीम ५- वी जिडके आरोग्य सेविका पाळ्वर येथून
VIA चे देविंग सोप्यासाठी वी के यक पाळ्वरकर इंस्पेक्टर
येथे 13 नारबेला 7:30 परा वी आरोग्य लेखा येथे
आरोग्यावर आरोग्याला खुप चांगले वाटके ठेवोदर वाटके की शहायची सोय
करी असेल परंतु आरोग्याला इकडे जादायला रुग्ण मिळाल्या तसेच
10 दिवस आंधोळीसाठी गरम पाणी देवीक मिळोके. शंशीच्या दिवसात गरम
पाणी मिळाल्याचे ती आंधोळी जाके. तसेच चहा नाष्टा, तसेच दुपारचे
तेवज आणी परत इ वाजला चहा नाष्टा मिळाल्या आणि
परत रात्री तेवज खुप चान वाटके. फधीच पोह खाली आल्याचे वाटलेवही.
तसेच येथील पॅडम मोडक ह्या परा खुप चांगल्या स्वभावाच्या कधी आरोग्याला
शीवायला जाहीत किय अरुज्या नरधीन मिस्ट परा खुप चांगल्या
स्वभावाच्या आहेत आरोग्याला सर्व समजावून सांगत असे.
येथे येवून आरोग्याला सर्व काही तपासला फशा करायचा हे प्रत्यक्ष
करायला केले. समजावून सांगितले तसेच हाट
बरेच माहिती चांगल्या प्रकारे मिळाली.
धन्यवाद पॅडम आणि वी स्टॉफ

THANKING YOU 

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"
Batch- 2 Palghar District 14th November Till 24th November 2019

NAME :- Rupali B. Rane.

Contact details :- 7507907592.

COMMENTS :-

Excellent training & training center. All Dr's & staff are very kindful nature & helpful nature. Hostel & Mess staff are also good. We are getting lot's of knowledge from staff / DR's in training. So very thankful to all staff's member.

}
}

Rane

THANKING YOU

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"
Batch- 2 Palghar District 14th November Till 24th November 2019

NAME :- Nilima Govind Sombare

Contact details :- 8805668475

COMMENTS :-

मी पाणघर जिल्ह्यात लनासरी तालुक्यात राहणारी असून मला 14-24 November पर्यंत त्र्यंगंगंगु वा काठमान झाली. मला का त्र्यंगंगंगु वा काठले. नेवपासून मला खूप मनात भीती निर्माण झालेली होती. काळ मला थिपळूण खवट्या लांब येण्याची भीती वाटत होती. पण इथे जाण्यावर मला काहीच त्रास आणि वेगवेगळे झाले नाही. कारण मला इथे येऊन या त्र्यंगंगंगु मध्ये खूप काही शिकायला भेटले. आणि जे माहित नव्हतं ते माहित झालं. इथला डॉ. अर्षा म्हणजेच डॉ. मॉडक मॅडम, शांती झामची चांगल्या प्रकारे गटस्थाची सोय, खाण्यापिण्याची सोय तसेच इतर काही गोष्टी झामला सांगितले. मी विस्फुलता ह्या तर खूपच छान आहेत. कधीच वागावले नाहीत. आणि खूप बलापासिंठ दाखविले. प्रत्येकांकर मध्ये खूप सोरे शिकवले. आणि इथला डॉ. अर्षा खूप चांगला आहे. छान शिकवले त्याकरून THANKING YOU धन्यवाद.

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"
Batch- 2 Palghar District 14th November Till 24th November 2019

NAME :- Tejaswini Bhanu Waghmare

Contact details :- 9075804754

COMMENTS :-

हे Hospital ग्रुप छान आहे.
या Hospital मध्ये आम्हाला 14/11/19 ते 23/11/19 पर्यंत ग्रुप काही शिक्षणासाठी झेल.

या Hospital मधील आम्हाला शिकवणारे डॉक्टर
Mickam, डॉ. ग्रुप ^{वांगळ्या आस} आणि वांगळ्या प्रकारे
आमची Training घेतली.
आम्हाला मार्गदर्शन ही ग्रुप छान केल.

या 10 दिवसांत आम्हाला ग्रुप काही शिक्षणय
मिळाले, तसेच आमची जेवणाची, राहण्याची, आराम
वांगळी होती.

आवाकडल आम्ही आपले मनापानुन
धन्यवाद करते.

THANKING YOU

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"

Batch- 2 Palghar District 14th November Till 24th November 2019

NAME: श्रीम. रंजना श्रीधर वाघमारे

Contact details :- 8390146533

COMMENTS :-

सदस्ये Y.J.A हे शाश्वत निपटूण
येथील, वातावरण वॉलंटियर्समध्ये सामील होणे हे
आमचे आग्रह आहे. या क्षेत्रे सर्व रक्षण (Screening)
आम्हाला स्वतः हाताळता आम्हाला यावर आमचा
स्वतःचा कॉन्फिडन्स वाढला आहे.

यांना सर्व प्रकारची सहाय्यता अदा करून
डॉ. मोडक, डॉ. लो. विकसिता सिख, तसेच लो. स्वेडन
बोर्ड यांनी केली.

आतिथ्य प्रोग्रामे लेक्चर घेऊन, प्रॅक्टिकल घेऊन
आम्हाला विमल आपारावाकत माहिती दिली.

आमची व्हिडिओ, गॅलरी, जेवण जास्त
याची सोयी उत्तरीत्या केली.

त्याबद्दल आम्ही आपले आभार "धन्यवाद"
मनात.

THANKING YOU

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"
Batch- 2 Palghar District 14th November Till 24th November 2019

NAME :- Rupali Ramdas Karde

Contact details :- 9527772652

COMMENTS :-

आल्या दिवसा म्हजे डेगिंगच्या पहिल्या दिवशी
आमच्या कडून युवा आल्या पण
डा. माडवु मंडप ने युप, लंभाभुत
बिगले डा. प्रतिभा मंडप ने युप
चांगल्या प्रकारे आम्हाला Cervical cancer oral cancer
बद्दल सांगितले. लेवायु निष्पत्ती युप चांगल्या
गोष्टी सांगल्या ज्या गोष्टी माहिती नव्हत्या
त्या कुळाल्या. मासपेव्हिल पण युप छान प्रकारे
शिकवले. लिगो किल्टर, निष्पत्ती किल्टर यंत्रणे
वर मध्ये पण प्रकटित्या वेळेस युप छान शिकवले
आम्हाला माऊ कोरल्या गरिजा सांगितले घेतले.
मेस मध्ये जेवण पण युप छान लो राखण्या
क्याक्या पण चांगल्या लो कोरल्या गोष्टी
को पडल्या नाहे. over all जामय ~~सु~~ डेगिंग
10 दिवस केले गेले कुळोय नाहे.

Rupali

THANKING YOU

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"
Batch- 2 Palghar District 14th November Till 24th November 2019

NAME :- Renuka Shankar Patil

Contact details :- 9860604437

COMMENTS :-

दि. 14 नोवेंबर ते 24 नोवेंबर पर्यंत आमचे PIA चे प्रशिक्षण वाचावळकरु स्वाख्यान होते. या प्रशिक्षणामध्ये आम्हाला डॉ. मोडकमॅडम, सिल्वर. विठ्ठलता शोनी आम्हाला चोगव्या प्रकारे सहकार्य केले.

सुकवातीला मला कॅन्सर लवकर काढायची माहिती नव्हते. फक्त कानावर रोकळे होते. की कॅन्सर हा एक आजार आहे. पण मला ते काढायचे नव्हते की, कॅन्सर कुठला आहे. त्याची चिन्हे लक्षात काय आहे. आपल्या अरिवाच्या कोठावाडिकाणी कॅन्सर लवकर जाऊ शकते. कॅन्सर आला तर आपण काय काय होईल पत्ता नसेल. उ. सर्व माहिती मला या प्रशिक्षणातून मिळाली. डॉ. प्रतिभा मॅडमनी आपल्या चोगव्या प्रकारे माहिती सांगितली व प्रत्यक्ष आमच्याकडून प्रॅक्टिक करून दिले.

मला खुप खान वाटते की मी माझी या प्रशिक्षणातून मिळविली. मी जे काही डेथे शिकली आहे त्याचा उपयोग मी जवळपास माझ्या कार्यक्षेत्रात करेन.

डॉ. मोडकमॅडम आणि सिल्वर. विठ्ठलता शोनी आम्हाला चोगव्या प्रकारे सहकार्य केव्यातुळे मी त्याची खुप-खुप आभारी. असय

THANKING YOU

धन्यवाद मॅडम.

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"

Batch- 2 Palghar District 14th November Till 24th November 2019

NAME :- Dishu Suresh Dhodi

Contact details :- 9723597862.

COMMENTS :-

मी पालघर जिल्हा मधून गेली तब्यत आजपर्यंतच्या ट्रेनिंग पेक्षा या ट्रेनिंग मध्ये खुप काही शिकायता मिळाले. तसेच लगेच ट्रेनिंग ला येवणाऱ्याची खुप ट्रेनिंग मध्ये आलेली परंतु कसे ट्रेनिंगला आल्यावर मंडम अडार्क खुप मनमिच्छू वेळे 10 दिवसात मफदा पर पिडले नाही. आणि मासाला आगच्या फिन्ड वर लपवखित रित्या काम करता येणार. मंडमनी आसली जेवणाची सोप व Hostal ची सोप खुपच लपवखित करण दिलेली. वेज न आकाळी आल्यावर फाही जपिन शिकायती मापड नाही. येथे Hostalचा सेवा मधून वडक PR ला कालिय अडचणी येताजा खपितले नाही. लीच पध्दत मासनी आसल्या PR लेवता ला कास. पुन्हा ट्रेनिंग आकाळी तर येथे नवनी येवू...

धन्यवाद.

THANKING YOU

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"

Batch-3 Thane District 16th December Till 25th December 2019

NAME :- Smt. Shalaka Surykant Chembavane

Contact details :- 9271532287

COMMENTS :-

VIA प्रशिक्षण हे आमच्यासाठी
अतिशय उपयुक्त आहे. याचा होशियारी
द्वारे पाहणे गोवापुरीत पायदा होईल.
यथे प्रशिक्षण ठरवल्यामुळे वरिष्ठ पदावरुन
होशियारीची माहिती आली, यथे
मिस्टर रफा, डॉक्टर, प्रशिक्षक, व
आहामा सहकार्य करणारे सर्व
कात्रिये धन्य आहेत. हे होशियारी
रूप सुंदर, सुसज्ज, स्वच्छ आहे.
यथे होशियारी व राहत्याची व्यवस्था
सर्वोत्तम अतिशय सुंदर आहे.

आमचे जा.प.प्रशिक्षण 16.12.19 ते 25.12.19
हे रूप सुंदर आहे. आणि वेतनेने
प्रशिक्षण यथा, प्रेरण वापर करत
व कठोर विमर्शाने आकाशाच्या
सहभाग, सहकार्य मनापासून करणारे

THANKING YOU



FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"
Batch-3 Thane District 16th December Till 25th December 2019

NAME :- प्रभावती दिलीप सलुंके L.H.V. लालवाडी.
(उरुखोप)

Contact details :- 9373312470

COMMENTS :-

दि. 15/12/2019 रोजी सलुंके दिलीप लालवाडी येथे प्रभावती प्रवासात सुखात कोळी परिवाराचा चिपलून येथे प्रशिक्षणाच्या जाण्याची सांधी मिळाली. शुभ सांज वारला परा हळू प्रकारची भिलीही वाटत होती. कारण डेजमसेटर वर आहे तेथील सेडम वर आहेत व्यवस्थित सोय आहे की नाही याची काळजी वाटत होती. रजुप रक्षीत वातावरण असिले की काय? परंतु तसे काही नाही रजुप व्हात सोय होती सलुंके चहा नाश्ता दुपारचे फेवट राहण्याची सोय सांधोकीला म्हणून गरम पाणी रजुप व्हात सोय आली जसे 10 दिवसांची माही आल्या सांजवे करले.

सर्व प्रशिक्षकांनी चांगल्या प्रकारे प्रशिक्षण दिले तेव्हा आत्यक्षिकेक परा सर्वांना करला येईल भास निरोपण केले होते लसेच लोशाची वॅक्सर साही लपासणी, रतनाची मपासणी व सर्वांचे लपासणी (गभिरायाच) मुखारी लपासणी करी करावे हे सर्व प्राथमिक केले. पुढेदरीत प्रशिक्षण रजुप चांगले आले.

THANKING YOU

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"
Batch-3 Thane District 16th December Till 25th December 2019

NAME :- Smt Yogita Baburao Jadhav

Contact details :- 8097760303

COMMENTS :-

प्रथम मी B.K.L. Walwal Kar Hospital डेवण (आवडे) यांचे मला VIA रेजिगकरिता या हॉस्पिटलला निवड करीत त्यावेळी मी मनापासून आभार मागतो. माझ्या जिवनातील हे प्रशिक्षणाला 10 दिवस खुप

अनमोल सदा आहे.

मी येथे प्रथम काळे लेव्हा फफूला कॅन्सर उपचार आहे इतक्या माहिती होते. परंतु 10 दिवसांच्या प्रशिक्षणाला कॅन्सर म्हणजे काय लक्षणे उपचार तपासणी व-यात गोपरीये राखू शकतो.

तसेच मोडक मंडळ यांनी आमची खुप चांगली तपासणी केली तसेच मंडळ Dr. Dolewca यांनी खुप चांगल्या पद्धतीने प्रशिक्षण दिले. तसेच मंडळ डॉ. प्रविका पाटील यांनी चांगल्या प्रकारे प्रशिक्षण दिले.

तसेच विपुलता खिस्तर राय हॉस्पिटल येथील खिस्तर यांनी चांगल्या प्रकारे वॉर्डमध्ये प्रॅक्टीकल प्रशिक्षण शिकविले. मी खर्च यथा मेमोरिझल हॉ. येथील मंडळ. मोडक मंडळ खिस्तर यांचे आभार मागतो.

THANKING YOU

तसेच येथील शहाव्यपी जेवणाची उत्तम कोस होती

तसेच येथील वातावरण खुप चांगले होते

श्रीविष्णू मला ह्या हॉस्पिटलला जेवा करवपाची श्रेणी मिळवपात मी

जखर पुन्य मेरुल. ड. नमपिण्ठे

मा. विश्वापु
Jadhav

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"
Batch-3 Thane District 16th December Till 25th December 2019

NAME :- Smt. Sunita Sudam Jadhav.

Contact details :- 9272538531.

COMMENTS :-

~~वे टेनिंग मतिराय~~
वे टेनिंग मतिराय चांगले आहे. शिकविलेले
प्राथमिक वे टेनिंग इंटरनेट व स्ट्रॉप चांगले मतिराय
सोप्या पद्धतीने शिकविले. वे चांगले समजले सा.
प्राथमिक कार्यशाळा ग्रुप चांगला उपभोग घेईल
सांगुन निश्चित केकरोग स्कॅनिंग सांगी.
वेक्यर घेवून रुग्ण प्रथम अवस्थेत शोधाता येईल
व आशा प्रकारे केकरोग निदान करुन
केकरोगचा प्रतिबंध घेईल.
शिकविलेले मतिराय चांगला पद्धतीने शिकविले, समजले.
नसेच या संस्थेने नियोजन, येथील शासना, स्वच्छता
सर्वीस संस्थानिय चांगले, विस्तृत ग्रुप आवडली.
सर्व संस्थांनी याप्रमाणे चांगले. असे वाटते.

THANKING YOU

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"
Batch-3 Thane District 16th December Till 25th December 2019

NAME :- SUREKHA VASANT MADHA

Contact details :- 9284853918

COMMENTS :-

मी सौ. सुरेखा वसंत माढा मी आपणास नमःपूर्वक सभिवंदन करुन सांगु. इच्छिते की आमचे training हे अतिशय आनंदाने साभ. training कालावधी हा training असल्यासारखे वाटले नाही. आम्हाला खुप मोठ्ठीक मिळली. सुरवलीला आम्हाकरु असे वाटले होते की, इथे आम्हाला वर्गात सभिवंदन आणि लेक्चर देणार. परंतु फक्त Lectureच न घेता आम्हाला पॉई मध्ये आदरपूर्वक वागणुक देऊन पेशेंट दाखवले गेले.

इथला स्टाफ पूर्ण अतिशय मनमिळाऊ आणि हसतमुख आहे. आम्हीविषयीही प्रश्न विचारले तरी अजिबात न कंटाळता उत्तर देतात. आम्हाला 200000 वरुदन अतिशय चांगली भाळीली मिळाली आहे. आम्ही त्याच्या उपयोग आम्हाला वरुद मध्ये खुप चांगल्या प्रकारे करु.

उ मागणीय डॉ. मोडक डॉ. मंडमचे मनपूर्वक आभार.

THANKING YOU



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 Batch-3 Thane District 16th December Till 25th December 2019

NAME :-..... रत्ना सुजित पटिल.....

Contact details :- 9403678038.....

COMMENTS :-

..... आम्हाला 16/12/19 रोजी साकडे येथे ट्रेनिंग
 दुकान येण्यासाठी डॉ. मोडक मंडळ यांनी खुप चांगल्या
 पद्धतीने पाठपुरावा करून आम्हाला स्टेशनला लोणी
 गोळा घेण्यासाठी पाठवून, जंगल राक्षण्यांसाठी चांगल्या
 प्रकॉल रोय केला. 16/12/19 आम्हाला आम्हाला रुम मध्ये आम्हाला जंगल
 मंडळ आम्हाला कोणत्या मंडळ येणार व रोजीचे आम्हाला वेळापत्र दिले
 डॉ. प्रतिभा मंडळ व पटिल मंडळ यांनी चांगल्या प्रकॉल लेखात
 दिली आम्हाला प्रत्यक्ष येथेच येण्यासाठी आम्हाला
 हांगणवडी रेविका मदतनीस वचन गट आम्हाला कोणत्या
 आम्हाला प्रत्यक्ष लघू रूमी करून आम्हाला शिवेत व तेथे आम्हाला
 खूप करून घेतल्या आम्हाला खुप चांगल्या प्रकॉल पिकले
 डॉ. मोडक मंडळ यांनी व विद्वानां ताल्ल यांनी
 खुप चांगले माहिती सांगितली
 आम्हाला आणि तपासणी करणाना आम्हाला
 तुम्हाला सांगितल्या खुप खुप आम्हाला आम्हाला

THANKING YOU

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"

Batch-3 Thane District 16th December Till 25th December 2019

NAME :- नि.भि.म। कृष्णा। पारीस

Contact details :- ७०२१२१७२१

COMMENTS :-

आम्ही हिमांकु रोगाच्या गुलाडुपारी डेनिंग कॅम्पमध्ये आलो
येताना मनात छोडायची अिती होती. कॅम्पच्या डेनिंगबद्दल
पुढच्या मीच्या हाशिरामध्ये. परंतु आम्ही इथे आल्यानंतर
हसतमुखाने स्वागत करणारा कॅम्प. इथली स्वाच्छता
आणि शांतता खूपच बान वारली.

दि उवायायु पाभून आम्हाला कार्यशाळेला सुकवान इतली.
डां मीडकु मंडम डां डोवाश्वा मंडम तसेच डां पातिमा पारीस
मंडम ह्यांनी आम्हाला टिप्याटिप्याने शिकवण्यात
सुकवान केले.

कार्यशाळेच्या 10 दिनात आम्हाला जे काही
स्वतः. पत्र तपासणी कशी करवा रून त्या तेंड्या तपासणी
शिकवली. आम्ही स्वतःची तपासणी जेकाकती
केली. त्यामुळे आम्हाला आम्हाला विश्वास वाढला.
इतले जेवण हो बान होते. 10 दिवस आम्ही खर
वियेकून इथे समशय आलो.

शिवाय स्वतावा स्वतःची काळी ध्यावी ठे शुद्धा तिरकिय
शिकलो. आम मी इतल्या सर्व कर्मचाऱ्यांने मी
THANKING YOU आभारी. आहे.

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"
Batch-3 Thane District 16th December Till 25th December 2019

NAME :- Parvathi Maina Mahadik

Contact details :- 8208966689

COMMENTS :-

दि. 16/12/2019 रोजी हाणे
मिळ्यानील 17 लोकांची बॅच (NMAN, LMY)
येथे जे.यलू. वालावकर कॅन्सर रुग्णालय येथे
VIA प्रशिक्षणासाठी हजर आलो. रुग्णालय
पहानासणी रुप आनंद आला. येथील
परिसर अनिश्चय सुंदर आनि स्वच्छ आहे.
आम्हाला मिळालेले प्रशिक्षक डॉ. डेनोरोसा मॅडम
आनि डॉ. प्रभावती मॅडम यांनी आम्हाला समजेल
अशा आकित शिकविल्याचा यशस्वी प्रयत्न केला.
पहिल्या दिवशी डॉ. मोडक मॅडम यांनी आम्हाचे
हस्तन कुळाने स्वागत केले होते. 09/12 गावणेक
मह्ये आम्हाला स्वाकृती रुप छान सहकार्य
दिले आम्हाला. 10 दिवस कसे आणार या
चिनेत ने कधी गेले ते क. समजेलच नाही
येथील सर्व क. स्वाकृ हस्तनकुळ आनंदी आहे.
रुप साया- सोयी सुविधांनी हे सौधीत्य
नटवने आहे, या शिकांनी केलेल्या प्रशिक्षणाचा

THANKING YOU

आम्ही नक्कल उपयोगक करू.


ANM
PNC मरळगाव

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"
Batch-3 Thane District 16th December Till 25th December 2019

NAME :- काशिनी दत्तात्रेय गोमारे

Contact details :- 9119531040

COMMENTS :-

ह्या प्रशिक्षणासाठी आमची मिवड वेळ्या-
वदल्य प्रथम माझे माझी माहेत
ह्या प्रशिक्षणावदल्य आम्हाला व
अप गोरसमज होते ते दूर व्हावे आणि त्या-
वदल्य भिती कमी व्हावी.

ह्या प्रशिक्षणाने माझे कार्यक्षेत्रात
योग्यता माहीत व्हेवून जनजागृती करून व व
त्यकरात त्यकर वेवामील कळणा त्यासणीलाठी
योग्य ठिकाणी पाठवून असा माझा आत्मवेववात
असा माझा आहे वेव

आमची राहण्याची व जेवण्याची
शोध ही अप चांगली होती मॅडम तसेच
सिस्टरानी अप मदत व्हेवी व शंकोचे निराकरण
वेवे. व्हेवून पुन्हा प्रकटा माझार
होसपीतल्य अप सुदर व्हावे.

THANKING YOU

Balan
ANM
PHC वज्रवती

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"

Batch-3 Thane District 16th December Till 25th December 2019

NAME :- ... अरुण शिवाजी पाटील ...

Contact details :- ... 9552296264 ...

COMMENTS :-

हे प्रशिक्षण खूप छान आहे.
साध्याची जेवणाची उलम लोथ होती.
हे प्रशिक्षण इतर प्रशिक्षणा पेक्षा वेगळे होते.
लेक्टर साक्षा व लोणा आघेत समाकुन सांगितले
प्राथमिक श्रुप छान करून घेतले.

तसेच स्पंदुलम उळे लावायचे, पॅप स्मीडार कसे घ्यायचे
हे शोन पणे व न निडला उत्तम प्रकारे सिखवणे.
ह्या हॉस्पिटलचे वातावरण, डिपेंड, नियम
स्वच्छता, खूप छान आहे

हे प्रशिक्षण घेनाना. फक्त मशीन मोड्युल पाहिले होते.
हे प्रशिक्षण घेतागा सर्व लेक्टरस, व सिस्टर खूप छान होते



THANKING YOU

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"
Batch-3 Thane District 16th December Till 25th December 2019

NAME :- Mansi Mahendra Kamble

Contact details :- 9766657490

COMMENTS :-

B.K.L. Walawalkar Has
या संस्थेमध्ये आम्ही 10 दिवस प्रशिक्षणाची सुरुवात होती.
या 10 दिवसात आम्हाला योग्य स्वरुप काही शिकायला
मिलाल,

कॅन्सर विषयी आम्हाला आधी ~~कधी~~ ब्रेस्ट (वेसिक) माहिती होती
जधे आल्यावर प्रत्येक कॅन्सर कसा होतो, त्याची लक्षणे काय आहेत
याविषयी अजुन खोष माहिती मिळाली.

तसेच प्रत्येक पेशन्वर आम्हाला VIA Test कशी करावी
याचा अनुभव घेतला. जेवढे आम्हाला रथे शिकवले ते स्वरुप
छान समजले. त्याचा आम्हाला आमच्या कार्यक्षेत्रात
जवळी चांगला उपयोग होईल.

THANKING YOU

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"
Batch-3 Thane District 16th December Till 25th December 2019

NAME :- Mrs. Pratibha Sachin Deshmukh

Contact details :- 8108161277 / 7875301412

COMMENTS :-

ट्रेनिंग ग्रुप हातूंत नविन माहिती उपयुक्त अशी होती. माहिती स्वामीमिळाली. प्रॅक्टिकल हातूंत प्रत्येक व्यक्तीने काम करताना आत्मविश्वासाने काम करता येईल.

फ्लिप चार्ट व व्हिडिओ द्वारे शिक्षण ग्रुप देखायला येईल. भविष्यात या ट्रेनिंगचा ग्रुप चालवला जाईल अशी आशा आहे. सर्व शिक्षकांनी ग्रुप चालवण्यास आम्हाला शिकवले.

- धन्यवाद -

THANKING YOU

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"

Batch-3 Thane District 16th December Till 25th December 2019

NAME :- Mrs. Poojita Pravin Tarmale.

Contact details :- 8788074461.

COMMENTS :-

ट्रेनिंग खूप छान होने. नविन माहिती उपयुक्त सारी माहिती मिळाली. प्रविकुल छान प्रकारे करता आली. त्यामुळे स कार्यक्षेत्रात गेल्यावर खूप छान आत्मविश्वासाने काम करता येईल. स फिल्म चार्ज व रिक्तन द्वारे video द्वारे खूप छान प्रबििक्षण देण्यात आले. अविद्यत या ट्रेनिंग चा खूप चांगला फायदा होणार आहे. सर्व शिक्षकांची खूप चांगल्या प्रकारे आम्हाला शिकवले.

— धन्यवाद —

THANKING YOU

FEEDBACK form "Population based screening program for Non communicable diseases control and prevention and training workshop on, VIA/VILI technique"
Batch-3 Thane District 16th December Till 25th December 2019

NAME: Ms. Vaishali Kamlesh Bhange

Contact details :- 79000 25233

COMMENTS :-

प्रथम आमची सेवा जिन्हा परिवर्तण करी
आरोग्य विभाग मध्ये आमर मानने की लानी
मा प्रशिक्षणासाठी माझी निवड केली.
पामावळकर हॉस्पिटल मध्ये कोन्सु
प्रशिक्षण आमचा नंतर एक उत्साह होला की यामध्ये
कार्य शिकव्याल मिळेल. परंतु सर्वेच्या प्रशिक्षकांनी
आमच्या प्रशिक्षणास पूर्ण समर्थन दिला. प्रशिक्षण मध्ये
Theory, Practical चाचण ^{व्याय} प्रदक्षने समाजाकून
सांगितले. Practical करताना करणांना examination
over based वर सांगितले की जेणे करण कामेसात
आम्हाला निदान करव्याल कोणतेही अडचण येऊ नये.
मेरीत डॉ. मोडक मॉडम आणि Tata Hospital.
चे Dr. Dolanov आणि प्र. Prathibha pati मानी.
अतिशय योग्य मार्गदर्शन, Practical दिले.
राहण्याची सोय उत्तम होती, खाण्या पिण्याची
सोय खुद्द उत्तम होती. ह्या दिवस कासे
जेणे करणे नही. Miss U Valavalkar Hospital

THANKING YOU





Date: 30/12/2019

Photos of "Visual inspection with Acetic acid training for staff nurses & primary health center staff"



Dr.Suvarna Patil (medical director BKLWRMC) guiding participants



Dr.Amey (TMH,Mumbai) guiding participants



Photos of “VIA training for staff nurses and primary health center staff”



Visual inspection with Acetic acid (VIA) hands on training to participants



Visual inspection with Acetic acid (VIA) hands on training to participants

UK Camp (Newcastle team) Workshop Online

(it was conucted online due to covid pandemic restrictions on international travel)

Online academic session for uk camp -24th – 26th January 2021

Workshop topics –

- 1. Ventilation,abg,bolld transfusion,transfer & sedation
- 2. Pain mangement

attended by – anesthesia & medicine department



workshop topic –

- 1. Knee joint and hip joint examination

attended by – ortho departmentworkshop topic –



1. Shock resuscitation & fluid
Attended by – paediatric department



Workshop topic –

1. Pns masses,mri pelvis & mediastinum,gynaecological protocol for mri

Attended by radiology department



Workshop topic –

1. Urology

Attended by surgery department



B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



Kasarwadi, At-Post Sawarda, Taluka Chiplun,
Dist. Ratnagiri - 415606, Maharashtra State, INDIA
Tel. : +91 02355 264636 / 264637
Fax : +91 02355 264693 Email : info@bklwrmc.com
Website : www.walawalkarmedicalcollege.com

Date: 10.01.2020

To,
Head of the department,
Clinical/para clinical/pre-clinical,
B.K.L. Walawalkar Rural Medical College,

Dear All,


All of you are aware about British team visit at our institute. This year team will arrive on 25 Jan 2020 and will depart on 29 Jan 2020.

Following members will be participating in training medical students.

Please arrange programs accordingly.

Please find attached list of British faculty.

Thanks,


Dr. Suvarna Patil
B.K.L. Walawalkar Rural Medical College.

C.c. Principle BKLWRMC
Principle, Nursing

Director
B.K.L. Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606

Shri Vitthalrao Joshi Charities Trust's

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



Kasarwadi, At-Post Sawarda, Taluka Chiplun,
Dist. Ratnagiri - 415606. Maharashtra State, INDIA
Tel. : +91 02355 264636 / 264637
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Website : www.walawalkarmedicalcollege.com

SUMMARY OF UK TEAM CAMP from 20 Jan 2020 to 31 Jan 2020.

| Date | Speakers, Trainers | BKLWRMC faculty /students | venue | topic |
|---------------------------|--|--|--|--|
| 26 .1. 2020 | Dr.R cooper(UK) Dr.Sanjay Deshpande (UK Anesthesia) Dr.Sanjiv Patankar | No.of faculty=108 No. of students- 45 | Medical College Lecture theater 1 | Multidisciplinary CME(MMC accredited) |
| 26.1.2020 | Dr.Sanjay Deshpande | No of faculty=12 No of students = 25 | Skill lab | Regional anesthesia workshop |
| 27.1.2020 to 30.1.2020 | Dr.Sanjiv Patankar(Alumni,Royal College of Edinburgh) Eleanor Freeman | No of students= 105 | Skill lab | Basic Surgical Skill Course |
| 27.1.2020 | John Wall Dr.Niranjan Khambete(Biomedical eng.Pune) Dr.Neha Deshpande(Pune) | No of biomedical students =16 | Seminar hall | Role of Clinical Engineers in Quality assurance & Safety Page 10 news letter |
| 27.1.2020 to 31.1.2020 | Dr Peter Taysum, Mandeline Storey, Derek Johanson.Ian Ingis | Medical Students= 55 | | Acute Illness management |
| 29.1.2020 | Dr Sanjay Deshpande Ms Clare Fletcher | First year MBBS student no.26 | Training center | Organ Donation lecture |

Faculty participated in surgical week

| <u>Department</u> | <u>Faculty</u> | <u>Uk team</u> |
|-------------------|--|---|
| Surgery | Dr.Abhay Desai Dr.Srinivas Biradar Dr Raghuvveer Bhosale Dr.Abhishek Patil Total=4 | Dr.Shlok Balpuri(UK) |
| Ortho | Dr.Sunil Nadkarni Dr Pawan Kohali Dr.Bharati Sharma Total=3 | Dr.Jonathan Loughead |
| Anesthesia | Dr.Asmiita Karnalkar Dr.Vaishali Bapat Dr.Rajesh Pawar Total =3 | Dr.Bhavani Lekhak(UK) Dr Sarang Puranik Dr Sanjay Deshpande |



Director
B.K L.Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606

Shri Vitthalrao Joshi Charities Trust's

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



Kasarwadi, At-Post Sewarda, Taluka Chiplun,
Dist. Ratnagiri - 415606, Maharashtra State, INDIA
Tel : +91 02355 264636 / 264637
Fax : +91 02355 264693 Email : info@bklwmc.com
Website : www.walawalkarmedicalcollege.com

Outward. No. SVJCT/BKLWH/ 208/2020

Date: 10.01.2020

To,
Head of the department,
Clinical/para clinical/pre-clinical,
B.K.L. Walawalkar Rural Medical College,

Dear All,


All of you are aware about British team visit at our institute. This year team will arrive on 25 Jan 2020 and will depart on 29 Jan 2020.

Following members will be participating in training medical students.

Please arrange programs accordingly.

Please find attached list of British faculty.

Thanks,


Dr. Suvarna Patil
Medical Director
B.K.L. Walawalkar Rural Medical College.

Director

B.K.L. Walawalkar Rural Medical College,
Sewarda, Kasarwadi, Pin - 415606

List of UK members 2020

| No. | Name | Country |
|-----|--|---------|
| | Dr. Sanjay Deshpande, Anaesthetist | UK |
| | Mrs. Eleanor Freeman, Nursing staff | UK |
| | Dr. PravinMenezes, Urology Surgeon | UK |
| | Ms. Madeleine Storey, Anaesthetist | UK |
| | Dr. JohnathanLoughead, Ortho Surgeon | UK |
| | Dr. Richard Cooper, Consultant Radiologist | UK |
| | Ms. Jayne Richardson, Senior Radiographer | UK |
| | Mrs. Clare Fletcher, Specialist Nurse | UK |
| | Mrs. Maria Pinho, Senior Sister | UK |
| | Ms. Alisa Dunphy, Sister | UK |
| | Dr. MadhaviNatarajan, Urologist | UK |
| | Ms. Elena Hidalgo Dominquez | UK |
| | Dr. ShlokBalupuri, General Surgeon | UK |
| | Dr. BhawaniLekhak, | UK |
| | Mr. Derek Johnson, Operating Practitioner | UK |
| | Mr. Iain Thompson,Nursing staff | UK |
| | Mr. John Wall,Senior Biomedical Engineer | UK |
| | Dr. SarangPuranik, | UK |
| | Dr. Peter Taysum, ODP, Anaesthesia | UK |

Dr. Ian Inglis, Operating
Department Practitioner

UK



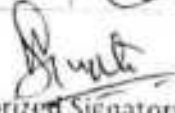
Director
B.K. Wankar Rural Medical College,
Sawade/Nasawadi, Pin - 415606

Attendance record for event Clinical Equipment maintenance.

Dated 27th / 01 / 20.

Class: F.Y, S.Y, T.Y B.Sc.

| Roll No. | Name | Signature |
|----------|---------------------|-----------|
| | Adinath. S. Gujar | E Gujar |
| | Pronav P. Kharashe | Pronav |
| | Siddhesh S. Chavan. | S. Chavan |
| | Omkar. S. Gurav | Gurav |
| | Ashutosh S. Patil | Aspatil |
| | Abhishek A. Rahade | Abhishek |
| | Vinay V. Ghag. | Vinay |
| | Shubham S. Sawant | Sawant |
| | Shubham R. Ranim | Ranim |
| | Shreyas S. Baiker | Baiker |
| | kshitij S. Padolkar | Padolkar |
| | Vinay V. Mestaji | Mestaji |
| | Pithanra Natchkar | Natchkar |
| | Omkar D. Ghag | Ghag |
| | Pratik N. Powar | Powar |
| | Harion B. Wable | Wable |


Authorized Signatory
Name and designation.

Ratan Gupte.
HOD B.Sc Biomedical

B.K.L.Walawalkar Rural Medical College & Hospital, Sawarde

Multi Disciplinary CME (MMC record)

Lecture taken by - L V K collaboration Topic - Diabetes
 Signature -
 Date - 26.1.2020 DR. Cooper Time -
DR. Peshende

Attendance

| SrNo | Name of the Students | Signature |
|------|-----------------------|--------------------|
| 1 | Jadhavi U. Abhyankar | <u>Jadhavi</u> |
| 2 | Satiputta S. Ambale | <u>Satiputta</u> |
| 3 | Anand Prilanshetti | |
| 4 | Bhatkar Neel Shrisam | <u>Bhatkar</u> |
| 5 | Divya P. Bhatkar | <u>Divya</u> |
| 6 | Pratiksha Borkar | <u>Pratiksha</u> |
| 7 | Yashodhan Brahme | <u>Yashodhan</u> |
| 8 | Buraji Chinmay | <u>Buraji</u> |
| 9 | Ahmed Anafare | <u>Ahmed</u> |
| 10 | Ramkrishana Chaudhari | <u>Ramkrishana</u> |
| 11 | Chaudhari Jiten | <u>Jiten</u> |
| 12 | Karna Dahvi | <u>Karna</u> |
| 13 | Darsho Angad | <u>Darsho</u> |
| 14 | Shubham Dandekar | <u>Shubham</u> |
| 15 | Das Nivedita | <u>Nivedita</u> |
| 16 | Sucheta Das Das | <u>Sucheta</u> |
| 17 | Anaya Dandekar | <u>Anaya</u> |
| 18 | Riya Divekar | <u>Riya</u> |
| 19 | Sheryl Abraham | <u>Sheryl</u> |
| 20 | Michelle Fernandez | <u>Michelle</u> |
| 21 | Madhavi Gravit | <u>Madhavi</u> |
| 22 | Isidore Vrushali | <u>Isidore</u> |
| 23 | Alma Cole | <u>Alma</u> |
| 24 | Avinash Gupta | <u>Avinash</u> |
| 25 | Aurang Gupta | <u>Aurang</u> |

B.K.L.Walawalkar Rural Medical College & Hospital, Sawarde

UK CME 2020

| | |
|-----------------------------------|---------|
| Lecture taken by - Signature - | Topic - |
| Date - | Time- |

Attendance

| SrNo | Name of the Students | Signature |
|------|-----------------------------|-----------|
| 26 | Munira Musaiin | |
| 27 | Iyer Vighanesh | |
| 28 | Suehal L. Jadhav | |
| 29 | Jadhav Raju | |
| 30 | Jamdar Siddhant | |
| 31 | Juraga Jethwa | |
| 32 | Shuchi Jha | |
| 33 | Monica Joshi | |
| 34 | Niranjan Joshi | |
| 35 | Aneesh R. Kadam | |
| 36 | Rohit Kadam | |
| 37 | Yashveth Kadam | |
| 38 | Swasali Kakade | |
| 39 | Pragana S. Kale | |
| 40 | Megha Prakash Kandalgaonkar | |
| 41 | Prashant Karna | |
| 42 | Shweta Khandalkar | |
| 43 | Khann Azeem Waqar | |
| 44 | Khann Muzammil | |
| 45 | Nikita Vishnu Kolhe | |
| 46 | | |
| 47 | | |
| 48 | | |
| 49 | | |
| 50 | | |

Director

B.K.L.Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606

B.K.L.Walawalkar Rural Medical College & Hospital, Sawarde

UK collaboration

| | |
|-----------------------------------|---|
| Lecture taken by - Signature - | Topic - REGIONAL Anesthesia workshop. |
| Date - 26.1.2020 | Time- |

Attendance

| SrNo | Name of the Students | Signature |
|------|-------------------------|-----------|
| 1 | Ishani. U. Abhyankar | |
| 2 | Sucipulta S Ambade | |
| 3 | Anand Arjundasani | |
| 4 | Bhatkar. Neel. Shrisam | |
| 5 | Divya P. Bhatkar | |
| 6 | Pratiksha Boekar | |
| 7 | Yashodhar Brahme | |
| 8 | Chinmay Bureji | |
| 9 | Ahmed Chafare | |
| 10 | Rambhishana Chavhelhari | |
| 11 | Ila Chavhelhari | |
| 12 | Karna Dalwai | |
| 13 | Darade Arjun | |
| 14 | Shubham Darekar | |
| 15 | Nivedita Das. | |
| 16 | Sacheta Das Das | |
| 17 | Anuja Daundkar | |
| 18 | Riya Divekar | |
| 19 | Sheryl Abraham | |
| 20 | Michelle Fernandes | |
| 21 | Litadhar Govit. | |
| 22 | Grodavale var | |
| 23 | Ahmed Gole | |
| 24 | Avinash Gupta | |
| 25 | Anurag Gupta | |

Director
B.K.L.Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606

Organ Donation

Attendance sheet

Date: 29/1/2020

1. Aaliyah Chanda
2. Dnyana Nanduskar
3. Bhawini Dhole
4. Fatima Sayyed
5. Ankita Dhile
6. Aarushi Agavekar
7. Smarnika Walruskar
8. Neha Beniwal
9. Veclanti Sapkal
10. Vaishnavi Kemdi
11. Vaishnavi Thetange
12. Shukti Sharma
13. Aakanksha Shirsath

Bchanda

FD

FD

Ajilu

FD

Retak

FD

Kemdi

Thetange

Sharma

Shirsath

- | | |
|--------------------------|-------------------|
| 14. Mansr. Nagvekar | <u>M.</u> |
| 15. Jyotsna Vetcha | <u>V. Jyotsna</u> |
| 16. Shradha Shelke | <u>Shelke</u> |
| 17. Sanidhi Bhavar | <u>Bhavar</u> |
| 18. Prerna Murukate | <u>Prerna</u> |
| 19. Vaishnavi Ghadage | <u>Ghadage</u> |
| 20. Vaidchi Deshpande | <u>Deshpande</u> |
| 21. Janhavi P. Patil | <u>Patil</u> |
| 22. Ashlesha S. Powale | <u>Ashlesha</u> |
| 23. Bhakti Kumbhar | <u>B. Kumbhar</u> |
| 24. Geetanjali Kapse | <u>Kapse</u> |
| 25. Maitreyee M. Gaikwad | <u>Maitreyee</u> |
| 25. Sakshi S. Pote | <u>S. Pote</u> |



Director
B.K.L. Walsavaiya Rural Medical College,
Sawarde, Kasarwadi, Pin - 415605

ACADEMIC MARATHON 2020

BY BRITISH MEDICOS

CME

WORKSHOP

TRAINING

..... A True Exchange of Knowledge & Technology



26TH JAN – 1ST FEB 2020

B.K.L. Walawalkar Hospital & Rural Medical College organized Academic Marathon which included CME, innovative work-shops and lectures by renowned personalities, transforming the campus into a place buzzing with flurry of activities.

Editorial:

By Dr. Suvarna N. Patil, Medical Director

It is a pleasurable moment for all of us that team UK and team Walawalkar together has offered their best services to rural people during last week. This partnership is going to go a long way. Enthusiastic and generous team from UK is always been a source of inspiration to all of us and we always look forward to your visit every year.

Walawalkar hospital is not just the hospital but it is an epicentre of social change and it has been observed also by our British friends who are visiting us for last 15 years. The Trust is focusing on the following objectives: Health for all, Education for all, and Empowerment for all.

With this background, as we did last year during UK team visit, were-focused on training and education to empower our rural youth.

To fulfil this objective trust also has collaborations with Knappschaftskliniken Sulzbach Germany, Christopher Lang who conducted hands on training and laser demo for Indian uro-surgeons last month. Endotrainers were purchased from Germany.

In November 2019, a team of 20 doctors and engineers from Leeds arranged a workshop on biomedical innovations during a surgical conference. Dr. Prashant Zha an intensivist and head of biomedical wing, ICMR, Delhi took motivational sessions for students and staff in this conference.

With the establishment of B.K.L. Walawalkar Rural Medical College, we established a research wing named as centre for adolescent health and nutrition and have ongoing projects in collaboration with Paediatric. Epidemiologist Dr. Caroline Fall, MRCUK, Southampton University. Dr David Warrel Emeritus Prof in Oxford is guiding us in the management of snake bite.

Doctors from Newcastle, UK have noticed this state of art care and honest vision in health by the hospital for last 24 years. They are also impressed by the infrastructure, cleanliness and expertise available in such a rural area. We are Inspired by this team from Newcastle which is rendering their special services

at Walawalkar hospital for the past 15 year. This was their 16th visit to the hospital.

This year we missed Dr. Lance Cope, Sis. Shelley Quantrill, as they are pioneers in starting and keeping this bond going between UK team and Walawalkar Hospital for last many years along with Dr. Deshpande.

This year, we experienced an academic marathon with lots of workshops and hands on treats for medicos.

We started with multidisciplinary CMEs for general practitioners. They said that it was useful for their day to day practice. Amongst all good speakers, the MRI workshop by Dr. Cooper was very resourceful. The feedback was that he is an excellent speaker with command on anatomy.

Regional anaesthesia workshop- participants will attend it next year too. It was an excellent demo for better understanding of anatomy. **Basic Surgical Skill workshop** was a treat for our medical students. At the end of the session the students really felt to be a surgeon and changed their opinion towards surgical skill. Thanks for keeping it practical than theoretical. Enjoyed and learned a lot. Very much impressed by patience of professors. It was very informative and this practical approach towards surgery was lacking over whole regular MBBS course. We as students are scared of tying knots but this course has developed confidence and tilted my mind towards being surgeon. **Anaesthesia workshop** was real practical ABCDE approach. Interactive sessions are praised than lecturing. Anaesthesia is called as backstage artist but this time magical touch of anaesthetist has relived pain of patients who were in agony of pain.

Dr. Niranjana Khambete, Biomedical Engineer from Pune with John Wall and Dr. Neha Deshpande arranged a **biomedical workshop** for budding biomed students. We plan to establish a biomed cell which will be ready when you visit next year.

We are thankful to various eminent personalities for associating with us throughout this Academic Marathon, Dr. Sarang Puranik, Anaesthesia and

Pain physician UK, Dr. Vinayak Desurkar Consultant Anaesthetist, Deenanath Mangeshkar Hospital Pune, Dr. Amit Dikshit Consultant Regional anaesthetist (AORA course co-ordinator) Ruby hall hospital Pune, Dr. Kharat, Radiologist, Kolhapur. Mrs. Aarti Gokhale, Zonal transplant co-ordination centre, Pune. Plastic surgeon team of Dr. Chinmay Joshi and Dr. Mangesh Pawar, Nair hospital, Dr. Shivprasad Date, Hinduja Hospital.

We are grateful to Dr. Sanjay Deshpande and his team for the initiation of this medical mission at Dervan and their active voluntary participation in this task and making it a great success this year. This successful camp motivates us to plan a similar theme of Academic marathon next year as well.

Thank you

Welcome!!!

Doctors from UK were welcomed, felicitated in the 'Academic Marathon 2020', a journey of consecutive 16 years of Service to poor people of this region that reflect their desire to recognize and showcase excellence in the healthcare.

The team of British medicos consisted of mix of categories spanning healthcare quality, medical education, technological innovation and research, and clinical excellence.

The welcome ceremony was attended by top healthcare dignitaries who consisted of eminent thought leaders, senior experienced doctors, and industry veterans from various healthcare organizations.



BRITISH TEAM 2020

Department of General Surgery:

1. Dr. Shlok Balupuri, General Surgeon, Sunderland Royal Hospital
2. Mr. Derek Johnson, Operating Department Practitioner
3. Mrs. Eleanor Freeman, Senior Nursing staff
4. Mr. Iain Thompson, Senior Operating Nursing staff
5. Mr. Iain Inglis, Operating Department Practitioner
6. Mrs. Clare Fletcher, Specialist Nurse for Organ Donation
7. Ms. Elena Hidalgo Dominquez, Theatre Staff

Department of Urology:

1. Dr. Pravin Menezes, Consultant, Urological Surgeon, St. Peter Hospital
2. Dr. Madhavi Natarajan, Urologist

Department of Anaesthesia:

1. Dr. Sanjay Deshpande, Consultant Anaesthetist, South Tyneside and Sunderland NHS FT
2. Dr. Peter Taysum, A+E Specialist Doctor, Durham University Hospital.
3. Ms. Madeleine Isabel Storey, Anaesthetic Registrar
4. Dr. Vinayak Desurkar, Consultant Anaesthetist
5. Dr. Bhavani Lekhak, Consultant Anaesthetist
6. Dr. Sarang Puranik, Consultant Anaesthetist.

Department of Orthopaedics:

1. Dr. Johnathan Loughead, Consultant Orthopaedic Surgeon
2. Mrs. Maria Pinho, Senior Theatre Sister

Biomedical Engineer:

1. Mr. John Wall, Senior Biomedical Engineer

Interventional Radiology:

2. Dr. Richard Cooper, Consultant Radiologist
3. Ms. Jayne Richardson, Senior Radiographer

CMEs



Workshops



Training



1. CME for General Practitioners

B.K.L. Walawalkar Rural Medical College is accredited CME provider to all medical professionals in Konkan region, it provides educational activities and ensure continuous quality improvement in medical education in rural area.

This January 26, 2020, we organized '*Multidisciplinary CME*' at B.K.L. Walawalkar Rural Medical College.

Topic Included: Advances in Gen. Surgery & Urosurgery, Robotic Colorectal Surgery, Management of common Surgeries and orthopedics problems, Human factors in Medicine.

Guest Speakers – Dr. Johnathan Loughead, Ortho Surgeon, Dr. Shlok Balupuri, General Surgeon, Dr. Sanjay Deshpande, Anaesthetist, Dr. Sanjiv Patankar, General Surgeon



2. Anaesthesia Workshop:

Department of Anaesthesia, Critical Care & Pain management department conducted workshop on '*Regional Anaesthesia made easy*' (CME & Ultrasound guided workshop)

On 26th January 2020, the week started with Regional anaesthesia workshop for which we had a fortune to learn from the expert faculty from UK and Pune which consisted of Dr. Sarang Puranik, Anaesthesia and Pain physician UK, Dr. Vinayak Desurkar Consultant anaesthetist, Deenanath Mangeshkar Hospital Pune, Dr. Amit Dikshit Consultant Anaesthetist (AORA course co-ordinator) Ruby hall hospital, Pune, Dr. Kashinath Jadhav, Consultant Anaesthetist B.K.L.W Hospital Dervan.

The course included Upper limb blocks, Lower limb blocks, truncal blocks and new interfascial blocks such as PECS 1 & 2, Serratus anterior plane block, this knowledge is in our armamentarium thereby Ultrasound guided regional anaesthesia is useful and made easy for us.





3. Acute Illness Management:



On occasion of UK camp from 26th January 2020 till 31st January 2020, the anaesthetic department organized various academic programs.

From 27th January 2020 till 31st January 2020 our anaesthesia and UK team of Dr Sanjay Deshpande, Dr Peter Taysum, Dr Madeline Storey, Derek Johnson, Iain Inglis, Alisa Dunphy and Clare Fletcher conducted a fun and interactive educational workshop "Acute Illness Management" which enlightened nearly 150 budding students of various specialities such as MBBS, Nursing, Paramedical and Operating room technicians. Peter led the team extremely well. All candidates thoroughly enjoyed the course and learnt Basic Life Support on manikins. The feedback received for the course was "Cool way to teach" and "best day of my medical life so far".



4. Musculo-Skeletal MRI & USG - CME & Workshop

The Workshop was held on January 27, 2020 on USG MSK for a comprehensive review and update of the practical aspects of 'Musculoskeletal MRI'. The well known experts led by Dr. Richard Cooper, Consulting Radiologist, UK, disseminated current and future trends in Musculoskeletal MRI & USG.

Dr. Richard Cooper has previously been the Programme Director for the Newcastle Training Scheme, and the Head of the Northern School of Radiology. He has trained many registrars in Radiology in MSK MRI, ultrasound, as well as sonographers, podiatrists, physiotherapists. Mrs Jayne Richardson, Radiographer was instrumental in this workshop.



5. Basic Skill Course:

The objectives of this course were to instill core surgical skills of tying knots securely and proper suturing. This course was aimed at participation by medical students. The original 2 days' course needed to be extended to 4 days from 27th January to 30th January 2020 due to overwhelming demand!

When Dr. Sanjiv Patankar from the Dept. of Surgery at BKLWR Medical College designed this course, one of the major goals was to enable a maximum number of medical students enrolled at our institute to benefit from a structured curriculum and get plenty of hands-on practice.



Our expectations were more than fulfilled as 20% of the enrolled medical students (all five years combined) successfully completed this training.

Dr. Shlok Balupuri from the UK team provided very engaging and sage advice to the participants. Dr. Patankar and Dr. Balupuri, two very experienced faculty members, patiently demonstrated the techniques and made sure that each student succeeded in learning these tasks.

A very well-equipped Skills Lab of international standards has been built at BKL Walawalkar Hospital and Research centre at Derwan and is effectively organizing various training programs associated with the international universities and colleges in future. Dr. Patankar conceived an idea to construct a "Suturing Practice Board" using locally sourced materials and one that would be affordable and allow extensive practice sessions. This suture practice board was introduced at this workshop and it was a notable success!



6. Emergency Management/ Basic Life Support:



In collaboration with UK medical team and BKL Walawalkar Hospital, Sawarde a two-day workshop was organized at SVJCT Samarth Nursing College. Various sections were conducted on clinical practice for nursing students. The UK Team members were Mrs. Eleanor Freeman, Nursing Staff, Mrs. Ailsa Dunphy, Sister, Mrs. Maria Pinho, Senior Sister and Mr. John Wall, Senior Biomedical Engineer.

The core topic of the workshop was emergency management and advanced procedure in critical care.

The UK team during their lecture provided education regarding effective communication skills and its importance for nurses while interacting with the patients



A demonstration of Basic Life support was conducted in Skill lab for Basic B.Sc. students. The students were also involved in mock demonstrations of aseptic techniques, hand washing, gowning and gloving techniques.



The two-day workshop helped the students as well as the faculty of nursing to update their knowledge regarding the current technique of nursing practice. Total 100 students from various nursing courses i.e. ANM, GNM, P.B.B.Sc. and B.Sc. Nursing and students of various Paramedical Courses and Teaching faculty participated in this workshop.



7. Biomedical Technology Workshop:

Biomedical workshop entitled "Role of Clinical Engineers in Quality Assurance & Safety of Medical Equipment" was organized on 27th January 2020 By Mr. John Wall, Biomedical Engineer, NHS, United Kingdom and Mr. Niranjana Khambete, Biomedical Engineer, Deenanath Mangeshkar Hospital, Pune.

The aim of this workshop was to teach the correct basic techniques to handle equipment and its safety. Also the techniques to improve quality measures were discussed with students of paramedical course- Biomedical instrumentation.



The programme was coordinated by NehaDeshpande, Ph.D., Associate Professor from Pune.



Social Awareness Programmes:

Baby Shower Ceremony:

The common custom in India is to bless the expecting mother and pray for the well being of the mother and the baby. It is the to-be-mom who is showered with blessings and bounty-food, clothes, gifts, -a sort of a 'mother-to-be shower'. Also, traditionally it is attended by the women-folk.

B.K.L.Walawalkar Hospital's community department has a strong commitment to help and uplift the under privileged sections of society. The socio-economic differences in society does not make possible for poor people to celebrate such type of activities. We arrange common celebration of all expecting mother and also take this as an opportunity to educate women about managing symptoms, diet, exercise, and general care tips that will keep them and their baby healthy.



Common Birthday Programme (6 Yrs. Age Children)



Community Visits:

Community Visit to village Burambad: 'REACH'

"Rural Empowerment and Community Health (REACH)" is established for the welfare of the community without the distinction of caste, creed, religion, race or other limiting considerations, for the betterment of the poor by rendering holistic services in order to make people aware of their rights and duties as well as to develop leadership, self employment.



India Republic Day Celebration:

71st Republic Day celebrated with enthusiasm in presence of eminent guest Shri. Ashok Chougule, Managing Director, Chougule and Company Pvt. Ltd. Various cultural programmes were organised on this auspicious occasion.



Felicitation Programme:





Shri. Vikas Walawalkar
Managing Trustee,
Shri Vithalrao Joshi Charities Trust,
'Suyash', Near Amar Hind Mandal,
Gokhale Road (North), Dadar (West),
Mumbai – 4000 028
Phone: (022) 24302517, 24300232

Remarks by British Medicos: 2020

1-Mr. Derek Johnson:



To come back is a privilege. This is not a Job.

The fact that everyone wants to learn, they are grasping things and they feel that they are growing and that's the exciting thing. I don't think people need to be taught technically, but they have a thirst to learn something and if we provide a little bit of something and then we are done.

There is ingenuity, fabulous facility and the prospectus growth in Operation Theatres here. We react to growth but here the Trust thinks what possibly will be needed in future and it works to build it now. All the work here is pre-empted.

The nursing and medical students here are extremely intelligent have broad breadth of knowledge.

We teach them and we elicit the knowledge and discuss with them at the end and we bring them out of the shell and we interact.

We teaching here will help them learn more, work outside India and bring the knowledge back in their work here.

2 - Ms. Ailsa Dunphy, ITU sister:



My family friend Dr Peter Ayliffe had promised me that once I finish my nursing education, he would take me to the medical missions. I was supposed to go to Philippines but I somehow came to India, to Dervan, some 8 or 9 years ago. But When I came here I met everyone and I just fell in love with the place and staff. This is my 6th Medical mission here. I have been in love with it and I am coming back ever since.

India is a beautiful country. It feels like home and I am a member of the family here at Walawalkar.

Every mission I come back, I do see a tremendous development, growth here. Such a progression here.

3 -Ms. Clare Fletcher: Specialist nurse in organ donation (picture)

This is my first visit here and I would love coming back here again if invited.

I am really impressed by the dedication of the staff and what I have been told how much the hospital has been advanced and progressed. There is no inconvenience we faced here. The accommodation here is lovely, The nursing students here and the staff here is very eager to learn.

4 -Dr. Pavan Rahamgdale: (picture)

The work getting done here is really great. India is such a huge country and the need of medical care is very high. We as Doctors really want to help people but the difficulty is we can't reach them.

But here we get to cover large scale of society. Here we get to meet many needy patients. I wouldn't have done this kind of work if this hospital wasn't there.

Here it is a good combination of motivation, spirituality, friendly nature, good work, dedication, going out of way or capacity to work. Because of all this, our level of energy increases and we tend to work more. This is a very rare case; you don't get to see such atmosphere anywhere else.

This is not just a hospital, but it is way of reaching needy people. How a nice thought or Idea with proper guidance or dedication can be reached to people. When I come here, I gather a lot of energy and happiness and I stock it within myself. I carry it with me and I work back in my country. When I feel this stock of energy is getting low, I come here again to refill the stock.

It gives a lot of Inner happiness after working here. The work here will grow slowly and will cover many such needy persons.

5 -Dr. Sanjay Deshpande:



This year the focus of the camp was mostly on education.

We provided many training courses for medical, nursing students, Theatre technicians, junior doctors and this time the focus was on resuscitation. Identifying critically ill patients, recognising them early and providing timely intervention. We covered basic and intermediate resuscitation skills.

It was gratifying to see all the participants really enjoyed the program and learned a lot.

I also gave talk on human factors which was mainly pitched for medical students, General practitioners, Doctors who work in hospital. Importance of human factors is that it emphasizes on non-technical skills which are equally important along with the technical skills. It compliments in the management of the patient care.

We also provided training on "7 habits of highly effective people". I did teach about management of ICU patients, I did ward rounds, we provided some education to theatre technicians on regional anaesthesia. We donated some books, educational materials, some equipment.

We also get learnings from the local staff here and from the volunteers on life skills. It is always a pleasure to work here in this hospital.

We also provided education to nursing staff, OT technicians, physiotherapy students on aspects of basic, advance life skills, identifying critical patients. And they all enjoyed it a lot.

6 -Dr. Jonathan Loughead:



I am very pleased to come here and invited by the team. This is my first trip to the country and this place in Dervan.

I am surprised to see huge building, developed services you have. The medical school is really good.

It has big dissecting rooms, big teaching area and it's a beautiful facility.

I see a lot of development work going on here. Also I hear from my friends who regularly visit here is how this place has grown and done lots of good work.

They are pioneering in endoscopic spinal surgery, minimal invasive knee surgery.

It is remarkable to see it.

I have been to the sports complex, the school and the temple we visited. And I like all the places very much. The Indian food served here was too good and delicious.

7 -Dr.Madhavi Natarajan:



It is my first visit here. It is really a brilliant place for us to learn and share our experiences from working in UK. The medicine is the same, but the execution of the medical practices or the way the theatres are different and it is very interesting to see that.

I understand that this hospital was started at a very small scale, treating the local people but I can see that it has grown tremendously over the past years.

The work done here is amazing and they have started medical school and a highschool for kids here.

This hospital is providing access to first class medical treatment to the local people who otherwise wouldn't have access to. Also the facilities here are kept in good condition and maintained well.

The equipment here is in great condition.

I am very grateful to work here and liked this opportunity.

The visit to the temple/ Ashram was really nice. It was really nice to visit the Guru and hear from him.

8 -Dr.Sarang Puranik:



First trip to Dervan.

It is really fascinated to see all the love expressed by all and the facilities here. I got a really warm welcome in Mumbai,

We were busy teaching medical students, anaesthetists. We taught them regional anaesthesia, Ultrasound usage. Hope that they have gained knowledge from the discussions with us.

This experience was further enhanced by our visit to the temple and meet with Shri. Kaka Maharaj.

This has given me a really fulfilling experience in the whole stay.

I have made so many friends. This was a truly fascinating experience and I feel very proud to be part of this community and hope to continue offering my services to this community.
And, I wish all the best to the organisation.

9 - Mr. Shlok Balupuri



This is my second visit: came 3 years back.

I can see a tremendous growth done here, Last visit I did quite a bit of operations here but now the focus has shifted to education side or trainings.

Though this hospital is called rural, but it has all the required facilities which any standard hospital will have.

I think this doesn't need any surgical input as hands on but there is this education component to bring in.

This basic surgical skill courses which we hosted is run similarly as we hosted in UK.

Here Dr. Sanjeev had made his own suture platform which was appreciated by the attendees.

I was surprised by the intensity with how these young boys and girls participated the course. Actually this was their holiday period and the course was over subscribed. Lot of people came in their spare time and wanted to learn. Though the day was finished but the participants were still keen to learn and that was the thing really impressed me.

10 - Dr Bhavani Lekhak



This is my first visit here. I knew about this community and their work since last 10 or more years through Dr Sanjay Deshpande.

Overall it is a good experience here. It is really a nice setup here. You can't compare this setup with the western world. I spent more time in Operating Theatres and provided teaching to theatre nurses.

I was quite pleased with the setup here. All the lovely people here. Food is really good.

I visited the temple Yesterday and met Shri. Kaka Maharaj. I hope to come again

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



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Website : www.walawalkarmedicalcollege.com

NOTICE

To,
Head of the departments,
Clinical, para-clinical and Pre-clinical,
B.K.L.Walawalkar Rural Medical College,

20.01.2019

Subject-British Team visit for training and credentialing

Dear All,

I am pleased to inform all of you that "British Team from Newcastle" is going to visit our institution from

27 JAN 2019- 2 FEB.2019.

Please inform concerned faculty to schedule program for medical students as mentioned in the program.

List of faculty from UK and program schedule is attached.

Thanks


Dr. Suvarna Patil
Medical Director,
B.K.L.Walawalkar Rural Medical College.

Cc: Principal, Nursing College Principal / BKLW RMC

Director
B.K.L.Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606

Shri Vitthalrao Joshi Charities Trust's

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



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Summary of activities during British doctors visit

27.1.2019 to 2.2.2019

| Date | Speakers, Trainers | BKLWRMC faculty /students | venue | topic |
|-------------------------|---|---|---|--|
| 27.1.2019 | Dr.Nur Lubis (UK) and Dr.Sanjay Deshpande (UK) | BKLWRMC faculty=78 | Medical College, Lecture Theater | CME – Anesthesia Title- Airway Management (MMC accredited) |
| 27.1.2019 to 28.1. 2019 | Dr.Richard Cooper(Ex head of Northern School of Radiology,UK Dr.Lance Cope(South Tyneside Hospital,UK) Dr.Amit Kharat (and Dr Sanjay Deasi(Consultant Radiologist,PunE) | BKLWRMC faculty=93 | Training center(Day 1) Skill lab (Day 2) | CME – Recent update in Radiology Radiology Musculoskeletal(MMC accredited) |
| 28.1.2019 | Dr.Sanjiv Patnagar(Surgeon, Alumni, Royal College of Edinburgh) Eleanor Freeman-Senior Nurse | No .of medical students No. of faculty 25 | Skill lab(SURGERY) | Basic Surgical Skill workshop 1 for medical students |
| 31.1.2019 | Dr.Rebecca | No of BPMT students=12 | Skill lab | Demonstration of Basic Life Support. |
| 1.2.2019 | Dr.Sanjiv Patnagar(Surgeon, Alumni, Royal College of Edinburgh) Eleanor Freeman-Senior Nurse | No. of medical students No. of faculty 35 | Skill lab(SURGERY) | Basic Surgical Skill workshop 2 for medical students |

Summary of community outreach visits

| Date | Program | Participants BKLWRMC | Health education | UK delegates for all programs |
|-----------|--|-------------------------|--|---|
| 28.1.2019 | Baby shower ceremony at RHTC | No. of staff from PSM-2 | CULTURAL program followed by antenatal checkup of pregnant women | Kath Yates, Shelley Quantrill, Rebecca Parker |
| 30.1.2019 | School camp Fanasewadi, Arawali | No. of staff PSM 4 | Adolescent girls health checkup | Shalley Quantrill Lubis Nurhayati |
| 31.1.2019 | Birthday program for malnourished children | PSM and ped faculty-1 | Health checkup at RHTC | Kath Yates Rebecca Parker Freeman Elaenor |
| 1.2.2019 | Kokare school visit | Ped 1/Dentist-1 | Health check up | Rebecca Parker Cope Lance |
| 1.2.2019 | Self help group | 1 | Awareness session | |
| 2.2.2019 | ANC clinic Kharawate PHC | GYN 1 Nurse 1 | ANC checkup | - |
| Total | | 11 | | |

No. of faculty participated in British Surgery Week

| | No of operations | BKLWRMC Faculty participated | BKLWRMC Anesthesia faculty | Uk faculty |
|----------------------------|---|--|---|---|
| Surgery ,Uro, Plastic, Ped | General surgery 55 Plastic 6 Uro-30 | Dr.Abhay Desai, Dr Neha Sawant. Dr Ramprasad Rajebhoslae, Dr Ajit Nehate, Dr Abhishek Patil Dr.Manish Agrawal, Dr Dipak Thorat, Dr Rajnish Jaiswal. Dr Sanish Shrungarpure, Dr Kasim Attar, Dr Srinivas Biradar Total=12 | Dr.Vaishali Bapat Dr Asmita Karnalkar Dr Rajesh Pawar Dr Dandekar Dr Shailendra Patil Dr Kashinath Jadhav Total =5 | Total 22 of various specialty Dr Menzes Dr Stuart McCracken Dr Vish Dr SANJAY Deshpande |
| | | | | - |
| Ortho | 26 | Dr Sunil Nadkarni Dr. Pawan Kohali, | | - |

| | | | | |
|--------------|----|--|--|---|
| | | Dr Summit Sonawane, Dr Ankush Nawale, Dr Devashish Rawal, Dr Pankaj Sharma total=6 | | |
| Gyn | 8 | Dr Vaishali Gaikwad Dr Shashikant Patil Dr Jagruti Kirdant , Dr Sagar Magar, Dr Anagha Modak total=5 | | - |
| Cataract | 92 | Dr Shankar Ranvir, Dr Vikrant Narawade, Dr Payal Pandit Total=3 | | - |
| TOTAL | | 31 | | - |



Director
B.K.L.Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606



Dr. Sanjay Deshpande
Project Lead, SVJC Trust UK
Consultant in Anaesthesia and Intensive Care Medicine
South Tyneside and Sunderland NHS Foundation Trust
UK

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Project Lead, SVJC Trust UK
Consultant in Anaesthesia and Intensive Care Medicine
South Tyneside and Sunderland NHS Foundation Trust
UK

10 Jan 2019

Dr. Suvarna Patil
Medical Director
BKL Walawalkar Rural Medical College and Hospital
Dervan, India

Visit of UK highly qualified doctors and nurses to provide educational activities to Medical Students, Medical and Nursing staff , Faculty of BKL Walawalkar Rural Medical College and Samartha Nursing School , Dervan

Dear Dr. Patil,

Greetings from Newcastle, UK.

I write to confirm that I am bringing a team of doctors and nurses to BKL Walawalkar Medical College and Hospital, Dervan, between the dates 26/1/2018 till 2/2/2019 to provide educational activities, which will include lectures, workshops and simulation training to medical students, doctors and nurses on common medical topics like Basic and Intermediate Life Support, Trauma Life Support, Surgical and Medical Emergencies, Common Nursing topics (Infection control, sterilisation, check lists, etc) . This year I have a team of 20 dedicated staff from the UK and 4 staff from Mumbai are looking forward to share their knowledge and skills with the medical and nursing students, and the faculty of the BKL Walawalkar Rural Medical School. I understand this is exciting times for you since the grant of permission of opening a medical school in 2015.

Since our visits since 2006, we have noticed a remarkable change in the knowledge, skills and working conditions offered at the Walawalkar Hospital which has been a huge motivation for the UK team. We also noticed in our last visit that the management and medical staff have embraced high quality working ethics, which will benefit all the staff and thus contributing to enhanced patient care.

The names of the staff who accompanied me to Dervan are:

- 1) Mr McCracken Stuart, Consultant Urologist, Sunderland NHS FT, UK
- 2) Eleanor Freeman, Operating Nurse Practitioner, QE Hospital
- 3) Denise Sixsmith, Radiographer, South Tyneside DGH, UK
- 4) Mr Ian Carr, Support Worker, Northern Region, UK
- 5) Kath Yates, S/N Ophthalmology
- 6) Fitrakis, Diane, ITU S/N, South Tyneside NHS FT
- 7) Ms. Shelley Quantrill, Sister, South Tyneside NHS FT
- 8) Mr John Wall, Biomedical Engineer
- 9) Mr. Derek Johnson, ODP, South Tyneside NHS FT, UK
- 10) Dr. Kirran Ahmed, Anaesthetic Trainee, Yorkshire, UK
- 11) Mr. Iain Inglis, ODP, Northumbria Trust, UK
- 12) Dr. Lubis Nurhayati , Consultant Anaesthetist , London Hospitals, UK
- 13) Mrs Jayne Richardson, Radiographer, South Tyneside NHS FT
- 14) Dr Richard Cooper, Consultant Radiologist, South Tyneside NHS FT, UK
- 15) Iain Thompson, Senior Operating Department Practitioner, RVI , Newcastle
- 16) Dr. Rebecca Parker, ST5 Anaesthetic Trainee, James Cook University Hospital, UK
- 17) Ms. Yelnoorkar Kshitija , Computer Analyst, Tyne and Wear , UK.
- 18) Dr. Menezes Pravin, Consultant Urologist, Kingston Hospital, UK
- 19) Dr Peter Taysum, SAS Anaesthetics, Durham University Hospital, Durham
- 20) Dr. Caitlin Lambert, FT Year 3, QE Hospital, UK
- 21) Mr. Bradley Wall, Support Worker, South Tyneside NHS FT

Medical Student and Trainees from UK (Plan to spend longer periods in Dervan)

- 1) Joshua Beck , Year 4 Student, Newcastle Medical School , UK (4 weeks elective)
- 2) Dr Anna Wilkinson CT2 Anaesthetic Trainee, Scotland UK, (10 weeks)
- 3) Dr Abigail Harper, CT2 Anaesthetic Trainee , Bristol Deanery Trainee (10 weeks)
- 4) Miss Rachel Howell, S/N in Paediatrics , Bristol, UK (10 weeks)

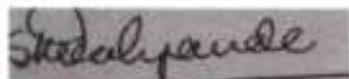
Kindly arrange their accommodation and boarding facilities during our stay.

Dr. Peter Taysum
SAS Anaesthetics, Durham University Hospital, Durham
Dr. Menezes Pravin, Kingston Hospital, UK
Dr. Kirran Ahmed, Anaesthetic Trainee, Yorkshire, UK
Dr. Rebecca Parker, ST5 Anaesthetic Trainee, James Cook University Hospital, UK
Dr. Lubis Nurhayati , Consultant Anaesthetist , London Hospitals, UK
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Denise Sixsmith, Radiographer, South Tyneside DGH, UK
Kath Yates, S/N Ophthalmology
Fitrakis, Diane, ITU S/N, South Tyneside NHS FT
Shelley Quantrill, Sister, South Tyneside NHS FT
John Wall, Biomedical Engineer
Derek Johnson, ODP, South Tyneside NHS FT, UK
Kirran Ahmed, Anaesthetic Trainee, Yorkshire, UK
Iain Thompson, Senior Operating Department Practitioner, RVI , Newcastle
Rebecca Parker, ST5 Anaesthetic Trainee, James Cook University Hospital, UK
Yelnoorkar Kshitija , Computer Analyst, Tyne and Wear , UK.
Menezes Pravin, Consultant Urologist, Kingston Hospital, UK
Peter Taysum, SAS Anaesthetics, Durham University Hospital, Durham
Caitlin Lambert, FT Year 3, QE Hospital, UK
Bradley Wall, Support Worker, South Tyneside NHS FT

I am enclosing a programme schedule for your perusal.

Thanking you,

Yours sincerely,

A rectangular box containing a handwritten signature in black ink. The signature appears to be 'Sanjay Deshpande' written in a cursive style.

Dr Sanjay Deshpande

FRCA, FFICM (UK)

Sanjay.Deshpande@nhs.net

SCHEDULE FOR UK CAMP

| DATE | TIME | NAME OF THE EVENT | VENUE |
|-------------------------|-----------------------------|---|--|
| 27/01/2019 Sunday | 9.00am to 9.20am | Welcome ceremony | Medical college lecture theatre -1 |
| | 9.30am to 1.00pm | CME – Anaesthesia Airway Mangement | Medical college lecture theatre -1 |
| | 9.30am onwards | CME –Radiology Musculoskeletal | Training center next to canteen |
| 28/01/2019 Monday | 9.00am onwards | CME –Radiology Workshop Musculoskeletal | Hospital IPD building 3 rd floor lab |
| | 9.00am onwards | Basic Surgical skill workshop-1 | Hospital IPD building 3 rd floor skill lab |
| | 11.30am | Baby Shower program | Rural Health Training Centre |
| 29/01/2019 Tuesday | 9.00am onwards | Basic Surgical skill workshop-1 | Hospital IPD building 3 rd floor skill lab |
| | 11.30am | Baby Shower program | Multipurpose Hall near sharayu |
| | 3.00 to 5.00pm | Nursing Workshop (Principal SNS) Shelly Elanor | Nursing school |
| 30/01/2019 Wednesday | 9.15 am | Aanganwadi visit (Saket shooting) | Fansewadi Arawali village |
| | 3.00 to 5.00pm | Nursing Workshop(Principal SNS) Shelly Elanor | Nursing school |
| | 5.00 to 5.30pm | WalawalkarSukanya project residential camp | Multipurpose Hall near sharayu |
| 31/01/2019 Thursday | 11.30 am | Six months birthday | Multipurpose Hall near sharayu |
| | 9am to 4 pm(1 - 2 break) | Resuscitation Day (Dr Rebecca)Residents from Med/Ped/derma/gyn/surg/Ortho | Hospital IPD building 3 rd floor skill lab |
| 1/02/2019 Friday | 9.00am onwards | Basic Surgical skill workshop -2 | Hospital IPD building 3 rd floor skill lab |
| | 9.15 am | Kokare high school | All projects |
| | 4.00pm | Reach | Visit to sawarde |
| 2/02/2019 Saturday | 9.00am onward | Basic Surgical skill workshop -2 | Hospital IPD building 3 rd floor skill lab |
| | 9.30am | Anti Natal clinic at village (saket shooting) | Kharavate VILLAGE PHC |
| | 6.00pm | Send off ceremony | Multipurpose Hall near sharayu |



Director

B.K.L.Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606

| | | | | | | | |
|----|---|-------|--------------------------|---------------|--|--|--|
| 1 | Batch B1 28/01/2020 8am to 1pm | 63601 | Ubharay Ahmad | 3rd (II) MBBS | | | |
| 2 | | 63602 | Bhagiya Mohit | 3rd (II) MBBS | | | |
| 3 | | 63603 | Shaikh Huzafa | 3rd (II) MBBS | | | |
| 4 | | 63604 | Vashista Vaishnavi | 3rd (II) MBBS | | | |
| 5 | | 63605 | Tandle Akshaya | 2nd (II) MBBS | | | |
| 6 | | 63606 | Joshi Khyati Hemant | 3rd (II) MBBS | | | |
| 7 | | 63607 | Ambure Purva Raju | 3th (II) MBBS | | | |
| 8 | | 63608 | satpute nidhi rajesh | 2nd (II) MBBS | | | |
| 9 | | 63609 | singh priyalakshmi singh | 2nd (II) MBBS | | | |
| 10 | | 63610 | Sirsat Advait | 2nd (II) MBBS | | | |
| 11 | | 63611 | Sakharpekar nupur rajan | 2nd (II) MBBS | | | |
| 12 | | 63612 | Vilayil Amrita | 2nd (II) MBBS | | | |
| 13 | | 63613 | Shetty Pavitra | 2nd (II) MBBS | | | |
| 14 | | 63614 | Pingulkar Sakshi | 2nd (II) MBBS | | | |
| 15 | | 63615 | Mehata naman | 2nd (II) MBBS | | | |
| 16 | | 63616 | Salunkhe Abhimanyu | 2nd (II) MBBS | | | |
| 17 | | 63617 | Rajmane Shubham Kallappa | 2nd (II) MBBS | | | |
| 18 | | 63618 | Singh Abhilash | 2nd (II) MBBS | | | |
| 19 | | 63619 | Warrier Ashawarya | 3rd (II) MBBS | | | |
| 20 | | 63620 | Lalwani Siddhi | 2nd (II) MBBS | | | |

| | | | | | | |
|---|-------|---------------------|---------------|--|--|--|
| Batch B2 28/01/2020 1pm to 6pm | 63621 | Maske Rutuja Vikas | 3rd (I) MBBS | | | |
| | 63622 | Sarkhalkar Charvi | 3rd (I) MBBS | | | |
| | 63623 | Tirodkar bhakti | | | | |
| | 63624 | Mulye Pooeva | 2nd (II) MBBS | | | |
| | 63625 | Gawali Prashma | 2nd (II) MBBS | | | |
| | 63626 | Torne chinmay Torne | 3rd (I) MBBS | | | |
| | 63627 | Singh Satyam | 3rd (I) MBBS | | | |
| | 63628 | Salunkhe Sarthak | 3rd (I) MBBS | | | |
| | 63629 | Sonurlekar Nandan | 2nd (II) MBBS | | | |
| | 63630 | Anand Simran | 2nd (II) MBBS | | | |
| | 63631 | Singh Mansi | 3rd (I) MBBS | | | |
| | 63632 | Kadam Aneesh | 3rd (I) MBBS | | | |
| | 63633 | Wagh Shefali | 3rd (I) MBBS | | | |
| | 63634 | Jadhav Rajan | 3rd (I) MBBS | | | |
| | 63635 | Parulekar Riddhi | 3rd (I) MBBS | | | |
| | 63636 | Manasi Salvi | 3rd (I) MBBS | | | |
| | 63637 | TirodkarAakash | 3rd (I) MBBS | | | |
| | 63638 | Yende Mrunal | 3rd (I) MBBS | | | |
| | 63639 | Gole Alhad | 3rd (I) MBBS | | | |
| | 63640 | Zanwar Akash | 3rd (I) MBBS | | | |

Shri Vitthalrao Joshi Charities Trust's
BRI WALAWALKAR RURAL MEDICAL COLLEGE, SAWARDE.
 27 Jan 2020 to 30 Jan 2020 (SS Workshop (MBBS Students)

| | | | | | | |
|---|-------|---------------------------|----------------|--|--|--|
| Batch B3 29/01/2020 8am to 1pm | 63641 | Subheddar Shravani | 3rd (I) MBBS | | | |
| | 63642 | Surangiwala Bushra | 3rd (I) MBBS | | | |
| | 63643 | Sonawane Priyanka | 3rd (II) MBBS | | | |
| | 63644 | Gandhi Ashay | 2nd (II) MBBS | | | |
| | 63645 | Bhosale Anushka Anand | 2nd (II) MBBS | | | |
| | 63646 | Raorane Anushka | 2nd (III) MBBS | | | |
| | 63647 | Deshpande Muunmayee | 2nd (II) MBBS | | | |
| | 63648 | Chinmay kelkar | 3rd (II) MBBS | | | |
| | 63649 | Kulkarni gauri | 3rd (I) MBBS | | | |
| | 63650 | Ludrike Eunie Sam | | | | |
| | 63651 | Chachad Anushka Rajan | 2nd (II) MBBS | | | |
| | 63652 | Das Nayanika Tapash | 2nd (II) MBBS | | | |
| | 63653 | Aurangabadkar Rucha Rahul | 3rd (II) MBBS | | | |
| | 63654 | Kulkarni Ankita Sunil | 3rd (II) MBBS | | | |
| | 63655 | Gupta Anurag | 3rd (I) MBBS | | | |
| | 63656 | Ghadi Vaibhavi Digambar | 3rd (II) MBBS | | | |
| | 63657 | Dhakan Shreyesh Mukesh | 3rd (II) MBBS | | | |
| | 63658 | Baraskar siddhesh | 3rd (II) MBBS | | | |
| | 63659 | Pankaj Mahadkar | 3rd (I) MBBS | | | |
| | 63660 | Garg Priya | 2nd (II) MBBS | | | |

Shri Vitthalrao Joshi Charities Trust's
BRL WALAWALKAR RURAL MEDICAL COLLEGE, SAWARDE.
 27 Jan 2020 to 30 Jan 2020: B55 Workshop (MBBS Students)

Batch
B4

29/01/2020
 1pm to 6pm

| | | | | | |
|-------|----------------------------------|---------------|--|--|--|
| 63661 | Deshpande atharv ram | 2nd (II) MBBS | | | |
| 63662 | Rane Devesh | 3rd (I) MBBS | | | |
| 63663 | Khadikar shweta | 3rd (I) MBBS | | | |
| 63664 | Ravindranath Wamika | 3rd (I) MBBS | | | |
| 63665 | Kakde Swarali | 3rd (I) MBBS | | | |
| 63666 | Trushana Mayekar | 3rd (I) MBBS | | | |
| 63667 | Mirajkar ajinkya | 3rd (I) MBBS | | | |
| 63668 | Pendharkar Nikhil | 3rd (I) MBBS | | | |
| 63669 | Piyush Singh | 3rd (I) MBBS | | | |
| 63670 | Rajput Kunal | 3rd (I) MBBS | | | |
| 63671 | Godawale Vrushali | 3rd (II) MBBS | | | |
| 63672 | Rambade Tanmayi | 3rd (I) MBBS | | | |
| 63673 | Joshi Monica | 3rd (I) MBBS | | | |
| 63674 | Bhatkar Divya | 3rd (I) MBBS | | | |
| 63675 | Shet Rahil | 3rd (I) MBBS | | | |
| 63676 | Chaitali Patil | 2nd (II) MBBS | | | |
| 63677 | Mehata Nidhi | 2nd (II) MBBS | | | |
| 63678 | SAMPAT JAYANI ATUL | 2nd (II) MBBS | | | |
| 63679 | MORE RUDRAABHISHEK VIJAYKUMAR | 2nd (II) MBBS | | | |
| 63680 | Manasi Chaudhari | 2nd (II) MBBS | | | |

| Sr. No. | Workshop Batch Date & Time | Rc.no | Name | QUALIFICATION | Opening Sign | Closing Sign |
|---------|--|-------|--------------------|---------------|--------------|--------------|
| 81 | Batch B5 30/01/2020 8am to 1pm | 63681 | Shruti Menon | 2nd (II) MBBS | | |
| 82 | | 63682 | Urvee Parekh | 2nd (II) MBBS | | |
| 83 | | 63683 | Avinash Mane | 2nd (II) MBBS | | |
| 84 | | 63684 | sayali Dnyanmote | 2nd (II) MBBS | | |
| 85 | | 63685 | Siddharth Mishra | 2nd (II) MBBS | | |
| 86 | | 63686 | Sheryl Elsa | 3rd (I) MBBS | | |
| 87 | | 63687 | Ishani Abhyankar | 3rd (I) MBBS | | |
| 88 | | 63688 | Yashodhan Brahme | 3rd (I) MBBS | | |
| 89 | | 63689 | Joshi Niranjana | 3rd (I) MBBS | | |
| 90 | | 63690 | Pankaj Nathe | 3rd (I) MBBS | | |
| 91 | | 63691 | Saloni Pthak | 3rd (I) MBBS | | |
| 92 | | 63692 | Michelle Farnandes | 3rd (I) MBBS | | |
| 93 | | 63693 | Rutuja Nemane | 2nd (II) MBBS | | |
| 94 | | 63694 | Shruti Hegde | 2nd (II) MBBS | | |
| 95 | | 63695 | Pracruti Iyer | 2nd (II) MBBS | | |
| 96 | | 63696 | Riya Kovil | 2nd (II) MBBS | | |
| 97 | | 63697 | Radhika Palany | 2nd (II) MBBS | | |
| 98 | | 63698 | Nishit Shah | 2nd (II) MBBS | | |
| 99 | | 63699 | Amulya Hande | 2nd (II) MBBS | | |
| 100 | | 63701 | Saqib Hingora | 2nd (II) MBBS | | |

| Sr. No. | Workshop Batch Date & Time | Rc.no | Name | QUALIFICATION | Opening Sign | Closing Sign |
|---------|----------------------------|-------|-------------------------|---------------|--------------|--------------|
| 101 | | 63702 | Ashwin Govil | 2nd (II) MBBS | | |
| 102 | | 63703 | Rutuja Nande | 2nd (II) MBBS | | |
| 103 | | 63704 | Sharadchandra Agnihotri | 2nd (II) MBBS | | |
| 104 | | 63705 | Avinash Gupta | 3rd (I) MBBS | | |
| 105 | | 63706 | Prashant Karn | 3rd (I) MBBS | | |

3rd year BPMT (EMS)



Demo of BLS

31.1.2019

- Aakansha Bole - Bole
- Pallavi Gajmal -
- Harshda Gandhi - Gandhi
- Shruti Indulkar - Indulkar
- Sakshi Jadhav - S.S. Jadhav
- Aishwarya Jawale - Jawale
- Divya Konapade - Konapade
- Rakshita Khonolkar - Khonolkar
- Snehil Kokare - S.B. Kokare
- Shrutika Mate - Mate
- Soniya Pawar - Pawar
- Priyanka Yelonde - Yelonde

Director

K.L. Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606



S. V. J. C. T's

B.K.L. Walawalkar Hospital

Diagnostic & Research Centre, Dervan
(ISO 9001: 2008 Certifide)

Dervan Newsletter 2019

Special Issue on: British Surgery Week



27th January – 1st February 2019

Dervan Newsletter 2019

Special Issue on: British Surgery Week

27th January – 1st February 2019



Editorial

Dr. Suvarna N. Patil,

Medical Director

Following a decade and half of relationship, the UK team is now like our own family settled abroad and every year come to visit us at Dervan. It is like a festive season for not just all of us but also for our patients.

Day by day this bond of relationship is getting stronger.

Both the teams come from varied social and cultural background. The challenges faced by us during treatment are very different to what they face in UK, but yet all of us try to fill the gaps and find a balance.

Despite of lot of social and economical challenges, SVJC Trust has always offered modern medical facilities to the rural people. At the same time the UK team has played a vital role in upgrading the skills and knowledge of our doctors which in turn helps all of us to be on par with the outside world.

Tell me and I forget, teach me and I may remember, involve me and I learn." ... with the saying, this year UK team decided to arrange hands on Trainings and Workshops,

Difficult airway workshop was attended by



70 general practitioner's participants and 16 anaesthetists. The participating Doctors were from Ratnagiri, Satara, Sangli, Karad & Lanja. Their feedback of the workshop has encouraged us to arrange the same next year. Hands on training on cadavers and mannequins and demonstration of disposal video laryngoscopes were the highlights. This could be done only due to active participation of Anatomy and Anesthesia Department of Walawalkar team and the UK Team. This light of knowledge will definitely help wipe the darkness from the life of our patients. Thanks to all the Anaesthetists from UK and Dr. Deshpande. Thanks to Dr. Ketki and Dr. Prashant Moolya for taking a lead, for the same.

Musculoskeletal ultrasound drew attention of all the RadiOLOGists, as a new horizon was opened for them in the field of ultrasound. Dr Lance Cope, Dr. Cooper and Mrs. Jayne Richardson along with Dr. Kharat and Dr. Sanjay Desai from Pune showed live demonstrations for diagnosing lumps and bumps. RadiOLOGists from Satara, Ratnagiri, Sindhudurg, Chiplun & Karad participated in the workshop. Next year our MRI will be ready for patient care and we would like to organize a workshop on MRI under the guidance of Dr. Cope and his team.

Dr. Bhaskar Gupta and Dr. Rory facilitated the Ophthalmic camp and have also given a momentum for research in DM Retinopathy. SMAT INDIA DM program will now start under their leadership for early detection of retinopathy by household survey. They have already trained two of our staff members for it at Chennai.

Dr. Parker and her anaesthetic colleagues organized a hands-on workshop on Resuscitation for all our resident doctors.

To sharpen the knowledge of our nurses, Shelley, Eleanor and their team conducted workshops on infection control, etiquettes in the operation theatres, WHO check list, equipment sterilization, etc... In absence of the UK team at Dervan, the video recordings of various procedures demonstrated by Shelley and Eleanor, will teach the correct ways of doing it for the future staff. We are thankful to all the above team members for this effort.

The Basic Surgical Skills Course was a great success and surgeons from Jammu-Kashmir, Australia, Kerala, and Auckland participated in it. Prof. Ian Wallace and Mr. Paul Fisher, both eminent surgeons taught basic surgical skills to budding surgeons and we now plan to do the same BSS course conducted by The Royal college of Surgeons of Edinburgh in September 2019.

The UK team along with the Walawalkar team in total performed 287 surgeries. 66 General surgery including Gynecology, 29 Uro-surgery, 13 Paediatric and plastic surgeries, 30 orthopedic surgeries and 116 Ophthalmic surgeries. We are thankful to the UK team on behalf of thousands of our patients who attended the hospital for surgery. We now look forward to their next visit in 2020.



Warm Welcome Of British Team





Continued Medical Education

A CME was held in B.K.L. Walawalkar Rural Medical College on 23rd January 2019. The aim of this CME was to get the best and latest in Healthcare Industry and to get updates on innovations in the various branches of medical field.

The session included a bunch of different topics such as Facilities in Medicine Department,

Approach to chest pain – Stent Care in Rural Set Up, Pre Malignancy in Rural Set Up, Pain Management in Rural Setup, Over View of Infertility, Damage control orthopedics, Vertigo – Clinical Evaluation & Management, Alcoholic liver disease (ALD) & NON-alcoholic fatty liver disease (NAFLD) & Advance Radiology in General Practice





Continued Nursing Education (CNE)

International workshop on “Infection Control” and “OT Techniques”

A Two-day international workshop on “Infection Control” and “OT Techniques” was conducted on 29th and 30th January 2019 at conference hall in Samarth Nursing College, Dervan, in order to get knowledge and skills regarding infection control and OT Techniques among student nurses and faculty of nursing.

At the inaugural function Shelley and Eleanor, senior OT nurses from United Kingdom (NHS) participated as chief guests, with principal Mrs.

Rekha Koppal presiding over the function. Ms. Shelley and Ms. Eleanor spoke on the topic of infection control and OT techniques on the day. It was more of hands-on procedures. On the question and answer session they explained about the extended and expanded role of nurses in United Kingdom too.

A total of 100 student nurses and faculty of nursing from Samarth Nursing College and other colleges participated in the workshop.



Demonstrations & Teaching new techniques to nursing students and staff.



Classroom Sessions

Nursing Students & Paramedical Course Students

Classroom & hands on training by experienced British doctors and Academicians: A mix of experienced Doctors, academicians and trained technicians imparted class room training through interactive sessions. The courses we offer are mainly technology driven and need hands-on

training on the related technology. Students were given practical training in wards, Operation theatres and other departments of the hospital as well as in the classrooms that will help in retaining the knowledge they gained.



Interactive Training Sessions with Audio Visuals



Group Discussions



Hands on Training to nurses



CME & Workshop 1

“MUSCULOSKELETAL USG” - A comprehensive review and update of the practical aspects of Musculoskeletal USG

The well known experts led by Dr. Richard Cooper, Consulting Radiologist, UK, imparted current and future trends in Musculoskeletal USG. Dr. Richard Cooper, Ex- Programme Director, and Ex -Head of the Northern School of Radiology, Dr. Lance Cope, Consultant Radiologist at South Tyneside Hospital South Shields, Tyne and Wear, UK trained many registrars in Radiology in MSK ultrasound, as well as sonographers, podiatrists, physiotherapists in

the CME and workshop held on 27th and 28th January, 2019.

The team also included Jane Richardson - USG Superintendent, UK, Dr. Amit Kharat, Consultant Radiologist, Pune, & Dr. Sanjay Desai, Consultant Radiologist, Pune. The topics were selected to help Radiologists improve patient care and foster lifelong learning.





CME 2: “Difficult Airway Management”

Airway Management is the most important skill in the armamentarium of an Anesthesiologist. This CME and workshop covered lectures and hands-on workshop by UK Anesthesiologists for the management of anticipated and unanticipated difficult airway situations and involved technical skills including Fibre optic intubation and cricothyroidotomy and non technical skills such as incidence reporting and patient education regarding difficult airway.

The lecture topics included Airway assessment (flagging difficult airway to team), DAS guidelines and checklists, Fibreoptic intubation, Airway

alert/ Incident reporting, Patient education regarding difficult airway etc. The workshop contained 5 stations for hands-on training which included Airway assessment (Demonstration on a volunteer), ABCD skill station on a mannequin, Ancillary equipment, Cricothyroidotomy (practical demonstrations on pig airway), Fibreoptic Intubation etc.

The eminent speakers were Dr Nur Lubis, Consultant Anaesthetist, UK along with Dr Sanjay Deshpande and his experienced team members trained the participants during the session held on 27th January 2019.



Hands on training on Cadavers and Mannequin



The Basic Surgical Skills Course by Royal College of Edinburgh, Uk.

Following the prodigious response received for the first two batches in the year 2018 'The Royal College of Surgeons of Edinburgh, UK' re-conducted The Basic Surgical Skills Course on 28th and 29th January 2019 and 1st and 2nd February 2019, at B.K.L. Walawalkar Hospital

This two-day course is aimed at instilling core surgical skills at the very start of a surgeon's training by teaching the correct basic techniques. Mr. Ian Wallace and Mr. Paul Fisher from The Royal College of Surgeons of Edinburgh conducted 2 training batches 12th-13th February and 15th-16th February 2018. 40 Doctors from all over India

and abroad participated in the training program. The aim of this workshop is to provide a structured curriculum to teach the surgical techniques and to instill in the trainees, the best habits at the beginning of a surgeon's training, under the expert supervision of senior consultant surgeons.

A very well equipped Skills Lab of international standards has been built at B.K.L. Walawalkar Hospital and Research center at Dervan. It will help in effectively organizing various training programs associated with international universities and colleges in future



Next BSS Course on:
21st-22nd September 2019
24th-25th September 2019

Contact: Mr. Rohan Gupte
At - 8879017888
Email: RDrohan@gmail.com

 THE ROYAL COLLEGE
OF SURGEONS
OF EDINBURGH

Basic Life Support Workshop



Cardio Pulmonary Resuscitation Training



Training of Defibrillator



Group Discussions



Community Outreach Programmes

These activities are conducted on a monthly basis to develop a bond between the hospital and the beneficiaries and to wipe out the fear about modern medicine from the minds of the rural people. The main motto is evaluating their health after attending the function and making them aware of the importance of good health.

We hope everybody who attended this outreach programme enjoyed it.

Various outreach camps were arranged where UK medicos participated.

1. Children's common birthday was celebrated at Rural Health Training Centre, Dervan

45 children's birthdays were celebrated in presence of UK medicos



Children's Common Birthday is celebrated to educate parents about child's early development & Well-Being. Also the pediatric examinations and vaccinations are done in this programme.



2. A visit to Fansewadi anganwadi at Aravali village was arranged where the UK team interacted with children. Around 30 children between the ages of 3 to 6 years participated in the session. The UK team here enjoyed singing and dancing with the anganwadi kids on their rhymes. They distributed gifts to these kids. They also visited a Marathi Zillaparishad school, where they communicated with school students from class 1 to class 4 and gifts were distributed.



Health Awareness Sessions in School



Gifts like Toys and stationery were distributed

3. A school visit to Kokare High school



Special sessions on Nutrition and Hygiene for children



Special sessions on Adolescent Health



Free Distribution of sanitary pads

4. Baby Shower Ceremony:

45 Pregnant ladies enjoyed the ceremony and talked with the U.K team during the baby shower programme.

The common custom in India is to bless the expecting mother and pray for the well being of the mother and the baby. It is the mom-to-be who is showered with blessings and bounty - food, clothes, gifts, - a sort of a "mother-to-be shower". Also, traditionally it is attended by the women-folk.

We arrange common celebration of all expecting mother and also take this as an opportunity to educate women about managing symptoms, diet, exercise, and general care tips that will keep them and their baby healthy.



5. Adolescent Girls Health

A residential camp for adolescent girls was arranged and 27 adolescent girls from A.S.P College Devrukh, attended this camp. Shelley and Eleanor interacted with these girls.



The programme envision, and strive toward, a world where adolescent girls are fully able to realize their rights, healthcare, nutrition, Menstrual cycles, Contraception, Sports, navigate challenges and access opportunities during the transition from childhood to adulthood and beyond.

6. REACH (Self Help Group)

The UK team visited a self help group (REACH for empowering the women) of Sawarde village and enjoyed demonstration of savory food.



The Rural Empowerment and Community Health (REACH) project intend to make women economically and socially empowered by giving them opportunity to earn their livelihood. The key part of the initiatives is to form self - Help- Groups (SHGs) which are given vocational training such as preparing processed food, handbags, jewelry etc. SHGs are micro credit group run by women at village level managing their finances for home based needs by selling these products. Economic empowerment usually is the first step towards social empowerment for these rural women.



On a Mercy Mission of Patient Care



On a Ward Round



Total knee replacement in Orthopedics Operation Theatre



Uro Surgery



Plastic Surgery



Uro surgery



Phaco Surgery



Giving you focus and perspective



A Mission Continues..



Felicitation Programme:



B.K.L.Walawalkar Hospital, Dervan
Surgery Camp Patients (27th January -1st February 2019)

| Sr. No. | Name Of Patient & Address | Age / Sex | Reg. No. | Operation Done | Surgeon | *Cost of Treatment (Hosp. Bill +Medicine +Investigation) (A)* | | Amount Paid by Patient (B) | | *Concession given (A-B+C)* | |
|--------------------------|---|-----------|----------|--|--|---|---------------|----------------------------|---------------|----------------------------|---------------|
| | | | | | | INR | USD (@ Rs.69) | INR | USD (@ Rs.69) | INR | USD (@ Rs.69) |
| General Surgeries | | | | | | | | | | | |
| 1 | Mr Khavnekar Gurunath Sitaram A/P Devgad Killa, Tal- Devgad, Dist- Sindhudurga, 7840949526 | 60 Y/M | 597748 | Rt Inguinal Hernioplasty | Dr. Vish Bhattacharya Dr. Neha Sawant Dr. Asmita Karnalkar Sr. Snehal Ghadge | ₹ 1,607 | \$313 | ₹ 0 | \$0 | ₹21,607 | \$313 |
| 2 | Mr Kangane Nilesh Shantaram A/P Devrukh Kangane Wadi, Tal. Sangmeshwar, Dist. Ratnagiri 9763738523 | 37 Y/M | 611416 | Emg. Ex- ploratory Laparotomy + Adhesi- olysis | Dr. Vish Bhattacharya Dr. Ramprasad Rajebhosale, Dr. Ajit Nehate Dr. Rajesh Pawar Sr. Dipali Chavan | ₹41,745 | \$605 | ₹41,745 | \$605 | ₹ 0 | \$0 |
| 3 | Miss Dhotare Reena Gautam A/P Vanad, Baudha Wadi, Tal. Dapoli, Dist. Ratnagiri. 90750891765 | 19 Y/F | 611395 | Open Appendicec- tomy | Dr. Vish Bhattacharya Dr. Abhishek Patil, Dr. Rajesh Pawar Sr. Shweta Ghanekar | ₹16,870 | \$244 | ₹ 0 | \$0 | ₹16,870 | \$244 |
| 4 | Mr Godbole Krushna Laxman A/P Janshi Post Mitgavane, Tal.- Rajapur, Dist. Ratnagiri 8888446658 | 61 Y/M | 611306 | Rt Inguinal Hernioplasty | Dr. Vish Bhattacharya Dr. Abhishek Patil, Dr. B.N. Patil Sr. Shweta Ghanekar | ₹19,298 | \$280 | ₹ 0 | \$0 | ₹19,298 | \$280 |
| 5 | Master Wadkar Nihar Dnyaneshwar A/P Umroli, Vani Wadi, Tal. Chiplun, Dist. Ratnagiri, 9545606180 | 4 Y/M | 611198 | Lt Inguinal Herniotomy | Dr. Vish Bhattacharya Dr. Neha Sawant Dr. Rajesh Pawar Sr. Dipali Chavan | ₹13,334 | \$193 | ₹ 0 | \$0 | ₹13,334 | \$193 |
| 6 | Mr Mirgule Parshuram Dhondu A/P Mirgulewadi, Post Sakhar , Tal.- Rajapur , Dist .- Ratnagiri 7769941016 | 70 Y/M | 611320 | Rt Inguinal Hernioplasty | Dr. Vish Bhattacharya Dr. Neha Sawant Dr. Rajesh Pawar Sr. Snehal Ghadge | ₹21,733 | \$315 | ₹ 0 | \$0 | ₹21,733 | \$315 |

| | | | | | | | | | | | |
|----|--|--------|--------|----------------------------------|---|---------|-------|--------|------|---------|-------|
| 7 | Mr Abgul Shankar Gopal A/P Sakhurde, Abgul Wadi, Tal- Dapoli, Dist- Ratnagiri, 7507191798 | 45 Y/M | 611389 | Lords Plication For Rt Hydrocele | Dr. Vish Bhattacharya Dr. Abhishek Patil, Dr. B.N. Patil Sr. Shweta Ghanekar | ₹17,989 | \$261 | ₹1,560 | \$23 | ₹16,429 | \$238 |
| 8 | Mrs Mandavkar Vaishanvi Vijay A/P Chikhali, Mandavkarwadi, Tal. Guhagar, Dist Ratnagiri 9623616703 | 39 Y/F | 607980 | Open Appendicectomy | Dr. Vish Bhattacharya Dr. Shrigurudas Dandekar Br. Suraj Goriwale | ₹18,607 | \$270 | ₹0 | \$0 | ₹18,607 | \$270 |
| 9 | Mr Gurav Harishchandra Bhiku A/P Pimpali Khrud, Tal.- Chiplun, Dist Ratnagiri, 7875794061 | 58 Y/M | 610446 | Rt Hydrocele Repair | Dr. Vish Bhattacharya Dr. Ajit Nehate Dr. Shalendra Patil Br. Suraj Goriwale | ₹18,356 | \$266 | ₹0 | \$0 | ₹18,356 | \$266 |
| 10 | Mr Mohite Shankar Ananda A/P Kusrund Patil Wadi Patan, Tal- Patan Dist Satara, 9823280958 | 25 Y/M | 601926 | Testicular Exploration + Biopsy | Dr. Abhishek Patil, Dr. Srinivas Birad Dr. Rajesh Pawar Sr. Dipali Chavan | ₹10,571 | \$153 | ₹0 | \$0 | ₹10,571 | \$153 |
| 11 | Mr Zimbar Yuvraj Vinayak At.p.adur Madliwadi Tal. Guhagar, Dist. Ratnagiri, 9764057170 | 9 Y/M | 611339 | Right Thigh Cyst Excision | Dr. Manisha Agrawal Dr. Neha Sawant Dr. Rajesh Pawar Br. Suraj Goriwale | ₹10,413 | \$151 | ₹62 | \$1 | ₹10,351 | \$150 |
| 12 | Mr Pawar Ajay Waman A/P Matvan Katkari Wadi, Tal. Dapoli, Dist. Ratnagiri, 7767073663 | 18 Y/M | 611400 | Open Appendicectomy | Dr. Vish Bhattacharya Dr. Ajit Nehate Dr. Shrigurudas Dandekar Sr. Snehal Ghadge | ₹18,122 | \$263 | ₹2,200 | \$32 | ₹15,922 | \$231 |
| 13 | Mr Kale Vishwanath Vasudev A/P Abloli Bramhanwadi, Tal. Guhagar, Dist. Ratnagiri, 9404156220 | 60 Y/M | 30553 | Circumcision | Dr. Vish Bhattacharya Dr. Ajit Nehate Dr. Rajesh Pawar Sr. Dipali Chavan | ₹17,710 | \$257 | 0 | \$0 | ₹17,710 | \$257 |
| 14 | Mr Kadam Raghunath Mahadev A/P Argaon Bauddha Wadi, Tal. Lanja, Dist. Ratnagiri, 7887358410 | 45 Y/M | 611224 | Haemorrhoidectomy | Dr. Vish Bhattacharya Dr. Srinivas Biradar Dr. Rajesh Pawar Sr. Shweta Ghanekar | ₹12,244 | \$177 | ₹0 | \$0 | ₹12,244 | \$177 |

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|----|---|------------|--------|---|---|---------|-------|---------|-------|---------|-------|
| 15 | Mr Kalambate Rakesh Arun A/P Talavali Bhadkhamba Wadi, Tal. Gubagar, Dist. Ratnagiri, 9604037413 | 19 Y/M | 594186 | Sfj Ligation + Stripping Of Gsv Vericose Costities. | Dr. Vish Bhattacharya Dr. Abhishek Patil, Sr. Shweta Ghanekar | ₹21,092 | \$306 | ₹2,000 | \$29 | ₹19,092 | \$277 |
| 16 | Mr Warishe Santosh Vasant A/P Gholap Gothane Wadi Ratnagiri, Tal. & Dist. Ratnagiri , 7507054384 | 33 Y/M | 601898 | Laparoscopic Cholecystec- tomy | Dr. Vish Bhattacharya Dr. Abhishek Patil, Dr. Aniket Pawar Dr. B.N. Patil Sr. Shweta Ghanekar | ₹28,696 | \$416 | ₹8,604 | \$125 | ₹20,092 | \$291 |
| 17 | Mr Revale Ramchandra Gopal A/P Kajurli Man Ade Wadi, Tal.guhagar, Dist. Ratnagiri, 8879502572 | 55 Y/M | 607972 | Bilateral Inguinal Hernioplasty | Dr. Vish Bhattacharya Dr. Neha Sawant Sr. Shweta Ghanekar | ₹24,909 | \$361 | ₹0 | \$0 | ₹24,909 | \$361 |
| 18 | Mr Padave Vijay Sudhir A/P Dabhol Bendal Wadi, Tal.guhagar, Dist. Ratnagiri, 9075774757 | 22 Y/M | 612058 | Laprosopic Appendicec- tomy | Dr. Vish Bhattacharya Dr. Abhishek Patil, Br. Suraj Goriwale | ₹17,942 | \$260 | ₹5,000 | \$72 | ₹12,942 | \$188 |
| 19 | Smt Patil Nirmala Mohan A/P Khavati Pakhar Wadi, Tal.khed, Dist. Ratnagiri, 9970324124 | 55 Y/F | 445772 | Laparoscopic Cholecystec- tomy | Dr. Vish Bhattacharya Dr. Abhishek Patil, Br. Aniket Pawar | ₹30,604 | \$444 | ₹10,604 | \$154 | ₹20,000 | \$290 |
| 20 | Miss Suware Tejasvi Vijay A/P Kumbharkhani Bk, Ram Wadi, Tal. sangameshwar, Dist. Ratnagiri, 9769538230 | 22 Y /F | 609319 | Rt Hemithy- roidectomy | Dr. Vish Bhattacharya Dr. Abhishek Patil, Sr. Prachi Bhikare | ₹26,268 | \$381 | ₹6,200 | \$90 | ₹20,068 | \$291 |
| 21 | Master Lanjekar Vedant Haresh A/P Rohidas Wadi, Tal.Lanja, Dist. Ratnagiri, 7276165522 | 3 Y/M | 612055 | Herniotomy | Dr. Meena Aggrawal Dr. Neha Sawant Sr. Shweta Ghanekar | ₹13,481 | \$195 | ₹0 | \$0 | ₹13,481 | \$195 |
| 22 | Smt Mandavkar Anita Anant A/P Mirvi Khalchi Mhade Wadi Ratnagiri, Tal. & Dist. Ratnagiri, 8550986690 | 53 Y/F | 601890 | Pan Hyster- ectomy | Dr. Abhay Desai Dr. Ramprasad Rajebhosale Sr. Dipali Chavan | ₹28,500 | \$413 | ₹8,500 | \$123 | ₹20,000 | \$290 |

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|----|---|-----------|--------|--------------------------------------|---|---------|-------|--------|-------|---------|-------|
| 23 | Mrs Sutar Savitri Satywan A/P Vaibhavvadi, Tal, vaibhavvadi, Dist. Sindhudurg, 9325412432 | 40 Y/F | 611410 | Cebaceous Cyst Exci- sion | Dr. Ajit Nehate Dr. Rajnish Jaiswal Dr. Shailendra Patil Tech. Dipti | ₹10,145 | \$147 | ₹150 | \$2 | ₹9,995 | \$145 |
| 24 | Mrs Kadam Mamata Anant A/P Gudhe Bauddha Wadi, Tal. Chiplun, Dist. R Atnagiri, 9921569184 | 49 Y/F | 2098 | Laparoscopic Appendicec- tomy | Dr. Vish Bhattacharya Dr. Abhishek Patil, Dr. Rajesh Pawar Dr. Asmita Karnalkar Sr. Snehal Ghadge | ₹20,969 | \$304 | ₹0 | \$0 | ₹20,969 | \$304 |
| 25 | Mrs Joshi Ketki Kedar At.p Kelshi Sathesali Tal. Dapoli, Dist. Ratnagiri, 9763970388 | 38 Y/F | 611341 | Laparoscopic Cholecystec- tomy | Dr. Vish Bhattacharya Dr. Abhishek Patil, Dr. Shailendra Patil Br. Aniket Pawar | ₹26,909 | \$390 | ₹6,909 | \$100 | ₹20,000 | \$290 |
| 26 | Mrs Kumbhar Kiran Krushna A/P Pimpali Khurd Sonar Wadi, Tal. Chiplun, Dist. Ratnagiri, 9075667712 | 42 Y/F | 611372 | Umbilical Hernia Mesh Repair | Dr. Rajnish Jaiswal Dr. Neha Sawant Dr. Kashinath Jadhav Br. Suraj Goriwale | ₹21,702 | \$315 | ₹1,702 | \$25 | ₹20,000 | \$290 |
| 27 | Mrs Baikar Pratibha Pandurang A/P Nirvhal Waghewadi, Tal. Guhagar, Dist. Ratnagiri, 8805397766 | 50 Y/F | 611193 | Dermoid Cyst Exci- sion | Dr. Vish Bhattacharya Dr. Abhishek Patil, Dr. Rajesh Pawar Dr. Kashinath Jadhav Sr. Shweta Ghanekar | ₹11,990 | \$174 | ₹0 | \$0 | ₹11,990 | \$174 |
| 28 | Mr Jadhav Pandurang Yashwant A/P Ayani Pande Wadi, Tal. Khed, Dist. Ratnagiri, 7447652931 | 55 Y/M | 513020 | Haemor- rhoidectomy | Dr. Rajnish Jaiswal Dr. Abhishek Patil Dr. Pawar Rajesh Sr. Snehal Ghadge | ₹16,659 | \$241 | ₹0 | \$0 | ₹16,659 | \$241 |
| 29 | Mr Agare Tukaram Vitthal A/P- Janshi Mithgavane, Tal. Rajapur, Dist. Ratnagiri | 67 Y/M | 415487 | Excision Of Lipoma Large | Dr. Abhishek Patil Dr. Kashinath Jadhav Sr. Shweta Ghanekar | ₹12,514 | \$181 | ₹0 | \$0 | ₹12,514 | \$181 |
| 30 | Master Kore Saharsh Sameer A/P Kondgaon Sakharpa, , Tal. sangmeshvar, Dist. Ratnagiri, 9765073109 | 7 Y/M | 612231 | Circumision | Dr. Meena Aggrawal Dr. Neha Sawant Dr. Kashinath Jadhav | ₹15,163 | \$220 | ₹0 | \$0 | ₹15,163 | \$220 |

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|----|---|-----------|--------|---|---|---------|-------|---------|-------|---------|-------|
| 31 | Master Kambale Parth Ashok A/P Swanand Colony Shanti Nagar Nachane Ratnagiri, Tal. & Dist. Ratnagiri, 9370187393 | 1 Y/M | 598933 | Tongue Tie Release | Dr. Meena Aggrawal Dr. Neha Sawant Dr. Rajesh Pawar Sr. Snehal Ghadge | ₹11,418 | \$165 | ₹11,418 | \$165 | ₹0 | \$0 |
| 32 | Mrs Naik Reshma Rajaram A/P Bhandup Maharashtra Niwas Room No 25 Ganesh Nagar, Mumbai, 9421260540 | 60 Y/F | 27613 | Lit Modified Radical Mas- tectomy | Dr. Abhay Desai Dr. Deepak Thorat Dr. Shriguruprasad Dandekar Dr. B. N. Patil Dr. Asmita Karmalkar Sr. Prachi Bhikare | ₹59,444 | \$862 | ₹0 | \$0 | ₹59,444 | \$862 |
| 33 | Mrs Kambale Archana Ashok A/P - Khanu, Baudh Wadi, Tal.Ratnagiri, Dist. Ratnagiri, 8698929267 | 52 Y/F | 586713 | Total Thy- roidectomy | Dr. Abhay Desai Dr. Deepak Thorat Dr. Shriguruprasad Dandekar Sr. Dipali Chavan | ₹31,463 | \$456 | ₹11,463 | \$166 | ₹20,000 | \$290 |
| 34 | Ashish Ramchandra Ambede A/P- Kalkavane, Tal- Chiplun, Dist Ratnagiri, 9404334654 | 29 Y/M | 27606 | Hernia Mesh Repair | Dr. Abhay Desai Dr. Deepak Thorat Dr. Abhishek Patil Dr. B. N. Patil Sr. Snehal Ghadge | ₹33,416 | \$484 | ₹13,416 | \$194 | ₹20,000 | \$290 |
| 35 | Mr Mestri Vasant Pandurang A/P Shivane Post Asore, Tal. Guhagar, Dist. Ratnagiri, 9767774873 | 65 Y/M | 607975 | Jabules Prepair + Lt Ingui- nal Hernia Repair | Dr. Abhay Desai Dr. Neha Sawant Dr. Kashinath Jadhav Sr. Snehal Ghadge | ₹23,131 | \$335 | ₹0 | \$0 | ₹23,131 | \$335 |
| 36 | Mr Jogalekar Manoj Gajanan A/P Palshet Barbhai Wadi, Tal. Guhagar, Dist. Ratnagiri 9404153415 | 52 Y/M | 178359 | Incision & Drainage | Dr. Abhishek Patil Dr. Ajit Nehate Dr. B.N. Patil Sr. Shweta Ghanekar | ₹15,927 | \$231 | ₹15,927 | \$231 | ₹0 | \$0 |
| 37 | Mr Supale Chandrakant Bhaskar A/P Kankavali Ambeali Bajarpath, Tal. Kankavli, Dist. Sindhudurg, 9923025025 | 63 Y/M | 612712 | Excision Of Rt Bm | Dr. Abhay Desai Sr. Manali Jagushte | ₹3,832 | \$56 | ₹3,832 | \$56 | ₹0 | \$0 |
| 38 | Mr Zimbar Vinayak Keshav A/P - Adur, Tal. Guhagar, Dist. Ratnagiri, 9764057170 | 44 Y/M | 612172 | Rt Inguinal Hernioplasty | Dr. Vish Bhattacharya Dr. Abhishek Patil, Dr. Kashinath Jadhav Sr. Snehal Ghadge | ₹16,141 | \$234 | ₹0 | \$0 | ₹16,141 | \$234 |

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|----|---|-----------|--------|---|--|---------|-------|----|-----|---------|-------|
| 39 | Mr Salunkhe Vijay Mahadev A/P - Palvan, Tal. Chiplun, Dist. Ratnagiri, 9881929536 | 46 Y/M | 22753 | Haemor- rhoidectomy | Dr. Deepak Thorat Dr. Abhishek Patil Dr. Rajesh Pawar Sr. Shweta Ghanekar | ₹14,529 | \$211 | ₹0 | \$0 | ₹14,529 | \$211 |
| 40 | Mrs Chavan Sneha Sandip Navshakti Chawal Ambedkar Nagar Kurar Village Malad East, Mumbai, 8369141461 | 39 Y/M | 612732 | Excision Of Rt.breast Fi- broadenoma | Dr. Abhay Desai Dr. Neha Sawant Dr. Rajesh Pawar Sr. Shweta Ghanekar | ₹11,872 | \$172 | ₹0 | \$0 | ₹11,872 | \$172 |
| 41 | Master Nachankar Manas Mahendra A/P Malan Alim Wadi, Tal. Guhagar, Dist. Ratnagiri, 9922099066 | 3 Y/M | 612047 | Circumcision | Dr. Meena Aggrawal Dr. Neha Sawant Dr. Kashinath Jadhav Sr. Dipti Ghanekar | ₹15,630 | \$227 | ₹0 | \$0 | ₹15,630 | \$227 |
| 42 | Mrs Naralkar Varsha Vijay A/P - Pimpali, Tal. Chiplun, Dist. Ratnagiri, 9767701862 | 38 Y/M | 359918 | Haemor- rhoidectomy | Dr. Abhishek Patil Dr. Rajesh Pawar Sr. Poonam Dhumal | ₹11,036 | \$160 | ₹0 | \$0 | ₹11,036 | \$160 |
| 43 | Mr Satale Ganpat Sonu A/P Palvan Satalewadi, Tal. Chiplun, Dist. Ratnagiri, 9421550502 | 73 Y/M | 572884 | Wound Exploration (Hernial Mesh Re- moved) | Dr. Abhay Desai Dr. Abhishek Patil Dr. Rajesh Pawar Sr. Shweta Ghanekar | ₹11,402 | \$165 | ₹0 | \$0 | ₹11,402 | \$165 |
| 44 | Mr Chindarkar Sitaram Krushna A/P Rameshwar Seva Sangh, Malad, Mumbai, 9284208418 | 65 Y/M | 612761 | Paraumbil- ical Hernia Mesh Repair | Dr. Vish Bhattacharya Dr. Ajit Nehate Dr. B.N. Patil Br. Suraj Goriwale | ₹21,803 | \$316 | ₹0 | \$0 | ₹21,803 | \$316 |
| 45 | Smt Salunkhe Subhadra Bhaskar A/P Kusur Sutar Wadi, Tal. Vaibhavwadi, Dist. Sindhudurg, 9420052861 | 72 Y/F | 276951 | Excision Of Rt Iliac Crest Calcified Cyst | Dr. Rajnish Jaiswal Sr. Snehal Ghadge | ₹10,714 | \$155 | ₹0 | \$0 | ₹10,714 | \$155 |
| 46 | Mrs Kanekar Manasi Mohan A/P Mundhe Tarfe Sawarde Sutar Wadi, Tal. Chiplun, Dist. Ratnagiri, 9405007805 | 37 Y/M | 612734 | Excision Of Lipoma On Rt Elbow | Dr. Vish Bhattacharya Dr. Ajit Nehate Br. Suraj Goriwale | ₹6,406 | \$93 | ₹0 | \$0 | ₹6,406 | \$93 |
| 47 | Mrs Teravkar Sunita Sakharam A/P Palghar Kumbharwadi, Tal. Chiplun, Dist. Ratnagiri, 9404327643 | 70 Y/F | 612763 | Lt Modified Radical Mas- tectomy | Dr. Abhay Desai Dr. Abhishek Patil Dr. Rajesh Pawar Dr. Shrigurusprasad Dandekar Sr. Deepali Chavan | ₹31,577 | \$458 | ₹0 | \$0 | ₹31,577 | \$458 |

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| 48 | Mr Durgoli Shankar Raju A/P Veer Devpat Karmari Wadi, Tal. Chiplun, Dist. Ratnagiri, 9224656757 | 52 Y/M | 375063 | Haemor- rhoidectomy | Dr. Rajnish Jaiswal Dr. Shriguruprasad Dandekar Sr. Poonam Dhumal | ₹17,314 | \$251 | ₹1,570 | \$23 | ₹15,744 | \$228 |
| 49 | Mr Arekar Bharat Punaji A/P Rajapur, Shivane Khrud, Tal. Chiplun, Dist. Ratnagiri, 9420969679 | 72 Y/M | 609367 | Their's Stich | Dr. Deepak Thorat Dr. Rajesh Pawar Sr. Snehal Ghadge | ₹95,115 | \$1,378 | ₹95,115 | \$1,378 | ₹0 | \$0 |
| 50 | Mrs Kazi Nasreem Shabbir A/P Dhamandevi Mohalla, Tal. Chiplun, Dist. Ratnagiri, 9763129665 | 47 Y/F | 605712 | Incision And Drainage Of Foot Abscess | Dr. Neha Suwant Dr. Shailendra Patil Sr. Poonam Dhumal | ₹27,583 | \$400 | ₹7,489 | \$109 | ₹20,094 | \$291 |
| 51 | Mr Khambe Shriram Vishram A/P Rampur Baikar Wadi, Tal. Chiplun, Dist. Ratnagiri, 9823724592 | 45 Y/M | 605724 | Open Appendicec- tomy | Dr. Vish Bhattacharya Dr. Ajit Nehate Dr. Pradip Patil Br. Suraj Goriwale | ₹16,279 | \$236 | ₹0 | \$0 | ₹16,279 | \$236 |
| 52 | Mr Kambale Shivaji Padam A/P Satara Sant Kabir So 464 Mangalwar Peth, Satara, 8390835697 | 48 Y/M | 613967 | Fistulectomy | Dr. Neha Suwant Dr. Deepak Thorat Dr. Rajnish Jaiswal Dr. Shriguruprasad Dandekar Sr. Dipti Ghaneekar | ₹12,851 | \$186 | ₹56 | \$1 | ₹12,795 | \$185 |
| 53 | Mr Mulye Sandip Suryakant A/P Chindravali, Post Chande, Tal. & Dist. Ratnagiri, 9404151551 | 36 Y/M | 483714 | Circumci- sion + Spc + Cystoscopy | Dr. Shailendra Patil Sr. Minal Sawant | ₹32,080 | \$465 | ₹18,840 | \$273 | ₹13,240 | \$192 |
| 54 | Mr Mundekar Shantaram Rajaram A/P Nandgaon, Dhamal Wadi, Tal- Chiplun, Dist- Ratnagiri, 9850384569 | 53 /M | 612735 | Emergency Exploratory Laparotomy | Dr. Ajit Nehate Dr. Pratibha Dr. Shrigurudas Dandekar Br. Suraj Goriwale | ₹32,098 | \$465 | ₹12,098 | \$175 | ₹20,000 | \$290 |
| 55 | Miss Rasal Kanchan Vilas A/P Nevare, Navedra Wadi, Tal & Dist - Ratnagiri, 9765509159 | 11/F | 608014 | Excision Of Scar & Revision | Dr. Shivprasad Date Dr. Kasim Attar Dr. Shriguruprasad Dandekar Sr. Poonam Dhumal | ₹12,168 | \$176 | ₹0 | \$0 | ₹12,168 | \$176 |
| | | | | | | 1,161,371 | \$16,831 | 286,460 | \$4,152 | 874,911 | \$12,680 |

| Urosurgery | | | | | | | | | | | |
|------------|--|-----------|--------|----------------------------------|---|---------|-------|---------|-------|---------|-------|
| 1 | Mr Jade Sakaharam Krushna A/P Talsar Jade Wadi, Tal- Chiplun Dist -Ratnagiri, 8390673992 | 70 Y/M | 519762 | Rt Pcnl + Lt Djs Removal | Dr. Shringarpure Dr. Shailendra Patil Br. Aniket Pawar | ₹32,623 | \$473 | ₹0 | \$0 | ₹32,623 | \$473 |
| 2 | Mrs Ambare Sangeeta Nandakumar A/P Gulmohar Colony Chal No 1 Room 3 Vijay Nagar Punelink Road Kalyan East, Mumbai, 9004896816 | 46 Y/F | 606871 | Rt Pcnl | Dr. Shringarpure Dr. Shailendra Patil Br. Pranav Salvi | ₹31,025 | \$450 | ₹0 | \$0 | ₹31,025 | \$450 |
| 3 | Smt Kate Anjira Balkrushna A/P Batechi Wadi Post Matavane), Dist - Raigad, 9867451718 | 70 Y/M | 611221 | Cystoscopy | Dr. Pravin Menezes Dr. Kasim Attar Dr. Shailendra Patil Br. Aniket Pawar | 10,355 | \$150 | 0 | \$0 | 10,355 | \$150 |
| 4 | Mr Pawar Vinayak Kumar A/P - Kethare (Budrik Wadi), Tal- Karad, Dist - Satara, 8767874282 | 30 Y/M | 17808 | Urs + Dj.stenting | Dr. Pravin Menezes Dr. Shailendra Patil Br. Aniket Pawar | ₹13,626 | \$197 | ₹3,058 | \$44 | ₹10,568 | \$153 |
| 5 | Mr Bhosale Shailesh Ramkrushna A/P Tisangi Khed Tal.- Khed, Dist.- Ratnagiri, 8275430460 | 38 Y/M | 609336 | Urs + Dj.stenting | Dr. Pravin Menezes Dr. Stuart McCracken Dr. Shailendra Patil Br. Aniket Pawar | ₹29,398 | \$426 | ₹3,863 | \$56 | ₹25,535 | \$370 |
| 6 | Mr Kangane Shantaram Laxman A/P Devrukh Kanganewadi, Tal-Sangmeshwar, Dist- Ratnagiri, 7378337902 | 66 Y/M | 609363 | Urethral Dilatation | Dr. Pravin Menezes Dr. Ramprasad Rajebhosale Dr. Shailendra Patil Sr. Milan Sawant | ₹10,862 | \$157 | ₹10,862 | \$157 | ₹0 | \$0 |
| 7 | Mr Gurav Tukaram Shankar A/P Kajurli Gurav Wadi, Tal- Gubagar, Dist.- Ratnagiri, 8652152054 | 80 Y/M | 611197 | Cystoscopy + Urethrot- omy | Dr. Pravin Menezes Dr. Stuart McCracken Dr. Ramprasad Rajebhosale Dr. Shrigurudas Dandekar Sr. Milan Sawant | ₹15,488 | \$224 | ₹0 | \$0 | ₹15,488 | \$224 |
| 8 | Mr Jadhav Jagannath Hari A/P 276 Ukshi Bauddha Wadi, Tal. Ratnagiri, Dist. Ratnagiri, 8975376649 | 73 Y/M | 588232 | Tur Prostate | Dr. Abhay Desai Dr. Pravin Menezes Dr. Stuart McCracken Dr. Shrigurudas Dandekar Sr. Milan Sawant | ₹25,811 | \$374 | ₹25,811 | \$374 | ₹0 | \$0 |

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|----|---|-----------|--------|---------------------------------------|--|---------|-------|---------|-------|---------|-------|
| 9 | Mrs Tamhankar Chandrabbhaga Gunaji A/P Valake Gavade Wadi, Tal. Ratnagiri, Dist. Ratnagiri, 8805413681 | 70 Y/F | 581974 | Cystoscopy | Dr. Abhay Desai Dr. Pravin Menezes Dr. Stuart McCracken Dr. Kasim Attar Dr. Pradip Patil Br. Aniket Pawar | ₹11,024 | \$160 | ₹1,310 | \$19 | ₹9,714 | \$141 |
| 10 | Mr Ayare Vinayak Ganpat A/P Kolthare Chavan Wadi, Tal. Dapoli, Dist. Ratnagiri, 8275600360 | 60 Y/M | 611201 | Lt Pcnl | Dr. Pravin Menezes Dr. Stuart McCracken Dr. Kasim Attar Dr. Shrigurudas Dandekar Br. Pranav Salvi | ₹35,521 | \$515 | ₹0 | \$0 | ₹35,521 | \$515 |
| 11 | Mrs Kuvalekar Laxmi Laxman A/P Kadwai Kinjalakarwadi, Tal. Sangameshwar, Dist. Ratnagiri, 8412013155 | 57 Y/F | 266846 | Rt Nephros- tomy | Dr. Lance Cope Dr. Netaji Patil Dr. Kasim Attar Dr. Shailendra patil Br. Aniket Pawar | ₹20,589 | \$298 | ₹4,244 | \$62 | ₹16,345 | \$237 |
| 12 | Mrs Kumbhar Aditi Yogesh A/P - Velam, Tal. Guhagar, Dist. Ratnagiri, 02359-284164 | 28 Y/F | 16041 | Urs+D J Stenting | Dr. Pravin Menezes Dr. Chaitanya Dr. Kasim Attar Dr. Shailendra patil Br. Pranav Salvi | ₹18,817 | \$273 | ₹0 | \$0 | ₹18,817 | \$273 |
| 13 | Smt Misal Shevanti Kashiram A/P Gavhe Pahili Wadi Home No 14, Tal. Dapoli, Dist. Ratnagiri, 7507796215 | 56 Y/F | 589489 | Lt.pcnl | Dr. Pravin Menezes Dr. Chaitanya Dr. Kasim Attar Dr. Shailendra patil Br. Pranav Salvi | ₹37,229 | \$540 | ₹0 | \$0 | ₹37,229 | \$540 |
| 14 | Mr Dabholkar Gajanan Bala A/P Dabhol Kumbhar Wadi, Tal. Dapoli, Dist. Ratnagiri, 7350619899 | 55 Y/M | 504197 | Milians Procedure | Dr. Pravin Menezes Dr. Stuart McCracken Dr. Rajesh Pawar Dr. Kasim Attar Br. Pranav Salvi | ₹37,970 | \$550 | ₹17,890 | \$259 | ₹20,080 | \$291 |
| 15 | Mr Vanoo Anish Abbas A/P Kalamaste Muslim Mohalla, Tal. Sangmeshwar, Dist. Ratnagiri, 9405751285 | 41 Y/M | 611369 | Cystoscopy Optical Uret- rotomy | Dr. Pravin Menezes Dr. Stuart McCracken Dr. Ramprasad Rajebhosale Dr. Rajesh Pawar Sr. Snehal Ghudage | ₹13,554 | \$196 | ₹0 | \$0 | ₹13,554 | \$196 |
| 16 | Mr Vichare Ashok Shankar A/P Phansavane Vichare Wadi, Tal. Sangmeshwar, Dist. Ratnagiri, 9819158595 | 62 Y/M | 611185 | Lt Urs + Dj Stenting | Dr. Pravin Menezes Dr. Stuart McCracken Dr. Kasim Attar Dr. Shailendra patil Br. Aniket Pawar | ₹12,627 | \$183 | ₹0 | \$0 | ₹12,627 | \$183 |

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|----|---|-----------|--------|---------------------|--|---------|-------|---------|-------|---------|-------|
| 17 | Mrs Kuvalekar Suvarna Ramchandra A/P Devrukh, Gele Wadi, Home No 246, Tal. Sangmeshwar, Dist. Ratnagiri, 7798020558 | 46 Y/F | 579106 | Lt Pcnl | Dr. Stuart McCracken Dr. Chaitanya Dr. Pradip Patil Br. Aniket Pawar | ₹30,000 | \$435 | ₹0 | \$0 | ₹30,000 | \$435 |
| 18 | Mr Kavankar Sunil Shivram A/P Kotluk Waghewadi, Tal. Guhagar, Dist. Ratnagiri, 7588483034 | 30 Y/M | 601911 | Lt Pcnl | Dr. Stuart McCracken Dr. Chaitanya Dr. Shailendra Patil Br. Aniket Pawar | ₹33,921 | \$492 | ₹13,931 | \$202 | ₹19,990 | \$290 |
| 19 | Mr Khakye Aatmaram Babu A/P Chichwadi, Harchiri, Tal & Dist - Ratnagiri, 7588696939 | 43 Y/M | 522547 | Rt Pcnl | Dr. Stuart McCracken Dr. Chaitanya Dr. Kasim Attar Dr. Shailendra Patil Br. Pranav Salvi | ₹34,324 | \$497 | ₹30,000 | \$435 | ₹4,324 | \$63 |
| 20 | Mr Rewale Sadu Tanu A/P Kajulri Man Wadi, Tal. Guhagar, Dist - Ratnagiri , 8108840995 | 80 Y/M | 612040 | Tur Prostate | Dr. Abhay Desai Dr. Shailendra Patil Br. Aniket Pawar | ₹30,998 | \$449 | ₹0 | \$0 | ₹30,998 | \$449 |
| 21 | Mr Zate Narayan Daji A/P Umbarli Kashtewadi, Tal. Dapoli, Dist. Ratnagiri, 8554822372 | 69 Y/M | 611397 | Cystoscopy | Dr. Stuart McCracken Dr. Chaitanya Dr. B. N. Patil Br. Pranav Salvi | ₹18,078 | \$262 | ₹0 | \$0 | ₹18,078 | \$262 |
| 22 | Mr Wanarkar Dilip Manohar A/P Dabhol Bhandar Wada Dapoli, Tal. Dapoli, Dist. Ratnagiri, 8975424590 | 48 Y/M | 612088 | Ureteroscopy | Dr. Stuart McCracken Dr. Chaitanya Dr. Kasim Attar Dr. Shailendra patil Br. Aniket Pawar | ₹30,423 | \$441 | ₹0 | \$0 | ₹30,423 | \$441 |
| 23 | Smt Dhanavade Shewanti Chandrakant A/P Tivare Fhanas Wadi, Tal. Chiplun, Dist - Ratnagiri , 7507930984 | 65 Y/F | 609347 | Lt Pcnl | Dr. Chaitanya Dr. Kasim Attar Dr. Shailendra patil Br. Tushar | ₹32,578 | \$472 | ₹0 | \$0 | ₹32,578 | \$472 |
| 24 | Mr Nivalkar Dilip Shankar A/P Panhale Kazi, Tal. Dapoli, Dist. Ratnagiri, 7776820476 | 53 Y/M | 372640 | Cystolithot- omy | Dr. Chaitanya Dr. Kasim Attar Dr. Kashinath Jadhav Sr. Snehal Ghadge | ₹25,418 | \$368 | ₹5,466 | \$79 | ₹19,952 | \$289 |

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|------------------------|---|-----------|--------|-------------------------------------|---|---------|----------|---------|---------|---------|---------|
| 25 | Mrs Gurav Pranita Prakash A/P Kondye Gurav Wadi, Tal. Sangmeshwar, Dist. Ratnagiri, 9545882856 | 31 Y/M | 557650 | Rt Urs + Dj Stenting | Dr. Pravin Menezes Dr. Kasim Attar Dr. Shrigurudas Dandekar Br. Aniket Pawar | ₹29,854 | \$433 | ₹9,715 | \$141 | ₹20,139 | \$292 |
| 26 | Mr Kadam Pankaj Prabhakar A/P Chiplun Kherdi, Tal. Chiplun, Dist - Ratnagiri . | 20 Y/M | 559583 | Check Cys- toscopy | Dr. Kasim Attar Dr. Shailendra patil Br. Pranav Salvi | ₹11,308 | \$164 | 0 | \$0 | ₹11,308 | \$164 |
| 27 | Mr Chimane Dipak Gopal A/P Ambavali Marath Wadi, Tal. Chiplun, Dist - Ratnagiri, 9405525520 | 43 Y/M | 598937 | Peni | Dr. Pravin Menezes Dr. Stuart McCracken Dr. Shailendra Patil Br. Pranav Salvi | ₹15,836 | \$230 | ₹15,836 | \$230 | ₹0 | \$0 |
| 28 | Mrs Kuvalekar Laxmi Laxman A/P Kadwai Kinjalakarwadi, Tal. Sangmeshwar, Dist. Ratnagiri, 8412013155 | 57 Y/F | 28152 | Rt Urs + Dj Stent | Dr. Kasim Attar Dr. Stuart McCracken Dr. Shailendra patil Br. Pranav Salvi | ₹30,092 | \$436 | ₹0 | \$0 | ₹30,092 | \$436 |
| 29 | Mr Mulye Sandip Suryakant A/P Chindravali, Post Chande, Tal.& Dist. Ratnagiri, 9404151551 | 36 Y/M | 483714 | Cystoscopy | Dr. Pravin Menezes Dr. Stuart McCracken Dr. Kasim Attar Dr. Shailendra Patil Sr. Milan Sawant | ₹32,080 | \$465 | ₹18,841 | \$273 | ₹13,239 | \$192 |
| 30 | Mr Mulye Sandip Suryakant A/P Chindravali, Post Chande, Tal.& Dist. Ratnagiri, 9404151551 | 36 Y/M | 483714 | Supra Pubic Catheterisa- tion | Dr. Pravin Menezes Dr. Stuart McCracken Dr. Kasim Attar Dr. Shailendra Patil Sr. Milan Sawant | ₹15,836 | \$230 | ₹15,836 | \$230 | ₹0 | \$0 |
| | | | | | | 727,265 | \$10,540 | 176,663 | \$2,560 | 550,602 | \$7,980 |
| Plastic Surgery | | | | | | | | | | | |
| 1 | Mr Pawar Dattatray Anna Muradwad Post Ghode Wadi, Tal. Khtav, Dist. Satara, 9922341620 | 40 Y/M | 594531 | Keloid Exci- sion | Dr. Shivprasad Date Dr. Shrigurudas Dandekar Sr. Dipali Chavan | ₹ 9,707 | \$141 | ₹0 | \$0 | ₹ 9,707 | \$141 |
| 2 | Mrs Chavan Pramila Prakash A/P Fhonda Khat Gangowadi Tal - Kankavali, Dist- Sindhudurg, 9420258385 | 48 Y/F | 524703 | Burn Con- tracture Release | Dr. Shivprasad Date Dr. B.N. Patil Sr. Dipali Chavan | ₹23,269 | \$337 | ₹3,269 | \$47 | ₹20,000 | \$290 |

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|---------------------------|--|-----------|--------|--|--|----------|---------|----------|---------|---------|---------|
| 3 | Miss Gavnanng Pratiksha Prakash A/P- Gangrai, Tal. Chiplun, Dist - Ratnagiri ; | 21 Y/F | 11524 | Sebaceous Cyst Exci- sion | Dr. Shivprasad Date Dr. Ramprasad Rajebhosle Dr. Shrigurudas Dandekar Sr. Dipali Chavan | ₹10,411 | \$151 | ₹0 | \$0 | ₹10,411 | \$151 |
| 4 | Master Rewale Soham Prakash A/P Swaroopanand Nagar Majgaon Road Vimantal Najik Mide Ratnagiri, Tal Dist. Ratnagiri, 8605139037 | 7 Y/M | 612716 | Syndajaly Separation | Dr. Shivprasad Date Dr. Shrigurudas Dandekar Sr. Dipali Chavan | ₹18,468 | \$268 | ₹0 | \$0 | ₹18,468 | \$268 |
| 5 | Miss Jadhav Namrata Vishwas A/P Dhamandevi Veer Arjun Nagar, Tal. Khed, Dist - Ratnagiri . 8379935366 | 23 Y/F | 42307 | Burn Con- tracture Release | Dr. Shivprasad Date Dr. Kasim Attar Dr. Shrigurudas Dandekar Sr. Poonam Dhumal | ₹17,240 | \$250 | ₹0 | \$0 | ₹17,240 | \$250 |
| 6 | Miss Marchande Sejal Ashok A/P Mandangad Gandhi Chauk, Bauddha Wadi, Tal- Mandangad, Dist- Ratnagiri, 7506805019 | 17/F | 612167 | Burn Con- tracture Release | Dr. Shivprasad Date Dr. Kasim Attar Dr. Shriguruprasad Dandekar Sr. Siddhi | ₹12,098 | \$175 | ₹0 | \$0 | ₹12,098 | \$175 |
| | | | | | | 91,193 | \$1,322 | 3,269 | \$47 | 87,924 | \$1,274 |
| Orthopedic Surgery | | | | | | | | | | | |
| 1 | Mrs Alsabi A/P/ Flat No 10 Shri Raj Vilhha 128 Bhusari Colony Kotharud Pune 38, 830742345. | 64 Y/F | 611303 | Lt Unicon- dylar Knee Replacement | Dr. Pavankumar Kohli Sr. Shweta Ghag Br. Ajit More | ₹348,920 | \$5,057 | ₹345,718 | \$5,010 | ₹3,202 | \$46 |
| | | | 611304 | L4 L5 Spine Instrumen- tation Et Decompres- sion | Dr. Sunil Nadkarni Dr. Sumit Sonawane Sr. Shweta Ghag | | | | | | |
| 2 | Mrs Mukadam Dhanashri Vasant A/P E3/72 Bibave Wadi Pune 37, 9422269654 | 60 Y/F | 610991 | Lt Unicon- dylar Knee Replacement | Dr. Pavankumar Kohli Br. Ajit More | ₹243,603 | \$3,530 | ₹240,123 | \$3,480 | ₹3,480 | \$50 |
| | | | | Rt Unicon- dylar Knee Replacement | Dr. Pavankumar Kohli Dr. Kashinath Jadhav Br. Ajit More | | | | | | |

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| 3 | Mrs Gole Snehal Avadhut A/P Gubagar Bajar Peth, Tal. Gubagar, Dist. Ratnagiri, 9423520117 | 64 Y/F | 254241 | Lt Unicon- dylar Knee Replacement | Dr. Pavankumar Kohli Dr. Kashinath Jadhav Br. Ajit More | ₹243,407 | \$3,528 | ₹240,030 | \$3,479 | ₹1,377 | \$49 |
| | | | | Rt Unicon- dylar Knee Replacement | Dr. Pavankumar Kohli Dr. Kashinath Jadhav Br. Ajit More | | | | | | |
| 4 | Mr Gavange Sachin Shankar Kushiwade Gavange Wadi , Tal. Chiplun, Dist. Ratnagiri, 7875300622 | 26 Y/M | 611418 | Spine Instru- mentation & Decompres- sion. | Dr. Sunil Nadkarni Dr. Sumit Sonawane Dr. Ankush Navale | ₹157,778 | \$2,287 | ₹151,170 | \$2,191 | ₹ 6,608 | \$96 |
| 5 | Mr Penkar Ashok Sakharan A/P Lanja Mauli Nagar, Tal. Lanja, Dist. Ratnagiri, 9028406083 | 68 Y/M | 59479 | Lt Unicon- dylar Knee Replacement | Dr. Sudhir Joshi Dr. Pavankumar Kohli Dr. Shailendra Patil | ₹ 142,197 | \$2,061 | ₹ 120,000 | \$1,739 | ₹ 22,197 | \$322 |
| 6 | Mr Bhosale Pramod Bhikaji A/P - Khed Tisangi, Tal. Khed, Dist. Ratnagiri, 9404992205 | 44 Y/M | 609335 | ACL Recon- struction | Dr. Pavankumar Kohli Dr. Apurv Dr. Shailendra Patil Br. Ajit More | ₹ 74,853 | \$1,085 | ₹45,000 | \$652 | ₹29,853 | \$433 |
| 7 | Mrs Pundekar Ranjana Dharmaraj A/P Chinchani Post Moravale, Tal. B. Dist. Ratnagiri, 9404624894 | 50 Y/F | 611209 | Lt Unicon- dylar Knee Replacement | Dr. Pavankumar Kohli Dr. Mukund Degburkar Dr. Pradip Patil | ₹ 128,435 | \$1,861 | ₹ 120,250 | \$1,743 | ₹ 8,185 | \$119 |
| 8 | Mr Tavakar Arun Dwarkanath A/P 76/33A Shipra Path Mansarovar Jaipur, Tal. Jaipur, Dist. Rajasthan , 9928994812 | 59 Y/M | 611376 | Lt Knee Re- placement | Dr. Sudhir Joshi Dr. Mukund Degburkar Dr. Babanrao Patil | ₹ 143,837 | \$2,085 | ₹ 140,000 | \$2,029 | ₹ 3,837 | \$56 |
| | | | | Tibia C.c. Screw Implant Removal | Dr. Ankush Navale Dr. Babanrao Patil Sr. Shweta Ghag | | | | | | |

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| 9 | Mr Potale Shahaji Huaba A/P - A/P Chakan Pimpalgaon Mohite Wadi Pune, 9850562571 | 75 Y/M | 611217 | Lt Unicon- dylar Knee Replacement | Dr. Pavankumar Kohli Dr. Mukund Deglurkar Dr. Babanrao Patil Br. Ajit More | ₹ 249,047 | \$3,609 | ₹ 240,000 | \$3,478 | ₹ 9,047 | \$131 |
| 10 | Mr Takale Navnath Pandurang A/P - Rampur Gudhe Fata, Tal. Chiplun, Dist. Ratnagiri, 9604232468 | 51 Y/M | 393707 | Lt Diagnostic Arthroscopy | Dr. Pavankumar Kohli Dr. Mukund Deglurkar Dr. Ankush Navale Dr. Babanrao Patil Sr. Shweta Ghag | ₹ 113,845 | \$1,650 | ₹ 113,845 | \$1,650 | ₹ 0 | \$0 |
| 11 | Mr Bapat Vinay Vasant A/P - Anjarie Brahman Wadi, Tal. Dapoli, Dist. Ratnagiri, 9404764679 | 45 Y/M | 612245 | Tendon Repair | Dr. Sumit Sonawane Dr. Ashok Dr. Shrigurudas Dandekar Sr. Dipali More | ₹ 25,920 | \$376 | ₹ 5,920 | \$86 | ₹ 20,000 | \$290 |
| 12 | Mr Savalkar Gourihar Dnyandeo A/P Sawarde Bajarpeth Home No 1907/A, Tal. Chiplun, Dist. Ratnagiri, 9890748620 | 41 Y/M | 578320 | ACL Recon- struction | Dr. Pavankumar Kohli Dr. Sushant Chavan Dr. Pradip Patil Br. Ajit More | ₹ 66,611 | \$965 | ₹ 45,000 | \$652 | ₹ 21,611 | \$313 |
| 13 | Miss Chogale Saba Iqbal A/P - Kherdi Moholla, Tal. Chiplun, Dist. Ratnagiri, 9075704118 | 16 Y/F | 584354 | Orthrogram | Dr. Kalvinde Dr. Ashok Dr. Pradip Patil Sr. Shweta Ghag | ₹ 11,248 | \$163 | ₹ 841 | \$12 | ₹ 10,407 | \$151 |
| 14 | Mrs Kadam Sunanda Pandurang A/P- Terav Datt Wadi, Tal. Chiplun, Dist. Ratnagiri, 7741996580 | 65 Y/F | 612105 | Rt DHS Platting | Dr. Mukund Deglurkar Dr. Devashish Rawal Dr. Ankush Navale Dr. Babanrao Patil Br. Pranav Nanjoshi | ₹ 31,700 | \$459 | ₹ 10,340 | \$150 | ₹ 21,360 | \$310 |
| 15 | Mr Bhalekar Omkar Madhukar A/P Ambed Khurd Gaval Wadi Near Shastri Pool, Tal. Sangmeshwar, Dist. Ratnagiri, 7083430861 | 19 Y/M | 577790 | E.U.A | Dr. Kalvinde Dr. Ashok Dr. Babanrao Patil Sr. Shweta Ghag | ₹ 12,878 | \$187 | ₹ 1,095 | \$16 | ₹ 11,783 | \$171 |
| 16 | Mr Kadam Shailesh Harishchandra A/P -Tuhad Kadam Wadi, Tal. Khed Dist. Ratnagiri, 8108508713 | 29 Y/M | 608862 | Rt ACL Re- construction | Dr. Pavankumar Kohli Dr. Sushant Chavan Dr. Pradip Patil Br. Ajit More | ₹ 95,083 | \$1,378 | ₹ 80,186 | \$1,162 | ₹ 14,897 | \$216 |

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| 17 | Mrs Damale Usha Balkrushna A/P Kolambe, Tal. & Dist. Ratnagiri, 9420496340 | 71 Y/F | 57098 | Kyphoplasty D12 Com- pression | Dr. Sunil Nadkarni Dr. Sumit Sonawane Dr. Babanrao Patil Sr. Shweta Ghag | ₹ 258,000 | \$3,739 | ₹ 258,000 | \$3,739 | ₹ 0 | \$0 |
| 18 | Mrs Damale Usha Balkrushna A/P Kolambe, Tal. & Dist. Ratnagiri, 9420496340 | 71 Y/F | 57098 | Rt Total Hip Rreplace- ment | Dr. Mukund Deglurkar Dr. Ankush Navale Sr. Shweta Ghag | ₹ 258,000 | \$3,739 | ₹ 258,000 | \$3,739 | ₹ 0 | \$0 |
| 19 | Miss Ghode Jagruti Jitendra A/P Khed, Tal. Chiplun, Dist. Ratnagiri, 8446322242 | 19 Y/F | 16148 | Lt Foot Corrective Osteotomy With Cc Fixation | Dr. Sumit Sonawane Dr. Pankaj Sharma Dr. Babanrao Patil Sr. Deepali More | ₹ 38,911 | \$564 | ₹ 18,911 | \$274 | ₹ 20,000 | \$290 |
| 20 | Mr Mahajan Ravindra K A/P C/27 Loksangam Vihar Near Medi Point Hospital Aounth Pune, 9881307414 | 72 Y/M | 613330 | Endoscopic Dissectomy L314 & L4 L5 | Dr. Sunil Nadkarni Dr. Sumit Sonawane Dr. Babanrao Patil Sr. Shweta Ghag | ₹ 217,695 | \$3,155 | ₹ 217,695 | \$3,155 | ₹ 0 | \$0 |
| | | | | Lt Unicon- dylar Knee Replacement | Dr. Pavankumar Kohli Dr. Babanrao Patil Sr. Shweta Ghag Br. Ajit More | | | | | | |
| 21 | Mr Phalake Akash Chandrkant A/P Tulashi Khurd Kond, Tal. Khed, Dist. Ratnagiri, 7378759726 | 23 Y/M | 614066 | Rt Hand De- bridement | Dr. Pankaj Sharma Dr. Devashish Rawal Sr. Shweta Ghag | ₹ 26,655 | \$386 | ₹ 26,655 | \$386 | ₹ 0 | \$0 |
| | | | | | | ₹ 288,623 | \$41,864 | ₹ 268,779 | \$38,823 | ₹ 203,844 | \$3,041 |
| Obstetrics & Gynaecology | | | | | | | | | | | |
| 1 | Mrs Pansande Snehal Shailendra A/P Kherdi Vikas Nagar, Tal. Chiplun, Dist. Ratnagiri, 7020706165 | 26 Y/F | 553257 | Elective Lscs | Dr. Vaishali Gaikwad Dr. Shashikant Dr. Asmita Karnalkar Sr. Poonam Dhumal | ₹ 20,012 | \$290 | ₹ 0 | \$0 | ₹ 20,012 | \$290 |
| 2 | Mrs Kondaskar Poonam Kishor A/P Agave Humanewadi, Tal.chiplun, Dist. Ratnagiri, 7057057462 | 26 Y/F | 555753 | Emergency Lscs | Dr. Vaishali Gaikwad Dr. Shashikant Dr. Asmita Karnalkar Sr. Poonam Dhumal | ₹ 18,119 | \$263 | ₹ 0 | \$0 | ₹ 18,119 | \$263 |

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| 3 | Mrs Jambarkar Chaya Gaurya A/P Navanagar Vitthal Wadi, Tal. Chiplun, Dist. Ratnagiri, 9049142357 | 50 Y/M | 610445 | Dilatation & Curratage + Biopsy | Dr. Sagar Magar Dr. Shashikant Br. Pranav Salvi Sr. Milan Sawant | ₹ 21,441 | \$311 | ₹ 2,354 | \$34 | ₹ 19,087 | \$277 |
| 4 | Mrs Jambarkar Chaya Gaurya A/P Navanagar Vitthal Wadi, Tal. Chiplun, Dist. Ratnagiri, 9049142357 | 50 Y/M | 610445 | Check Cys- tосcopy | Dr. Abhay Desai Dr. Pradip Patil Br. Pranav Salvi Sr. Milan Sawant | | | | | | |
| 5 | Mrs Javek Pramika Pandurang A/P- Veer, Tal. Chiplun, Dist. Ratnagiri, | 38 Y/F | 18985 | EUA + Endometrial Biopsy | Dr. Modak Dr. Anuradha Sr. Dipali Chavan | ₹ 4,104 | \$59 | ₹ 0 | \$0 | ₹ 4,104 | \$59 |
| 6 | Mrs Veer Tejal Ganesh A/P Kalambat Gavade Wadi, Tal. Chiplun, Dist. Ratnagiri, 8275868520 | 27 Y/F | 117051 | Emerg. Lscs | Dr. Sagar Magar Dr. Kashinath Jadhav Sr. Manali Jagushte | ₹ 23,667 | \$343 | ₹ 3,667 | \$53 | ₹ 20,000 | \$290 |
| 7 | Mrs Nivalkar Pallavi Prakash A/P-Oni, Hile Wadi, Tal. Dapoli, Dist. Ratnagiri, 9221375747 | 34 Y/F | 6718 | Elective Lscs | Dr. Jagruti Kirdant Dr. Sagar Magar Dr. Pradip Patil Sr. Manali Jagushte | ₹ 20,062 | \$291 | ₹ 0 | \$0 | ₹ 20,062 | \$291 |
| 8 | Mrs Sutar Janhavi Yogesh A/P Ambavponkshe Sutarwadi, Tal. Sangameshwar, Dist. Ratnagiri, 9767000334 | 23 Y/F | 50947 | Emerg. Lscs | Dr. Sagar Magar Dr. Pradip Patil Sr. Manali Jagushte | ₹ 18,664 | \$270 | ₹ 0 | \$0 | ₹ 18,664 | \$270 |
| | | | | | | ₹126,069 | \$1,827 | ₹ 6,021 | \$87 | ₹120,048 | \$1,740 |
| Cath Lab | | | | | | | | | | | |
| 1 | Mr Jadhav Parshuram Ravaji A/P Kurangavne, Jadhav Wadi Tal -Kankavli, Dist - Sindhudurg 9326845812, 9137803748 | 75 Y/M | 27453 | Angioplasty | Dr. Pranav Shamraj Dr. Amitkumar Bhalerao Dr. Asmita Karnalkar | ₹ 167,699 | \$2,430 | ₹ 0 | \$0 | ₹ 167,699 | \$2,430 |

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| 2 | Smt Chavan Sunita Sadashiv A/P- Devrukh, Soljai Mandir, Tal. Sangameshwar, Dist- Ratnagiri, 7448060772 | 68 Y/F | 27649 | Angiography | Dr. Pranav Shamraj Dr. Amitkumar Bhalerao Br. Sushant Kamble | | | | | | |
| 3 | Smt Chavan Sunita Sadashiv A/P- Devrukh, Soljai Mandir, Tal. Sangameshwar, Dist- Ratnagiri, 7448060772 | 68 Y/F | 27649 | Angioplasty | Dr. Pranav Shamraj Dr. Amitkumar Bhalerao Br. Sushant Kamble | ₹ 79,332 | \$1,150 | ₹ 0 | \$0 | ₹ 79,332 | \$1,150 |
| 4 | Mr Khambe Daji Dhakatu A/P Mandki, Khambe Wadi, Tal -Chiplun, Dist - Ratnagiri, 9860151681 | 70 Y/M | 236123 | Angiography | Dr. Pranav Shamraj Br. Aamir Navrang | | | | | | |
| 5 | Mr Khambe Daji Dhakatu A/P Mandki, Khambe Wadi, Tal -Chiplun, Dist - Ratnagiri, 9860151681 | 70 Y/M | 236123 | Angioplasty | Dr. Pranav Shamraj Br. Amir Navrang | ₹69,229 | \$1,003 | ₹ 0 | \$0 | ₹69,229 | \$1,003 |
| 6 | Mr Limaye Anant Vinayak A/P Tamhanmala, Tal -Chiplun, Dist - Ratnagiri, 02355228011 | 65 Y/M | 585054 | Angiography | Dr. Pranav Shamraj Br. Omkar Yadav | ₹7,140 | \$103 | ₹3,000 | \$43 | ₹4,140 | \$60 |
| 7 | Mr Nevarekar Amiruddin Fakir A/P Fansavane, Dakshinkadi Mohalla, Tal. Sangameshwar, Dist. Ratnagiri, 9890686122 | 59 Y/M | 407088 | Angiography | Dr. Pranav Shamraj Br. Sushant Kamble | ₹7,878 | \$114 | ₹3,000 | \$43 | ₹4,878 | \$71 |
| 8 | Mr Vanjare Suresh Balkrushna A/P Kalmundi, Hammanwadi, Tal -Chiplun, Dist - Ratnagiri, 9420152236 | 55 Y/M | 99318 | Angiography | Dr. Pranav Shamraj Br. Sushant Kamble | ₹7,138 | \$103 | ₹3,000 | \$43 | ₹4,138 | \$60 |
| 9 | Mrs Navrang Sunita Dhonda A/P Dahivali, Navrang Wadi, Tal -Chiplun, Dist - Ratnagiri, 8888300641 | 67 Y/F | 27900 | Angiography | Dr. Pranav Shamraj Br. Omkar Yadav | ₹ 8,031 | \$116 | ₹ 3,804 | \$55 | ₹ 4,227 | \$61 |

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| 10 | Mr Shetye Nandkumar Dattatray A/P Abloli, Sonar Wadi, Tal -Guhagar, Dist - Ratnagiri, 9881817307 | 65 Y/M | 612861 | Angiography | Dr. Pranav Shamraj Br. Omkar Yadav | ₹ 12,260 | \$178 | ₹ 12,260 | \$178 | ₹ 0 | \$0 |
| 11 | Mr Bhingarde Uday Samb A/P Sakharpa Kondgaon Tal -Sangameshwar, Dist - Ratnagiri, 9420158529 | 56 /M | 613303 | Angiography | Dr. Pranav Shamraj Br. Omkar Yadav | | | | | | |
| 12 | Mr Bhingarde Uday Samb A/P Sakharpa Kondgaon, Tal -Sangameshwar, Dist - Ratnagiri, 9420158529 | 56 Y/M | 613303 | Angioplasty | Dr. Pranav Shamraj Br. Amir Navrang | ₹ 60,958 | \$883 | ₹ 0 | \$0 | ₹ 60,958 | \$883 |
| 13 | Mr Devrukhkar Jagdish Bhikaji A/P Harnai, Tal -Dapoli, Dist - Ratnagiri, 9525898955 | 63 /M | 28042 | Angiography | Dr. Pranav Shamraj Br. Amir Navrang Br. Sushant Kamble | ₹ 5,337 | \$77 | ₹ 3,000 | \$43 | ₹ 2,337 | \$34 |
| 14 | Mrs Ghadage Sulochana Mahipat A/P Pimpali Hanuman Nagar, Tal -Chiplun, Dist - Ratnagiri, 9819945944 | 69 Y/F | 613893 | Angiography | Dr. Pranav Shamraj Br. Amir Navrang Br. Omkar Yadav | ₹ 91,548 | \$1,327 | ₹ 0 | \$0 | ₹ 91,548 | \$1,327 |
| 15 | Mr Shetye Nandkumar Dattatray A/P Abloli, Sonar Wadi Tal -Guhagar, Dist - Ratnagiri, 9881817307 | 65 Y/M | 612861 | Angioplasty | Dr. Pranav Shamraj Br. Amir Navrang | ₹ 11,438 | \$166 | ₹ 11,438 | \$166 | ₹ 0 | \$0 |
| 16 | Mr Salgaonkar Ramkushna Arjun A/P Vengurla Math Bovalekar Wadi, Tal -Vengurla, Dist - Sindhudurg, 7588204269 | 60 Y/M | 612857 | Angiography | Dr. Pranav Shamraj Br. Amir Navrang Br. Sushant Kamble | ₹ 7,639 | \$111 | ₹ 3,000 | \$43 | ₹ 4,639 | \$67 |
| 17 | Mrs Shaikhnak Jainabi Ali A/P Ghonsare Umroli, Tal -Chiplun, Dist - Ratnagiri, 8408883272 | 69 Y/F | 613939 | Coronary Angiography | Dr. Amitkumar Bhalerao Br. Sushant Kamble Br. Omkar Yadav | ₹ 7,210 | \$104 | ₹ 3,000 | \$43 | ₹ 4,210 | \$61 |

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|----|--|-----------|--------|-------------|--|----------|---------|---------|---------|---------|-------|
| 18 | Mr Thombare Ratnakar Ramchandra A/P Shir Thombarewadi, Tal -Guhagar, Dist - Ratnagiri, 9604081940 | 65 Y/M | 451424 | Angiography | Dr. Amitkumar Bhalerao Br. Amir Navrang | ₹ 5,612 | \$81 | ₹ 3,000 | \$43 | ₹ 2,612 | \$38 |
| 19 | Mr Pawaskar Vijayanand Ganpat A/P Karjuve, Tal. Sangameshwar, Dist. Ratnagiri, | 47 /M | 14179 | Angiography | Dr. Pranav Shamraj Br. Omkar Yadav | ₹ 8,973 | \$130 | ₹ 4,550 | \$66 | ₹ 4,423 | \$64 |
| 20 | Mrs Fage Laxmi Narayan A/P Chiveli Kadam Wadi, Tal. Chiplun, Dist. Ratnagiri, 9021378571 | 70 /F | 611333 | Angiography | Dr. Pranav Shamraj Br. Omkar Yadav | ₹ 4,413 | \$64 | ₹ 3,000 | \$43 | ₹ 1,413 | \$20 |
| 21 | Mr Vitmal Anant Govind A/P Parshuram, Tal. Chiplun, Dist. Ratnagiri, 9820941657 | 60 /M | 609898 | Angioplasty | Dr. Pranav Shamraj Dr. Asmita Karnalkar Br. Omkar Yadav | ₹101,812 | \$1,476 | ₹80,000 | \$1,159 | ₹21,812 | \$316 |
| 22 | Mr Chogale Mohamad Husen A/P Khed Karje, Tal. Khed, Dist. Ratnagiri, 9673839179 | 65 /M | 609906 | Angioplasty | Dr. Pranav Shamraj Dr. Asmita Karnalkar Br. Sushant Kamble | ₹111,482 | \$1,616 | ₹80,000 | \$1,159 | ₹31,482 | \$456 |
| 23 | Mr Sutar Dattaram Vitthal A/P Alsure, Sutar Wadi, Tal. Khed, Dist. Ratnagiri, 8999883102 | 60 /M | 609895 | Angioplasty | Dr. Pranav Shamraj Dr. Asmita Karnalkar Br. Aamir Navrang | ₹104,883 | \$1,520 | ₹80,000 | \$1,159 | ₹24,883 | \$361 |
| 24 | Mr Jawale Soma Gopal A/P Veer, Jawale Wadi, Tal. Chiplun, Dist. Ratnagiri, 8422046065 | 65 /M | 612225 | Angiography | Dr. Pranav Shamraj Br. Omkar Yadav | ₹9,104 | \$132 | ₹4,830 | \$70 | ₹4,274 | \$62 |
| 25 | Mr Dalvi Dattaram Manohar A/P. Kokare, Chansopi, Tal. Chiplun, Dist. Ratnagiri, 9221975354 | 55 /M | 275868 | Angioplasty | Dr. Pranav Shamraj Dr. B. N. Patil Br. Aamir Navrang | ₹79,228 | \$1,148 | ₹60,000 | \$870 | ₹19,228 | \$279 |
| 26 | Mr Nevrekar Yusuf Mohammad A/P Kalambaste, Tal. Sangameshwar, Dist- Ratnagiri, 9405654159 | 65 /M | 613936 | Angiography | Dr. Pranav Shamraj Br. Omkar Yadav | ₹3,035 | \$44 | ₹1,079 | \$16 | ₹1,956 | \$28 |

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|-----------------------------|--|----------|--------|----------------------|--|----------|----------|-----------|---------|----------|---------|
| 27 | Mrs Kadam Sarika Shankar A/P Vadera, Tal -Chiplun, Dist - Ratnagiri, | 46/F | 118734 | Angiography | Dr. Pranav Shamraj Br. Omkar Yadav | ₹10,989 | \$159 | ₹10,989 | \$159 | ₹0 | \$0 |
| | | | | | | ₹982,328 | \$14,237 | ₹ 372,990 | \$5,405 | ₹609,378 | \$8,832 |
| Ophthalmic Surgeries | | | | | | | | | | | |
| 1 | Mr Dalvi Subhash Anant A/P Kokare Chousopi, Tal -Chiplun, Dist - Ratnagiri, 9011846361 | 67 /M | 227828 | Rt. Eye Phaco+IOL | Dr. Bhaskar Gupta S/N Harshada Bharati | ₹13,454 | \$195 | ₹2,200 | \$32 | ₹11,254 | \$163 |
| 2 | Mr Dalvi Subhash Anant A/P Kokare, Chousopi, Tal-Chiplun, Dist. Ratnagiri, 9011846361 | 67 /M | 227828 | Lens Redi- aling | Dr. Shankar Ranveer S/N Harshada Bharati | | | | | | |
| 3 | Mrs Dhumak Ananadi Pandu A/P Murtavade Katal Wadi, Tal Chiplun, Dist. Ratnagiri, 9405895573 | 67 /F | 611367 | Lt. Eye Phaco+IOL | Dr. Rory Nicholson S/N Harshada Bharati | ₹ 11,910 | \$173 | ₹ 0 | \$0 | ₹ 11,910 | \$173 |
| 4 | Smt Palekar Chandra Eknath A/P Panchpandari Rastale, Tal. Dapoli, Dist. Ratnagiri, 860599576 | 65 /F | 611396 | Lt. Eye Phaco+IOL | Dr. Bhaskar Gupta S/N Sanjivani Gavanang. | ₹ 12,707 | \$184 | ₹ 0 | \$0 | ₹12,707 | \$184 |
| 5 | Mrs Dalvi Hemangi Chandrakanta A/P 27/173 Dindoshi Nagar, M.h.b.colony, Near Reliance Energy, Mulad East, Mumbai, 9322116649 | 62 /F | 611352 | Rt. Eye Phaco+IOL | Dr. Rory Nicholson S/N Sanjivani Gavanang. | ₹16,543 | \$240 | ₹13,000 | \$188 | ₹3,543 | \$51 |
| 6 | Mr Sawant Rajaram Mahadev A/P Koythare, Gurav Wadi, Tal. Chiplun, Dist. Ratnagiri, 9820362734 | 82 /M | 611391 | Rt. Eye Phaco+IOL | Dr. Rory Nicholson S/N Harshada Bharati | ₹12,235 | \$177 | ₹ 0 | \$0 | ₹12,235 | \$177 |
| 7 | Mrs Khandekar Gangabai Raju A/P Ghaval Gavadewadi, Tal. Chiplun, Dist .- Ratnagiri, 9405895573 | 67/F | 611368 | Rt. Eye Phaco+IOL | Dr. Bhaskar Gupta S/N Sanjivani Gavanang. | ₹12,125 | \$176 | ₹ 0 | \$0 | ₹12,125 | \$176 |

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|----|---|----------|--------|----------------------|--|----------|-------|-----|-----|----------|-------|
| 8 | Mrs Dhotre Vandana Anant A/P Vanand, Tal- Dapoli, Dist- Ratnagiri 7798247768 | 59/F | 132330 | Rt. Eye Phaco+IOL | Dr. Bhaskar Gupta S/N Sanjivani Gavanang | ₹ 11,921 | \$173 | ₹ | \$0 | ₹ 11,921 | \$173 |
| 9 | Smt Jadhav Janabai Shantaram A/P Shirshinge Baudhwadi, Tal. Dapoli , Dist Ratnagiri, 7798247768 | 73/F | 611401 | Lt. Eye Phaco+IOL | Dr. Vikrant Narvade S/N Harshada Bharati | ₹12,160 | \$176 | ₹ 0 | \$0 | ₹12,160 | \$176 |
| 10 | Smt Joyashi Hiray Tanu A/P Murtavade, Tal.- Chiplun, Dist Ratnagiri 9405895573 | 64/F | 611363 | Rt. Eye SICS+IOL | Dr. Payal Pandit S/N Sanjivani Gavanang | ₹8,968 | \$130 | ₹ 0 | \$0 | ₹ 8,968 | \$130 |
| 11 | Mr Rambade Devji Tanu A/P Kere, Tok Wadi, Tal.- Chiplun, Dist Ratnagiri, | 65 /M | 448517 | Lt. Eye SICS+IOL | Dr. Payal Pandit S/N Sanjivani Gavanang | ₹ 8,152 | \$118 | ₹ 0 | \$0 | ₹ 8,152 | \$118 |
| 12 | Mr Dalvi Dattaram Pilaji A/P Kokare Chausopi Wadi , Tal. Chiplun, Ratnagiri, 9545379033 | 71 /M | 109148 | Rt. Eye Phaco+IOL | Dr. Bhaskar Gupta S/N Harshada Bharati | ₹12,378 | \$179 | ₹ 0 | \$0 | ₹12,378 | \$179 |
| 13 | Mrs Yadav Parvati Mahadev A//P Navshi, Hanuman Wadi, Dapoli, Dist. Ratnagiri, 9923919062 | 57/F | 611388 | Lt. Eye Phaco+IOL | Dr. Bhaskar Gupta S/N Harshada Bharati | ₹11,954 | \$173 | ₹ 0 | \$0 | ₹ 11,954 | \$173 |
| 14 | Mrs Kadam Nirmala Vishnu A/P Nandgaon, Dhamal Wadi, Tal. Guhagar, Dist. Ratnagiri, 8308493311 | 70/F | 604242 | Lt. Eye Phaco+IOL | Dr. Rory Nicholson Sr. Kath Yates | ₹12,071 | \$175 | ₹ 0 | \$0 | ₹ 12,071 | \$175 |
| 15 | Mr Pawar Ramdas Gangaram A/P Kudave, Baudtha Wadi, Tal. Dapoli , Dist. Ratnagiri 8767578587 | 73/F | 611403 | Rt. Eye Phaco+IOL | Dr. Bhaskar Gupta S/N Harshada Bharati | ₹11,869 | \$172 | ₹ 0 | \$0 | ₹ 11,869 | \$172 |
| 16 | Mr Gothankar Tulaji Bhikaji A/P Goval , Tal - Rajapur, Dist -Ratnagiri | 70 /M | 611307 | Lt. Eye Phaco+IOL | Dr. Bhaskar Gupta S/N Harshada Bharati | ₹14,524 | \$210 | ₹ 0 | \$0 | ₹14,524 | \$210 |

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|----|--|----------|--------|----------------------|--|---------|-------|--------|------|---------|-------|
| 17 | Mr Sawant Bhargav Krushna A/P Tere, Dalvi Wadi, Tal Sangmeshwar, Dist. Ratnagiri, 9767598368 | 65 /M | 612072 | Rt. Eye SICS+IOL | Dr. Payal Pandit S/N Sanjivani Gavanang | ₹8,960 | \$130 | ₹0 | \$0 | ₹8,960 | \$130 |
| 18 | Mr Ghag Shreeram Gajanan A/P Sawarde, Kedarnath Colony, Tal- Chiplun, Dist. Ratnagiri, 8983673889 | 69 /M | 22980 | Lt. Eye Phaco+IOL | Dr. Rory Nicholson S/N Harshada Bharati | ₹15,127 | \$219 | ₹6,000 | \$87 | ₹9,127 | \$132 |
| 19 | Mr Korlekar Vishwanath Vitthal A/P Holi, Phol Wadi, Tal -Rajapur, Dist - Ratnagiri, 7218393383 | 63 /M | 611316 | Rt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Sanjivani Gavanang | ₹9,008 | \$131 | ₹0 | \$0 | ₹9,008 | \$131 |
| 20 | Smt Baikar Manjula Mahadev A/P Satkondi, Baikar Wadi, Tal & Dist -Ratnagiri, 7768973137 | 61 /F | 422785 | Rt. Eye Phaco+IOL | Dr. Rory Nicholson S/N Harshada Bharati | ₹12,205 | \$177 | ₹0 | \$0 | ₹12,205 | \$177 |
| 21 | Mr Survanshi Dnyandevo Ganpati A/P Ghanav, Pathan, Satara, 9763566695 | 48 /M | 612102 | Lt. Eye Phaco+IOL | Dr. Bhaskar Gupta S/N Sanjivani Gavanang | ₹11,805 | \$171 | ₹0 | \$0 | ₹11,805 | \$171 |
| 22 | Mr Doiphode Prashant Bhalchandra A/P Chiplun, Shankar Wadi, Tal-Chiplun Dist -Ratnagiri, 8149390039 | 43 /M | 612087 | Lt. Eye Phaco+IOL | Dr. Payal Pandit S/N Harshada Bharati | ₹11,930 | \$173 | ₹0 | \$0 | ₹11,930 | \$173 |
| 23 | Mr Chavan Baliram Sitaram A/P Rampur, Talyachiwadi, Tal. Chiplun, Dist Ratnagiri, 9275262192 | 78 /M | 139842 | Lt. Eye Phaco+IOL | Dr. Bhaskar Gupta S/N Harshada Bharati | ₹12,475 | \$181 | ₹0 | \$0 | ₹12,475 | \$181 |
| 24 | Smt Gudekar Jayashri Sonu A/P Mandkl. Gudekar Wadi, Tal- Chiplun, Dist Ratnagiri, 8380961772 | 69 /M | 548938 | Lt. Eye Phaco+IOL | Dr. Shankar Ranveer S/N Sanjivani Gavanang | ₹8,395 | \$122 | ₹0 | \$0 | ₹8,395 | \$122 |
| 25 | Mr Gudekar Vitthal Balkrushna A/P Mandkl. Gudekar Wadi, Tal- Chiplun, Dist Ratnagiri, 8380961772 | 65 /F | 8637 | Lt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Harshada Bharati | ₹12,130 | \$176 | ₹0 | \$0 | ₹12,130 | \$176 |

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|----|--|-------|--------|-------------------|--|----------|-------|---------|------|----------|-------|
| 26 | Mrs Kavan Kalabai Maruti A/P Pathan ,Tal. Pathan, Dist Satara | 70/F | 612103 | Lt. Eye SICS+IOL | Dr .Vikrant Narvade S/N Sanjivani Gavanang | ₹ 8,185 | \$119 | ₹ 0 | \$0 | ₹ 8,185 | \$119 |
| 27 | Mrs Repal Satyabhama Dattaram A/P Nivali, Koste Wadi, Tal -Chiplun, Dist. Ratnagiri, 7507586260 | 67/F | 333141 | Rt. Eye Phaco+IOL | Dr. Bhaskar Gupta S/N Harshada Bharati | ₹ 11,754 | \$170 | ₹ 0 | \$0 | ₹ 11,754 | \$170 |
| 28 | Mrs Rane Suhasini Anaji A/P Kankavali , Dist - Sindhudurga | 63/F | 357849 | Lt. Eye SICS+IOL | Dr. Payal Pandit S/N Harshada Bharati | ₹ 11,309 | \$164 | ₹ 0 | \$0 | ₹ 11,309 | \$164 |
| 29 | Mrs Sadadekar Sumati Sonu A/P Kankavali, Bajarpeth, Dist - Sindhudurg, 9422346484 | 60/F | 612246 | Rt. Eye SICS+IOL | Dr .Vikrant Narvade S/N Sanjivani Gavanang | ₹ 7,877 | \$114 | ₹ 0 | \$0 | ₹ 7,877 | \$114 |
| 30 | Mr Ghag Jaysing Shankar A/P Shirwadkar Chawl Santosh Wadi, Thane West, 9702800186 | 70 /M | 612182 | Rt. Eye SICS+IOL | Dr. Payal Pandit S/N Harshada Bharati | ₹ 9,043 | \$131 | ₹ 0 | \$0 | ₹ 9,043 | \$131 |
| 31 | Smt Jadhav Laxmibai Kamalakar A/P Ambika Nagar No 2, Wagale Estate, Road No 16, Thane West, 8652487538 | 55 /F | 612259 | Rt. Eye SICS+IOL | Dr .Vikrant Narvade S/N Sanjivani Gavanang | ₹ 8,337 | \$121 | ₹ 3,550 | \$51 | ₹ 4,787 | \$69 |
| 32 | Smt Pawar Sumati Gopal A/P Karul , Tal - Vaibhavwadi, Dist - Sidhudurg, 9420654776 | 65 /F | 612237 | Rt. Eye SICS+IOL | Dr. Payal Pandit S/N Harshada Bharati | ₹ 10,610 | \$154 | ₹ 0 | \$0 | ₹ 10,610 | \$154 |
| 33 | Mr Kerkar Ramchandra Ganesh A/P Tulas , Tal -Vengurla, Dist -Sindhudurg 9420305982 | 74 /M | 612236 | Rt. Eye SICS+IOL | Dr. Payal Pandit S/N Harshada Bharati | ₹ 12,133 | \$176 | ₹ 0 | \$0 | ₹ 12,133 | \$176 |
| 34 | Mr Kodare Mahadev Gunaji A/P Nivali Kodarewadi, Tal- Chiplun, Dist -Ratnagiri, 89594198894 | 52 /M | 188936 | Lt. Eye SICS+IOL | Dr .Vikrant Narvade S/N Sanjivani Gavanang | ₹ 9,008 | \$131 | ₹ 0 | \$0 | ₹ 9,008 | \$131 |

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| 35 | Mr Nirgun Sadanaad Bhiva A/P Kusur, Tal - Vaibhav Wadi, Dist -Sindhudurg 9421647510 | 65 /M | 612238 | Rt. Eye SICS+IOL | Dr. Payal Pandit S/N Harshada Bharati | ₹8,763 | \$127 | ₹ 0 | \$0 | ₹ 8,763 | \$127 |
| 36 | Mr Khambe Devji Krushna A/P - Nivali , Tal -Chiplun, Dist Ratnagiri | 63 /M | 78279 | Lt. Eye SICS+IOL | Dr .Vikrant Narvade S/N Sanjivani Gavanang | ₹8,325 | \$121 | ₹0 | \$0 | ₹8,325 | \$121 |
| 37 | Mr Kerkar Ramesh Ganesh A/P Tulas, Tal- Vengurla, Dist - Sindhudurg, 9420305982 | 65 /M | 424772 | Lt. Eye SICS+IOL | Dr .Vikrant Narvade S/N Sanjivani Gavanang | ₹12,133 | \$176 | ₹ 0 | \$0 | ₹12,133 | \$176 |
| 38 | Mrs Rane Sneha Subhash A/P Kankavali,Tal. Chiplun, Dist -Ratnagiri, 8805433358 | 50 /F | 275555 | Lt. Eye Phaco+IOL | Dr. Payal Pandit S/N Harshada Bharati | ₹14,789 | \$214 | ₹ 6,000 | \$87 | ₹ 8,789 | \$127 |
| 39 | Mr Kambale Mohan Maruti A/P Miraj Datta Colony , Dist -Sangali. 7387181812 | 68 /M | 612200 | Rt. Eye Phaco+IOL | Dr. Payal Pandit S/N Harshada Bharati | ₹20,526 | \$297 | ₹ 10,000 | \$145 | ₹ 10,526 | \$153 |
| 40 | Mr Sawant Vasant Gopal A/P Karul ,Vaibhavwadi, Dist -Sindhudurg 7588858412 | 73 /M | 612239 | Rt. Eye SICS+IOL | Dr .Vikrant Narvade S/N Sanjivani Gavanang | ₹ 8,536 | \$124 | ₹ 1,000 | \$14 | ₹ 7,536 | \$109 |
| 41 | Mr Mandavkar Ganpat Ramchandra At Hadkani, Post Nandgaon, Satichi Wadi, Tal. Chiplun , Dist -Ratnagiri | 68 /M | 582684 | Lt. Eye SICS+IOL | Dr .Vikrant Narvade S/N Sanjivani Gavanang | ₹ 12,071 | \$175 | ₹ 0 | \$0 | ₹ 12,071 | \$175 |
| 42 | Mr Yadav Mahadev Rambhau A/P Kadvai, Tal -Chiplun, Dist - Ratnagiri, 9527106532 | 75 /M | 612211 | Rt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Harshada Bharati | ₹ 7,806 | \$113 | ₹ 0 | \$0 | ₹ 7,806 | \$113 |
| 43 | Smt Salvi Laxmi Pratap A/P Jamsut, Madhan Wadi, Tal -Guhaghar, Dist- Ratnagiri 9420791099 | 55 /F | 606879 | Lt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Harshada Bharati | ₹ 7,085 | \$103 | ₹ 0 | \$0 | ₹ 7,085 | \$103 |

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|----|--|------------|--------|----------------------|--|----------|-------|-----|-----|----------|-------|
| 44 | Mr Naralkar Yashwant Dhondu A/P Kapare, Varchi Wadi, Tal-Chiplun, Dist -Ratnagiri, 9921984518 | 68 /M | 612213 | Rt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Vaishnavi Kanavaje | ₹ 7,997 | \$116 | ₹ 0 | \$0 | ₹ 7,997 | \$116 |
| 45 | Mrs Gosavi Vijaya Jagannath A/P Fondaghat, Gangwadi, Tal-Kankavli, Dist- Ratnagiri, 9404449058 | 63 /F | 323759 | Lt. Eye SICS+ IOL | Dr. Shankar Ranveer S/N Vaishnavi Kanavaje | ₹ 7,869 | \$114 | ₹ 0 | \$0 | ₹ 7,869 | \$114 |
| 46 | Mrs Parab Pramila Prakash A/P Harkul Budruk, Tal - Vaibhavwadi, Dist - Sindhudurg. | 54 /F | 612243 | Rt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Vaishnavi Kanavaje | ₹ 8,057 | \$117 | ₹ 0 | \$0 | ₹ 8,057 | \$117 |
| 47 | Mr Parab Prakash Laxman A/P Harkul, Katalkarwadi, Tal - Vaibhavwadi, Dist - Sindhudurg. 8275780285 | 55 /M | 612242 | Rt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Vaishnavi Kanavaje | ₹ 8,961 | \$130 | ₹ 0 | \$0 | ₹ 8,961 | \$130 |
| 48 | Mr Kulaye Shripat Govind At/P. Kusur, Pimpalwadi, Tal -Vaibhavwadi, Dist -Sindhudurg. 9420469927 | 67 /M | 299992 | Lt. Eye SICS+IOL | Dr. Payal Pandit S/N Harshada Bharati | ₹ 10,567 | \$153 | ₹ 0 | \$0 | ₹ 10,567 | \$153 |
| 49 | Mr Mane Dattaram Sakharam A/P Het Khadak Wadi, Tal - Vaibhavvadi, Dist - Sindhudurg. 9011712567 | 72 yr/M | 350367 | Rt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Sanjivani Gavanang | ₹ 8,657 | \$125 | ₹ 0 | \$0 | ₹ 8,657 | \$125 |
| 50 | Mr Fondake Balkrushna Sadashiv A/P - Het Khadakwadi, Tal - Vaibhavvadi, Dist - Sindhudurg. 9604832714 | 65 /M | 612803 | Lt. Eye SICS+IOL | Dr. Payal Pandit S/N Sanjivani Gavanang | ₹ 8,525 | \$124 | ₹ 0 | \$0 | ₹ 8,525 | \$124 |
| 51 | Mr Chougule Padmanna Chintamani A/P Karnur, Kagal Dist - Kolhapur, 7038881393 | 73 /M | 612858 | Rt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Sanjivani Gavanang | ₹ 8,566 | \$124 | ₹ 0 | \$0 | ₹ 8,566 | \$124 |
| 52 | Smt Gurav Prabhavati Shantaram A/P Kokisare, Tal -Vaibhavwadi, Dist - Sindhudurga | 62/F | 612812 | Lt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Sanjivani Gavanang | ₹ 8,327 | \$121 | ₹ 0 | \$0 | ₹ 8,327 | \$121 |

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|----|--|----------|--------|---------------------|--|----------|-------|---------|------|----------|-------|
| 53 | Mrs Palaye Sunanda Madhukar A/P Bandhawadi, Tal. Sangameshwar, Dist. - Ratnagiri | 57/F | 241053 | Rt. Eye SICS+IOL | Dr. Payal Pandit S/N Harshada Bharati | ₹ 8,942 | \$130 | ₹ 0 | \$0 | ₹ 8,942 | \$130 |
| 54 | Mr Chavan Dattaram Ganpat A/P Kokeshri, Tal -Vaibhavwadi, Dist - Sindhudurg, 7038597765 | 65 /M | 612800 | Lt. Eye SICS+IOL | Dr. Payal Pandit S/N Harshada Bharati | ₹ 8,393 | \$122 | ₹ 0 | \$0 | ₹ 8,393 | \$122 |
| 55 | Mrs More Nirmala Sitaram A/P Rajivali, Kalbe Wadi, Tal. Sangameshwar, Dist Ratnagiri, 7066226062 | 50/F | 501125 | Lt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Sanjivani Gavanang | ₹ 8,017 | \$116 | ₹ 0 | \$0 | ₹ 8,017 | \$116 |
| 56 | Mrs Nalawade Pratibha Pradip At Pali Post Kalmundi, Nalawade Wadi, Tal.- Guhagar, Dist Ratnagiri 7776820918 | 50/F | 611353 | Rt. Eye SICS+IOL | Dr. Payal Pandit S/N Harshada Bharati | ₹ 12,013 | \$174 | ₹ 0 | \$0 | ₹ 12,013 | \$174 |
| 57 | Mr Nar Anant Kashiram A/P Napane, Borchi Wadi, Tal- Vaibhavwadi, Dist - Sindhudurg, 9403640547 | 66 /M | 612790 | Lt. Eye SICS+IOL | Dr. Payal Pandit S/N Harshada Bharati | ₹ 8,526 | \$124 | ₹ 0 | \$0 | ₹ 8,526 | \$124 |
| 58 | Mr Belekar Rajaram Ramchandra A/P Kokisarli, Tal- Vaibhavwadi, Dist - Sindhudurg | 72 /M | 448815 | Rt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Sanjivani Gavanang | ₹ 9,926 | \$144 | ₹ 0 | \$0 | ₹ 9,926 | \$144 |
| 59 | Smt Shetye Sarita Govind A/P Akale, Chorgewadi, Tal-Chiplun, Dist. Ratnagiri, 9405231484 | 65/F | 612818 | Lt. Eye SICS+IOL | Dr. Payal Pandit S/N Harshada Bharati | ₹ 9,118 | \$132 | ₹ 3,500 | \$51 | ₹ 5,618 | \$81 |
| 60 | Mr Jadhav Vijay Yashwant A/P Kokeshri, Tal -Vaibhavwadi, Dist - Sindhudurg, 9767504787 | 60 /M | 612804 | Rt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Sanjivani Gavanang | ₹ 8,634 | \$125 | ₹ 0 | \$0 | ₹ 8,634 | \$125 |
| 61 | Mrs Khan Mariamibi Mohamad A/P Nadavade Vaibhavwadi, Dist - Sindhudurg, 9922930526 | 55 /F | 612791 | Lt. Eye SICS+IOL | Dr. Payal Pandit S/N Harshada Bharati | ₹ 8,214 | \$119 | ₹ 0 | \$0 | ₹ 8,214 | \$119 |

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| 62 | Mrs Katkar Sumati Vishnu A/P Kusur, Tal- Vaibhav Wadi, Dist - Sindhudurg, 9420726987 | 72 /M | 612796 | Rt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Sanjivani Gavanang | ₹ 8,944 | \$130 | ₹ 0 | \$0 | ₹ 8,944 | \$130 |
| 63 | Mr Fondke Dhondu Laxman A/P.het, Ramwadi, Vaibhawadi, Dist-Sindhudurg | 71 /M | 423697 | Lt. Eye SICS+IOL | Dr. Vikrant Narvade S/N Akanksha Sawant | ₹ 8,752 | \$127 | ₹ 0 | \$0 | ₹ 8,752 | \$127 |
| 64 | Mrs Chaudhari Sumitra Mohan A/P Kusur, Pimpal Wadi, Tal- Vaibhavwadi, Dist - Sindhudurg, 8379025706 | 55 /M | 612789 | Lt. Eye SICS+IOL | Dr. Vikrant Narvade S/N Akanksha Sawant | ₹ 8,805 | \$128 | ₹ 0 | \$0 | ₹ 8,805 | \$128 |
| 65 | Mr Shirke Vasudev Jayram A/P Kudap, Tal-Chiplun, Dist- Ratnagiri | 69 /M | 32723 | Rt. Eye SICS+IOL | Dr. Vikrant Narvade S/N Akanksha Sawant | ₹ 11,294 | \$164 | ₹ 0 | \$0 | ₹ 11,294 | \$164 |
| 66 | Smt Kajrekar Chandrabhaga Kashiram A/P Vaibhavwadi , Dist- Sindhudurg, | 64 /F | 612811 | Rt. Eye SICS+IOL | Dr. Vikrant Narvade S/N Akanksha Sawant | ₹ 8,800 | \$128 | ₹ 0 | \$0 | ₹ 8,800 | \$128 |
| 67 | Mr Fondke Shantaram Nagu A/P Het, Shantaram Nagu, Tal - Vaibhavwadi, Dist - Sindhudurg. | 80 /M | 612788 | Rt. Eye SICS+IOL | Dr. Vikrant Narvade S/N Akanksha Sawant | ₹ 10,342 | \$150 | ₹ 0 | \$0 | ₹ 10,342 | \$150 |
| 68 | Mr Chavan Dagdu Ravji A/P Hativ, Chavan Wadi, Tal - Sangmeshwar, Dist - Ratnagiri, 9420730767 | 71 /M | 609334 | Rt. Eye SICS+IOL | Dr. Vikrant Narvade S/N Akanksha Sawant | ₹ 11,827 | \$171 | ₹ 6,000 | \$87 | ₹ 5,827 | \$84 |
| 69 | Mr Fondake Tukaram Rajaram A/P Het, Tal -Vaibhavwadi , Dist - Sindhudurg, 9604832714 | 60 /M | 612801 | Rt. Eye SICS+IOL | Dr. Vikrant Narvade S/N Harshada Bharati | ₹ 8,753 | \$127 | ₹ 0 | \$0 | ₹ 8,753 | \$127 |
| 70 | Mr Ravrane Ashok Vasant A/P Yedgaon Fausdar Wadi, Tal - Vaibhavwadi, Dist - Sindhudurg, 9420206428 | 58 /M | 612785 | Rt. Eye SICS+IOL | Dr. Vikrant Narvade S/N Harshada Bharati | ₹ 8,620 | \$125 | ₹ 0 | \$0 | ₹ 8,620 | \$125 |

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|----|--|----------|--------|------------------------|--|---------|-------|----------|-------|---------|-------|
| 71 | Mr Sutar Rajaram Narayan A/P Nachane ,Tal - Vaibhavwadi, Dist - Sindhudurg. | 60 /M | 612806 | Lt. Eye Phaco+IOL | Dr .Vikrant Narvade S/N Harshada Bharati | ₹12,824 | \$186 | ₹ 0 | \$0 | ₹12,824 | \$186 |
| 72 | Mr Khan Abuakkar Harun A/P Mosam, Rajapur, Tal- Rajapur, Dist- Ratnagiri, 9922930526 | 70 /M | 612792 | Rt. Eye Pte- rygium | Dr. Payal Pandit S/N Vaishnavi Kanavaje | ₹ 6,322 | \$92 | ₹ 0 | \$0 | ₹ 6,322 | \$92 |
| 73 | Mr Lingayat Sitaram Mahadev A/P Tere Burambi, Gopal Wadi, Tal- Sangmeshwar, Dist-Ratnagiri, 9403880171 | 62 /M | 612048 | Rt. Eye Phaco+IOL | Dr. Rory Nicholson S/N Harshada Bharati | ₹18,460 | \$268 | ₹ 10,000 | \$145 | ₹ 8,460 | \$123 |
| 74 | Mr Patole Ramesh Anant A/P Ratambi Post Rajivali, Tal -Vengurla, Dist - Sindhudurg, 9922749187 | 58 /M | 613312 | Rt. Eye Phaco+IOL | Dr. Bhaskar Gupta S/N Sanjivani Gavanang . | ₹12,324 | \$179 | ₹ 0 | \$0 | ₹12,324 | \$179 |
| 75 | Smt Sangamiskar Shevanti Bandu A/P Kudap, Sawarde, Tal- Chiplun, Dist- Ratnagiri | 73 /M | 470928 | Lt. Eye Phaco+IOL | Dr. Rory Nicholson S/N Harshada Bharati | ₹12,341 | \$179 | ₹ 0 | \$0 | ₹12,341 | \$179 |
| 76 | Mr Salunkhe Parikshit Sauryaji A/P Kusur, Tem Wadi, Tal - Vaibhavwadi, Dist - Sindhudurg, 9076375385 | 65 /M | 612786 | Rt. Eye Phaco+IOL | Dr. Bhaskar Gupta S/N Sanjivani Gavanang . | ₹12,821 | \$186 | ₹ 0 | \$0 | ₹12,821 | \$186 |
| 77 | Mr Jadhav Vitthal Tukaram A/P Murdav, Gurav Wadi, Tal-Sangmeshwar, Dist-Ratnagiri. 8605910235 | 70 /M | 594184 | Lt. Eye Phaco+IOL | Dr. Payal Pandit S/N Harshada Bharati | ₹12,080 | \$175 | ₹ 0 | \$0 | ₹12,080 | \$175 |
| 78 | Mr Palkar Gopal Govind A/P Kokeshri, Tal - Vaibhavwadi, Dist - Sindhudurg, 9404442227 | 65 /M | 612793 | Lt. Eye Phaco+IOL | Dr. Bhaskar Gupta S/N Sanjivani Gavanang . | ₹12,860 | \$186 | ₹ 0 | \$0 | ₹12,860 | \$186 |
| 79 | Smt Shivgan Jayashri Atmaram A/P Napane, Tal - Vaibhavwadi, Dist - Sindhudurg, 9168436532 | 61/F | 612808 | Lt. Eye Phaco+IOL | Dr. Bhaskar Gupta S/N Sanjivani Gavanang | ₹13,302 | \$193 | ₹ 0 | \$0 | ₹13,302 | \$193 |

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|----|---|----------|--------|----------------------|--|----------|-------|---------|------|----------|-------|
| 80 | Smt Sawant Sumitra Dattaram A/P Kolthare Gurav Wadi, Dapoli, Ratnagiri 9270173528 | 67/F | 612709 | Rt. Eye Phaco+IOL | Dr. Bhaskar Gupta S/N Sanjivani Gavanang | ₹13,486 | \$195 | ₹ 3,500 | \$51 | ₹ 9,986 | \$145 |
| 81 | Mr Ozaramkar Ankush Laxman A/P Waghere, Tal- Kankavli, Dist-Sindhudurg, 9373990167 | 65 /M | 613345 | Rt. Eye Phaco+IOL | Dr. Payal Pandit S/N Harshada Bharati | ₹12,570 | \$182 | ₹ 0 | \$0 | ₹ 12,570 | \$182 |
| 82 | Mr Gurav Sadanand Nana A/P Wagheri, Tal- Kankavli, Dist-Sindhudurg, 9373990167 | 65 /M | 613347 | Lt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Harshada Bharati | ₹ 8,786 | \$127 | ₹ 0 | \$0 | ₹ 8,786 | \$127 |
| 83 | Mr Karambale Sadashiv Babu A/P Kokeshri, Tal - Vaibhavwadi, Dist - Sindhudurg. 7588585696 | 75 /M | 612799 | Lt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Harshada Bharati | ₹ 9,864 | \$143 | ₹ 0 | \$0 | ₹ 9,864 | \$143 |
| 84 | Mrs Deshinge Nirmala Dhanpal A/P Chokak,Hatkangale, Dist- Kolhapur | 65 /F | 612859 | Rt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Harshada Bharati | ₹ 8,716 | \$126 | ₹ 0 | \$0 | ₹ | \$126 |
| 85 | Mrs Khandekar Sukhada Suresh A/P Devrukh Khalchi Ali, Tal- Sangmeshwar, Dist-Ratnagiri 9421595882 | 50/F | 565185 | Rt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Harshada Bharati | ₹ 10,149 | \$147 | ₹ 6,000 | \$87 | ₹ 4,149 | \$60 |
| 86 | Mr Shigwan Soma Ganu At/P Sarand Tal- Sangmeshwar, Dist-Ratnagiri. | 71 /M | 357662 | Lt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Harshada Bharati | ₹ 8,434 | \$122 | ₹ 0 | \$0 | ₹ 8,434 | \$122 |
| 87 | Smt Nitore Chandrabhaga Dhonde A/P Dingani, Kashite Wadi, Tal- Sangmeshwar, Dist-Ratnagiri | 65 /F | 613916 | Lt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Vaishnavi Kanavaje | ₹ 7,971 | \$116 | ₹ 0 | \$0 | ₹ 7,971 | \$116 |
| 88 | Mr Gurav Dhanaji Sakharam A/P - Kuchambe, Gurav Wadi, Tal- Chiplun, Dist -Ratnagiri, 8805604387 | 55 /M | 22488 | Lt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Vaishnavi Kanavaje | ₹ 7,682 | \$111 | ₹ 0 | \$0 | ₹ 7,682 | \$111 |

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|----|---|-------|--------|------------------|--|------------|-----------|-------------|----------|-------------|----------|
| 89 | Mrs Gurav Vasanti Ganpat A/P Kuchambe, Surve Wadi, Tal- Chiplun, Dist -Ratnagiri, 8888468308 | 65/F | 265631 | Lt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Vaishnavi Kanavaje | ₹ 7,686 | \$111 | ₹ 0 | \$0 | ₹ 7,686 | \$111 |
| 90 | Mrs Manjarekar Manjiri Mohan A/P Kokishare, Tal- Vaibhavwadi, Dist - Sindhudurg, | 47/F | 612810 | Rt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Harshada Bharati | ₹ 9,347 | \$135 | ₹ 0 | \$0 | ₹ 9,347 | \$135 |
| 91 | Smt Naram Nirmala Gangaram A/P Mangavali, Tal - Vaibhavwadi, Dist - Sindhudurg, 9763188155 | 75/F | 612797 | Rt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Harshada Bharati | ₹ 8,836 | \$128 | ₹ 0 | \$0 | ₹ 8,836 | \$128 |
| 92 | Mr Mane Ganpat Ramchandra A/P Tural, Kumbhar Wadi, Tal- Sangmeshwar, Dist-Ratnagiri, 9146070670 | 50 /M | 521809 | Rt. Eye SICS+IOL | Dr. Shankar Ranveer S/N Harshada Bharati | ₹ 7,349 | \$107 | ₹ 0 | \$0 | ₹ 7,349 | \$107 |
| | | | | | | ₹ 952,952 | \$13,811 | ₹ 0,750 | \$1,025 | ₹ 952,202 | \$12,786 |
| | | | | | | ₹ 9,09,801 | \$100,432 | ₹ 3,994,892 | ₹ 52,100 | ₹ 13,34,000 | ₹ 48,332 |



Shri. Vikas Walawalkar

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Dr Lance Cope

"Good afternoon, my name is Lance Cope, and I am a Consultant Radiologist. This is my tenth or eleventh trip or maybe twelfth, I am not sure. So, I keep coming back year after year because I find this place very inspiring. Kaka Maharaj has done a fantastic job in developing not just the hospital but the whole community and as soon as we arrive here, we are welcomed by long lasting friends. The whole ethos of the hospital is fantastic because there is so much enthusiasm for the project and one of the things that inspires us is every year we come back, there is something new, there is another development going on, new things being tried although all practices that have been established are maturing and being developed. So, what I found is that when we first came, we were working to provide a service, treat the patients which we are still doing, but now the hospital is much more self sufficient and the staff here are excellent and are providing great level of service. So our role is changing and we are developing more into training and making sure the standards are high and are maintained, trying to share our knowledge with the doctors here and we in turn learn a lot from them about Radiology and also about how we should be working and behaving in our life in general and I find it an extremely rewarding experience to come here and everything the whole school, the REACH project, I think is a very inspiring piece of work. The best thing about it being, is that it is self-perpetuating and that its getting positive engagement of the women in the community and fighting their socio-economic life style. So, I would like to thank Shri. Kaka Maharaj and all the team at the Hospital allowing me to come back and take part in this project and I wish you all the very best for the future. Thank you very much.

It is a privilege to go to the temple in the morning. I obviously am not from the same religious background. But I find the atmosphere very inspiring and humbling and it is a quiet time for reflection and for spirituality. It is obvious to see the staff there and how engaged they are in the projects."



Dr Ryan Pereira: (Australia)

"Ryan: My name is Ryan Pereira and I attended the Basic Surgical Skills Course. I thought it was a very good experience to improve my timing and get a quick feedback about my techniques. Also, it was very senior faculty which was teaching us and I recommend this course to other students."



Mr. John Wall

"My name is John Wall and I am a Bio-medical Engineer.

This is I think my eighth trip to the hospital and the development is absolutely incredible. I am always amazed by just how friendly and helpful the staff is, how keen they are to learn new techniques and to try new techniques. I am very impressed with the high level of maintenance of medical equipment. It is something we have been working together to improve over the last 8 years and it is at a very very good level now, which is excellent. Safety is a lot better as well and other than that, just the scale of the project with the sports facility and the expansion of the school. I have been fortunate enough to talk to the biomedical instrumentation science degree course students and they are brilliant. Really keen, very engaged. Look forward to doing some practical skills laboratory work with them and it really feels like we are part of a family. It feels very much like coming home every time we visit BKL Walawalkar Hospital.

I really really love being here, coming to the temple in the mornings and to join them in morning prayers and to have breakfast there, talk with Kaka Maharaj as he shares his wisdom and what an incredible man, very very influential man and very inspirational for me to be able to spend sometime with him. I find one of the things that I am always trying to do, is spend time with as many different cultures around the world, so as to learn as much as I can from all of them and the temple here and staff here just embrace us like one of the family and I can't thank them enough for that. I really do love that kind of morning prayers. It is a beautiful way to start the day and I really really appreciate that. Thank you very much."



Dr Richard Cooper

"Richard: This is obviously my first experience of coming to this particular campus, Walawalkar Hospital. I have been very impressed by the organisation of the camp, by the welcome of the local camp organisation and the local people. I have been made to feel very welcome, very well supported. I have just run a two-day conference on musculo-skeletal ultrasound. Very well organised, lots of enthusiasm and lots of energy in the room offering hands-on experience of musculo-skeletal ultrasound. Today and in forthcoming days, I am involved in teaching and training in the X ray department with the residents, who are very interesting, very interested, a joy to work with and a real pleasure. I hope that I will be able to leave some skills and some learning and some change behind that will help benefit the local doctors, the local medical teams and benefit the local patients. That is the hope and that is much more sustainable."



Mr Ian Thompson (Orthopaedic Nurse)

"My name is Ian Thompson and I am a nurse working in Spine and Orthopaedics back in Newcastle, in the UK. This is my eighth visit to Walawalkar Hospital, and each year I find it very enlightening. The whole team within the hospital is fantastic and I just want to come back and teach them more, every time I come. They are thirsty for knowledge and want to learn how to practice better within theatres and the further nurses out on the wards are so hungry to learn, it is fantastic.

I first came to help Dr Deshpande out as he was short of staff, 8 years ago and thought I would only ever make one visit, but I found that I just need to keep coming back to Dervan. There is such a magnet for me here, I feel I can't stay in the UK when the camp is on. My lasting memories for this week will be, how improved the OT theatre staff are and how much they have learnt from previous years and continue to do so and I hope to be back again in 2020."



Ian Carr

"I am Ian Carr, and I am here with Rebecca who is an Anaesthetist and I have been mainly out to look at the Community Projects and Education. This was my first visit.

I heard about the camp through our friends Sarah & Pete, who were here a few years ago, who had spoken to Rebecca and came out hoping to find out, they stayed and learnt about how medicine and education was delivered on this side.

Inspiration for the journey was mainly to try and, I would like to give something back, I would like to do something good and hopefully if I have got any skills, I would like to be able to help the Trust, by offering in my time.

My lasting memory will be going out to the School and Village and seeing the kids and seeing the Village Outreach that is done by the Trust. The whole experience has been fantastic and I feel very fortunate to have come out and genuinely say this with hand on my heart that I have never seen projects so well intentioned and so well delivered. I hope the Trust continues and flourishes for the foreseeable future."



Mr Deglurkar

"I am Mukund Deglurkar. I am one of the Orthopaedic Surgeons practicing in UK. This is the first time I had an opportunity to visit Dervan. I came with my colleagues from Newcastle. I looked it up before coming to this place, on the internet, to see what facilities are available here, but when I came here, I found them beyond my expectations. I think this is one of the best places I have ever visited and the facilities available in a rural area are I think beyond comparison. I think you can only appreciate it, if you come here. We have been looked after so well, I can't thank each one of them enough for feeding us, taking us to the temple and showing us around. I think the facilities that are available here are of higher standard comparable to any international Medical College or School and everybody is so accommodating. I think the person who has built this, has a vision looking forward and looking after the health of regional community. We and also people around this place, we always will be in debt of Kaka Maharaj. I don't think anybody can take that away. What he has done for the poor and people who do not get medical facilities available at their doorstep, is beyond comprehension and I believe this has been given to majority of the people free of cost. I feel really privileged to come here and serve the community.

What a place to visit!

I understand children here in the local school are learning foreign languages like German & Spanish. That itself shows the forward thinking of local people and training the children to be able to reach beyond shores of this country. The facilities, the medical facilities specially the operation theatres are clean and furnished. I understand that soon the hospital is going to get a new MRI scan. I think in this day and age, having recent technology will make a huge difference in the outcome of patients and I am sure this hospital is going to get busier once the highway close to the hospital is fully functional.

What can I say? I think I am in awe, looking at all these facilities. We had a brilliant time here and I am glad I came."

Thank you.



Mr Vish Bhattacharya

"This is Vish Bhattacharya. I am a surgeon in England. I come for the camp for the sixth year now. It is like a place of pilgrimage for me. It is great to come back to this very inspiring Hospital and Medical School. With the blessings of Kaka Maharaj, this place has moved in leaps and bounds and every year I see new buildings come up, new changes come up and most exciting of all, I find that the medical students here are extremely interested in teaching and learning and they absorb whatever we teach them like a sponge. They are very inspirational and I love teaching all these students, not only in medicine but also in nursing and ancillary staff. I would love to keep coming back to this place because it recharges our batteries. It creates huge amount of bonding and gives me a chance to introspect and have a pause in my life and look at medical treatment which is done in a beautiful holistic fashion in Walawalkar Hospital. May you reach further heights and God willing; I will keep coming back every year. Thank you"



Dr Sadanand Shetye

"I am Dr Sadanand Shetye. This course basically is Basic Surgical Skill Assessment Course wherein the common skills which a surgeon, a Medical Practitioner needs to know are taught. In India we are taught many skills, but we do them unknowingly. There are no such protocols which we follow. So in this course, right from safety, our own safety, as in wearing of gloves, hand washing till knot tying, suturing, everything has been taken care of. Not only that, also minor surgeries like suturing, different types of suturing, interrupted, sub-cuticular, mattress sutures, removal of sebaceous cyst, abscess drainage, debridement of traumatic wound, all these points have been covered and for each session 15 to 20 minutes have been allotted and experts from Royal College of Surgeons themselves have come here to teach us. So, in fact we are very lucky here to get such kind of education, which the foreigners receive in Royal College of Surgeons, to get it in India and directly from them.

Also other aspects of Surgery like electro-surgery, diathermy, basic procedures like abdominal incision closure, tendon repairs were very nicely taught to us. So we are really grateful to have this opportunity given to us, a learning opportunity."



Dr Meena Agarwal

"I am Dr Meena Agarwal, I am a Consultant Paediatric Surgeon and have been working at Guys & St Thomas Hospital in London. This is my first visit to Dervan and I have been extremely impressed with the Hospital and with the facilities available. The staff is very eager to learn and work long and hard. Work very hard and put in long hours. The present camp that I have been attending from UK has hopefully helped to increase the knowledge and facilitated exchange of ideas between the local team and our team. There have been various workshops in different specialties, in anaesthetics, in resuscitation, in radiology and of course the Basic Surgical Skills Course that was organised by the Royal College of Surgeons of Edinburgh, which has been a great success and hopefully has been of great help to the trainee Surgeons. I have also had the opportunity of visiting various community projects. I have visited the local school which is excellent and have also been to the Rural Health Centre and to the Anganwadi & I have attended baby showers and birthday parties. It has been a delight to see the children and to see their progress and the way the community team work so closely with the parents and the children. There is great emphasis on diet and nutrition, which will certainly help tremendously with their future progress and health. The other facilities I had noted on the campus, of course the Sports Academy which is absolutely superb. They have all the facilities necessary, the running track, the swimming pool, basket ball, badminton, kabbadi, Kho-Kho, just about everything and they even have a climbing wall, which was a special interest to me since I have in the past done some rock climbing and climbing in the Himalayas as well.

I feel privileged to have been part of this team and to visit the Walawalkar Rural Hospital and Diagnostic Centre and I am very grateful for all the affection and the facilities made available to us during this visit."

Thank you.



Jane Richardson

"My name is Jane Richardson and I have come here for the first time as an Ultra sonographer. I have come to teach some ultrasound in the Radiology Department. I was invited to come here by my Consultant Radiologist, Dr Lance Cope, who has been here many years and has talked so fondly of this place that I was intrigued and I wanted to be part of it. I have been so impressed by the facilities, the people, and their eagerness to learn. Particularly I have learnt a lot and would very much like to be a part of this trip again in future."



Kaustubh Ghate: (Medical Student)

"My name is Kaustubh Ghate. I am a final year medical student from Auckland, New Zealand. I am here on my medical elective for two months. So, I have been working alongside this team in General Surgery and also spent time in the Medicine department and I have also been doing some time in Casualty. I have come here for my training and I have enjoyed the experience so far. I think the highlight was the Basic Surgical Skills Course, which was done with a few other international students. I found that very useful, especially for me as a beginner in my training but otherwise the experience here has been very good. I have been able to see a variety of conditions that I would not see back home and I also had a chance to be hands-on involved in in-patient care, so overall it has been a good experience."

Patients Interviews

Ashok Ganpat Bhuvad, Dapoli- "I arrived here from Dapoli for my surgery. My surgery was successful as expected and my treatment is going very well. I am feeling much better and most importantly, I did not have to pay even a single rupee for this treatment. The hospital definitely proves to be a boon for the poor."

Ayesha (Jakarta, Indonesia) – "We travelled to Pune, India to get treatment for my knees. Our doctor and relatives recommended for a second opinion from Dr. Nadkarni. After thorough checkups and MRI etc., Dr. Nadkarni suggested we should operate the backbone along with the knees to completely fix the problem. He further suggested that a team of UK doctors have arrived and we can get the surgeries done through them. He further convinced us that these surgeries will almost be like getting them done in UK itself. So we took an important decision and are glad that his diagnosis and recommendation was accurate. Dr. Nadkarni, Dr. Kohli and Dr. Patel provided excellent treatment. I am extremely satisfied. In fact, its important to also note that the facility here has admirable services for food etc. and the stay is absolutely comfortable. My heartiest acknowledgements to Dr. Nadkarni and the hospital."



Patients Feedback

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Parikshit Salunke, Vaibhav-wadi – “My sister came here last year for her operation and was very impressed with her experience. This year, the hospital organized a camp at Kokisara and provided in-depth information about the treatments. I attended the camp and therefore decided to come here for treatment. We were in total 42 patients that arrived for treatment from our village. They organized everything extremely efficiently for all of us from stay, meals, to treatment. I had paid Rs. 20,000.00 for my right eye surgery in Mumbai. But here, they operated my left eye and I just paid Rs.35.00 for the initial case-paper. We received outstanding cooperation and service from each and every one. We are permanently indebted to the hospital. From here on, we will definitely recommend about this hospital to the people in our village. There is no hospital of this stature and service in our Sindhudurg or Kolhapur district. In fact, I don't remember seeing such a hospital even in Mumbai. I am grateful to all the staff and doctors at this hospital.”

Rakesh Arun Kalambate, Talavade (District subdivision – Chiplun) – “I had immense pain in the veins of my legs for numerous years. In fact, the pain exaggerated to an extent that I was having difficulty walking. I heard about the medical camps and decided to give it a try. My treatment here was excellent and most importantly, it was offered for free. My mother accompanied me to assist during the treatment and the arrangements for our stay, meals were extraordinary. I am truly grateful to the B.K.L. Walawalkar hospital for this.”

Pandurang Sonu Kamble, Chiplun – “I was admitted here about eight days ago. After all tests, they operated my heart successfully. I did not have to spend anything since the treatment and surgery were free as part of the government scheme. If I had to go to cities like Pune or Mumbai for treatment, it would have been unaffordable for me to get these surgeries done since my financial resources are limited and I do not have the capacity to pay 2 or 3 lakhs to the big city doctors. This hospital in a rural area is a big blessing to the poor villagers in the region.”

Pravin Shirvadkar, Jaitapur (Rajapur) – “I am on my way home after being discharged from the hospital post heart surgery. I received extraordinary treatment; every person from doctors, nurses, to ward-boys treated me well almost like God-sent angels. Due to the government scheme, I received the surgery for free. In addition, I was able to get diagnosed plus receive the treatment on time thus saving my life only because this hospital is close to my village.”

Nandkumar Shirvadkar, Jaitapur (Rajapur) – “My uncle got a second life. We are poor people and we cannot repay the kindness of this hospital in money. But if we can somehow help this hospital, we will feel satisfied and it will bring a good purpose to our life too.”

Ashok Vasant Raavrane, Yedgaon (Vaibhav-wadi) – “We heard about the medical camp in Vaibhav-wadi so we decided to check it out. I received an eye surgery and it was successful. There were no obstacles in the entire process. All arrangement from food to treatment is well organized. They have asked me to come for a follow-up check after 7 days. Many thanks to the hospital.”

Sitaram Mahadev Lingayat, Sangameshwar – “I had one eye operated in Ratnagiri in the past. This time, I read about this camp in the newspaper and decided to get treatment at the camp. Therefore, I did not have to spend a single penny and the operation was obviously successful since this hospital is well-equipped with all modern facilities and equipment.”

Shri Vithalrao Joshi Charities Trust's

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



Kasarwadi, At-Post Sawarda, Taluka Chiplun,
Dist. Ratnagiri - 415606, Maharashtra State, INDIA
Tel. : +91 02355 264636 / 264637
Fax : +91 02355 264693 Email : info@bklwrmc.com
Website : www.walawalkarmedicalcollege.com

Outward. No. SVJCT/BKLWH/ /2018

Date: Jan 2018

To,
All Head of the Departments,
B.K.L. Walawalkar Rural Medical College,

Dear All,

We are excited to announce the visit of "**British medical Team**" at our institute in the last week of January 2018.

MMC accredited CME is organized on 28.01.2018


Title- LATEST UPDATE IN MEDICINE

Speakers are from British team.

Please inform your departmental staff about this program.

List of British faculty visiting and Schedule is attached herewith.

Thanks,


Dr. Suvarna Patil
Medical Director,
B.K.L. Walawalkar Rural Medical College.

Director

B.K.L. Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606

Shri Vithalrao Joshi Charities Trust's

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



Kasarwadi, At-Post Sawarda, Taluka Chiplun,
Dist. Ratnagiri - 415806, Maharashtra State, INDIA
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Fax : +91 02355 264693 Email : info@bklwmc.com
Website : www.walawalkarmedicalcollege.com

List of Faculty visiting B.K.L.Walawalkar Rural Medical College is as follows

| No | Great Britain (Newcastle) |
|----|------------------------------------|
| 1 | NARAYANAN KRISHNAMOORTHY |
| 2 | KENDALL KEVIN |
| 3 | SMITHSON ELIZABETH |
| 4 | YATES KATHLEEN |
| 5 | HUNTER MICHELLE |
| 6 | PEARSON JANAKI |
| 7 | FREEMAN ELEANOR |
| 8 | DESHPANDE SANJAY |
| 9 | COPE LANCE |
| 10 | ADEGOKE KENNETH ADEDEJI ADETOKUNBO |
| 11 | COOPER RACHEL |
| 12 | VERALL BHASIN NATASHA |
| 13 | TAYSUM PETER |
| 14 | THOMPSON IAIN |
| 15 | FENDER DAVID |
| 16 | LAMBERT CAITLIN |
| 17 | DUNPHY AILSA |
| 18 | WHELAN ANDREW |
| 19 | LINCOLN LOIS |
| 20 | QUANTRILL SHELLEY |
| 21 | ADEGOKE STELLA OLUBUNMI OGHENE OVU |
| 22 | IVANOVA TSVETA |
| 23 | BHATTACHARYA VISH |
| 24 | KASHYAP SHANKAR |
| 25 | PRAVIN MENEZES |
| | |
| | Mumabi Doctors |
| 26 | BHAT UDAY |
| 27 | PAWAR MANGESH |
| 28 | RAHANGALE PAVAN |
| 29 | GADEKAR CHETAN |
| | |

Director
B.K.L.Walawalkar Rural Medical College,
Sawarda, Kasarwadi, Pin - 415806



Dr. Sanjay
Deshpande
MBBS, MRCP
FRCA, FRCR
FRS, FRCR
FRCS, FRCR
FRCS, FRCR
FRCS, FRCR

Dr. Sanjay Deshpande
Project Lead, SVJC Trust UK
Consultant in Anaesthesia and Intensive Care Medicine
South Tyneside and Sunderland NHS Foundation Trust
UK

10 Jan 2018

Dr. Suvarna Patil
Medical Director
BKL Walawalkar Rural Medical College and Hospital
Dervan, India

Visit of UK highly qualified doctors and nurses to provide educational activities to Medical Students, Medical and Nursing staff , Faculty of BKL Walawalkar Rural Medical College and Samartha Nursing School , Dervan

Dear Dr. Patil,

Greetings from Newcastle, UK.

I write to confirm that I am bringing a team of doctors and nurses to BKL Walawalkar Medical College and Hospital, Dervan, between the dates 28/1/2018 till 3/2/2018 to provide educational activities, which will include lectures, workshops and simulation training to medical students, doctors and nurses on common medical topics like Basic and Intermediate Life Support, Trauma Life Support, Surgical and Medical Emergencies, Common Nursing topics (Infection control, sterilisation, check lists, etc) . This year I have a team of 25 dedicated staff from the UK and 4 staff from Mumbai are looking forward to share their knowledge and skills with the medical and nursing students, and the faculty of the BKL Walawalkar Rural Medical School. I understand this is exciting times for you since the grant of permission of opening a medical school in 2015.

Since our visits since 2006, we have noticed a remarkable change in the knowledge, skills and working conditions offered at the Walawalkar Hospital which has been a huge motivation for the UK team. We also noticed in our last visit that the management and medical staff have embraced high quality working ethics, which will benefit a staff and thus contributing to enhanced patient care.

The names of the staff who accompanied me to Dervan are:

- 1) Mr Vishwanath Bhattacharya, Consultant Surgeon Queen Elizabeth NHS FT, Gateshead
- 2) Eleanor Freeman, Operating Nurse Practitioner, QE Hospital
- 3) Dr.Elizabeth Smithson, CT 2 anaesthetic Trainee, Yorkshire, UK
- 4) Dr. Andrew Whelan, ST5 anaesthetic trainee, Yorkshire, UK
- 5) Kath Yates, S/N Ophthalmology
- 6) Michelle Hunter, SNOD , NHS Blood and Transplant
- 7) Ms. Shelley Quantrill, Sister, South Tyneside NHS FT
- 8) Mr John Wall, Biomedical Engineer
- 9) Dr. Pearson Janaki, ST 3 anaesthetic trainee, Northern Region, UK
- 10) Mr. Kevin Kendall, ODP , RVI , Newcastle Trust, UK
- 11) Ms. Lois Lincoln, ODP, QE Hospital , Gateshead, UK
- 12) Dr Shankar Kashyap, Consultant Orthopaedic Surgeon, QE Hospital, Gateshead
- 13) Dr Narayanan Krishnamoorthy, Consultant Ophthalmologist, RVI, Newcastle, UK
- 14) Dr Rachel Cooper, GP, Northern Region, UK
- 15) Dr Lance Cope, Consultant Radiologist, South Tyneside NHS FT
- 16) Iain Thompson , Senior Operating Department Practitioner , RVI , Newcastle
- 17) Ailsa Dunphy, Nurse Practitioner, Canada
- 18) Mrs. Bhasin Natasha Verall, ODP, Birmingham
- 19) Dr David Fender, Consultant Spine Surgeon, RVI, Newcastle Tyne and Wear
- 20) Dr Ken Adegoke, Consultant Anaesthetist, Margate Hospitals, Kent, UK
- 21) Dr Peter Taysum, SAS Anaesthetics, Durham University Hospital, Durham
- 22) Dr Ivanova Tsveta, Consultant Ophthalmologist, Manchester, UK
- 23) Dr. Caitlin Lambert, FT Year 3, QE Hospital, UK
- 24) Adegoke Stella, Senior Sister, Margate Hospitals, UK

Staff from Mumbai

- 1) Prof. Dr Uday Bhatt , Consultant Plastic Surgeon, Nair Hospital , Mumbai
- 2) Dr Mangesh Pawar , Plastic Surgeon, Mumbai
- 3) Dr Chetan Gadekar , Plastic Surgeon, Mumbai
- 4) Dr pavan Rahangale, Urologist , Mumbai,

Kindly arrange their accommodation and boarding facilities during our stay.

Dr. [Name] [Title]
[Address]
[City] [State] [Country]
[Phone Number]
[Email Address]

I am enclosing a programme schedule for your perusal.

Thanking you,

Yours sincerely,

A handwritten signature in black ink, appearing to read "Sanjay Deshpande", is enclosed in a grey rectangular box.

Dr Sanjay Deshpande

FRCA, FFICM (UK)

Sanjay.Deshpande@nhs.net

Shri Vitthalrao Joshi Charities Trust's

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



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NOTICE

Date: 18 Jan 2018

SCHEDULE FOR UK CAMP FROM 27TH JANUARY to 4TH FEBRUARY 2018

| DAY /DATE | INDOOR PROGRAMME(hospital) | OUTDOOR VISIT(field) | |
|------------------------|---|--|---|
| Sat 27/ 01/2018 | Arrival | Yes | 1)Child Development Camp Dadar Anganwadi 2)Adolescent Girls Residential Camp |
| Sun 28/01/2018 | 1)Welcome Ceremony 2)CME | | Medical College |
| Mon 29/01/2018 | 9.00 Am To 10am Lecture For Medical Students 1 ST MBBS+ BPMT | 2)Rural Health Training Centre Visit For Six Months Birthday | Medical College |
| Tue 30/01/2018 | 1)Visit To Residential Camp ForAdolescent Girls 2)Visit ToChild Development Camp In Hospital | 1)Reach Visit Post Lunch | - |
| Wed 31/01/2018 | | Dental + Adolescent Healthcampvisit To School(devghar) | Devghar Village |
| Thursday 01/02/2018 | 1)2.00PM TO 3.00PM Lecture For Medical Students 2 ND MBBS | 1)Vahal PHC Pregnant Ladies Clinic | Vahal PHC Medical College |

| | | |
|---------------------------------|--|--|
| | 2)3.00pmT05.00pm Lecture For Medical Students3 RD MBBS | |
| Fri 02/02/2018 | 1) Baby Shower Ceremony | |
| Sat 03/02/2018 | 1)10.00am To 11am Lecture For Nursing College Girls 2) 11.00am onwards kharavte bit workshop | Nursing college Kharawate village |



Director
B.K.L.Walawalkar Rural Medical College
Sawale, Warananadi, Pin - 415005

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



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NOTICE

Date: 20 JAN 2018

I give me a great pleasure to announce Uk team visit from 30 Jan 2018 to 4 Feb.2018

We have arranged a surgical camp and field visits with Uk team faculty. Following faculty and residents are requested to offer their duties in the operation theater.

Total 22 UK faculty of various specialties are visiting our institute.

| Department | Names of faculty | No of faculty BKLWPMC |
|---|--|-----------------------|
| Department of General Surgery including ,Uro,Plastic, Ped surgery | General surgery Dr ABHAY Desai Dr Pramod Bapat Dr NEVILLE Tatta Dr Bhushan shinde Dr ahilesh Mishra Dr Amit Mandhare Dr MALLAPA Huggi Dr Abhijit Patil | 8 |
| Anesthesia | Dr Dandekar Guru DR Asmita Karnalkar Dr ABHIJIT Pandit Dr Vaishali Bapat | 4 |
| Ortho | Dr BHARATI SHARMA DR Sunil Nadkarni Dr Summit Sonawane Dr Pavan Kohali | 4 |

| | | |
|----------|--|---|
| Cataract | Dr JAHIN Pawasakr Dr Vikrant Narwade Dr SHANKER Ranvir | 3 |
|----------|--|---|

Please make arrangements accordingly. Communicate with Community team and MSW for camp arrangements and advertisement of the camp for patients.

Thanks ,


Dr Suvarna Patil
Medical Director,
B.K.L.Walawalkar Rural Medical College.
Director

B.K.L.Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606

To,

The Registrar,
Maharashtra Medical Council
Anand Complex, 1st Floor,
Sane Guruji marg, Arthur Road Naka,
Mumbai 400 011.

Date 30/01/2018

Subject : Submission of attendance Report of Faculty ,Delegates, Observer for credit points

Ref-1 : Your Application No. MMC201800077 and Date 01/01/2018Ref-2 : Our CME Code . MMC/MAC/2018/F-009499 and dated 28/01/2018

Respected Sir,

With reference to above mentioned subject , I am providing details of the CME conducted by B.K.L WALAWALKAR HOSPITAL DIAGNOSTIC AND RESEARCH CENTRE on dated 28/01/2018 the said CME/Workshop attended the following Faculty , Delegates and Observer and we are allotted credit hour as under.

| Sr. No | Registration No. | Name Of RMP | Type Of Attendance | CME Points | Fees |
|--------|------------------|--------------------------------------|--------------------|------------|-------|
| 1 | 66238 | Dr. MODAK ANAGHA AJIT | Observer | 3 | 0.00 |
| 2 | 34008 | Dr. ABHAY YASHWANT DESAI | Speaker | 1 | 10.00 |
| 3 | 39247 | Dr. MURLIDHAR DATTATRAYA VARUNJIKAR | Speaker | 1 | 10.00 |
| 4 | 59667 | Dr. PRAMOD SHRIKRISHNA BAPAT | Speaker | 1 | 10.00 |
| 5 | 66238 | Dr. ANAGHA AJIT MODAK | Speaker | 3 | 30.00 |
| 6 | 68884 | Dr. VAISHALI PRAMOD BAPAT | Speaker | 1 | 10.00 |
| 7 | 69181 | Dr. SUVARNA NETAJI PATIL | Speaker | 3 | 30.00 |
| 8 | 75470 | Dr. ASMITA PRATAP KARNALKAR | Speaker | 1 | 10.00 |
| 9 | 17489 | Dr. SAHU PRITIKANT | Delegate | 2 | 20.00 |
| 10 | 2000072343 | Dr. GURSALE SANTOSH CHANDRAKANT | Delegate | 2 | 20.00 |
| 11 | 2001072732 | Dr. SWAMI NAGESH BANDAYYA | Delegate | 2 | 20.00 |
| 12 | 2002031782 | Dr. THANEDAR ASHVINI ANANT | Delegate | 2 | 20.00 |
| 13 | 2003041879 | Dr. GAIKWAD VAISHALI ATMARAM | Delegate | 2 | 20.00 |
| 14 | 2004082583 | Dr. GAIKWAD RUPA KRISHNA | Delegate | 2 | 20.00 |
| 15 | 2005042394 | Dr. GOEL NEHA MUKESH KUMAR | Delegate | 2 | 20.00 |
| 16 | 2006021273 | Dr. DALWAI SAMINA FAISAL | Delegate | 2 | 20.00 |
| 17 | 2007040936 | Dr. DANDEKAR SHRIGURUDAS PURUSHOTTAM | Delegate | 2 | 20.00 |
| 18 | 2007062131 | Dr. BHAVSAR RAHUL PRAKASH | Delegate | 2 | 20.00 |
| 19 | 2007072971 | Dr. MOHITE SAKSHI SANTOSH | Delegate | 2 | 20.00 |
| 20 | 2008020366 | Dr. DEOKAR SHARMA BHARATI PANKAJ | Delegate | 2 | 20.00 |
| 21 | 2008041317 | Dr. CHAVAN RAJENDRA GANPAT | Delegate | 2 | 20.00 |
| 22 | 2008041509 | Dr. PATIL ABHIJEET MANOHAR | Delegate | 2 | 20.00 |
| 23 | 2008082036 | Dr. SHELKE YOGENDRA PANDURANG | Delegate | 2 | 20.00 |
| 24 | 2008082157 | Dr. SHETYE SADANAND SHRIKRISHNA | Delegate | 2 | 20.00 |
| 25 | 2008072749 | Dr. SHARMA PANKAJ NANDKISHORE | Delegate | 2 | 20.00 |
| 26 | 2008083006 | Dr. RAUT NILESH MANIKRAO | Delegate | 2 | 20.00 |
| 27 | 2008093241 | Dr. RACHOTKAR SANTOSH UTTAMRAO | Delegate | 2 | 20.00 |
| 28 | 2009030847 | Dr. PATIL DEEPAK GANPATRAO | Delegate | 2 | 20.00 |
| 29 | 2009041523 | Dr. PAVASKAR JAHIN NASIR | Delegate | 2 | 20.00 |
| 30 | 2010030556 | Dr. MANDHARE AMIT MOHAN | Delegate | 2 | 20.00 |
| 31 | 2011051374 | Dr. CHAVAN PRAVIN TUKARAM | Delegate | 2 | 20.00 |
| 32 | 2011051507 | Dr. SHINDE UJJWALA BHUSHAN | Delegate | 2 | 20.00 |
| 33 | 2011062168 | Dr. PATIL SHASHIKANT SHANTARAM | Delegate | 2 | 20.00 |
| 34 | 2011082700 | Dr. KOSE SANHITA MADHUKAR | Delegate | 2 | 20.00 |
| 35 | 2011123506 | Dr. SANTHOSH KUMAR R | Delegate | 2 | 20.00 |
| 36 | 2012020205 | Dr. NARWADE VIKRANT ANANT | Delegate | 2 | 20.00 |
| 37 | 2012040802 | Dr. NIKAM ANAND JAIHINDRAO | Delegate | 2 | 20.00 |
| 38 | 2012051362 | Dr. MAGAR SAGAR TANAJI | Delegate | 2 | 20.00 |

| | | | | | |
|----|---------------|--------------------------------------|----------|---|-------|
| 39 | 2012103098 | Dr. MAGAR VINOD SHARAD | Delegate | 2 | 20.00 |
| 40 | 2012113287 | Dr. KENDRE PRANAM SUNDARRAO | Delegate | 2 | 20.00 |
| 41 | 2013040892 | Dr. JOSHI KIRAN VIDYADHAR | Delegate | 2 | 20.00 |
| 42 | 2013081381 | Dr. KIRDANT JAGRUTI JEEVAN | Delegate | 2 | 20.00 |
| 43 | 2013062352 | Dr. KUMBHAR NILESHKUMAR ANANDA | Delegate | 2 | 20.00 |
| 44 | 2016031237 | Dr. PANDIT ABHIJEET SHIVAJI | Delegate | 2 | 20.00 |
| 45 | 2016031328 | Dr. DAWARI DHANAJI BABURAO | Delegate | 2 | 20.00 |
| 46 | 2016041650 | Dr. ZODPE PALLAVI VISHWAMBHAR | Delegate | 2 | 20.00 |
| 47 | 2016020250 | Dr. KHOMANE MANGESH SAMPAT | Delegate | 2 | 20.00 |
| 48 | 2016061081 | Dr. NAWALE ANKUSH VIJAYRAO | Delegate | 2 | 20.00 |
| 49 | 2017030533 | Dr. AHIWALE PRASHANT PRAKASH | Delegate | 2 | 20.00 |
| 50 | 2017061662 | Dr. CHAKOTE KAILAS VIVEKANAND | Delegate | 2 | 20.00 |
| 51 | 2017062633 | Dr. JADHAV NIKHIL PRAVIN | Delegate | 2 | 20.00 |
| 52 | 2017062745 | Dr. SOLANKI VIVEK PURUSHOTTAM | Delegate | 2 | 20.00 |
| 53 | 2017073442 | Dr. VADGAONKAR ADITYA RAJIV | Delegate | 2 | 20.00 |
| 54 | 2017094223 | Dr. PAWAR NIKHIL SHAHAJI | Delegate | 2 | 20.00 |
| 55 | 20173500 | Dr. KHUPSE POOJA | Delegate | 2 | 20.00 |
| 56 | 201752355 | Dr. POL SHRUTIKA JAGDISH | Delegate | 2 | 20.00 |
| 57 | 39501 | Dr. PAL GOVIND NITYANAND | Delegate | 2 | 20.00 |
| 58 | 40592 | Dr. TALATHI RAMANLAL CHANDULAL | Delegate | 2 | 20.00 |
| 59 | 42326 | Dr. VALVEKAR UMAKANT RAMCHANDRA | Delegate | 2 | 20.00 |
| 60 | 44009 | Dr. BHOSALE NANDKUMAR MAHADEV | Delegate | 2 | 20.00 |
| 61 | 45601 | Dr. BAMANE EKNATH MARUTI | Delegate | 2 | 20.00 |
| 62 | 46523 | Dr. BAM SHRIDHAR NARAYAN | Delegate | 2 | 20.00 |
| 63 | 46662 | Dr. PATIL SHIWAJI AMRUTRAO | Delegate | 2 | 20.00 |
| 64 | 46687 | Dr. SALUNKHE SADASHIV BALKRISHNA | Delegate | 2 | 20.00 |
| 65 | 46740 | Dr. BOBADE HANAMANT GANAPATI | Delegate | 2 | 20.00 |
| 66 | 46932 | Dr. NADKARNI SUNIL MANOHAR | Delegate | 2 | 20.00 |
| 67 | 48098 | Dr. SADEKAR NEETA MADHUKAR | Delegate | 2 | 20.00 |
| 68 | 49377 | Dr. BAM ANJALI SHRIDHAR | Delegate | 2 | 20.00 |
| 69 | 52854 | Dr. KHATU PRADIP PRABHAKAR | Delegate | 2 | 20.00 |
| 70 | 52926 | Dr. OTARI KUNDAN GAJANAN | Delegate | 2 | 20.00 |
| 71 | 53011 | Dr. JADHAV RAJARAM BABURAO | Delegate | 2 | 20.00 |
| 72 | 53156 | Dr. PATWARDHAN NARESH KESHAV | Delegate | 2 | 20.00 |
| 73 | 53200 | Dr. MODAK AJIT SHRIKANT | Delegate | 2 | 20.00 |
| 74 | 53446 | Dr. SAKHARPEKAR RAJAN BABLING | Delegate | 2 | 20.00 |
| 75 | 54183 | Dr. PADHYE VANDANA DAMODAR | Delegate | 2 | 20.00 |
| 76 | 54884 | Dr. JADHAV VISHWAS PILAJI | Delegate | 2 | 20.00 |
| 77 | 55086 | Dr. KOLAGE SUSHMA ANANT | Delegate | 2 | 20.00 |
| 78 | 55785 | Dr. DHUMALE SHASHIKANT BALKRISHNA | Delegate | 2 | 20.00 |
| 79 | 56192 | Dr. POTDAR ARVIND SHRIPATI | Delegate | 2 | 20.00 |
| 80 | 57867 | Dr. BHIDE NIVEDITA KASHINATH | Delegate | 2 | 20.00 |
| 81 | 58462 | Dr. BHAYTHANKAR PRABHAKAR SHIVDASRAO | Delegate | 2 | 20.00 |
| 82 | 58727 | Dr. KULKARNI RAJASHREE AJIT | Delegate | 2 | 20.00 |
| 83 | 66614 | Dr. KOHLI PAVAN KULDIP | Delegate | 2 | 20.00 |
| 84 | 75297 | Dr. SUTAR ARVIND BABURAO | Delegate | 2 | 20.00 |
| 85 | 78120 | Dr. PATIL NETAJI RANGRAO | Delegate | 2 | 20.00 |
| 86 | 79167 | Dr. PATIL MANISHA NIMBAJI | Delegate | 2 | 20.00 |
| 87 | 80853 | Dr. KHOT VIKRAMSINGH VILASRAO | Delegate | 2 | 20.00 |
| 88 | 81095 | Dr. MODAK DEEPAK SHIVRAM | Delegate | 2 | 20.00 |
| 89 | 83432 | Dr. DHAGE AVINASH DNYANDEO | Delegate | 2 | 20.00 |
| 90 | 84123 | Dr. KUSHTE RAJESH RAMCHANDRA | Delegate | 2 | 20.00 |
| 91 | 85862 | Dr. KULKARNI AJIT MADHUKARRAO | Delegate | 2 | 20.00 |
| 92 | 88358 | Dr. THOMBARE CHANDRAKANT MARUTI | Delegate | 2 | 20.00 |
| 93 | 91014 | Dr. MISHRA AKHILESH RAMCHANDRA | Delegate | 2 | 20.00 |
| 94 | MCI 12 -48416 | Dr. Dr. Shankar Gautam Ranveer | Delegate | 2 | 20.00 |

| | | | | | |
|--|--|--|-----------------|-----|---------|
| | | | Total | 183 | 1830.00 |
| | | | Processing Fees | 0 | 22.42 |
| | | | Grand Total | 0 | 1852.42 |

Please Credit above mentioned credit points to individual account of RMP. Payment has been done online and attached here with the online payment receipt for your ready reference.

Thanking You,

Your truly,

Stamp & Signature of President/Secretary
(B.K.L WALAWALKAR HOSPITAL DIAGNOSTIC AND
RESEARCH CENTRE)

Signature of Observer

Note : Observer Credit points amount not included in the statements.

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



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Summary of visit of British Medico 2018 (27.1.2018-4.2.2018)

British Medicos 2018 camp was a great learning opportunity for medical students.

British Team was actively involved in various teaching programs from 27 Jan to 4 Feb. 2018

| 2018 | Foreign faculty/students | Date | Participants | TOPIC |
|---|--|------------|----------------------------------|---|
| CME MMC accredited | Dr.Sanjay Deshpande(UK) Dr.Lance Cope(Radilogist) Dr.Shanker Kashyap(Orthopedic, uk) | 28.01.2018 | MBBS-NO.52 Faculty BKLWRMC-93 | Latest Updates in Medicine |
| Lecture | | 29.01.2018 | MBBS-NO.66 Faculty BKLWRMC-4 | RHTC Birthday ceremony Faculty PSM 1 |
| Self help group visit | Rachel Cooper Shailley Quantril Elanor | 30.1.2018 | PSM Satff-2 | Village Palvan |
| Lecture | | 1.02.2018 | MBBS Faculty BKLWRMC-2 | |
| Dental screening and adolescent camp, Devghar Village | | 31.1.2018 | Faculty 2 | |
| Baby Shower PSM | | 2.2.2018 | PSM Faculty -1 | |
| Kharawte | | 3.2.2018 | | |
| | | | Mbbs Faculty BKLWRMC-2 | - |

No of faculty participated in Surgical Camp-

| | No of operations | BKLWRMC Faculty participated | Uk faculty |
|--------------------------|------------------|------------------------------|-------------------------------|
| Surgery ,Uro,Plastic,Ped | 81 | 8 | Total 22 of various specialty |
| | | | - |
| Ortho | 33 | 4 | - |
| | | | - |
| Cataract | 120 | 3 | - |
| Anesthesia | - | 4 | - |

Participation in community activities in collaboration with BKLWRMC faculty

| Activity | Foreign faculty | Date | No of BKLWRMC staff/faculty | Objective |
|--|-----------------|-------------|-----------------------------|--|
| Common birthday of malnourished children followed by health check up | 5 | 29 Jan 2018 | 2 | Awareness session about nutrition and vaccination |
| Self help group REACH visit Adolescent camp | 5 | 30 Jan 2018 | 2 | Awareness about health and early identification of disease |
| Adolescent girl program at Village Deoghar | 4 | 31 Jan 2018 | 2 | Awareness about Nutrition and reproductive health |
| ANC clinic Vahal PHC | 4 | 1 Feb 2018 | 1 | Antenatal check up |
| Baby shower Preganat women check up | 4 | 2 Feb 2018 | 1 | Antenatal Health check up |
| Kharwate village visit | 2 | 3 FEB. 2018 | 2 | - |

“Dervan Newsletter” was published by rural medical college attached Hospital to document and summaries the events during UK visit. A copy of “Dervan Newsletter” is attached.


Medical Director,
B.K.L. Walawalkar Rural Medical College

Director

B.K.L. Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606

Shri Vithaldas Joshi Charities Trust's
B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



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Website : www.walawalkarmedicalcollege.com

(UK CME)

DATE :- 28/01/2019 Guest Lecture by VK Faculty

| SrNo | Name Of Participants M B B S Students | Remark | Sign |
|------|--|-----------|------|
| 1) | Nikhil Pendarkar | Good | |
| 2) | Trushra M. | V. Good | |
| 3) | Achal Gole | Excellent | |
| 4) | Ishani A. | Good | |
| 5) | Ahmed C. | V. Good | |
| 6) | Aakash Tirodhkar | Good | |
| 7) | Shweta Khadilkar | Good | |
| 8) | Pallav Makani | Good | |
| 9) | Mhangan Joshi | V. Good | |
| 10) | Sankhe Sahubhe | Good | |
| 11) | Mansi Singh | Good | |
| 12) | Kajal Shahi | Good | |
| 13) | Shefali Wagh | V. Good | |
| 14) | Chinmay Bawaji | Good | |
| 15) | Himanshu S. Patil | Good | |
| 16) | Ajinkya Mirajkar | Excellent | |
| 17) | Riddhi Parulekar | V. Good | |
| 18) | Rohit Nadar | Excellent | |
| 19) | Aneesh Kadam | Good | |
| 20) | Kamika R. | Excellent | |
| 21) | Anurag Gupta | Good | |
| 22) | Rushikesh Pachinaze | Excellent | |

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



Kasarwad, At-Post Sawarda, Taluka Chiplun,
Dist. Ratnagiri - 415606, Maharashtra State, INDIA
Tel : +91 02355 264836 / 264837
Fax : +91 02355 264893 Email : info@bklwmc.com
Website : www.walawalkarmedicalcollege.com

DATE - : 28/1/18

| SrNo | Name Of Participants | Remark | Sign |
|------|------------------------|-----------|-----------|
| 23) | Satyam Singh | V. Good | Satyam |
| 24) | Satiputa AI | Good | Satiputa |
| 25) | Mahar Manojan | Good | Manojan |
| 26) | Asiya Khan | V. Good | Khan |
| 27) | Ranjay Mahadkar | Excellent | Ranjay |
| 28) | Kalina Dalmi | Good | Dalmi |
| 29) | Bushra S. | Good | Bushra |
| 30) | Ramkrishna Chaudhari | Excellent | Chaudhari |
| 31) | Snehal Mogal | Good | Mogal |
| 32) | Piyush Singh | Good | Piyush |
| 33) | Rishi Diverkar | Excellent | Rishi |
| 34) | Rutuja Maske | Good | Maske |
| 35) | Juraya Jitena | V. Good | Jitena |
| 36) | Saurabh Sr Divya Bhatn | V. Good | Bhatn |
| 37) | Devesh Rane | V. good | Rane |
| 38) | Shruti Jha | Good | Jha |
| 39) | Prashant Kari | V. Good | Kari |
| 40) | Khan Moqyan | Good | Khan |
| 41) | Gautami | Good | Gautami |
| 42) | Chinmay Torne | Good | Chinmay |
| 43) | Yogesh Trakre | Good | Trakre |
| 44) | Saurabh Patil | V. Good | Patil |

Shri Vitthalrao Joshi Charities Trust's

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DATE - : 29/01/2018 Guest Lecture

| SrNo | Name Of Participants | Remark | Sign |
|------|--------------------------|-----------|-----------|
| 1) | Shubham. Bharat Daretor. | Very good | Jshubham |
| 2) | Saurabh S. Patil | Good | Patil |
| 3) | Paulan K. Mahane | V. Good | P |
| 4) | Chinmay Bureji | V. good | C |
| 5) | Sashtale Sabhate | Good | SS |
| 6) | Aneesh Kadam | Excellent | Aneesh |
| 7) | Pankaj Uttam Mahadkar | Very good | Mahadkar |
| 8) | Prasant Karn | Good | PK |
| 9) | Sariputta Ambarale. | Good | S |
| 10) | Bushra Aurangpura | Good | B |
| 11) | Munil P Yende | Good | M |
| 12) | Himanshu S. Rathod. | Good | H |
| 13) | Rohit Nadar | Good | R |
| 14) | Sucheta Das Des | Good | S |
| 15) | Shehal S. Mogal | Good | S |
| 16) | Neel Bhavsare | Good | N |
| 17) | Charvi R. Sankholkar | V. Good | Charvi |
| 18) | Yashodhan Brahma | Good | Yashodhan |
| 19) | Prathamesh Shirde | Good | P |
| 20) | Prathamesh Sawant | Good | P |
| 21) | Rohit Shet | Good | R |
| 22) | Vighnesh Shirde | Good | V |

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DATE -: 29/01/2018

| SrNo | Name Of Participants | Remark | Sign |
|------|-----------------------------|---------|-------------|
| 23) | Ajinkya Sheogawan | Good | AS |
| 24) | Arunav Shirshetty | Good | Arun |
| 25) | Vishal Shingate | Good | Vishal |
| 26) | Janita Satalkar | V. Good | Janita |
| 27) | Snehal Jadhav | V. Good | Snehal |
| 28) | Pratipsha Borkar | V. Good | Pratipsha |
| 29) | Duhan Kalyan | Good | Duhan |
| 30) | Tamadar Strajudhn Mahiyadin | Good | Tamadar |
| 31) | Rohit R. Kadam | Good | Rohit |
| 32) | Akash Kute | Good | Akash |
| 33) | Chinmay Tom | Good | Chinmay |
| 34) | Satyam Singh | Good | Satyam |
| 35) | Hani Singh | Good | Hani |
| 36) | Akash Sarwar | V. Good | Akash |
| 37) | Amr Singh | V. Good | Amr |
| 38) | Riya Divekar | Good | Riya |
| 39) | Ramkrishana Chaudhari | Good | Ramkrishana |
| 40) | Nikhil Pendharkar | Good | Nikhil |
| 41) | Kajan Jadhav | V. Good | Kajan |
| 42) | Piyush Singh | V. Good | Piyush |
| 43) | Shreyali Wagh | Good | Shreyali |
| 44) | Kavina Dalwai | V. Good | Kavina |

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DATE - : 29/01/2018

| SrNo | Name Of Participants | Remark | Sign |
|------|----------------------|-----------|------|
| 45) | Niharjan Joshi | Good | |
| 46) | Kunal Rajput | V-Good | |
| 47) | Shweta V Khadikar | Good | |
| 48) | Almal Gole | Excellent | |
| 49) | Jureya Jethwa | Excellent | |
| 50) | Aakash Tiradkar | V. Good | |
| 51) | Anurag Gupta | Good | |
| 52) | Khan Maszam | V-Good | |
| 53) | Mrunali Galvi | V. Good | |
| 54) | Anurag Gupta | Good | |
| 55) | Arjun D. | V-Good | |
| 56) | Devesh Rane | Good | |
| 57) | Shruti Jha | Excellent | |
| 58) | Prasanth Karan. | V-Good | |
| 59) | Rushikesh Pachindare | Vgood | |
| 60) | Ankita Mhasalekar | Vgood | |
| 61) | Krushna Moyalaw | excellent | |
| 62) | Pshani Mhyanikus | Vgood | |
| 63) | Gautami Phadtare | Vgood | |
| 64) | Malhar Munayam | Vgood | |
| 65) | Yogesh Patil | Vgood | |
| 66) | Pallav Makhani | excellent | |

Director
B.K.L. Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606



Dervan Newsletter 2018

Special Issue on Medical Mission by British Medicos: 2018





Towards sustainable developments

As sustainable development (satisfying the needs of the present generation without compromising the ability of future generations to meet their own needs) involves a complex interplay between economic, environmental and socio-cultural considerations, its realization requires paying attention to all these issues when making short- and long-term development plans. However, this cannot be achieved in the absence of well qualified and trained human resources equipped with up-to-date information, knowledge and skills to address these various issues.

Thus, over the past several years it has become clear that capacity building and human resource development are central for attaining sustainable development. Therefore, capacity building through knowledge transfer, research and training has become a core goal of B.K.L. Walawalkar Hospital, Dervan with collaborative technical assistance provided by the different

groups and their programmes like 'Annual Surgery Camp' by UK Team, 'Collaborative network for adolescent nutrition and health in sub-Saharan Africa & India' by MRC, UK and 'Basic Surgical Skills course' by The Royal College of Surgeons, Edinburgh.

But since capacity building should be an ongoing process, technical assistance programs need to explore modalities through which its contribution towards capacity building in poor societies will be sustainable.

The new developments could convey significant benefits to poor and marginalized communities and could offset some of the impacts of socioeconomic disadvantages as it offers linkages and ties that increase access to resources (such as highly qualified trainers in the different specialties) networks and institutions that could be used to improve conditions of life.

In this issue



A Collaborative network for adolescent nutrition and health in sub-Saharan Africa & India Workshop by MRC, UK (Page 24)



'Basic Surgical Skills Course' by The Royal College of Surgeons, Edinburgh (Page 28)





Editorial...

Dr. Suvarna Patil



Service of the humanity without any discrimination is at the heart of human brotherhood. The world we are living in has shared sorrows and happiness. It is our moral duty to help the less privileged sections of society irrespective of any discrimination for caste, creed, race and color. Doctors from Newcastle, UK noticed this line of gigantic and honest vision in health care done by the hospital, also impressed by the infrastructure, cleanliness and expertise available in such a rural area. Inspired this team of doctor's from Newcastle to render their special services in Walawalkar Hospital hence they have been visiting us for past 12 year for 1 week. This is their 13th visit to Walawalkar Hospital. Some of the team members have visited us consecutively for 13 year, I earnestly thank them. Your visit gives us a sense of satisfaction, inspiration and motivation.

Almost 3000 patients visited the hospital outpatient departments as well as indoor to meet UK medicos. All these patients came

from the villages far and nearby from 0 km to 300km away from our hospital, we could say like Kankavli, Vaibhavwadi, Vegrula, Nipani almost near to Goa and Karnataka.

Various outreach camps were arranged where UK medicos participated.

We are thankful to all UK team members for their successive visits and their encouragement in sustaining the mission towards success.

The efforts & results at Dervan are a glowing example of what a transparent organization with vision of a healthy nation and spiritual base coupled with a genuine desire to deliver most modern health services at doorsteps of deprived can do. Such an endeavor cannot stay ignored for a long time and therefore it has attracted towards it, several people from different walks of life, different places and professions, all working towards transforming lives of the people. It is a pleasure to have all of you here as a part of our team and looking forward to UK team's visit next year 2019.



Welcome all dignitaries



Warm welcome of Dr. Sanjay Deshpande and all other team members by Shri Vikas Walawalkar



GCRF Adolescent Nutrition workshop team from- Africa, Kenya, UK



Trainers from the Royal College of Edinburgh, UK

CME



CME titled 'Latest Updates in Medicine' was held on 28th January 2018.

Speakers:

Dr. Sanjay Deshpande (Upper left sidebar),

Dr. Lance Cope (Lower left sidebar),

Dr. Shankar Kashyap (Above)





The classroom

Nursing & Paramedical Students

The advanced techniques are demonstrated to our nursing and paramedical students in the classroom and at the workplace.





“Only a life lived in the service to others is worth living”

- Albert Einstein



B.K.L. Walawalkar Hospital is a tertiary referral centre and caters to the health needs of surrounding 19 tehsils of 2 districts. The aims of these camps are to provide cost effective surgery at the doorstep, teach local doctors and train residents in Plastic Surgery. A total of 238 patients have been operated by the team in this camp. Surgical team operated on 50 Patients headed by Dr. Vish Bhattacharya and his team. 33 patient's kidney has been saved from getting damaged by urology team, headed by Dr. Praveen Menezes, Dr. Chetan, Dr. Pawan and others.

120 patients got vision in this camp and the credit goes to ophthalmic team and Dr. Narayanan, Dr. Tsveta, Sister Kath and Dr. Sarpotdar.

Dr Lance Cope performed various procedures and hundreds of ultrasounds, X-rays, CT scans were done under his guidance and he introduced new techniques at Dervan. Dr Uday Bhatt, Dr. Mangesh Pawar operated 15 plastic surgery cases which included burns contracture, rhinoplasty, and minor deformities of faces thus offering them respect from the society & boosting their self-confidence to get back in the social life.

Orthopedic team comprising of Dr. Kashyap, Dr. Kohli, Dr. Nadkarni, Dr. Mahadev, and Dr. David was the busiest team who performed 35 surgeries (14 joint surgeries, 10 hip replacement surgeries & 11 spines) and helped the patients to overcome their disabilities





Reach the unreached...

There are a wide range of programmes that are designed to educate and support the general public in essential skills and knowledge. These include mass participation in camps, visits to households, distribution of educational materials, training tools and community events.

Various outreach camps were arranged where UK medicos participated.

Around community

Dental Health Programme

Model Dental Caries elimination program was held at Devghar School and many of the U.K team members visited the camp. It was emphasized how dental hygiene is important for good health.



Adolescent Girls Health Programme (Community Checkup)

Adolescent girls interacted with Dr Rachel Cooper, Anna Miranda, Joseph Menezes and other team members. They discussed health care and diet at this age.





Adolescent girls health programme (indoor workshops)



Common birthday celebration

Children's Common Birthday is celebrated to educate parents about child's early development & Well-Being.

The first three years of life are a period of incredible growth in all areas of a baby's development. The knowledge was given about How the earliest relationships with caregivers can promote healthy development, how young children build social and emotional skills and ways you can support language and literacy development starting from birth.

These activities are conducted on monthly basis to develop a bond between the hospital and the beneficiaries and to wipe out the fear about modern medicine from rural people's mind. One hidden agenda is to evaluate their health after attending the function.





Safe Motherhood Initiative:



ANC Mothers Check up at PHC For sustainable growth and development of country, there is a need to improve MCH Care in the rural region. Safe motherhood by providing good antenatal care (ANC) is very important to reduce maternal mortality ratio and infant mortality rate and to achieve millennium development goals. .

A primary health center (PHC) was visited by UK Team to examine pregnant ladies. Also they visited villages with mobile medical unit and rendered their services by examining patients.



ANC Mothers Check up at PHC





Health education through social programmes:

Dohale Jevan (Baby Shower Ceremony)

The principal reason for this 'Sanskar' is to ask the Divine to protect the baby in the womb (Garbha-Rakshana). The pregnant woman is also encouraged to maintain a positive mind and a healthy body. It was customary to perform this samskaar vidhi in the 6th or the 8th month of pregnancy. Before we get to the fun part of what foods to serve, what clothes to give to the aspiring mother.

The pregnant ladies enjoyed talking with U.K team during baby shower programme.



Barse (Naming Ceremony)

The formal naming ceremony (Barse) performed especially for a girl child. In this programme a newborn girl's name is selected using traditional methods. The aim of this activity is to focus on a newly born girl child and her growth.

This naming ceremony was celebrated in presence of UK medicos in our Rural Health Training Centre. Dr. Rachel Cooper examined each child during this program.





Health services at doorsteps:



A large number of elders as well as children in rural areas are unable to seek medical help due to variety of economic and social problems. BKLW hospital has joined hands with NRHM to run mobile medical units in rural region of Maharashtra to provide medical facilities to doorsteps. Mobile Medical Van has been commissioned for this service.

The MMU van visits the designated communities on a regular basis and offers services such as medical consultation, dispensing medicines, conducting medical counseling etc.





Rural empowerment and community health (REACH)



Community wellness is a process-oriented program that encompasses community-based program planning; facilitates interventions based on an assessment of community-specific health needs; encourages empowerment of the community.

Through this programme, villagers are better able to improve their social, cultural and economic well being





Special views by staff members



Greetings!

Dr. Rachel along with her team members visited the nursing college and conducted a lively class on 'Communication Skills' to the nursing students. It was a socio-drama method of teaching involving the lively discussion along with the Power Point presentation on the said topic. The Emphasis was given on the aspect of maintaining a good rapport with the patient since that is most important to gain confidence from the client.

The students responded well and took part in discussions. It was beneficial for the nursing students.

Regards,

Prof. Mrs. G. Balamani Bose,
Vice Principal, Samarth Nursing College

We all senior nurses are very much thankful to all UK nurses & team that comes to Walawalkar hospital every year. Every time they teach us new techniques and boost the knowledge of all nursing and paramedical staff.

They are very much punctual and sincere at their work. We are thankful to them for providing us some medical items for ICU department.

Every day they were ready to teach what we asked them to. We are sure that patient care at Walawalkar hospital, Dervan is on par with that in UK.

We feel very happy and proud when they come here to serve the rural population. They always participate in all community programmes like Dohale jevan, children common birthday, community visit etc. We all are eagerly waiting for their next year visit.

Thank you,
Senior Nurses



I, Shweta Ghag am working in operation theatre as staff nurse. UK Camp is a lot for us. It is a new festival for our campus. We learn most of new techniques & knowledge from great people. I assisted Dr. David & Dr. Nadkarni for spine cases & also attended Dr. Shankar sir for joint replacement surgeries. We did 21 joint replacement & 10 spine surgeries in only 6 days. It was really a great experience for me.

We discussed our queries with senior Sr. Shelly & Sr. Alenor. They shared their experience with us, which boosted me up with great confidence.

I am also thankful to Dr. Suvarna Patil Madam, Dr. Nadkarni sir, Dr. Kohali Sir, Sr. Jadhav & Sr. Mahadik who supported me through these experiences.

I am once again thankful to all UK team for their dedication for us & thank you for giving me this opportunity to share my experience.

Thank You

Sr. Shweta
Ortho OT Staff



It is my pleasure to express my feeling about UK Camp. Since last two years I am studying in this Hospital as 'Operation theater technician'. I would like to share my experience about UK Camp.

I got to know many things, many new techniques of assisting the operations. This UK Camp is most memorable for me. I had learned lots of new ideas in Anesthesia as well as operations.

Anesthetist team of UK like Dr. Sanjay Deshpande, Dr. Ken, Dr. Andy Whelan, Dr. Beth, Dr. Peter Taysum taught us systematic ideas about Drager's Machine.

In this UK camp I was posted in Ortho OT by Sr. Jadhav for Joints Replacement Surgeries. In this UK camp I was working with Dr. Shankar Kashyap, Dr. Joshi, And O-tech Br. Lain. In these 6 Days of camp, ortho team of UK did 22 joints replacement surgeries. So I am very happy and thank to all UK Team and Hospital for this.

Rohit Ranim
OT Technician



Case study

Reconstructive rhinoplasty – a case report



28 year old male, Sajan Bagkar, a resident of Guhagar, came to the hospital with a nasal bone deformity after an alleged history of facial injury during a Kabaddi match 2 years ago. On examination, it was found that the nasal septum was eroded with malunited nasal bone fractures.

The patient was taken for a reconstructive rhinoplasty under general anesthesia. The eroded nasal septum was repositioned at the normal and the cartilage defect was assessed. Right side 7th costal cartilage was harvested for the repair graft. The cartilage was cut, shaped and structured as needed to recreate the natural form of the nose. The shaped graft pieces were placed at the site of the defect and a new nasal septum, with lateral walls were created. Osteotomy of the malunited bones was done and the fragments were aligned to set supporting the structure of the repair. The nasal reconstruction was allowed to set with a plaster dressing supporting the frame.

Post operatively, assessment of the repair after settlement of the tissue edema revealed a massive transformation with a straight and

aligned high nasal bridge and a new structured nose. The psychological and social implications and the impact on his life thereafter, being truly monumental.

B/I total knee replacement – a case report



Mr. Sadashiv Karlekar, 66 Year old Gentleman resident of Wanivde, Tal. Devgad, Dist-Sindhudurg was admitted on 24.01.2018 with complaints of severe pain and deformity of both knees. Mr. Karlekar was unable to stand, walk and was completely Bedridden since last 2 ½ Years.

Mr. Karlekar was clinically evaluated and advised total knee replacement surgery by Dr. Shankar Kashyap. Patient had Bilateral FFD of about 60 with coronal plane deformities and further flexion to 100. Patient was put on traction for 4-5 days. Patient underwent rescent Rt. total knee replacement on 28.01.2018 and Lt. Total knee replacement on 31.01.2018. Both knees were completely corroded and patient was able to walk with comfort. Now patient is fully mobilized and able to carry his activities independently.



Its leisure time...





Collaborative network for adolescent nutrition & health in sub-Saharan Africa and India



On context to 'Beti Bachao, Beti Padhao' campaign being spread over the country in recent years, the world has taken into account the programme 'Adolescent girls Health and Empowerment' which is running for last 22 years in this rural part of Maharashtra. Shri Vithalrao Joshi Charities Trust's B.K.L. Walawalkar Hospital is successfully running this project to improve the health of malnourished girls. It is praised by doctors and researchers from all over the world and this 'Dervan pattern' is going to be implemented in 9 centers across the world.

An international workshop on 'Collaborative Network for Adolescent Nutrition & Health in sub-Saharan Africa and India' was organised by Medical Research Council, U.K. at B.K.L. Walawalkar Rural Medical College. The council was attended by Researchers, Doctors, and Nutritionists from England, South Africa, Kenya, Ethiopia, Jiniva and many more research

centers. Dr. David Ross, Adolescent Health Researcher and Guideline Development, WHO, Geneva, and Dr. Caroline Fall, (Southampton, UK) were special guests on this event.

All these doctors, researchers had a thorough discussion on Health, Nutrition and Psychology of adolescent girls and decided to start such research at 9 centers all over the world and B.K.L. Walawalkar Hospital is one of them.

A programme 'TALENT', Transforming Adolescence Life Through Nutrition, have been initiated and will work for 18 months at B.K.L. Walawalkar Hospital and latter on it will be implemented in different countries from all over the world. This project will be started at University of Southampton, Medical Research Council, UK, Jimma Ethiopia, Johannesburg, France, Gambia etc.



Adolescent girls are educated through special workshops so that they can be good mothers of our future citizens. Improving the hemoglobin level of preschool age children could yield substantial benefits in cognitive and psychosocial development and overall health.





Adolescent girls residential camp



Activities

Physical & psychological assessment

The camp was guided by clinical specialties and various experts from different part of world to evaluate adolescent health.



Objectives of adolescent girls residential camp –

- Clinical examination of girls
- Anthropometry (height, weight and other parameters by using Tanita machine)

- Blood collection for assessment of micronutrients, hemogram.
- Detection and correction of deficiencies of vitamins
- Physical & Health Education
- Psychological counseling and Self Empowerment





Inauguration of CBNATT (Gene expert machine center)

A collaborative program by Revised National Tuberculosis Control Programme & B.K.L. Walawalkar rural medical college



For continued sustainability and optimization of treatment and care for Tuberculosis (TB) patients in the Konkan region of Maharashtra State, District Tuberculosis Unit, Ratnagiri has installed TB Gene Xpert machine at B.K.L. Walawalkar Hospital, Dervan

The new revolutionary TB diagnostic machine was unveiled on 2nd February 2018 in presence of CEO Ratnagiri district, Civil Surgeon, DHO and District TB Officer.

The Gene Xpert is a new test for the TB and the machine can detect if a person is infected within two hours and also if the TB bacterium of the person has resistance to one of the common TB drugs. This facility has been beneficial mainly to patients, doctors and health sector workers which might help in achieving its aims in this rural area of Konkan region. The unit forms part of the department's decentralization of MDR TB treatment model aimed at making having facilities accessible and closer to communities.





Basic surgical skills course programme



B.K.L. Walawalkar Hospital and Rural Medical College offer national and international symposia services and also facilities for live surgery skills.

The Royal College of Surgeons of Edinburgh, UK conducted a Hands-On Basic Surgical Skills Course for the first time in India, presenting a unique opportunity for Doctors from all over the country.

The course was conducted twice over 2 days each between 12th to 17th February 2018 at BKL Walawalkar Hospital, Dervan and is made up of a series of demonstrations and extensive hands-on sessions.

Total 40 Candidates attended this course from various states of India (i.e. Uttar Pradesh, Tamilnadu, Kerala, Andhra Pradesh, Maharashtra etc) and abroad. (1 candidate from Aden, South Africa attended this workshop)





This course is helpful for the doctors looking to learn and improve the basic skills and techniques of Surgery. They got an opportunity to learn from highly qualified and experienced visiting faculty from UK.

The aim of this workshop is to provide a structured curriculum to teach the correct basic surgical techniques and to instill in the trainees the best habits at the Beginning of a surgeon's training.

The course is held over two days and is made up of a series of demonstrations and extensive hands-on sessions

At the end of the workshop, trainees will be able to demonstrate the correct basic surgical techniques and appreciate the theoretical and practical knowledge of basic surgical procedures.

Junior trainees pursuing a career in surgery are expected to be able to perform a range of basic surgical skills prior to commencing specialty surgical training. The Basic Surgical Skills courses have been running since 1994, with the involvement of all four UK and Ireland Colleges of Surgeons, and are designed to teach the essential basic technical skills required of a surgeon, instilling good practice at the early stages of training. Participants are introduced to the principles underpinning the various techniques being taught and practice these techniques with individual tuition and under the expert supervision of consultant surgeons. Participants are assessed throughout the course and issued with a certificate upon successful completion.

B.K.L.Walawalkar Hospital, Dervan
Surgery Camp Patients (27th January -3rd February 2018)

| Sr. No. | Name of Patient & Address | Age / Sex | Operation Done | Surgeon | *Cost of Treatment (Hosp. Bill +Medicine +Investigation) (A)* | | Amount Paid by Patient (B) | | *Concession given (A-B=C)* | |
|---|---|-----------|---|--|---|-------|----------------------------|-------|----------------------------|-------|
| | | | | | In Rs. | In \$ | In Rs. | In \$ | In Rs. | In \$ |
| I. General Surgeries (33 Patients, 33 Surgeries) | | | | | | | | | | |
| 1 | Mangesh Krushna Bendal At/p Devput, Veer, Taluka-Chiplun, District-Ratnagiri, Phone No. 9594467449 | 27/M | Lt. Inguinal Hernioplasty | Dr. Vish Bhattacharya Dr. Bhushan Shinde Dr. Janaki Pearson Dr. Ketki Paranjape | 18,788 | \$290 | 0 | \$0 | 18,788 | \$290 |
| 2 | Soma Sakharan Dingankar A/p Margtamhane, Kalmundi, Taluka-Chiplun, District-Ratnagiri, Phone No. 7875410149 | 54/M | Release incision with Debridement | Dr. Vish Bhattacharya Dr. Akhilesh Mishra Dr. Shriguru Dandekar | 13,727 | \$212 | 0 | \$0 | 13,727 | \$212 |
| 3 | Rachana Dhanappa Rajeshwar Deep Bangala Chowk Zopadpatti, Vadar Wadi, Pathandhare Road, Pune, Phone No. 9890202345 | 58/M | Rt. Inguinal Hernioplasty | Dr. Vish Bhattacharya Dr. Bhushan Shinde Dr. Janaki Pearson | 21,164 | \$327 | 1,164 | \$18 | 20,000 | \$309 |
| 4 | Ramesh Tanaji Rane A/p Dhokravali Varchi Wadi, Taluka-Chiplun, District-Ratnagiri, Phone No. 9420467615 | 58/M | Rt. Inguinal Hernioplasty | Dr. Vish Bhattacharya Dr. Akhilesh Mishra Dr. Asmita Karnalkar | 19,910 | \$307 | 0 | \$0 | 19,910 | \$307 |
| 5 | Sunita Tukaram Pale A/p Trumbav, Pale Wadi, Taluka-Chiplun, District-Ratnagiri, Phone No. 8828768896 | 65/F | Excision of dermoid cyst | Dr. Vish Bhattacharya Dr. Bhushan Shinde | 7,132 | \$110 | 0 | \$0 | 7,132 | \$110 |
| 6 | Bharat Tukaram Phage A/p Bharane, Taluka-Khed, District-Ratnagiri, Phone No. 9096410487 | 47/M | Open Cholecystectomy | Dr. Vish Bhattacharya Dr. Bhushan Shinde Dr. Janaki Pearson Dr. Peter Taysum | 37,868 | \$584 | 17,800 | \$275 | 20,068 | \$310 |
| 7 | Shaamshuddin Kasim Chaugule A/p Kadwad Deul Wadi, Taluka-Chiplun, District-Ratnagiri, Phone No. 9423276228 | 45/M | Umbilical Hernia Repair | Dr. Vish Bhattacharya Dr. Bhushan Shinde Dr. Akhilesh Mishra Dr. Juber | 20,071 | \$330 | 0 | \$0 | 20,071 | \$330 |
| 8 | Ravindra Krushnaji Mahajan C27, Loksangam Vihar, Nagras Road, Aundh, Pune Phone No. 9881307414 | 70/M | Hernioplasty | Dr. Pramod Bapat Dr. Sanjay Deshpande | 28,524 | \$440 | 0 | \$0 | 28,524 | \$440 |
| 9 | Dattatray krushnarao vichare A/p Sant Sena Nagar, Khed, Taluka-Khed, District-Ratnagiri, Phone No. 9923012010 | 58/M | Umbilical Hernia Repair | Dr. Bhushan Shinde Dr. Akhilesh Mishra Dr. Bahanrao Patil | 23,962 | \$370 | 6,628 | \$102 | 17,334 | \$267 |
| 10 | Rajaram Pandurang Zuzam A/p Dhayal Zuzam Wadi, Taluka-Khed, District-Ratnagiri, Phone No. 8806554213 | 44/M | Inguinal Hernioplasty | Dr. Pramod Bapat Dr. Janaki Pearson Dr. Peter Taysum | 17,332 | \$267 | 0 | \$0 | 17,332 | \$267 |
| 11 | Suchita Sitaram Sawant A/p Salgaon Veshi Wadi, Taluka-Kudal, District-Sindhudurg, Phone No. 9764653912 | 40/F | Feeding Jejunostomy | Dr. Bhushan Shinde Dr. Akhilesh Mishra Dr. Juber | 13,735 | \$212 | 13,735 | \$212 | 0 | \$0 |
| 12 | Sneha Gajanan Teli At/p. Ghodage, Taluka-Kudal, District-Sindhudurg, Phone No. 8275362600 | 38/F | Umbilical Hernia Repair | Dr. Vish Bhattacharya Dr. Bhushan Shinde Dr. Akhilesh Mishra Dr. Juber | 24,107 | \$372 | 2,500 | \$39 | 21,607 | \$333 |
| 13 | Julekha Karim Mullaji A/p Sawarde, Adarekar Mohalla, Taluka-Chiplun, District-Ratnagiri, Phone No. 9970459030 | 59/F | Incisional Hernia Repair | Dr. Pramod Bapat Dr. Peter Taysum | 21,937 | \$338 | 1,937 | \$30 | 20,000 | \$309 |
| 14 | Mohan Krushna Mane At/p Asud, Taluka-Dapoli, District-Ratnagiri, Phone No. 9404157352 | 66/M | Open Cholecystectomy | Dr. Vish Bhattacharya Dr. Bhushan Shinde Dr. Bahanrao Patil Dr. Juber | 39,317 | \$607 | 19,317 | \$298 | 20,000 | \$309 |
| 15 | Sangita Dagada Dhebe At/p. Pedhumbre, Dhangarwadi, Taluka-Chiplun, District-Ratnagiri, Phone No. 9657068443 | 36/F | EUA + Lateral Spinetero | Dr. Vish Bhattacharya Dr. Juber Dr. Peter Taysum | 14,167 | \$219 | 0 | \$0 | 14,167 | \$219 |

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|----|---|------|--|---|--------|-------|--------|-------|--------|-------|
| 16 | Pravina Pravin Pawar At/p. Arawali, Amborewadi, Taluka-Sangameshwar, District-Ratnagiri, Phone No. | 32/F | Open Cholecystectomy | Dr. Vish Bhattacharya Dr. Bhushan Shinde Dr. Peter Taysum Dr. Juber | 25,389 | \$392 | 5,389 | \$83 | 20,000 | \$309 |
| 17 | Anuja Prakash Katakhar A/p Aware, Taluka-Guhagar, District-Ratnagiri, Phone No. 9404153253 | 42/F | Incision & Drainage | Dr. Vish Bhattacharya Dr. Bhushan Shinde Dr. Juber Dr. Peter Taysum | 13,383 | \$206 | 0 | \$0 | 13,383 | \$206 |
| 18 | Vishwanath Yashwant Chavan A/p Kalambushi, Shevatkaranda, Taluka-Sangameshwar, District-Ratnagiri, Phone No. 9420087721 | 58/M | Haemorrhoid- ectomy | Dr. Vish Bhattacharya Dr. Bhushan Shinde Dr. Peter Taysum | 15,998 | \$247 | 0 | \$0 | 15,998 | \$247 |
| 19 | Namrata Bhagaram Pagade A/p Abloli Pagadewadi, Taluka-Guhagar, District-Ratnagiri, Phone No. 9405258209 | 19/F | Excision of Filmoadenoma | Dr. Vish Bhattacharya Dr. Bhushan Shinde Dr. Abhijit Patil Dr. Babanrao Patil | 13,294 | \$205 | 0 | \$0 | 13,294 | \$205 |
| 20 | Laxmi Maruti Phondekar At/p. Phondaghat Faujdarwadi, Taluka-Kudal, District-Sindhudurg, Phone No. 8554941844 | 65/F | Hemi Thyroidectomy | Dr. Vish Bhattacharya Dr. Peter Taysum Dr. Akhilesh Mishra Dr. Natasha Dr. Juber | 29,796 | \$460 | 9,796 | \$151 | 20,000 | \$309 |
| 21 | Sandip Janardan Shirdhankar A/p Bag, Taluka- Guhagar, District- Ratnagiri, Phone No. 9049780034 | 51/M | Fistulectomy for Complex Fistula | Dr. Vish Bhattacharya Dr. Peter Taysum | 13,784 | \$213 | 0 | \$0 | 13,784 | \$213 |
| 22 | Ankush Ramchandra Gujar At/p. Ambatkhoh, Taluka-Chiplun, District-Ratnagiri, Phone No. 9527862086 | 64/M | Rt 5th Toe Amputation | Dr. Vish Bhattacharya Dr. Peter Taysum Dr. Natasha | 30,221 | \$466 | 9,915 | \$153 | 20,306 | \$313 |
| 23 | Tukaram Dhonda Mahadik A/p Adkhal, Ram Wadi, Taluka- Mandangad, District-Ratnagiri, Phone No. 8888791627 | 80/M | B. K. Amputation | Dr. Bhushan Shinde Dr. Akhilesh Mishra Dr. Juber Dr. Abhijit Pandit | 26,792 | \$413 | 6,792 | \$105 | 20,000 | \$309 |
| 24 | Komal Ashok Pawar A/p Hardagal, Sukad Wadi, Taluka-Lanja, District-Ratnagiri, Phone No. 9404799643 | 18/F | Hernioplasty | Dr. Pramod Bapat Dr. Babanrao Patil | 13,851 | \$214 | 0 | \$0 | 13,851 | \$214 |
| 25 | Nishikant Bajirao Dhoke At/p. Jamsandekatta, Taluka-Devgad, District-Sindhudurg, Phone No. 9112128242 | 35/M | Umbilica Hernia Repair | Dr. Bhushan Shinde Dr. Akhilesh Mishra Dr. Juber | 24,328 | \$375 | 4,000 | \$62 | 20,328 | \$314 |
| 26 | Mahesh Chandrakant Jadhav A/p Vakavali, Marath Wadi, Taluka-Lanja, District-Ratnagiri, Phone No. 7218575138 | 16/M | Open Cholecystectomy | Dr. Vish Bhattacharya Dr. Akhilesh Mishra Dr. Juber Dr. Beth | 18,010 | \$278 | 0 | \$0 | 18,010 | \$278 |
| 27 | Rupa Dashrath Chavari A/p Kushiwade, Bhagad Wadi, Taluka-Chiplun, District-Ratnagiri, Phone No. 9689653546 | 48/F | Pan Hysterectomy | Dr. Abhay Desai Dr. Amit Mandhare Dr. Babanrao Patil | 41,586 | \$642 | 21,586 | \$331 | 20,000 | \$309 |
| 28 | Sandhya Shashikant Adhatrao At/p Murdav, Marathwadi, Taluka-Sangameshwar, District-Ratnagiri, Phone No. 9420087721 | 51/F | Radical Hysterectomy | Dr. Abhay Desai Dr. Amit Mandhare Dr. Bhushan Shinde Dr. Babanrao Patil Dr. Abhijeet Pandit | 50,978 | \$786 | 0 | \$0 | 50,978 | \$786 |
| 29 | Nandini Dipak Patle A/p Karivane, Rajapur Borambe Wadi, Taluka-Rajapur, District-Ratnagiri, Phone No. 7030312823 | 45/F | Hernia Repair | Dr. Vish Bhattacharya Dr. Akhilesh Mishra Dr. Asmita Karnalkar | 17,047 | \$263 | 0 | \$0 | 17,047 | \$263 |
| 30 | Chandrakant Bhikaji Manjarekar A/p Rajwadi, Manjarekarwadi, Taluka-Sangameshwar, District-Ratnagiri | 45/M | Hernioplasty | Dr. Neville Tata Dr. Babanrao Patil | 14,588 | \$227 | 400 | \$6 | 14,288 | \$220 |
| 31 | RAHIL GAITAM TAMBE A/p Makhajan, Taluka-Chiplun, District-Ratnagiri | 24/M | Appendectomy | Dr. Mallapa Haggi Dr. Juber | 18,471 | \$285 | 0 | \$0 | 18,471 | \$285 |

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|---|--|------|---|---|---------|----------|---------|---------|---------|---------|
| 32 | Shankar Krushna Yelonde A/p Ulbale, Madhall Wadi, Taluka-Chiplun, District-Ratnagiri, Phone No. 7745010805 | 55/M | Hernioplasty | Dr. Neville Tata Dr. Juber | 14,868 | \$229 | 0 | \$0 | 14,868 | \$229 |
| 33 | Santosh Baliram Jadhav A/p Tural, Raul Wadi, Taluka-Chiplun, District-Ratnagiri, Phone No. 9049848438 | 56/M | Cystolithotripsy | Dr. Abhijit Patil Dr. Sabnis Dr. Babanrao Patil | 17,499 | \$270 | 0 | \$0 | 17,499 | \$270 |
| Sub Total- 1 | | | | | 721,724 | \$11,134 | 120,959 | \$1,866 | 600,765 | \$9,268 |
| 2. Urology Surgeries (32 Patients, 32 Surgeries) | | | | | | | | | | |
| 1 | Urmila Rajaram Okate At/p. Kadwai Okatewadi, Taluka-Sangameshwar, District-Ratnagiri, Phone No. 9970300746 | 38/F | Rt. PCNL + Rt. DJS | Dr. Pravin Manezes Dr. Abhijit Patil Dr. Chetan Ghadekar Dr. Shriguru Dandekar | 40,410 | \$623 | 0 | \$0 | 40,410 | \$623 |
| 2 | Suraj Santosh Surve A/p Nive, Taluka-Chiplun, District-Ratnagiri, Phone No. 9421502993 | 21/M | Rt. URS + DJS | Dr. Chetan Ghadekar Dr. Abhijit Patil Dr. Asmita Karnalkar Dr. Abhijit Pandit | 25,230 | \$389 | 0 | \$0 | 25,230 | \$389 |
| 3 | Rachana Rajendra Joshi A/p Mahad, Taluka-Mahad, District-Ratnagiri, Phone No. 9422694009 | 41/F | EUA + Lateral Spinecctomy + excision of anal fissure | Dr. Vish Bhattacharya Dr. Akhilesh Mishra Dr. Peter Taysum Dr. Juber | 15,994 | \$247 | 0 | \$0 | 15,994 | \$247 |
| 4 | Baban Bhaguji Dhebe A/p Pedhambe, Ambadi Wadi, Taluka-Chiplun, District-Ratnagiri, Phone No. 9923418706 | 60/M | Exploratory Laparotomy | Dr. Mallapa Huggi Dr. Akhilesh Mishra Dr. Abhijit Patil | 55,730 | \$860 | 0 | \$0 | 55,730 | \$860 |
| 5 | Rajashree Avadhut Salvi A/p Kapsal, Dukan Khorl, Taluka-Chiplun, District-Ratnagiri, Phone No. 9545739440 | 54/F | Rt. PCNL | Dr. Pravin Manezes Dr. Chetan Ghadekar Dr. Shriguru Dandekar | 35,702 | \$551 | 0 | \$0 | 35,702 | \$551 |
| 6 | Santosh Laxman Jadhav A/p Mamale Jadhav Wadi, Taluka-Sangameshwar, District-Ratnagiri, Phone No. 9657763396 | 38/M | Lt. PCNL + DJS | Dr. Chetan Ghadekar Dr. Mallapa Huggi Dr. Peter Taysum Dr. Abhijit Pandit | 38,020 | \$587 | 0 | \$0 | 38,020 | \$587 |
| 7 | Manohar Tukaram Lad At/p. Dhakmoli, Taluka-Chiplun, District-Ratnagiri, Phone No. 9594595829 | 60/M | Cystolithotripsy + Lt. URS + DJ Stenting | Dr. Pravin Manezes Dr. Chetan Ghadekar Dr. Shriguru Dandekar | 22,989 | \$355 | 0 | \$0 | 22,989 | \$355 |
| 8 | Ramesh Gopal Mandavkar At/p Palpene, Taluka - Guhagar, District- Ratnagiri, Phone No. 7756819705 | 48/M | B/L DJS Removal + Lt. PCNL + Lt. DJS | Dr. Pravin Manezes Dr. Abhijit Patil Dr. Babanrao Patil Dr. Abhijit Pandit | 39,433 | \$608 | 0 | \$0 | 39,433 | \$608 |
| 9 | Suvarna Sitaram Dhanawade A/p Chikhali, Dhanawade Wadi, Taluka-Chiplun, District-Ratnagiri, Phone No. 9421502993 | 63/F | Rt. URS + DJ Stenting | Dr. Pravin Manezes Dr. Abhijit Patil Dr. Babanrao Patil | 26,303 | \$406 | 4,000 | \$62 | 22,303 | \$344 |
| 10 | Dinesh Dattaram Bhuwad At/p. Donavali Shirkewadi, Taluka-Chiplun, District-Ratnagiri, Phone No. 8879112045 | 26/M | Rt. PCNL with DJS | Dr. Chetan Ghadekar Dr. Beth | 35,744 | \$551 | 0 | \$0 | 35,744 | \$551 |
| 11 | Sanjay Babu Gurav At/p. Ambed Bk. Taluka- Sangameshwar, District- Ratnagiri, Phone No. 9970611465 | 35/M | Lt. PCNL + DJS | Dr. Pravin Manezes Dr. Chetan Ghadekar Dr. Beth Dr. Abhijit Pandit | 32,418 | \$500 | 0 | \$0 | 32,418 | \$500 |
| 12 | Manohar Keshav Mahindre A/p Kuve, Taluka-Lanja, District-Ratnagiri, Phone No. 9730293655 | 79/M | Rt. PCNL + Rt. DJS | Dr. Chetan Ghadekar Dr. Beth | 33,325 | \$514 | 13,325 | \$206 | 20,000 | \$309 |
| 13 | Bhikaji Ravaji Mohite A/p Shringarpur, Baudh Wadi, Taluka- Sangameshwar, District- Ratnagiri, Phone No. 7387839614 | 69/M | TURP | Dr. Abhay Desai Dr. Babanrao Patil | 29,172 | \$450 | 0 | \$0 | 29,172 | \$450 |

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|----|--|------|--|--|--------|-------|--------|-------|--------|-------|
| 14 | Bapu Krishna Bandagale A/p Birwadi Adarsh Nagar, Taluka-Mahad, District-Raigad, Phone No. 9011241198 | 64/M | TURP | Dr. Chetan Ghadekar Dr. Abhay Desai Dr. Beth | 25,800 | \$398 | 0 | \$0 | 25,800 | \$398 |
| 15 | Ganu Hiru Khambe A/p Nivali, Khambe Wadi, Taluka-Chiplun, District-Ratnagiri, Phone No. 9527852899 | 86/M | Cystoscopy | Dr. Pravin Manezes Dr. Shriguru Dandekar | 14,828 | \$229 | 0 | \$0 | 14,828 | \$229 |
| 16 | Dhaktu Ganu Pachkale A/p Chikhali, Dhanawade Wadi, Taluka- Sangameshwar, District- Ratnagiri, Phone No. 8605460156 | 60/M | Cystoscopy | Dr. Pravin Manezes Dr. Shriguru Dandekar | 16,807 | \$259 | 0 | \$0 | 16,807 | \$259 |
| 17 | Vikhi Thakar A/p Vasai, Mumbai, Phone No. 9226138507 | 30/M | Laparotomy | Dr. Abhijeet Patil Dr. Neville Tata Dr. Babanrao Patil | 23,560 | \$363 | 21,550 | \$332 | 2,010 | \$31 |
| 18 | Sameer Shivaji Bhoobaskar A/p Koundhar Bhoobaskar Wadi, District-Ratnagiri, Phone No. 9823854501 | 28/M | Rt. PCNL + DJS | Dr. Chetan Ghadekar Dr. Pravin Manezes Dr. Beth Dr. Abhijit Pandit | 34,456 | \$532 | 0 | \$0 | 34,456 | \$532 |
| 19 | Parshuram Bapu Mhadye A/p Holl, Gurav Wadi, Taluka-Rajapur, District-Ratnagiri, Phone No. 92098385891 | 65/M | Cystoscopy + TURP | Dr. Pravin Manezes Dr. Abhay Desai Dr. Beth Dr. Abhijit Pandit | 30,687 | \$473 | 0 | \$0 | 30,687 | \$473 |
| 20 | Narayan Balu Gotekar A/p Sarand, Gotekar Wadi, Taluka-Sangameshwar, District-Ratnagiri, Phone No. 8179951430 | 55/M | Rt. Ureteric reimplant + Rt. DJS | Dr. Abhay Desai Dr. Abhijit Patil Dr. Sanjay Deshpande Dr. Asmita Karnalkar | 31,534 | \$486 | 0 | \$0 | 31,534 | \$486 |
| 21 | Laxmi Maruti Ghadage A/p Wadnaka, Chiplun, District-Ratnagiri, | 30/F | Lt. URS + DJ Stent Removal | Dr. Pravin Manezes Dr. Pavan Dr. Junkie Pearson | 5,837 | \$90 | 510 | \$8 | 5,327 | \$82 |
| 22 | Nayan Rakesh Ganjekar A/p Kadwad Sutarwadi, Taluka- Chiplun, District- Ratnagiri, Phone No. 9420147560 | 5/M | Open HL Pyloplasty | Dr. Pravin Manezes Dr. Pavan Dr. Peter Taysum Dr. Asmita Karnalkar | 47,945 | \$740 | 0 | \$0 | 47,945 | \$740 |
| 23 | Anjali Anant Mavalankar At/p Khana, Katul Wadi, Taluka fi District-Ratnagiri, Phone No. 8605529222 | 45/F | Cystoscopy + Urethral Dilatation | Dr. Pawan Rahanglal Dr. Abhijit Patil Dr. Beth Dr. Abhijit Pandit | 13,294 | \$205 | 0 | \$0 | 13,294 | \$205 |
| 24 | Keshav Ragho Kadam A/p Devsale, Vairag Wadi, Taluka-Khed, District-Ratnagiri, Phone No. 9421954353 | 65/M | TURP | Dr. Pawan Rahanglal Dr. Chetan Ghadekar Dr. Asmita Karnalkar | 28,277 | \$436 | 0 | \$0 | 28,277 | \$436 |
| 25 | Sakharam Vitbu Modak At/p. Sheldi Hedwadi, Taluka- Chiplun, District- Ratnagiri, Phone No. 02356-651336 | 65/M | TURP | Dr. Chetan Ghadekar Dr. Sanjay Deshpande Dr. Asmita Karnalkar | 36,302 | \$560 | 0 | \$0 | 36,302 | \$560 |
| 26 | Raju B Sanade A/p Kolhapur, District- Kolhapur, Phone No. 99206776850 | 38/M | Lt. PCNL | Dr. Pawan Rahanglal Dr. Chetan Ghadekar Dr. Sanjay Deshpande Dr. Asmita Karnalkar | 29,418 | \$454 | 8,413 | \$130 | 21,005 | \$324 |
| 27 | Renuka Rajendra Bhagwat A/p Dapoli, District- Ratnagiri, Phone No. 9403111948 | 28/F | Supracervical Excision biopsy | Dr. Vish Bhattacharya Dr. Peter Taysum | 5,365 | \$83 | 5,365 | \$83 | 0 | \$0 |
| 28 | Pandurang Bhikaji Khade A/p Dahivali, Taluka-Chiplun, District-Ratnagiri | 67/M | TURP | Dr. Chetan Ghadekar Dr. Abhijit Patil Dr. Babanrao Patil Dr. Abhijit Pandit | 27,608 | \$426 | 0 | \$0 | 27,608 | \$426 |
| 29 | Tanaji Bhagoji Rambade At/p. Kere, Tokwadi, Patepilavali, Taluka-Chiplun, District-Ratnagiri, Phone No. 9757210698 | 30/M | Lt. PCNL | Dr. Chetan Ghadekar Dr. Abhijit Patil Dr. Babanrao Patil Dr. Abhijit Pandit | 41,219 | \$636 | 0 | \$0 | 41,219 | \$636 |

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|---|--|------|--|--|---------|----------|--------|-------|---------|----------|
| 30 | Vaishali Babu Bhadwalkar A/p Rajwadi, Bhadwalkarwadi, Taluka-Sangameshwar, District-Ratnagiri | 45/F | Lt. PCNL + DJS | Dr. Chetan Ghadekar Dr. Abhijit Patil Dr. Babanrao Patil Dr. Abhijit Pandit | 29,094 | \$449 | 9,000 | \$139 | 20,094 | \$310 |
| 31 | Sagar Suresh Kadam A/p Vahal, Telewadi, Taluka-Chiplun, District-Ratnagiri, Phone No. 9130423039 | 20/M | Rt. PCNL + DJS | Dr. Satej Sahnis Dr. Mallapa Huggi Dr. Babanrao Patil | 36,500 | \$563 | 0 | \$0 | 36,500 | \$563 |
| 32 | Ranjana Rajaram Nate A/p Sadavali, Sahaydrinagar, Taluka-Sangameshwar, District-Ratnagiri, Phone No. 9890301828 | 53/F | Rt. PCNL + Rt. DJS | Dr. Satej Sahnis Dr. Abhijeet Pandit | 37,171 | \$573 | 0 | \$0 | 37,171 | \$573 |
| Sub Total- 2 | | | | | 946,172 | \$14,597 | 62,163 | \$959 | 884,009 | \$13,638 |
| 3. Plastic Surgeries (16 Patients, 16 Surgeries) | | | | | | | | | | |
| 1 | Shanti Somu Tambe At/p Ghodge, Taluka- Kudal, District- Sindhudurg, Phone No. 9421267053 | 23/F | Split ear lobule advent flap and repair | Dr. Mangesh Pawar Dr. Janaki Pearson Dr. Ketki Paranjape | 15,599 | \$241 | 0 | \$0 | 15,599 | \$241 |
| 2 | Akshay Arvind Bodhe A/p Shirdhon, Near Datta Manadir, Taluka- Koregaon, District-Satara, Phone No. 9096060947 | 22/M | Cranioplasty | Dr. Uday Bhatt Dr. Mangesh Pawar Dr. Neville Tata Dr. Janaki Pearson Dr. Ketki Paranjape | 29,130 | \$449 | 8,500 | \$131 | 20,630 | \$318 |
| 3 | Pranita Devrao Shisode A/p Pedhambe, Taluka-Chiplun, District-Ratnagiri, Phone No. 8975311281 | 1/F | Excision of extra Finger | Dr. Mangesh Pawar Dr. Neville Tata Dr. Janaki Pearson Dr. Ketki Paranjape | 11,094 | \$171 | 0 | \$0 | 11,094 | \$171 |
| 4 | Vilas Pandurang Ghanekar A/p Ovali, Vitthal Wadi, Taluka-Chiplun, District-Ratnagiri, Phone No. 9420143446 | 68/M | Keloid Contracture release and grafting | Dr. Mangesh Pawar Dr. Neville Tata | 13,000 | \$201 | 0 | \$0 | 13,000 | \$201 |
| 5 | Ramesh Sadashiv Indulkar A/p Kalambe, Taluka- B District-Satara, Phone No. 9967110792 | 27/M | Excision of Scar | Dr. Mangesh Pawar Dr. Neville Tata | 14,781 | \$228 | 0 | \$0 | 14,781 | \$228 |
| 6 | Sumit Sudhakar Jadhav A/p Vataad Pashchim Boudh Wadi, Taluka- B District-Ratnagiri, Phone No. 8975412508 | 26/M | Suturing | Dr. Mangesh Pawar Dr. Neville Tata | 9,262 | \$143 | 0 | \$0 | 9,262 | \$143 |
| 7 | Rupesh Radheshyam Karwa A/p Pune, Phone No. 9762517517 | 23/M | Excision of Scar | Dr. Mangesh Pawar Dr. Neville Tata | 4,625 | \$71 | 0 | \$0 | 4,625 | \$71 |
| 8 | Samiksha Suresh Vane At/p. Velamb, Pangari, Vanewadi, Taluka- Guhagar, District- Ratnagiri, Phone No. 9763028592 | 30/Y | Burn Contracture Release + Skin grafting | Dr. Mangesh Pawar Dr. Neville Tata Dr. Deshpande | 38,392 | \$592 | 18,000 | \$278 | 20,392 | \$315 |
| 9 | Sujan Sandesh Bagkar A/p Guhagar, Taluka- Guhagar, District- Ratnagiri, Phone No. 9420054441 | 28/M | Rhinoplasty | Dr. Uday Bhatt Dr. Mangesh Pawar Dr. Neville Tata Dr. Janaki Pearson Dr. Ketki Paranjape | 31,604 | \$488 | 11,604 | \$179 | 20,000 | \$309 |
| 10 | Pravin Prakash Pednekar A/p Nadhavade, Taluka- Sawantwadi, District- Sindhudurg | 33/M | Inj. Kenacort 40 mg locally, infiltrate intra keloid | Dr. Mangesh Pawar | 1,634 | \$25 | 0 | \$0 | 1,634 | \$25 |
| 11 | Rasika Kundiba Zore A/p Ovali, Bamsadi, Taluka-Chiplun, District-Ratnagiri, Phone No. 9405943735 | 11/F | Burn Contracture Release + 'z' plasty | Dr. Mangesh Pawar Dr. Neville Tata Dr. Babanrao Patil | 24,981 | \$385 | 4,981 | \$77 | 20,000 | \$309 |
| 12 | Jaywant Barakya Chavan At/p. Sawarde Khotwadi, Taluka-Chiplun, District-Ratnagiri, | 42/M | Commando | Dr. Mangesh Pawar Dr. Neville Tata Dr. Abhay Desai Dr. Babanrao Patil Dr. Abhijit Pandit | 75,882 | \$1,171 | 0 | \$0 | 75,882 | \$1,171 |

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|--|--|-------|---|---|---------|---------|---------|---------|---------|---------|
| 13 | ATHRVA DIPAK SURVE A/p Kuchambe No 1, Taluka-Sangameshwar, District-Ratnagiri | 8/M | Auroplasty | Dr. Mangesh Pawar Dr. Neville Tata Dr. Abhijit Patil Dr. Juber | 11,434 | \$176 | 0 | \$0 | 11,434 | \$176 |
| 14 | Sai Jayanta Rasal A/p- 730, Nevare, Navedar Wadi, Taluka & District- Ratnagiri, Phone No. 7798723885 | 24/M | Excision of Lipoma Large | Dr. Mangesh Pawar Dr. Neville Tata Dr. Juber Dr. Babanrao Patil | 10,335 | \$159 | 0 | \$0 | 10,335 | \$159 |
| 15 | Priya Jaydas Mhadgul A/p Vilaye Mhadgul, Taluka- Guhagar, District- Ratnagiri, Phone No. 9067452578 | 33/F | Excision | Dr. Mangesh Dr. Neville Tata Dr. Babanrao Patil Dr. Juber | 11,003 | \$170 | 0 | \$0 | 11,003 | \$170 |
| 16 | Prasad Ashok Chandorkar A/p Chandor, Taluka & District- Ratnagiri, Phone No. 8698371221 | 35/M | Excision of Lipoma Large | Dr. Mallapa Haggi | 6,083 | \$94 | 0 | \$0 | 6,083 | \$94 |
| Sub Total- 3 | | | | | 308,839 | \$4,765 | 43,085 | \$665 | 265,754 | \$4,100 |
| 4. Orthopedic Surgeries (10 Patients, 31 Surgeries) | | | | | | | | | | |
| 1 | Sadasbiv Ganesh Karlekar A/p Vanivde, Taluka- Devgad, District- Sindhudurg, Phone No. 02364217555 | 65/M | B/L TKR | Dr. Shankar Kashyap Dr. Mahadev Ghuge Dr. Babanrao Patil | 301,580 | \$4,653 | 300,580 | \$4,637 | 1,000 | \$15 |
| 2 | Kashinath Devaji More A/p Pal, Taluka- Chiplun, District- Ratnagiri, Phone No. 9823251170 | 67/M | TUFP | Dr. Pavan Rajurkar Dr. Pravin Dr. Asmita Karnalkar Dr. Abhijit Pandit | 58,014 | \$895 | 58,014 | \$895 | 0 | \$0 |
| 3 | Maruti Gangani Patil A/p Kotoli, Taluka- Panhala, District- Kolhapur, Phone No. 7875575859 | 68/M | B/L UKA | Dr. Shankar Kashyap Dr. Pavan Kohali Dr. Sudhir Joshi Dr. Sanjay Deshpande Dr. Babanrao Patil | 222,404 | \$3,431 | 200,130 | \$3,087 | 22,274 | \$344 |
| 4 | Madhura Pramod Joshi Nirman Residency, B7, Flat 604, Bhujhal TownShip, Kothrud, Pune 38 Phone No. 9270403082 | 65/F | Rt. UKR | Dr. Shankar Kashyap Dr. Sudhir Joshi Dr. Ankush Dr. Babanrao Patil | 131,449 | \$2,028 | 100,660 | \$1,553 | 30,789 | \$475 |
| 5 | Santosh Babanrao Badhe At/p. Moshi, Pune Phone No. 9881616263 | 40/M | Cervical Endoscopic Discectomy | Dr. Sunil Nadkarni Dr. Bhupesh Dr. Abhijit Pandit | 51,220 | \$790 | 49,730 | \$767 | 1,490 | \$23 |
| 6 | Pralhad Chandrakant Heman A/p Ambay Ponshe, Taluka- Sangameshwar, District- Ratnagiri | 44/M | Cervical Spine Instrumentation | Dr. Dave Fender Dr. Sunil Nadkarni Dr. Bhupesh Dr. Sumit Sonawane Dr. Shriguru Dandekar | 7,005 | \$108 | 7,005 | \$108 | 0 | \$0 |
| 7 | Leela Trimbak Sathé A/p 998 Gokhale Nagar Pune Phone No. 9657983133 | 70/F | Rt. L5-S1 Fenestration + Rt. Open Foraminotomy | Dr. Bhupesh Dr. Bharati Sharma Dr. Abhijit Pandit | 55,294 | \$853 | 55,065 | \$850 | 229 | \$4 |
| 8 | Manohar Pandurang Pawar A/p Chikhali, Guravwadi, Taluka- Sangameshwar, District- Ratnagiri, Phone No. 8380862700 | 65Y/M | Radius Plating | Dr. Bharati Sharma Dr. Vaibhav Kanawade Dr. Abhijit Pandit Dr. Shriguru Dandekar | 31,000 | \$478 | 11,000 | \$170 | 20,000 | \$309 |
| 9 | Sanjay Laxman Rane A/p Ambatkhol, Gujarwadi, Taluka- Chiplun, District- Ratnagiri, Phone No. 9623425985 | 42/M | B/L THR | Dr. Shankar Kashyap Dr. Mallikarjun Dr. Sanjay Deshpande Dr. Mahadev Ghuge Dr. Ken | 239,672 | \$3,698 | 200,000 | \$3,085 | 39,672 | \$612 |
| 10 | Sarika Amit Kale A/p 295/31, Gokhale Nagar, Main Road Pune Phone No. 9405030200 | 30/F | Spine Instrumentation | Dr. Sunil Nadkarni Dr. Bhupesh Dr. Sumit Sonawane Dr. Abhijit Pandit | 100,135 | \$1,545 | 72,430 | \$1,117 | 27,705 | \$427 |
| 11 | Vaishali Vijay Malusare A/p Chiplun, Taluka - Chiplun, District- Ratnagiri, Phone No. 901898560 | 57/Y | B/L TKR | Dr. Shankar Kashyap Dr. Sudhir Joshi Dr. Mahadev Ghuge Dr. Ken Dr. Babanrao Patil | 255,209 | \$3,937 | 200,000 | \$3,085 | 55,209 | \$852 |

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|----|--|-------|--|--|---------|---------|---------|---------|--------|---------|
| 12 | Sangita Harischandra Pawar A/p Murdav Pawar Wadi, Taluka- Sangameshwar, District- Ratnagiri, Phone No. 9860021009 | 70Y/F | Laminectomy | Dr. Dave Fender Dr. Bhupesh Dr. Bharati Sharma Dr. Bahanrao Patil | 62,954 | \$971 | 50,280 | \$776 | 12,674 | \$196 |
| 13 | Sameena Majid Shaikh A/p Sawarde, Mohalla, Taluka- Chiplun, District- Ratnagiri, Phone No. 9860176062 | 36/F | Rt. UKR | Dr. Shankar Kashyap Dr. Ankush Dr. Ken | 134,256 | \$2,071 | 100,450 | \$1,550 | 33,806 | \$522 |
| 14 | Sangita Sudhakar Lanjekar A/p Zombadi Telewadi, Taluka-Guhagar, District- Ratnagiri, Phone No. 7887966120 | 55/F | Decompression + Fixation | Dr. Sunil Nadkarni Dr. Bhupesh Dr. Sumit Sonawane Dr. Bahanrao Patil | 86,244 | \$1,331 | 0 | \$0 | 86,244 | \$1,331 |
| 15 | Suvidha Kamalakar Sarmalkar A/p Sawantwadi Mate Wadi, Taluka-Sawantwadi, District- Sindhudurg, Phone No. 9422584434 | 65/F | B/L TKR | Dr. Dave Fender Dr. Shankar Kashyap Dr. Mahadev Ghuge Dr. Bahanrao Patil Dr. Abhijit Pandit | 244,694 | \$3,775 | 200,000 | \$3,085 | 44,694 | \$690 |
| 16 | Prakash Dattaram Baing A/p Shiposhi, Taluka- Lanja, District- Ratnagiri, Phone No. 9822807095 | 35/M | Y Hole Locking LC DCP | Dr. Pavan Kohali Dr. Mallikarjun Dr. Asmita Karnalkar | 25,445 | \$393 | 5,300 | \$82 | 20,145 | \$311 |
| 17 | Shalini Kamchandra Katkar A/p Lanja Ashirwad Niwas, Taluka- Lanja, District- Ratnagiri, Phone No. 8087316966 | 81/M | Revision Rt. Hip with implant removal THR | Dr. Shankar Kashyap Dr. Vaibhav Patil Dr. Mahadev Ghuge Dr. Ken | 196,664 | \$3,034 | 196,664 | \$3,034 | 0 | \$0 |
| 18 | Nirmala Bhulchandra Joshi A/p. Waghambhe, Taluka- Guhagar, District- Ratnagiri, Phone No. 9637105530 | 75/F | RT.TKR | Dr. Shankar Kashyap Dr. Pavan Kohali Dr. Ken Dr. Abhijit Pandit | 138,096 | \$2,130 | 100,660 | \$1,553 | 37,436 | \$578 |
| 19 | Pranod Prabhakar Walawalkar A/p Kudal Madhali Kumbharwadi, Taluka- Kudal, District- Sindhudurg, Phone No. 9823065040 | 50/M | Endoscopic Discectomy | Dr. Sunil Nadkarni Dr. Sumit Sonawane Dr. Bahanrao Patil Dr. Abhijit Pandit | 60,000 | \$926 | 60,000 | \$926 | 0 | \$0 |
| 20 | Lata gulab shingade A/p Shrungartali, Taluka- Guhagar, District- Ratnagiri, | 46/F | L2 Anterolateral Decompression + Bone grafting L1 to L2 fixation | Dr. Dave Fender Dr. Bharati Sharma Dr. Sumit Sonawane Dr. Asmita Karnalkar Dr. Abhijit Pandit | 61,077 | \$942 | 0 | \$0 | 61,077 | \$942 |
| 21 | Satyabhama Pandurang Suryavanshi A/p Ganesh Peth, Burdi Pul, Pune Phone No. 9833638122 | 62/F | B/L TKR | Dr. Shankar Kashyap Dr. Pavan Kohali Dr. Pankaj Dr. Bahanrao Patil | 267,077 | \$4,120 | 205,000 | \$3,163 | 62,077 | \$958 |
| 22 | Rehana Wajirali Malim Malund, Mumbai, Phone No. 9892040677 | 68Y/F | B/L UKR | Dr. Shankar Kashyap Dr. Mahadev Ghuge Dr. Ken | 259,687 | \$4,006 | 259,687 | \$4,006 | 0 | \$0 |
| 23 | Bharati Ananda Sutar A/p Bajak Wadi, Taluka- Shahuwadi, District- Kolhapur | 32/F | L5-S1 Endoscopic Discectomy | Dr. Dave Fender Dr. Sunil Nadkarni Dr. Sumit Sonawane Dr. Bahanrao Patil Dr. Abhijit Pandit | 46,581 | \$719 | 30,000 | \$463 | 16,581 | \$256 |
| 24 | Prabhavati Dattaram Panchal A/p Kurane, Ghadshi Wadi, Taluka- Lanja, District- Ratnagiri, Phone No. 8007160460 | 75/F | Bipolar Prosthesis | Dr. Bharati Sharma Dr. Mallikarjun Dr. Vaibhav Kanawade Dr. Bahanrao Patil Dr. Juber | 65,937 | \$1,017 | 32,400 | \$500 | 33,537 | \$517 |
| 25 | Trishul Vijay Jadhav A/p Bharane, Shivneri Nagar, Taluka- Khed, District- Ratnagiri, Phone No. 9405328201 | 30/M | B/L THR Uncemented | Dr. Shankar Kashyap Dr. Pavan Rajurkar Dr. Mahadev Ghuge Dr. Bahanrao Patil | 250,573 | \$3,866 | 200,680 | \$3,096 | 49,893 | \$770 |
| 26 | Kishor Vitthal Parmar Tadi Wala Road, Pach Buledding, Sharveer Chouk, Pune 13 Phone No. 9767961377 | 44/M | Lt. THR | Dr. Shankar Kashyap Dr. Mahadev Ghuge Dr. Pavan Rajurkar Dr. Sumit Sonawane Dr. Sanjay Deshpande | 123,299 | \$1,902 | 100,000 | \$1,543 | 23,299 | \$359 |

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|--|--|------|-----------------------------------|---|------------------|-----------------|------------------|-----------------|----------------|-----------------|
| 27 | Madhav Haribhau Belsare At/p. Mhb Colony, Lig L4 324, Kuldevata Housing Society, Pune Phone No. 9850846846 | 74/M | L4-S1 Endoscopic Discectomy | Dr. Sunil Nadkarni Dr. Dave Fender Dr. Babanrao Patil | 77,212 | \$1,191 | 71,635 | \$1,105 | 5,577 | \$86 |
| 28 | Maya Atmaram Choche A/p Kadwai, Vane Wadi, Taluka- Chiplun, District- Ratnagiri, Phone No. 9730875225 | 71/M | CR + Internal Fixation | Dr. Pankaj Sharma Dr. Sumit Sonawane Dr. Babanrao Patil | 16,482 | \$254 | 5,300 | \$82 | 11,182 | \$173 |
| 29 | Pari Vikas Kadam A/p Kuchambe, Baoddha Wadi, Taluka- Chiplun, District- Ratnagiri, Phone No. 9075334820 | 3/F | Closed Reduction | Dr. Bharati Sharma Dr. Mallikarjun | 7,138 | \$130 | 300 | \$5 | 6,838 | \$105 |
| 30 | Sunil Dattaram Kajave At/p. Mithgavane, Taluka- Rajapur, District- Ratnagiri, Phone No. 7057586713 | 45/M | L4-L5 Root Block | Dr. Sumeet Sonawane | 12,134 | \$187 | 4,400 | \$68 | 7,734 | \$119 |
| Sub Total- 4 | | | | | 3,508,532 | \$55,361 | 2,877,170 | \$44,390 | 711,162 | \$10,971 |
| 5. Ophthalmic Surgeries (120 Patients, 120 Surgeries) | | | | | | | | | | |
| 1 | Gangabai Dhondu Chundivade At/p Inampangari Balgude Wadi, Taluka- Dapoli, District- Ratnagiri, Phone No. 7798936532 | 73/F | RE SICS + IOL | Dr. Jahin Pavaskar Sr. Pranali | 9,851 | \$152 | 0 | \$0 | 9,851 | \$152 |
| 2 | Shewanti Tukaram Bhagade A/p Vahal Ghadshi Wadi, Taluka- Chiplun, District- Ratnagiri, Phone No. 9405895573 | 55/F | LE SICS + IOL | Dr. Jahin Pavaskar Sr. Pranali | 10,219 | \$158 | 0 | \$0 | 10,219 | \$158 |
| 3 | Vijaya Vijay Yadav At/p Jalgaon Bajarpath, Taluka- Dapoli, District- Ratnagiri, Phone No. 9049830999 | 68/F | LE SICS + IOL | Dr. Jahin Pavaskar Sr. Pranali | 9,313 | \$144 | 0 | \$0 | 9,313 | \$144 |
| 4 | Chandrabhaga Gopinath Mane A/p Vashi Tatfr Sangameshwar, Taluka- Sangameshwar, District- Ratnagiri, Phone No. 9422999382 | 78/F | RE SICS + IOL | Dr. Vikrant Narwade Sr. Pranali | 10,373 | \$160 | 2,200 | \$34 | 8,173 | \$126 |
| 5 | Bhagirathi Tukaram Gavade A/p Kalambhat, Gavadewadi, Taluka- Chiplun, District- Ratnagiri, | 57/F | RE SICS + IOL | Dr. Shankar Ranveer Tech. Raj | 9,543 | \$147 | 0 | \$0 | 9,543 | \$147 |
| 6 | Laxmi Daulat Ghavale A/p Kalambhat, Ghaval Wadi, Taluka- Chiplun, District- Ratnagiri, Phone No. 9763022345 | 57/F | RE SICS + IOL | Dr. Vikrant Narwade Tech. Raj | 9,715 | \$150 | 0 | \$0 | 9,715 | \$150 |
| 7 | Bhagirathi Rupa Ghavale A/p Kalambhat, Ghavalewadi, Taluka- Chiplun, District- Ratnagiri, Phone No. 9763022345 | 67/F | RE SICS + IOL | Dr. Shankar Ranveer Tech. Raj | 9,620 | \$148 | 0 | \$0 | 9,620 | \$148 |
| 8 | Balkrushna Shankar Surve A/p Tural, Taluka- Sangameshwar, District- Ratnagiri | 62/M | LE SICS + IOL | Dr. Jahin Pavaskar Sr. Pranali | 9,322 | \$144 | 2,200 | \$34 | 7,122 | \$110 |
| 9 | Shewanti Shantaram Mane A/p Chikhali, Dhamnakwadi, Taluka- Sangameshwar, District- Ratnagiri Phone No. 9221093927 | 70/F | LE SICS + IOL | Dr. Vikrant Narwade Tech. Raj | 9,250 | \$143 | 0 | \$0 | 9,250 | \$143 |
| 10 | Bilaram Dhaktu Bagave A/p Sawarde, Joshi Wadi, Taluka- Chiplun, District- Ratnagiri, Phone No. 9766483436 | 61/M | LE SICS + IOL | Dr. Vikrant Narwade Sr. Pranali | 11,245 | \$173 | 0 | \$0 | 11,245 | \$173 |
| 11 | Shobha Suresh Gurav A/p Sawarde, Guravwadi, Taluka- Chiplun, District- Ratnagiri, Phone No. 9028852345 | 51/F | RE SICS + IOL | Dr. Jahin Pavaskar Sr. Pranali | 10,261 | \$158 | 3,000 | \$46 | 7,261 | \$112 |

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|----|--|------|----------------------|--|--------|-------|--------|-------|--------|-------|
| 12 | Bhikaji Changharao Chavan A/p Kalambhushi, Taluka- Sangameshwar, District- Ratnagiri, Phone No. 8308057101 | 90/M | RE SICS + IOL | Dr. Vikrant Narwade Tech. Raj | 11,624 | \$179 | 10,000 | \$154 | 1,624 | \$25 |
| 13 | Zaiba Ali Yelkar A/p Poladpur, Taluka- Mahad, District- Raigad, Phone No. 9422383673 | 55/F | LE SICS + IOL | Dr. Jubin Pavaskar Sr. Pranali | 8,468 | \$131 | 0 | \$0 | 8,468 | \$131 |
| 14 | Sonu Yashwant Joshi Murtavade Katal Wadi, Taluka- Chiplun, District- Ratnagiri, Phone No. 8108779883 | 60/M | RE SICS + IOL | Dr. Shankar Ranveer Sr. Vinita | 9,183 | \$142 | | \$0 | 9,183 | \$142 |
| 15 | Shreeram Gajanan Ghag A/p Sawarde, Kedarnath Colony, Taluka- Chiplun, District- Ratnagiri, Phone No. 8983673889 | 68/M | RE Phaco +IOL | Dr. Narayanan Dr. Tsveta Sr. Pranali | 15,424 | \$238 | 6,000 | \$93 | 9,424 | \$145 |
| 16 | Jayavanti Yashvant Katkar At/p Kase Katkar Wadi, Taluka- Sangameshwar, District- Ratnagiri, Phone No. 8379951430 | 60/F | LE SICS+IOL | Dr. Nirmala Sarpotdar Sr. Akanksha | 9,481 | \$146 | 0 | \$0 | 9,481 | \$146 |
| 17 | Chandrabhaga Rupa Katala A/p Sarkondi, Baikar Wadi, Taluka & District- Ratnagiri, Phone No. 8390979219 | 73/F | RE Phaco +IOL | Dr. Narayanan Dr. Tsveta Sr. Pranali | 11,938 | \$184 | | \$0 | 11,938 | \$184 |
| 18 | Ganpat Budhaji Gangarkar A/p Murdav, Gangarkarwadi, Taluka- Sangameshwar, District- Ratnagiri, Phone No. 9860939657 | 61/M | Lt Eye Phaco +IOL | Dr. Narayanan Dr. Tsveta Sr. Pranali | 12,616 | \$195 | 0 | \$0 | 12,616 | \$195 |
| 19 | Jaywanti Devji Kajave A/p Kadwai Madagewadi, Taluka- Sangameshwar, District- Ratnagiri, | 68/F | RE SICS+IOL | Dr. Vaibhav Thorat Sr. Akanksha | 9,570 | \$148 | 0 | \$0 | 9,570 | \$148 |
| 20 | Jayashree Yashwant Shigwan A/p Sarkondi Shigwan Wadi, Taluka & District- Ratnagiri, Phone No. 9623864297 | 65/F | RE SICS+IOL | Dr. Vaibhav Thorat Sr. Akanksha | 7,996 | \$123 | 0 | \$0 | 7,996 | \$123 |
| 21 | Manjula Mahadev Baikar A/p Sarkondi, Baikar Wadi, Taluka & District- Ratnagiri, Phone No. 7768973137 | 60/F | LE Phaco + IOL | Dr. Narayanan Dr. Tsveta Sr. Akanksha | 13,319 | \$205 | 0 | \$0 | 13,319 | \$205 |
| 22 | Ashwinikumar Mahadev Valdyu A/p Devrukh, Taluka- Sangameshwar, District- Ratnagiri, Phone No. 9420155333 | 51/M | RE Phaco + IOL | Dr. Narayanan Dr. Tsveta Sr. Pranali | 21,738 | \$335 | 13,000 | \$201 | 8,738 | \$135 |
| 23 | Laxmi Shantaranam Baikar A/p Panhali, Taluka & District- Ratnagiri, Phone No. 7507892154 | 55/F | RE Phaco + IOL | Dr. Vaibhav Thorat Sr. Akanksha | 12,810 | \$198 | 0 | \$0 | 12,810 | \$198 |
| 24 | Manisha Dinesh Deshmukh Om Anant Gopal, Ghodekhot all, Agra Road, Kalyan Phone No. 8108244536 | 52/F | LE Phaco + IOL | Dr. Nirmala Sarpotdar Sr. Pranali Sr. Akanksha | 15,245 | \$235 | 6,000 | \$93 | 9,245 | \$143 |
| 25 | Divakar Jagannath Paranjpe A/p Makhjan, Chuvan Wadi, Taluka- Sangameshwar, District- Ratnagiri, Phone No. 9527106484 | 67/M | RE Phaco + IOL | Dr. Vaibhav Thorat Sr. Akanksha | 18,030 | \$278 | 10,000 | \$154 | 8,030 | \$124 |
| 26 | Vanita Dhonda Varvatkar A/p Pedhambe, Varvatkarwadi, Taluka- Sangameshwar, District- Ratnagiri, Phone No. 8108201455 | 53/F | LE Phaco + IOL | Dr. Nirmala Sarpotdar Sr. Pranali | 13,020 | \$201 | 0 | \$0 | 13,020 | \$201 |

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|----|---|------|-------------------|---|--------|-------|-------|------|--------|-------|
| 27 | Sitalini Ramchandra Lad A/p Sarand, Jadhav Wadi, Taluka- Sangameshwar, District- Ratnagiri, Phone No. 8975917053 | 71/F | RE Phaco + IOL | Dr. Vaibhav Thorat Sr. Akanksha | 12,697 | \$196 | 0 | \$0 | 12,697 | \$196 |
| 28 | Sangita Harishchandra Baikar A/p Satkondi, Baikar Wadi, Taluka & District- Ratnagiri, Phone No. 9850876325 | 45/F | RE Phaco + IOL | Dr. Nirmala Sarpotdar Sr. Pranali | 12,657 | \$195 | 0 | \$0 | 12,657 | \$195 |
| 29 | Subhadra Shantaram Mandarkar A/p Mavlang, Mandarkar Wadi, Taluka- Sangameshwar, District- Ratnagiri, Phone No. 8975917053 | 61/F | LE Phaco + IOL | Dr. Narayanan Dr. Tsveta Sr. Kath Yates | 12,820 | \$198 | 0 | \$0 | 12,820 | \$198 |
| 30 | Draupadi Pandurang Bandbe A/p Satkondi Bandbe Wadi, Taluka & District- Ratnagiri | 60/F | RE Phaco + IOL | Dr. Narayanan Dr. Tsveta Sr. Kath Yates | 12,716 | \$196 | 0 | \$0 | 12,716 | \$196 |
| 31 | Rukmini Bhagoji Gawade A/p Kalambat Andar Pare, Taluka- Chiplun, District- Ratnagiri, Phone No. 9920232238 | 75/F | LE Phaco + IOL | Dr. Shankar Ranveer Tech. Raj | 8,675 | \$134 | 0 | \$0 | 8,675 | \$134 |
| 32 | Minakshi Mahadev Thul A/p Satkondi, Baikarwadi, Taluka & District- Ratnagiri, | 62/F | RE Phaco + IOL | Dr. Narayanan Dr. Tsveta Tech. Raj | 12,624 | \$195 | 0 | \$0 | 12,624 | \$195 |
| 33 | Ganga Punaji Bachare A/p - 704, Vatat, Taluka & District- Ratnagiri, Phone No. 9023745337 | 78/F | RE Phaco + IOL | Dr. Vaibhav Thorat Tech. Raj | 12,888 | \$199 | 0 | \$0 | 12,888 | \$199 |
| 34 | Bai Bhiku Baikar A/p Panhali, Taluka & District- Ratnagiri, Phone No. 7507892154 | 65/M | RE Phaco + IOL | Dr. Shankar Ranveer Sr. Vinita | 12,747 | \$197 | 0 | \$0 | 12,747 | \$197 |
| 35 | Saurabh Manohar Kambale A/p Hasol, Baudha Wadi, Taluka- Lanja, District- Ratnagiri, Phone No. 9867121138 | 11/M | Rt. DCR | Dr. Nirmala Sarpotdar Sr. Akanksha | 10,195 | \$157 | 0 | \$0 | 10,195 | \$157 |
| 36 | Anant Digambar Deshpande A/p B 22 Rahul Park, Paul Road, Pune 38 Phone No. 9422060316 | 82/M | RE Phaco + IOL | Dr. Nirmala Sarpotdar Sr. Pranali | 14,978 | \$231 | 6,000 | \$93 | 8,978 | \$139 |
| 37 | Kondiba Babu Mane A/p Pedhambe Ambadi Take Wadi, Taluka- Chiplun, District- Ratnagiri, | 65/M | RE Phaco + IOL | Dr. Narayanan Sr. Vinita | 12,935 | \$200 | 0 | \$0 | 12,935 | \$200 |
| 38 | Ramchandra Shankar Nagarkar A/p Dudhere, Sonar Wadi, Taluka- Mandangad, District- Ratnagiri, Phone No. 9422663488 | 65/M | RE Phaco + IOL | Dr. Narayanan Sr. Vinita | 13,007 | \$201 | 0 | \$0 | 13,007 | \$201 |
| 39 | Vilas Keshav Rane A/p Halval, Narfi Wadi, Taluka- Kankavli, District- Sindhudurg, Phone No. 8690439341 | 66/M | LE Phaco + IOL | Dr. Vikrant Narwade Sr. Pranali | 12,788 | \$197 | 0 | \$0 | 12,788 | \$197 |
| 40 | Rajaram Gopal Thakur A/p & Taluka- Kankavli, District- Sindhudurg, Phone No. 8690439341 | 60/M | RE Phaco + IOL | Dr. Vaibhav Thorat Tech. Raj | 13,073 | \$202 | 0 | \$0 | 13,073 | \$202 |
| 41 | Rajashree Shridhar Bait A/p & Taluka- Kankavli, District- Sindhudurg, | 40/F | LE Phaco + IOL | Dr. Nirmala Sarpotdar Sr. Pranali | 13,021 | \$201 | 0 | \$0 | 13,021 | \$201 |
| 42 | Pratibha Tukaram Morye A/p 74 Satkondi, Taluka & District- Ratnagiri, Phone No. 8806890558 | 64/F | RE Phaco + IOL | Dr. Jahin Pavaskar Tech. Raj | 13,458 | \$208 | 0 | \$0 | 13,458 | \$208 |
| 43 | VANDANA GANGARAM OKATE A/p Kadvai Okate Wadi, Taluka- Sangameshwar, District- Ratnagiri, Phone No. 9764878068 | 58/F | LE Phaco + IOL | Dr. Jahin Pavaskar Sr. Pranali | 16,258 | \$251 | 6,000 | \$93 | 10,258 | \$158 |

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|----|--|------|-------------------|--|--------|-------|-------|------|--------|-------|
| 44 | Deepmala Dipak Palav A/p Kankavali, Taluka- Kankavli, District- Sindhuburg, Phone No. 9764235466 | 51/F | RE Phaco + IOL | Dr. Juhin Pavaskar Sr. Pranali | 16,777 | \$259 | 6,000 | \$93 | 10,777 | \$166 |
| 45 | Jayshree Krushna Parab A/p Kankavali, Taluka- Kankavli, District- Sindhuburg | 50/F | RE SICS + IOL | Dr. Vaibhav Thorat Tech. Raj | 8,989 | \$139 | 0 | \$0 | 8,989 | \$139 |
| 46 | Nirmala Shankar Tambe At/p. Savnas, Taluka- Khed, District- Ratnagiri, Phone No. 7790739737 | 69/F | RE SICS + IOL | Dr. Nirmala Sarpotdar Sr. Kath Yates | 9,760 | \$151 | 0 | \$0 | 9,760 | \$151 |
| 47 | Darshana Dattatray Temkar A/p Devsade, Vairag Wadi, Taluka- Khed, District- Ratnagiri, Phone No. 9168502159 | 46/F | RE Phaco + IOL | Dr. Vaibhav Thorat Tech - Raj | 13,820 | \$213 | 0 | \$0 | 13,820 | \$213 |
| 48 | Savitri Nandkishor Rulya Dumbhvali East, Mumbai Phone No. 9321525498 | 80/F | SUTURING | Dr. Vikrant Narwade Sr. Pranali | 8,172 | \$126 | 0 | \$0 | 8,172 | \$126 |
| 49 | Jaywanti Yashwant Thakur A/p Halwal, Tal - Kankavali, District- Sindhuburg Phone No.9422346484 | 65/F | RE SICS + IOL | Dr. Vaibhav Thorat Tech - Raj | 8,875 | \$137 | 0 | \$0 | 8,875 | \$137 |
| 50 | Laxmi Narayan Thakur A/p Halwal, Tal - Kankavali, District- Sindhuburg Phone No.8805433358 | 65/F | LE SICS + IOL | Dr. Vaibhav Thorat Dr. Juhin Pavaskar | 11,417 | \$176 | 6,000 | \$93 | 5,417 | \$84 |
| 51 | Malini Sahdeo Thakur A/p Halwal Pimpal Wadi, Tal - Kankavali, District- Sindhuburg Phone No.8805433358 | 55/F | RE Phaco +IOL | Dr. Sanhita Tech. Raj | 12,072 | \$186 | 0 | \$0 | 12,072 | \$186 |
| 52 | Chandrahaga Halbat Chalke A/p Chinchghari, Sati, Taluka- Chiplun, District- Ratnagiri, Phone No. 9657892747 | 78/F | RE Phaco + IOL | Dr. Nirmala Sarpotdar Sr. Pranali | 16,454 | \$254 | 6,000 | \$93 | 10,454 | \$161 |
| 53 | Babya Nana Bhuwad A/p Sawarde, Taluka- Chiplun, District- Ratnagiri, Phone No. 9922340881 | 90/M | RE Phaco + IOL | Dr. Narayanan Tech. Raj | 13,448 | \$207 | 0 | \$0 | 13,448 | \$207 |
| 54 | Madhakar Vishnu Devalkar At/p Nadhavade, Tal - Vaibhavwadi, District- Sindhuburg Phone No.8975069435 | 45/M | LE Phaco + IOL | Dr. Shankar Ranveer Tech. Raj | 9,715 | \$150 | 0 | \$0 | 9,715 | \$150 |
| 55 | Gangaram Vishram Dhanawade A/p Dhamapur, Dhanawade Wadi, Taluka- Sangameshwar, District- Ratnagiri, Phone No. 8693868166 | 65/M | RE Phaco + IOL | Dr. Nirmala Sarpotdar Tech. Raj | 9,950 | \$154 | 0 | \$0 | 9,950 | \$154 |
| 56 | Dhondu Laxman Fondke At/p.Het, Ramwadi, Tal - Vaibhavwadi, District- Sindhuburg | 70/M | RE Phaco + IOL | Dr. Tsveta Sr. Pranali | 13,444 | \$207 | 0 | \$0 | 13,444 | \$207 |
| 57 | Raghunath Atmaram Gurav Mumbai Phone No. 8108004217 | 78/M | LE Phaco + IOL | Dr. Narayanan Tech. Raj | 12,694 | \$196 | 0 | \$0 | 12,694 | \$196 |
| 58 | Shashikant Sitaram Halbat A/p Kasaba, Vadathikan, Taluka- Sangameshwar, District- Ratnagiri, Phone No. 9970648537 | 59/M | RE Phaco + IOL | Dr. Tsveta Sr. Pranali | 15,466 | \$239 | 6,000 | \$93 | 9,466 | \$146 |
| 59 | Sakharan Sonu Kadam A/p Sasale, Taluka & District- Ratnagiri, Phone No. 8806890558 | 65/M | LE Phaco + IOL | Dr. Tsveta Sr. Pranali | 13,054 | \$201 | 0 | \$0 | 13,054 | \$201 |
| 60 | ANANT SHIVRAM PHONDAKE At/p Het Khudakwadi, Tal - Vaibhavwadi, District- Sindhuburg Phone No.8975792956 | 70/M | LE Phaco + IOL | Dr. Tsveta Sr. Pranali | 12,867 | \$199 | 0 | \$0 | 12,867 | \$199 |

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|----|---|------|---------------------------|---------------------------------------|--------|-------|-------|------|--------|-------|
| 61 | Arjun Narayan Rambade At/p. Jambhavade, Tal - Vaibhavwadi, District- Sindhadurg Phone No.7588554137 | 70/M | LE Phaco + IOL | Dr. Tsveta Sr. Pranali | 12,055 | \$186 | 0 | \$0 | 12,055 | \$186 |
| 62 | Namdev Sakhararam Shingre At/p Nadhavde, Tal - Vaibhavwadi, District- Sindhadurg Phone No.9702669536 | 80/M | LE Phaco + IOL | Dr. Shankar Ranveer Tech. Raj | 8,306 | \$128 | 0 | \$0 | 8,306 | \$128 |
| 63 | Shubhangi Kashiram Jadhav A/p Nerul, Baudhd Wadi, Taluka It District- Ratnagiri, Phone No. 9892132060 | 50/F | LE SICS + IOL | Dr. Vikrant Narwade Sr. Pranali | 5,753 | \$89 | 0 | \$0 | 5,753 | \$89 |
| 64 | Saraswati Rajaram Khedekar A/p Palgad, Taluka - Dapoli, District- Ratnagiri, Phone No. 9049153109 | 65/F | Rt. DCR | Dr. Nirmala Sarpotdar Sr. Akanksha | 7,123 | \$180 | 0 | \$0 | 7,123 | \$180 |
| 65 | Shalini Krushna Mahadik A/p Kasba, Bhendi Bajar, Taluka- Sangameshwar, District- Ratnagiri, Phone No. 9049818579 | 65/F | RE Phaco +IOL | Dr. Tsveta Sr. Kath Yates | 13,155 | \$203 | 0 | \$0 | 13,155 | \$203 |
| 66 | Sahasini Chandrakant Mahadik A/p Kasba, Bhendi Bajar, Taluka- Sangameshwar, District- Ratnagiri, Phone No. 9049818579 | 65/F | RE Phaco + IOL | Dr. Nirmala Sarpotdar Sr. Pranali | 16,573 | \$256 | 6,000 | \$93 | 10,573 | \$163 |
| 67 | Anandibai Motiram Padval At/p Karul, Tal - Vaibhavwadi, District- Sindhadurg | 70/F | RE Phaco + IOL | Dr. Narayanan Tech. Raj | 13,361 | \$206 | 0 | \$0 | 13,361 | \$206 |
| 68 | Vijaya Vijay Pawar A/p Mandaki, Baudhdwadi, Taluka- Chiplun, District- Ratnagiri, Phone No. 7350734586 | 41/F | Rt. DCR | Dr. Nirmala Sarpotdar Sr. Akanksha | 7,420 | \$114 | 0 | \$0 | 7,420 | \$114 |
| 69 | Parvati Devu Valvadkar At/p Het, Gurav Wadi, Tal - Vaibhavwadi, District- Sindhadurg Phone No.9763250129 | 70/F | RE SICS+ IOL | Dr. Vikrant Narwade Sr. Pranali | 9,316 | \$144 | 0 | \$0 | 9,316 | \$144 |
| 70 | Jayashri Janardan Shirke At/p. Devsade, Taluka- Khed, District- Ratnagiri, Phone No. 7798739737 | 60/F | LE Phaco + IOL | Dr. Shankar Ranveer Tech. Raj | 13,672 | \$211 | 0 | \$0 | 13,672 | \$211 |
| 71 | Sunanda Shankar Yadav At/p Nadhavade, Tal - Vaibhavwadi, District- Sindhadurg | 60/F | RE Phaco + IOL | Dr. Vikrant Narwade Sr. Pranali | 9,349 | \$144 | 0 | \$0 | 9,349 | \$144 |
| 72 | Srushti Rajendra Dhadave At/p. Bheisal, Taluka- Kbed, District- Ratnagiri, Phone No. 9623971913 | 30/F | RE foreign body remove | Dr. Jabin Pavaskar Sr. Vinita | 8,095 | \$125 | 0 | \$0 | 8,095 | \$125 |
| 73 | Laxman Bhiku Bole At/p. Kutare, Taluka- Chiplun, District- Ratnagiri, Phone No. 9653432193 | 69/M | RE Phaco + IOL | Dr. Nirmala Sarpotdar Sr. Pranali | 13,278 | \$205 | 0 | \$0 | 13,278 | \$205 |
| 74 | Suresh Bapu Khanvilkar At/p. Kusur, Taluka- Vaibhavwadi, District- Sindhadurg, Phone No. 9403072386 | 69/M | RE Phaco + IOL | Dr. Nirmala Sarpotdar Sr. Pranali | 12,317 | \$190 | 0 | \$0 | 12,317 | \$190 |
| 75 | Asbok Pandalik Panchal At/p.Kusur, Taluka- Vaibhavwadi, District- Sindhadurg, Phone No. 9423571788 | 55/M | RE SICS +IOL | Dr. Tsveta Sr. Pranali | 9,175 | \$142 | 0 | \$0 | 9,175 | \$142 |
| 76 | Ramkrushna Prabhakar Sinkar At/p. Khanavale Gurav Wadi, Taluka- Lanja, District- Ratnagiri, Phone No. 02351691585 | 73/M | RE Phaco + IOL | Dr. Narayanan Tech. Raj | 13,177 | \$203 | 0 | \$0 | 13,177 | \$203 |

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|----|---|------|------------------------------|-------------------------------------|--------|-------|--------|-------|--------|-------|
| 77 | Barka Kashiram Tambe At/p. Nikhare Buuddh Wadi, Taluka- Rajapur, District- Ratnagiri, Phone No. 7709555072 | 71/M | LE SICS + IOL | Dr. Narayanan Tech. Raj | 8,738 | \$135 | 0 | \$0 | 8,738 | \$135 |
| 78 | Laxmi Gangaram Daul At/p. Sawarde Near Datta Mandir Survewadi, Taluka- Chiplun, District- Ratnagiri, Phone No. 9860765760 | 60/F | RE Phaco + IOL | Dr. Shankar Ranveer Sr. Vinita | 16,175 | \$250 | 1,450 | \$22 | 14,725 | \$227 |
| 79 | Hajarabi Karim Sindakhene At/p. Pithapur, Taluka- Akkalkot, District- Solapur, Phone No. 7219069186 | 65/F | LE Phaco + IOL | Dr. Narayanan Tech. Raj | 12,583 | \$194 | 0 | \$0 | 12,583 | \$194 |
| 80 | Ghamanabai Motiram Pawar At/p. Dervan, Taluka- Chiplun, District- Ratnagiri, Phone No. 9881635351 | 75/F | LE Phaco + IOL | Dr. Jahin Pavaskar Tech. Raj | 12,642 | \$195 | 0 | \$0 | 12,642 | \$195 |
| 81 | Bhagayashri Abhay Desai At/p. Bklwh Campus Dervan, Taluka-Chiplun, District- Ratnagiri, | 60/F | LE Phaco + IOL | Dr. Tsveta Sr. Pranali | 16,297 | \$251 | 10,000 | \$154 | 6,297 | \$97 |
| 82 | Shantaram Gangaram Gurav At/p. Dhamani Guravwadi, Taluka- Sangameshwar, District- Ratnagiri, Phone No. 9860263340 | 35/M | Lt. Pterygium Excision | Dr. Vikrant Narwade Sr. Pranali | 6,276 | \$97 | 0 | \$0 | 6,276 | \$97 |
| 83 | Ramesh Ganesh Kerkar At/p. Tulas Vengurla, Taluka- Vengurla, District- Sindhudurg, Phone No.9420305982 | 65/M | RE Phaco + IOL | Dr. Jahin Pavaskar Tech - Raj | 12,628 | \$195 | 0 | \$0 | 12,628 | \$195 |
| 84 | Atmaram Ganpat Sakpal At/p. Ovali Vitthal Mandir, Taluka- Chiplun, District- Ratnagiri, Phone No. 9421118496 | 74/M | RE Phaco + IOL | Dr. Shankar Ranveer Sr. Akanksha | 13,293 | \$205 | 0 | \$0 | 13,293 | \$205 |
| 85 | Atmaram Vishram Tulaskar At/p. Tulas Vengurla, Taluka-Vengurla, District- Sindhudurg, Phone No.8691950681 | 68/M | RE SICS+ IOL | Dr. Tsveta Sr. Pranali | 8,722 | \$135 | 0 | \$0 | 8,722 | \$135 |
| 86 | Anita Anant Chavan At/p. Makhajan, Taluka- Sangameshwar , District- Ratnagiri | 60/F | LE Phaco + IOL | Dr. Tsveta Sr. Pranali | 12,947 | \$200 | 3,500 | \$54 | 9,447 | \$146 |
| 87 | Radhabai Dhonda Kerkar At/p.Tulas, Vengurla, Taluka-Vengurla, District- Sindhudurg, Phone No. 9420305982 | 70/F | RE Phaco + IOL | Dr. Shankar Ranveer Tech. Raj | 12,417 | \$192 | 0 | \$0 | 12,417 | \$192 |
| 88 | Sarita Ramchandra Kerkar At/p. Tulas Vengurla, Taluka-Vengurla, District- Sindhudurg, Phone No.9420305982 | 65/F | LE Phaco + IOL | Dr. Tsveta Sr. Pranali | 12,764 | \$197 | 0 | \$0 | 12,764 | \$197 |
| 89 | Saraswati Sitaram Shigwan At/p.Aravli Naka, Taluka- Sangameshwar, District- Ratnagiri, Phone No. 9860237553 | 55/F | LE Phaco + IOL | Dr. Jahin Pavaskar Tech. Raj | 12,477 | \$192 | 0 | \$0 | 12,477 | \$192 |
| 90 | Laxmi Bhargav Gurav At/p. Dalvatne Badwadwadi, Taluka- Chiplun, District- Ratnagiri | 65/F | RE Phaco + IOL | Dr. Tsveta Sr. Pranali | 12,783 | \$197 | 0 | \$0 | 12,783 | \$197 |
| 91 | Vandana Shantaram Kadam At/p. Mardav, Taluka- Sangameshwar, District- Ratnagiri, | 60/F | RE Phaco + IOL | Dr. Tsveta Sr. Pranali | 13,634 | \$210 | 0 | \$0 | 13,634 | \$210 |

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|-----|---|------|-------------------|--------------------------------------|--------|-------|-------|-------|--------|-------|
| 92 | Shantabai Sambhaji Yadav At/p. Nadhavade, Taluka- Vaibhavwadi, District- Sindhudurg, Phone No.8975950254 | 70/F | RE SICS + IOL | Dr. Vikrant Narwade Sr. Pranali | 14,381 | \$222 | | \$0 | 14,381 | \$222 |
| 93 | Nandana Bhikaji Vichare At/p. Varavade Guravwadi, Taluka- Et District -Ratnagiri, Phone No.9421138969 | 75y | RE Phaco + IOL | Dr.Tsveta Sr. Pranali | 14,549 | \$224 | 6,500 | \$100 | 8,049 | \$124 |
| 94 | Chandravijay Saktharam Kotharkar At/p.Dhaulvadi, Taluka- Rajapur, District- Ratnagiri, Phone No.9226758450 | 61/M | LE Phaco + IOL | Dr. Narayanan Tech. Raj | 12,092 | \$187 | 3,500 | \$54 | 8,592 | \$133 |
| 95 | Dipali Deepak Bavkar At/p. Kuveshi, Taluka- Rajapur, District- Ratnagiri, Phone No.9221875610 | 52/F | RE Phaco +IOL | Dr.Tsveta Sr. Pranali | 12,223 | \$189 | 0 | \$0 | 12,223 | \$189 |
| 96 | Babu Dhau Shelke At/p. Pedambe Dhangarwadi, Taluka- Chiplun, District- Ratnagiri, | 70Y | RE Phaco + IOL | Dr.Tsveta Sr. Pranali | 13,095 | \$202 | 0 | \$0 | 13,095 | \$202 |
| 97 | Manali Divakar Guvkar At/p. Ansure, Taluka- Rajapur, District- Ratnagiri, Phone No.9764853610 | 48Y | LE Phaco + IOL | Dr. Narayanan Tech. Raj | 12,931 | \$199 | 0 | \$0 | 12,931 | \$199 |
| 98 | Shubhangi Ganpat Bavkar At/p. Kuveshi Bavkar Wadi, Taluka- Rajapur, District- Ratnagiri, | 74/F | LE Phaco + IOL | Dr. Narayanan Tech. Raj | 12,329 | \$190 | 0 | \$0 | 12,329 | \$190 |
| 99 | Gajanan Bhikaji Kasekar At/p. Khandotri, Taluka-Chiplun, District- Ratnagiri, Phone No.7066483517 | 68/M | RE Phaco + IOL | Dr.Tsveta Sr. Pranali | 11,553 | \$178 | 0 | \$0 | 11,553 | \$178 |
| 100 | Neha Narendra Shirke At/p. Kutare Guravwadi, Taluka-Chiplun, District- Ratnagiri, Phone No.8308360857 | 34Y | RE Phaco + IOL | Dr. Narayanan Tech. Raj | 12,713 | \$196 | 2,200 | \$34 | 10,513 | \$162 |
| 101 | Sumati Punaji Mahadgut At/p. Varavade Guravwadi, Taluka- Ratnagiri, District- Ratnagiri, Phone No.9421138969 | 70/F | RE SICS+ IOL | Dr. Jahin Pavaskar Tech. Raj | 8,780 | \$135 | 0 | \$0 | 8,780 | \$135 |
| 102 | Mangala Shivaji Shirdhankar At/p. Vilaye Mahadgutwadi, Taluka-RAJAPUR, District- Ratnagiri, Phone No.9404018412 | 70/F | RE Phaco + IOL | Dr. Shankar Ranveer Sr. Pranali | 12,774 | \$197 | 0 | \$0 | 12,774 | \$197 |
| 103 | Dhonda Bapu Sawant At/p.Janshi, Taluka- Rajapur, District- Ratnagiri, | 66/M | LE Phaco + IOL | Dr. Shankar Ranveer Sr.Kath Yates | 11,571 | \$179 | 3,500 | \$54 | 8,071 | \$125 |
| 104 | Laxmi Babya Dhamane At/p. Vahai Bharad Wadi, Taluka- Chiplun, District- Ratnagiri, | 70/F | LE SICS+ IOL | Dr. Jahin Pavaskar Sr. Pranali | 8,882 | \$137 | 0 | \$0 | 8,882 | \$137 |
| 105 | Prabhavati Narayan Holam At/p. Kuveshi, Taluka- Rajapur, District- Ratnagiri, Phone No.9764635118 | 80/F | RE SICS+ IOL | Dr. Shankar Ranveer Tech. Raj | 9,412 | \$145 | 0 | \$0 | 9,412 | \$145 |
| 106 | Chandrashekar Jagannath Srungapur At/p. Devale, Taluka- Poladpur, District- Raigad, Phone No.9420059911 | 71/M | LE Phaco + IOL | Dr. Jahin Pavaskar Sr. Pranali | 11,304 | \$174 | 3,500 | \$54 | 7,804 | \$120 |
| 107 | Kanu Mahadeo Bavkar At/p. Kondiwade Kasar Wadi, Taluka- Rajapur, District- Ratnagiri, Phone No.9763213835 | 65/M | RE SICS + IOL | Dr. Vikrant Narwade Sr. Pranali | 8,416 | \$130 | 0 | \$0 | 8,416 | \$130 |

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|--|---|------|----------------------|--|------------------|------------------|------------------|-----------------|------------------|-----------------|
| 108 | Raghnath Keshav Berde At/p. Kuveshi, Taluka- Rajapur, District- Ratnagiri, Phone No.9764635118 | 65/M | RE SICS + IOL | Dr. Shankar Ranveer Tech. Pratiksha | 8,790 | \$151 | 250 | \$4 | 9,540 | \$147 |
| 109 | Ramchandra Yashwant Dhanawade A/p Dhamapur, Taluka-Chiplun, District-Ratnagiri, | 67/M | LE SICS + IOL | Dr. Shankar Ranveer Tech. Pratiksha | 9,506 | \$147 | 0 | \$0 | 9,506 | \$147 |
| 110 | Bhiku Jilu Jogale At/p. Vadavasud Khalil Wadi, Taluka- Rajapur, District- Ratnagiri, Phone No.9421035224 | 75/M | LE SICS + IOL | Dr. Jahin Pavaskar Tech. Aniket | 8,083 | \$125 | 0 | \$0 | 8,083 | \$125 |
| 111 | Krushana Balu Mahakal At/p. Dhamapur Dhoparkhol Wadi, Taluka- Sangameshwar, District- Ratnagiri, Phone No.9623272071 | 65/M | LE SICS + IOL | Dr. Vikrant Narwade Sr. Pranali | 7,949 | \$123 | 0 | \$0 | 7,949 | \$123 |
| 112 | Darshani Dattatray Devrukkhar At/p. Dhamapur Dhanawade Wadi, Taluka- Sangameshwar, District- Ratnagiri, Phone No.9623272071 | 60/F | LE SICS + IOL | Dr. Jahin Pavaskar Tech. Raj | 7,891 | \$122 | 0 | \$0 | 7,891 | \$122 |
| 113 | Santoshi Santosh Devrukkhar At/p.Dhamapur Dhanawade Wadi, Taluka- Sangameshwar, District- Ratnagiri, Phone No.9623272071 | 50/F | RE SICS + IOL | Dr. Vikrant Narwade Sr. Pranali | 8,034 | \$124 | 0 | \$0 | 8,034 | \$124 |
| 114 | Shilpa Shrikant Gurav At/p. Pirandavane Gurav Wadi, Taluka- Sangameshwar, District- Ratnagiri, Phone No.9422588347 | 43/F | LE SICS + IOL | Dr. Shankar Ranveer Tech. Pratiksha | 8,186 | \$126 | 2,200 | \$34 | 5,986 | \$92 |
| 115 | Yashoda Bhiku Jogale At/p.Bhu, Taluka- Rajapur, District- Ratnagiri, | 68/F | LE SICS + IOL | Dr. Jahin Pavaskar Tech. Raj | 8,425 | \$130 | 0 | \$0 | 8,425 | \$130 |
| 116 | Vasanti Vasudev Kaneri At/p. Asure Shivadiwadi, Taluka- Rajapur, District- Ratnagiri, Phone No.758857822 | 59/F | RE SICS + IOL | Dr. Shankar Ranveer Sr. Pranali | 7,864 | \$121 | 5,000 | \$77 | 2,864 | \$44 |
| 117 | Girijabai Babya Muknak At/p. Dahivali Muknak Wadi, Taluka- Chiplun, District- Ratnagiri, Phone No.9527847464 | 80/F | RE SICS + IOL | Dr. Vikrant Narwade Sr. Pranali | 8,199 | \$126 | 0 | \$0 | 8,199 | \$126 |
| 118 | Gangabai Ramchandra Jogale At/p. Vadad Hasol Khalil Wadi, Taluka- Rajapur, District- Ratnagiri, Phone No.9421035224 | 80/F | RE SICS + IOL | Dr. Jahin Pavaskar Tech. Aniket | 8,339 | \$129 | 0 | \$0 | 8,339 | \$129 |
| 119 | Sitabai Sitaram Kaneri At/p. Ansure Shevdi Wadi, Taluka- Rajapur, District- Ratnagiri, Phone No.7588377653 | 66/F | LE SICS + IOL | Dr. Jahin Pavaskar Tech. Aniket | 8,308 | \$128 | 0 | \$0 | 8,308 | \$128 |
| 120 | Sitabai Gopal Pade At/p. Dhamapur (pade Wadi), Taluka- Sangameshwar, District- Ratnagiri | 60/F | SICS LT EYE + IOL | Dr. Shankar Ranveer Tech. Pratiksha | 8,561 | \$132 | 0 | \$0 | 8,561 | \$132 |
| Sub Total- 5 | | | | | 1,376,326 | \$21,233 | 136,000 | \$2,098 | 1,240,326 | \$19,135 |
| Grand Total (Sub Total-1+2+3+4+5) | | | | | 6,941,593 | \$107,090 | 1,219,577 | \$49,978 | 3,702,016 | \$57,113 |



Remarks by British Medicos: 2018

Mr Shankar Kashyap

Consultant Orthopaedic Surgeon from Newcastle



I have been coming here for the last 3 years. This is my 3rd visit.

I am impressed to see the huge amount of improvement every time I come. We always try to inculcate what we have achieved in the UK back here, to improve the situation here.

One thing that impressed me the first time I came is there are a lot of needy people here.

The staff here is very inclusive and always willing to learn. Everything I teach them, they pick it up very quickly and that has impressed me quite a lot.

The patients are so grateful to whatever little we do for them. There have been a lot of challenging cases in last 3 years.

What also impressed me is this place is, always showing a lot of improvement each time I visit this place. I am impressed by the service mentality of the people who work here.

What I take back from here is quality, maturity of the people and also the humbleness of the people.

For Kaka Maharaj, I have to specially say, hats off to him, because with his inspiration, this place is going from place to place and it is the best.

I would like to congratulate the people who work here, who converted the rural area into what looks like an internationally renowned unit. I have no doubt that this place one day will be on the world map. The people would want to come here, not only to work and serve but also to help the rural population of India.

Thank you very much."



Rachel Cooper

Doctor and General Practitioner in England



I decided to do something different. This is my first visit to the hospital & to give something back to somebody else. I am incredibly impressed by the Hospital. The technology and the setup is fantastic.

All the staff here are doing an amazing job given the conditions. I am also looking at opting out into the community and see some community projects which would be very interesting. Very impressive with what the hospital is doing in outreach work. I think there is a lot more we could do together to improve the community, may be to improve the General Practice side of the work, have hospital out in the community.

I would definitely come back again and also will be telling all my friends about the work this hospital does."



Lois Lincoln

Works at Queen Elizabeth Hospital at Gateshead

“ I heard about the trip to Dervan because I work with Ms Elena and Mr Bhattacharya & sometimes I work with Mr. Sanjay. I had heard a lot of good things about the Dervan trip. They always talk about how much good work they do and how they have fun in all the trips. I had spare annual leave hence I thought it would be a good time for me to come on the trip and see what it was all about.

I haven't been disappointed and when I arrived here, everybody's been so friendly and the facilities at the hospital are really good. The facilities we have got access to in our social (extra/leisure time) are fantastic. The running track is amazing. We couldn't have ever asked to be better looked after. The food is absolutely fantastic. The guys who have been looking after us, nandan/everybody.. , you couldn't want for anymore things. You ask for anything and you get it.

I haven't been into the community yet, but I think this afternoon I am going to the baby shower, which I am really looking forward to. I have heard a lot of good things about what's happening in the community, from one of the guys who were on the trip. So I am keen to go this afternoon, & hopefully I will get invited to come next year and that is how I hope to help out the trust in the future.

Dr Sanjay is always telling me about the fund-raising events happening back in UK, with which I would like to get involved in future. And hopefully I will stay in touch with everyone with email, facebook.

Also Mr Bhattacharya and Sanjay will keep me updated about the happenings as well.

So thank you very much from myself. I have had amazing time so far. Thank you.”



Kevin Kendall

Operating Private Practitioner in Newcastle, England

“ I came to this trip to see how things work here, in a different country and in rural hospitals. I am very impressed with how things are here in Dervan. The staff here is very incredible. They work very hard and are very keen to learn. The facilities are brilliant. It is very well organized. I am definitely coming back again. The food is great.”



Dr Kenneth Adegoke



Most people call me Dr Ken (Due to my difficult surname). I am originally from Nigeria, born in Britain. I was invited here by Dr Deshpande who is my good friend. We work together in UK.

Now I am very pleased to be here and to have seen what is going on here. I have been made to feel just like my home as I am originally from Nigeria. It is indeed my pleasure to be here. I do pinch myself sometimes as when I close my eyes, I think as if I am in my home in Nigeria, because the Indian culture is exactly same as the culture in Nigeria.

So this is my first trip to India and it has been a fantastic memorable trip. It is one of those trips of a lifetime for me which I will never ever forget. I am planning on setting up similar thing/ a camp may be which will be similar to what is going on here, in Nigeria, because we need the kind of medical input from the west as you have, in Nigeria too.

The food has been fantastic. I am not normally a vegetarian but I am enjoying the vegetarian food so much. I came along with my wife, and I have been giving her subtle hints that she needs to go and start learning how to make vegetarian food.

Yes, I just feel like being at home. I just feel completely being at home and it's a big big pleasure to be here and I am sure this will not be my only visit here and I will come here again some other time and indeed is a great pleasure. I have been made to feel just like I am at home."



Michelle Hunter



I am a clinical governance manager. I work for NHS Blood and Transplant in the UK (<https://www.nhsbt.nhs.uk/>) which covers all the hospitals in UK.

This is my 5th time of coming to Dervan. Each time I have seen dramatic changes in the hospital, in the facilities, in the expectations of the patients and of the surrounding areas.

Things continually surprise me each time I come because of the huge steps that have been taken.

The one thing I would recommend is to increase patients safety and for better outcomes for all, important to speak to the patient. Communication is the key for everything. Talk to the patient and talk to each other. You are one team. This is all about making the best for everyone."



Stella Adegoke



I am a specialist nurse with East Kent hospital in Kent. This is in South East of England. I have been an Ophthalmology Specialist Nurse for 14 years. I have been in England for 26 years and I am originally from Nigeria. I got involved in this project through my husband who is a Consultant Anaesthetist and he worked with Sanjay. I have never been to India, this is my first coming to India and this rural area. The facilities here are like Wow, the facilities here in Rural area are unbelievable and looks more like facilities from the city. When I look at Nigeria, you guys have put a great thing together. Rome wasn't built in a day. This facility wasn't up in a night but through years.

I am really impressed with the facilities and the training being made available to the students.

The environment is nice and calm. And the food, Wow! I have put on so much amount of weight I bet. I love Indian food and rice is the main food. The food is unbelievable. I didn't know the rice can be made in so many different ways here.

I am really impressed that women are empowered in this area as well. I purchased lots of jewellery for myself and other things from the REACH projects and got some things from villages as well.

I am impressed that one person is blessed financially who has put all this together. I am impressed with the hospitality. People from England or more from the world come here to help in whatever way possible.

This being my first visit, I don't know what to expect but if I visit again I'd be better prepared than this. On my first day here, I thought there won't be much for me as ophthalmic nurse. I went to the theatre and I thought there wasn't much hands-on for me. I am not a theatre nurse, I am a clinical nurse. I found my way to the clinic and I have been in the community and hospital as well. I observed and interacted with many persons here. I enjoyed talking to adolescents about health issues and preparation for marriage which I really enjoyed. I met some people in the hospital and made some observations in the Hospital which I shall discuss with the Medical Director, just improvement, because in the UK, people are so concerned about infection control, just to make sure that people come in and they do not go home with anything they did not come with and I know you guys try giving your best to the patients that come here and you go extra mile to bring people from their homes, go to their homes to do stuff.

My husband & I are really thinking to start something similar to this, back in Nigeria.

People here have regular supply of Water, Electricity, but from where I come from that is a luxury, there is no regular electricity or water. You have to have a bore hole. After coming here I am thinking, 'Did I make a right choice. As I like to help people and interact with them, maybe I should do something like Public Health instead of Ophthalmic Nurse, to give back to the community.'

I am thankful and proud of everybody and all those who supported us. I am really proud of the good work being done here. And I pray that this place will continue to grow. This place is a role model to me. I would like to do something like this.

Well done everybody. I will be talking about this work back in England for sure.

Thank you.!"



Natasha Verall Bhasin

Nurse from UK, working in Birmingham.



This is my second visit here to Dervan Hospital. I came last year and Dr Sanjay Deshpande asked me to help him in the operation theatres. This year I have arrived and have noticed that the training we did last year has had a positive impact in the theatre and the standards have started to come up really well, which is very rewarding to see.

I love this place and I hope to keep on visiting this place year after year and be part of the growth of this wonderful hospital. The patients are extremely grateful for the care they receive & that is evident when we walk around the place. There is a real positive vibe here and very relaxing here. It is very rewarding to come and share my skills with the people here in Dervan.

When I go back home, I will speak about the positive experience and the learnings both professionally and personally. I hope to continue that learning year after year."



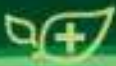
David Fender

Spine Surgeon from North East of England, Newcastle



I look after children and adults and for many years I have worked intermittently with Dr Deshpande,

who for many years has mentioned about this fantastic trip over to Walawalkar Hospital. I got lucky a few years ago to come across Dr. Nadkarni who also mentioned the hospital. This year, the opportunity came to me to attend this camp. I was operating with Ian Thompson last summer time and I asked him when the next camp was. He told me and I expressed an interest. Within a few minutes of seeing him, Sanjay had contacted me and enrolled me to come and it has been absolutely fabulous. I am privileged to be here. I am massively massively impressed with the facility. The senior and junior staff here are far exceeding to what I was expecting. Also it is a privilege for me to work in this camp particularly and specially the youngsters who have restored my faith in their abilities and commitment and desire to help people. So overall I feel that I have gained far far more than what I have given in this trip. I truly hope that I will come back in future and contribute to the work here."



Mr Bhattacharya

Consultant General and Vascular Surgeon at Queen Elizabeth Hospital in Gateshead



This is my 5th visit here in Dervan and it is always an eye opener. I have seen a huge amount of progress everytime I have visited this place and each year is better than the previous one. The amount of development throughout in the campus is massive. The medical school here is running beautifully. There are a bunch of aspiring young doctors here who are doing a fantastic job. There are lots of young medical students, doctors, OP technicians, nursing students who are very important and it is really good to see how motivated they are. It is surprising to see that so much of development can take place in one year. The theatres have improved so much. The anaesthetics have improved so much. Everything has become part of the great movement and India has improved so much. Walawalkar Hospital really reflects this progress of India.

I would really love to keep coming back. I tend to learn more that what I tend to give and I learn the spirit of brotherhood here. The sense of belonging of everybody here is fantastic. I will keep coming back here and learning more and more from the institution."

Patients Feedback



Akshay Gajanan Pachpole, 18 years old a self-employed youngster from Buldhana was staying in Ratnagiri. The poor young man was pulling a fruit trolley in order to sell fruits and fend for his family was unfortunately addicted to 'Gutkha'. The stomach pain started and Doctor asked to admit in the hospital. But all the hospitals in Ratnagiri city refused to admit him as the disease was severe. Finally one of his relative suggested taking him to Dervan Hospital. In this hospital, 'British Camp' was started during that period. His relatives took him to Walawalkar Hospital and immediately the treatment was started by the team of Doctors from the hospital. He was diagnosed as 'Acute perforative peritonitis'. The doctors decided to operate him immediately and they successfully operated him and saved his life. His relatives with wet eyes appreciated the doctors by adding, "Akshay couldn't be lived any more if we had not brought him in this hospital, Dervan Hospital saved his life. Our financial condition is not so good, but without asking to deposit any money, they started the treatment. We two relatives accompanied the patient and the hospital provided free food to us throughout the period and we could complete the treatment. We are very grateful to Doctors, Nurses, Wardboys and management of Walawalkar Hospital for their great work."



Mrs. Madhura Pramod Joshi had come from Pune for her knee operation. Dr. Kohali had suggested her to come here. On very next day of her operation, while practicing the walk & physiotherapy, she and her husband very happily said, "The staff here is working honestly and efficiently. The arrangement over here is overwhelming. The concern about cleanliness is taken here can rarely be seen in any other hospital. The physiotherapist gives not only walking practice and exercise but they give us best morale support. We felt our decision to come here absolutely right. We are thankful to Dr. Kohli and Dervan Hospital.



Shri. Vijay Yashwant Pagde, a community social worker from Abloli, Guhagar, has been guiding the poor patients from his area and taking them to Walawalkar Hospital for treatment. He said, "I am doing this for social cause only and to the benefit of poor patients. I bring patients from my village, at least twice in a week in this hospital. I always get a good response here. The hospital is very near to us. All medical facilities are available in one premises and we don't need to go anywhere for investigations or further treatment. The hospital is a big support to poor patients. One thing I should mention that whenever the patient arrives in this hospital for any treatment, the hospital never asks to deposit any money, first they start the treatment. We honestly tell them the financial status of the patient and the hospital provides the treatment in very concessional rates to the poor and needy patients. We always inform Dr. Suvarna Patil about the poor financial condition of the patient and accordingly she gives some concession in the bills. Also the community programmes "Elimination of malnutrition in children" successfully implemented by the hospital is really admirable where nutritious Laddoos are provided to poor malnourished children. More and more people are becoming dependent on this hospital.



Senior citizen women in Sawarde village Mrs. Rehana Wajir Ali Malim was admitted in hospital for both knee replacement surgery during British Camp. She was accompanied by her husband Mr. Wajir Ali Malim. He said, "Regularly I come to this hospital. The way Dr. Suvarna Patil is taking care of this hospital and patients; the people have a faith in hospital. Actually she has lot of workload like patient consultation, hospital management etc. Now these foreign doctors have come, she has to make arrangements for them also. I pray to "Allah" for her long life and serve for hospital.

Shri Vithalrao Joshi Charities Trust's

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



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Outward. No. SVJCT/BKLWH206/2017

Date: 01.01.2017

To,
All Head of the Departments,
B.K.L. Walawalkar Rural Medical College & hospital,

Subject-Visit of UK MEDICO for training purpose and conducting workshops/CMEs for medical students/nurses and Faculty of B.K.L. Walawalkar Rural Medical College and Samarath Nursing College.

Dear Sir/Madam,

It is my pleasure to announce a visit of doctors from Newcastle.
As you are aware a group of doctors and nurses who are interested in honorary work to serve the rural population of rural India is visiting our institute for last one decade.

They would like to train nurses and medical students of our Medical and nursing college.
Please take a note of arrival of following faculty.

Iain Thompson and Peter are arriving at 8:15 am on 21 st Jan so arrange to pick them up.
Gareth Kessell, Peter Taysum, RadhaVenkatesan, Kat Herneman, Stephen Hall, Laura Jones
Sanjay Deshpande

Radiology :Dr.Lance Cope
Surgery :Eleanor Freeman ,dr.ShlokBalupuri
Ortho : Iain Thompson,Dr. Shankar Kashyap
Biomedical engineering :John WallAaron Wall
Ophthal team: Dr. Bhaskar Gupta/ Kathleen Yates
Urology : Dr. Praveen Menezes,Charlotte Kessell
Plastic :Dr. Uday Bhatt ,dr.PeterAyliffe
Please take a note of this and convey this to concerned faculty.Progrm Schedule is attached herewith.

Thanks ,


Dr. Suvarna Patil
Medical Director,
B.K.L. Walawalkar Rural Medical College

Director
B.K.L. Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606

BRITISH FACULTY VISIT PROGRAM (U.K. Camp 2017)

| Date | Time | Event | Venue | Concern Person | BKLW Medical College |
|-------------------|--------------------------------------|--|--|---|--|
| 21 Jan Sat | | Receiving & Welcome | Sharayu area | | |
| 22 Jan Sun | 10 am | Welcome & Inauguration of Camp | BKLW Rural Medical College Auditorium | Dr.SuvarnaPatil, Mr.VikasWalawalkarsaheb | Lecture theatre No.1 |
| 23 Jan Mon | 11 am-1 pm | Common Birthday Programme (Up-to 1 yr age group children) | Recreation Hall | Snehal, PSM Faculty Nursing Tutor | 2 -3 pm Medical students Guest lectures by UK Faculty, drsanjayDeshpande & team |
| 24 Jan Tue | 11 am-1 pm | Baby Shower Ceremony (DohaleJevan) | Recreation Hall | Snehal, Nursing Tutor Ob-gy faculty | 2 -3 pm medical students guest lectures. drsanjayDeshpande &team |
| 25 Jan Wed | 9:30 am - 1 pm 4 pm - 6:30 pm | 1) Community visit for Adolescent girl's activities 2) Community visit with Women project (REACH) group | Kutare Village Village-KondmalaRajeshirkewadi | Dr.Modak, Aishwarya&SnehaDeshmukh, PSM faculty Veena Nursing Tutor | 2 -3 pm Medical Students guest lectures &team |
| 26 Jan Thu | 8 am - 9:30 am | School Function | SVJCT School ground | | 2 -3 pm Medical Students guest lectures drsanjayDeshpande &team |
| 27 Jan Fri | - | - | - | - | 2 -3 pm Medical Students guest lectures drsanjayDeshpande &team |
| 28 Jan Sat | - | - | - | - | 2 -3 pm Medical Students guest lectures drsanjayDeshpande &team |
| Every Day | 6 am onwar | All Operation Theatres | - | - | surgery/ortho/ |

| | ds | ob-gy faculty and SR |
|---|---|----------------------|
| Other Hospital based community related camps | 1) CTC camp at Paediatric ward- 20 th Jan - 2 Feb Department of paediatrics Residential camp for malnourished children | |

Medical Director

Director

B.K.L. Walsekar - Jai Prakash Medical College
 Sawarde, Khasurwad, Pin - 415606



Dr. Sanjay Deshpande
MBBS, MRCP, FRCA
FRCR, FRCR
FRCR, FRCR
FRCR, FRCR

Dr. Sanjay Deshpande
Project Lead, SVJC Trust UK
Consultant in Anaesthesia and Intensive Care Medicine
South Tyneside and Sunderland NHS Foundation Trust
UK

10 Jan 2017

Dr. Suvarna Patil
Medical Director
BKL Walawalkar Rural Medical College and Hospital
Dervan, India

Visit of UK highly qualified doctors and nurses to provide educational activities to Medical Students, Medical and Nursing staff , Faculty of BKL Walawalkar Rural Medical College and Samartha Nursing School , Dervan

Dear Dr. Patil,

Greetings from Newcastle, UK.

I write to confirm that I am bringing a team of doctors and nurses to BKL Walawalkar Medical College and Hospital, Dervan, between the dates 21/1/2017 till 28/1/2017 to provide educational activities, which will include lectures, workshops and simulation training to medical students, doctors and nurses on common medical topics like Basic and Intermediate Life Support, Trauma Life Support, Surgical and Medical Emergencies, Common Nursing topics (Infection control, sterilisation, check lists, etc) . This year I have a team of 22 dedicated staff from the UK who are looking forward to share their knowledge and skills with the medical and nursing students, and the faculty of the BKL Walawalkar Rural Medical School. I understand this is exciting times for you since the grant of permission of opening a medical school in 2015.

Since our visits since 2006, we have noticed a remarkable change in the knowledge, skills and working conditions offered at the Walawalkar Hospital which has been a huge motivation for the UK team. We also noticed in our last visit that the management and medical staff have embraced high quality working ethics, which will benefit all the staff and thus contributing to enhanced patient care.

The names of the staff who are visiting Dervan are:

- 1) Mr Shlok Baipuri, Consultant Surgeon, South Tyneside and Sunderland NHS FT
- 2) Eleanor Freeman, Operating Nurse Practitioner, QE Hospital
- 3) Dr.Kat Herneman, ST 3 anaesthetic Trainee, Bristol, UK
- 4) Dr. Gareth Kessell, Consultant Anaesthetist, James Cook University Hospital, Middlesborough, UK

- 5) Kath Yates, S/N Ophthalmology
- 6) Michelle Hunter, SNOD, NHS Blood and Transplant
- 7) Miss Charlotte Kessell, Year 4 Medical Student, Sheffield Medical School
- 8) Mr John Wall, Biomedical Engineer
- 9) Mr Peter Ayliffe, Consultant Plastic Surgeon, Great Ormond Street, London
- 10) Mr. Peter Christie, ODP, QE Hospital
- 11) Mr Aaron Wall, Support worker in Biomedical Engineering Department
- 12) Dr Shankar Kashyap, Consultant Orthopaedic Surgeon, QE Hospital, Gateshead
- 13) Dr Bhaskar Gupta, Consultant Ophthalmologist, Southampton Hospitals,
- 14) Dr Uday Bhatt, Consultant Plastic Surgeon, Nair Hospital, Mumbai
- 15) Dr Lance Cope, Consultant Radiologist , South Tyneside NHS FT
- 16) Iain Thompson, Senior Operating Department Practitioner, RVI, Newcastle
- 17) Ailsa Dunphy, Nurse Practitioner, Canada
- 18) Stephen Hall, Operating Department Practitioner, Newcastle
- 19) Dr Radha Venkatesan, SAS, Hartlepool Hospitals, Tyne and Wear
- 20) Dr Laura Jones, Foundation Doctor, South Tyneside NHS FT
- 21) Dr Peter Taysum, SAS Anaesthetics, Durham University Hospital, Durham
- 22) Dr Lalit Shekhar, Consultant in Anaesthetics, Sunderland Hospitals, Sunderland

Kindly arrange their accommodation and boarding facilities during our stay.



I am enclosing a programme schedule for your perusal.

Thanking you ,

Yours sincerely,



Dr Sanjay Deshpande
FRCA, FFICM (UK)
Sanjay.Deshpande@nhs.net

Shri Vithalrao Joshi Charities Trust's

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B.K.L.Walawalkar Rural Medical College

U.K. Camp 2017 Schedule

| Date | Time | Event | Venue | Concern Person | BKLW Medical College |
|------------|----------------------------------|--|---|--|--|
| 21 Jan Sat | | Receiving & Welcome | Sharayu area | | Lectures at Medical College |
| 22 Jan Sun | 10 am | Welcome & Inauguration of Camp | BKLW Rural Medical College Auditorium | Dr. Suvarna Patil, Mr. Vikas Walawalkar saheb | - |
| 23 Jan Mon | 11 am- 1 pm | Common Birthday Programme (Up-to 1 yr age group children) | Recreation Hall | Snehal, Nursing Tutor Faculty | Guest lectures by UK Faculty.dr sanjay Deshpande& team |
| 24 Jan Tue | 11 am- 1 pm | Baby Shower Ceremony (Dohale Jevan) | Recreation Hall | Snehal, Nursing Tutor | - |
| 25 Jan Wed | 9:30 am - 1 pm 4 pm - 6:30 pm | 1) Community visit for Adolescent girl's activities 2) Community visit with Women project (REACH) group | Kutare Village Village-Kondmala Rajeshirkewadi | Dr. Modak, Aishwarya & Sneha Deshmukh, Veena Kaku Nursing Tutor | guest lectures &team |
| 26 Jan Thu | 8 am - 9:30 am | School Function | SVJCT School ground | | - |
| 27 Jan Fri | | | | | guest lectures dr sanjay Deshpande&team |
| 28 Jan Sat | | | | | guest lectures dr sanjay Deshpande&team |

| | | | | | |
|--|--|------------------------|--|--|---|
| Every Day | 6 am onwards | All Operation Theatres | | | - |
| Other Hospital based community related camps | 1) CTC camp at Paediatric ward- 20 th Jan - 2 Feb | | | | - |


Medical Director

Director
 B.K.L. Walawalkar Rural Medical College,
 Sawardc, Nasarwadi, Pin - 415606

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DATE: 10.2.2017**Summary of visit of British Medico 2019 (21.1.2017-2.2.2017)**

British Medicos 2017 camp was a great learning opportunity for medical students.

British Team was actively involved in various teaching programs from 21 Jan to 2 Feb. 2017

| 2017 | Foreign faculty/students | Date | Participants | TOPIC |
|---------------------|---|------------|---|----------------------------------|
| Katherine Herman | ST 3 anaesthetic Trainee, Bristol, UK | 21.01.2017 | MBBS-NO. 54 Faculty BKLWRMC-4 | ABC of resuscitation |
| Gareth Kessell | Anesthetist, James Cook University Hospital, Middlesborough, UK | 21.01.2017 | MBBS-NO. 51 Faculty BKLWRMC-4 | Professionalism in Medicine |
| Charlotte Aron Wall | Year 4 Medical Student , Sheffield Medical School Foundation | 23.01.2017 | MBBS STUDENT- 53 Faculty BKLWRMC-2 | Assessing acutely unwell patient |
| Laura Johns | Doctor, South Tyneside NHS FT | | | |
| Dr Sanjay | FRCA, FFICM | 25.01.2017 | MBBS | Acute care sepsis |

| | | | | |
|------------------------------|--------------------------------|------------|---|------|
| Deshpande Mr John Wall | (UK) Biomedical Engineer | | STUDENT-45 Faculty BKLWRMC-2 | Tool |
| Dr.Sanjay Deshpande | FRCA, FFICM (UK) | 27.01.2017 | MBBS Student- 58 Faculty BKLWRMC-2 | - |

| | No of operations | BKLWRMC Faculty participated | UK faculty |
|-------------------------------|---------------------|---------------------------------|----------------------------------|
| Surgery ,Uro, Plastic, Ped | 91 | 3 | Total 22 of various specialty |
| Urology | | 1 | - |
| Ortho | 28 | 6 | - |
| Gyn | 12 | 4 | - |
| Cataract | 69 | 2 | - |
| Anesthesia | - | 8 | - |

Participation in community activities in collaboration with BKLWRMC faculty

| Activity | Foreign faculty | Date | No of BKLWRMC staff/faculty | Objective |
|--|--------------------|----------------|-----------------------------------|--|
| Common birthday of malnourished children followed by health check up | 5 | 23 Jan 2017 | 5 | Awareness session about nutrition and vaccination |
| Baby shower ceremony (Antenatal clinic) | 5 | 24 Jan 2017 | 2 | Awareness session about antenatal checkup and institutional delivery |
| Adolescent girl program at Village | | 25 Jan 2017 | 2 | Awareness about Nutrition and reproductive health |


Director

B.K.L.Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606

| | | | | |
|--|--|--------------------|---|--|
| Kutare | | | | |
| Self help group (REACH) village Kondhamala | | 25 Jan 2017 | 1 | Awareness about health and early identification of disease |
| Visit to Furus Village | | 25 Jan 2017 | 1 | Health check up |
| CTC visit | | 20 Jan -2 Feb 2017 | 2 | Child treatment center of severely malnourished children |

“**Dervan Newsletter**” was published by rural medical college attached Hospital to document and summaries the events during UK visit. A copy of “**Dervan Newsletter**” is attached.


Medical Director,
B.K.L. Wafawalkar Rural Medical College

Director
 B.K.L. Wafawalkar Rural Medical College,
 S.Saunde, Kasarwadi, Pin- 413605

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Notice

2017 British Medico camp is schedules from 21 Jan 2017 to 28 Jan 2017

Following faculty is requested to participate in the activities during camp.

| British team and Mumbai Team | General surgery | Anesthesia | Ortho |
|---|------------------|----------------------|--------------------|
| Laparoscopic surgeons Plastic surgeons | Dr. Abhay Desai | DR Vaishali Bapat | Dr Sunil Nadkarni |
| Anesthetists | Dr.Mallapa Huggi | Dr Nambiraj KONAR | Dr.Pawan Kohli |
| General Surgeons | Dr Amit Mandhare | Dr Asmita Karnalakar | Dr.Summit Sonawane |
| Orthopedics | | Dr Sachin Dongarwar | Dr Sumit Jadhav |
| | | Dr.Abhijit | Dr Vijay Birajdar |
| | | Dr Bindiya Salunkhe | Dr Arshaj Gaikwad |
| | | Dr Ketki Paranjape | |
| | | Dr Sachin KATKADE | |

| Ob gy | Ophthal | Teaching and training programs | PSM |
|-------------------|-------------------|--------------------------------|-----------------------|
| Dr Mansi Gandhele | Dr Vaibhav Thorat | Dr Ketki Pranjape | For outreach programs |
| Dr Pradip Rathod | Dr Jahin Pawasakr | Dr Asmita Karnalkar | |
| Dr Vishal Mandale | | | |
| Dr Dipak Kambale | | | |

Please arrange duties accordingly.

Best Luck


Dr. Suvarna Patil,
Medical Director,
B.K.L.Walawalkar Rural Medical College

Director
B.K.L.Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606

Shri Vithalrao Joshi Charities Trust's

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DATE - : 28/01/2017

| SrNo | Name Of Participants | Remark | Sign |
|------|----------------------|-----------|------------------|
| 1) | Nikita Kolhe | Good | <u>Nikita</u> |
| 2) | Rutuja Maske | Good | <u>Rutuja</u> |
| 3) | Alhad Gole | V good | <u>Alhad</u> |
| 4) | Aakash Tiradkar | V good | <u>Aakash</u> |
| 5) | Janhvi Mrajale | V good | <u>Janhvi</u> |
| 6) | Nilesh Pendhakar | V good | <u>Nilesh</u> |
| 7) | Khan Muzgam | Excellent | <u>Khan</u> |
| 8) | Rayan Todhan | V good | <u>Rayan</u> |
| 9) | Kunal Rajput | V good | <u>KKR</u> |
| 10) | Avinash Gupta | V good | <u>Avinash</u> |
| 11) | Murug Gupta | excellent | <u>Murug</u> |
| 12) | Piyush Singh | V-Good | <u>Piyush</u> |
| 13) | Vignesh Iyer | Good | <u>Iyer</u> |
| 14) | Karim Dalwai | V good | <u>Dalwai</u> |
| 15) | Riddhi Pawalekar | Good | <u>Riddhi</u> |
| 16) | Darshan Nichat | V Good | <u>Nichat</u> |
| 17) | Saloni P. | good | <u>Saloni</u> |
| 18) | Nivedita R. | V Good | <u>Nivedita</u> |
| 19) | Jyoti Jethia | Good | <u>Jyoti</u> |
| 20) | Ishani Abhyankar | V good | <u>Ishani</u> |
| 21) | Darshan Kukyan | excellent | <u>Darshan</u> |
| 22) | Rushikesh Pachindre | V good | <u>Pachindre</u> |

Shri Vithalrao Joshi Charities Trust's

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DATE -: 28/01/2017

| SrNo | Name Of Participants | Remark | Sign |
|------|----------------------|-----------|---------|
| 23) | Monica Joshi | Good | Joshi |
| 24) | Saheerputta A. | V.Good | Saheer |
| 25) | Rutiga Maske | Good | Ums |
| 26) | Shreshth Jha. | Excellent | Jha. |
| 27) | Shaurabh Patil | Good | Patil |
| 28) | Prashant Karm | Good | Pr |
| 29) | Snehal Mogal | V.Good | Mogal |
| 30) | Shaurabh S. Patil | Good | Patil |
| 31) | Rohit Nadar | Good | Nadar |
| 32) | Jankyl Mahadkar | Good | Jankyl |
| 33) | Jyushna Moyleen | V.Good | Jyushna |
| 34) | Satyam Singh | Good | Singh |
| 35) | Mansi Singh | Good | Mansi |
| 36) | Devesh Rane | Excellent | Rane |
| 37) | Yogesh Thakre | V.Good | Thakre |
| 38) | Chinmay Torne | Good | Torne |
| 39) | Asiyah Khan | Good | Khan |
| 40) | Malhar Muraungar | Good | Malhar |
| 41) | Himanshu Rathod | Excellent | Rathod |
| 42) | Gautami | Excellent | Gautami |
| 43) | Aneesh Kadane | Excellent | Aneesh |
| 44) | Bashra S. | Good | Bashra |

Shri Vitthalrao Joshi Charities Trust's

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DATE -: 21/01/2017 UK - SURGERY CAMP OPENING & LECTURE

| SrNo | Name Of Participants | Remark | Sign |
|------|-------------------------------------|-----------|------------|
| | MBBS students | | |
| 1) | Dr. Sheeja Abraham | Good | Sheeja |
| 2) | Dr. Sajidul Islam | Good | Ahmed C. |
| 3) | Shubham Bharat Darekar | Good | Shubham |
| 4) | Bhushra Aurangiwala | Good | Bhushra |
| 5) | Yashodhan Brahme | Good | Yashodhan |
| 6) | Chinmay Bujaji | Good | Chinmay |
| 7) | Sarthak Salunke | Good | Sarthak |
| 8) | Jamodars - Sajidul Islam Muhiyuddin | Good | Jamodars |
| 9) | Neel Bhavare | Good | Neel |
| 10) | Aijunmya Shegumar | Good | Aijunmya |
| 11) | Charvi R. Sankholkar | v. Good | Charvi |
| 12) | Sariputta Ambekar | Good | SA |
| 13) | Pankaj Mahadkar | Very Good | Pankaj |
| 14) | Prashant Karn | Good | Prashant |
| 15) | Snehal S. Mogal | Good | Mogal |
| 16) | Prathamesh Shirde | Good | Shirde |
| 17) | Vighnesh Shirde | Good | Vighnesh |
| 18) | Vighan Shirgase | Good | Vighan |
| 19) | Rabil Shet | Good | Rabil |
| 20) | Arnav Shirshetty | Good | Arnav |
| 21) | Himanshu S. Rakud | Good | Himanshu |
| 22) | Prathamesh Sawant | Good | Prathamesh |

Shri Vitthalrao Joshi Charities Trust's

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



Kasarwadi, At-Post Sewarda, Taluka Chiplun,
Dist. Ratnagiri - 415606, Maharashtra State, INDIA
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Fax : +91 02355 264693 Email : info@bklwmc.com
Website : www.walawalkarmedicalcollege.com

DATE -

| SrNo | Name Of Participants | Remark | Sign |
|------|-----------------------|-----------|-------------|
| 23) | Chiranjyot Tame | Good | [Signature] |
| 24) | Satyam Singh | Good | [Signature] |
| 25) | Mansi Singh | Good | [Signature] |
| 26) | Mrunal Wende | Good | [Signature] |
| 27) | Danham Kubyam | Good | [Signature] |
| 28) | Rohit R. Kadam | Good | [Signature] |
| 29) | Savitā Satanker | v. Good | [Signature] |
| 30) | Snehal Jadhav | v. Good | [Signature] |
| 31) | Pradiksha Borke | v. Good | [Signature] |
| 32) | Piyush Singh | v. Good | [Signature] |
| 33) | Pallav Makani | v. Good | [Signature] |
| 34) | Akash Zanwar | Good | [Signature] |
| 35) | Arati Singh | v. Good | [Signature] |
| 36) | Riya Divekar | Good | [Signature] |
| 37) | Ramkrishana Chaudhari | Good | [Signature] |
| 38) | Aakash Kute | Good | [Signature] |
| 39) | Nikhil Pendharkar | v. Good | [Signature] |
| 40) | Rajan Jadhav | Good | [Signature] |
| 41) | Kunal Rajput | v. Good | [Signature] |
| 42) | Niranjan Joshi | Excellent | [Signature] |
| 43) | Achal Cole | Good | [Signature] |
| 44) | Aakash Tirodkar | v. Good | [Signature] |

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DATE :- 23/01/2017 Guest Lecture 'VK Faculty' 2 pm - 3 pm

| SrNo | Name Of Participants MBBS Students | Remark | Sign |
|------|---------------------------------------|---------|-------------|
| 23) | Prashant Kora | Good | [Signature] |
| 24) | Soniputta Ambade | Good | [Signature] |
| 25) | Jamadar Strajuddin | Good | [Signature] |
| 26) | Dauhon Kalyan | Good | [Signature] |
| 27) | Sarthak Salunke | Good | [Signature] |
| 28) | Bushra Aurangiwala | Good | [Signature] |
| 29) | Snehal Jadhav | v. Good | [Signature] |
| 30) | Saimiti Satavkar | Good | [Signature] |
| 31) | Pratiksha Bhatnagar | Good | [Signature] |
| 32) | Manuel P. Yende | Good | [Signature] |
| 33) | Himanshu S. Patil | Good | [Signature] |
| 34) | Rohit R. Kadam | Good | [Signature] |
| 35) | Chinmay Torne | Good | [Signature] |
| 36) | Satyan Singh | Good | [Signature] |
| 37) | Haris Singh | Good | [Signature] |
| 38) | Rambhiksha Chaudhary | Good | [Signature] |
| 39) | Riya Divekar | Good | [Signature] |
| 40) | Pallavi R. Prabhakar | v. Good | [Signature] |
| 41) | Nilmit Pendharkar | v good | [Signature] |
| 42) | Divya Anandkar | v good | [Signature] |
| 43) | Rajni Jadhav | v good | [Signature] |
| 44) | Kunal Rajput | v good | [Signature] |

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DATE - : 23/01/2017

| SrNo | Name Of Participants | Remark | Sign |
|------|-------------------------|-----------|--------------------|
| 1) | Rutuja Maske | Good | <i>[Signature]</i> |
| 2) | Nikita Kolhe | Good | <i>[Signature]</i> |
| 3) | Aditeam Tramadkar | V good | <i>[Signature]</i> |
| 4) | Khan Moazzam | V. Good | <i>[Signature]</i> |
| 5) | Alhad Aule | V good | <i>[Signature]</i> |
| 6) | Vignesh Iyel. | Good | <i>[Signature]</i> |
| 7) | Dakshin Kutyam. | V. Good | <i>[Signature]</i> |
| 8) | Pankaj Uttam Mahadkar | Excellent | <i>[Signature]</i> |
| 9) | Ishani Dhyananar | excellent | <i>[Signature]</i> |
| 10) | Riyush Singh | V. Good | <i>[Signature]</i> |
| 11) | Twisha Morekar | excellent | <i>[Signature]</i> |
| 12) | Shubham Bharat Dasetkar | Excellent | <i>[Signature]</i> |
| 13) | Rohit Nadar | Excellent | <i>[Signature]</i> |
| 14) | Juveya Jelma | Good | <i>[Signature]</i> |
| 15) | Kalina Dalwei | Good | <i>[Signature]</i> |
| 16) | Kiddhi Parulekar | Good | <i>[Signature]</i> |
| 17) | Snehal - Smogal | Good | <i>[Signature]</i> |
| 18) | Charvi R. Sankholkar | V. Good | <i>[Signature]</i> |
| 19) | Ajinkya Shergonkar | Good | <i>[Signature]</i> |
| 20) | prathmesh Shinde | Good | <i>[Signature]</i> |
| 21) | vignesh Shinde | Good | <i>[Signature]</i> |
| 22) | Vishal Shingate | Good | <i>[Signature]</i> |

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Website : www.walawalkarmedicalcollege.com

DATE - : 25/01/2017 Guest Lecture - UK faculty 2pm - 3pm

| SrNo | Name Of Participants ' MBBS students ' | Remark | Sign |
|------|---|-----------|------------|
| 1) | Piyush Singh | V. Good | Piyush |
| 2) | Shubeta Khadikar | Good | Khadikar |
| 3) | Shefali Wagh. | Excellent | Wagh |
| 4) | Nikhil Pendharkar. | Good | Nikhil |
| 5) | Abhal Gole | V. Good | Gole |
| 6) | Rajan Jadhav | Good | Rajan |
| 7) | Shubham Bharat Parekar | Good | shubham |
| 8) | Dasshan Nichat | Excellent | Nichat |
| 9) | Dasshan Kulyan | Good | Dasht |
| 10) | Manal P. Yende | Good | Manal |
| 11) | Aakash Tirotbkar | Good | Tirotbkar |
| 12) | Chiranjyot | Good | Chiranjyot |
| 13) | Sudhanshu Singh | Good | Singh |
| 14) | Manoj Singh | Good | Manoj |
| 15) | Arach Zanwar | Good | Arach |
| 16) | Anni Singh | Good | Anni |
| 17) | Rohit Wadai | Excellent | Rohit |
| 18) | Ahmed. C. | Excellent | Ahmed |
| 19) | Ahank Kute | Excellent | Ahank |
| 20) | Prashant Kaur. | Good | Prashant |
| 21) | Aneesh Kadam | Good | Aneesh |
| 22) | Prasanna Kale | V. Good | Prasanna |

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Website : www.walawalkarmedicalcollege.com

DATE - : 25/01/2017

| SrNo | Name Of Participants | Remark | Sign |
|------|----------------------|---------|------|
| 23) | Neel Bhargava | Good | |
| 24) | Yashodhan Brahma | V. Good | |
| 25) | Prathamesh Shinde | V. Good | |
| 26) | Rahul Shet | Good | |
| 27) | Prathamesh Sawant | Good | |
| 28) | Vighnesh Shinde | V. Good | |
| 29) | Vishal Shingate | V. Good | |
| 30) | Arjun Shirsalkar | V. Good | |
| 31) | Ajinkya Shergaonkar | V. Good | |
| 32) | Saxiputta Ambekar | Good | |
| 33) | Prashant Kamn | Good | |
| 34) | Jomadar Sirajuddin | V. Good | |
| 35) | Charvi R. Sankholkar | V. Good | |
| 36) | Snehal S Mogal | V. Good | |
| 37) | Himanshu S. Rathod | Good | |
| 38) | Snehal . L. Sadhav. | V. Good | |
| 39) | Sarita . Batakar | V. Good | |
| 40) | Sarita Solunke | Good | |
| 41) | Pratibha Borkar | V. Good | |
| 42) | Bushra Surayya | Good | |
| 43) | Rohit R. Kadam | Good | |
| 44) | Pallav K. Mahani | Good | |
| 45) | Ajinkya Mraygaonkar | V good | |

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DATE :- 27/01/2017 Lecture by UK faculty 2pm - 3pm.

| SrNo | Name Of Participants | Remark | Sign |
|------|-----------------------|-----------|------------|
| | M.B.B.S students | | |
| 1) | Riddhi Pasulekal | V. Good | Riddhi |
| 2) | Nikhil Pendharkar | Excellent | Nikhil |
| 3) | Shweta Khadikar | Good | Shweta |
| 4) | Rajan Jadhav | V. Good | Jadhav |
| 5) | Shefali Wagh | Excellent | Wagh |
| 6) | Pankaj Uttam Mahadkar | Excellent | Mahadkar |
| 7) | Souab S. Patil | Good | Patil |
| 8) | Piyush Singh | V. Good | Piyush |
| 9) | Sucheta Des Des | Good | Des |
| 10) | Banshra Surangwale | Good | Surangwale |
| 11) | Chinmay Bawaji | Good | Bawaji |
| 12) | Sarthak Salunke | Good | Salunke |
| 13) | Aakash Zanwar | V. Good | Zanwar |
| 14) | Amit Singh | V. Good | Amit |
| 15) | Himanshu Rathod | Good | Rathod |
| 16) | Mansi Singh | Good | Mansi |
| 17) | Kunal Rajput | V. Good | Rajput |
| 18) | Riya Divekar | Good | Divekar |
| 19) | Ramkrishana Chaudhari | Good | Chaudhari |
| 20) | Deekshani Kulkarni | V. Good | Kulkarni |
| 21) | Mrunal Yende | Good | Yende |
| 22) | Aakash Tirwadkar | V. Good | Tirwadkar |

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Website : www.walawalkarmedicalcollege.com

DATE -: 22/01/2017

| SrNo | Name Of Participants | Remark | Sign |
|------|----------------------|-----------|-------------|
| 23) | Kunal Rajput | Good | Rajput |
| 24) | Trushra J.M. | v. Good | Good |
| 25) | Ajinkya Mrajkal | Excellent | Good |
| 26) | Prathamesh Sawant | Good. | [Signature] |
| 27) | Vignesh Shinde | Good | [Signature] |
| 28) | Neel Bhokare | Good | [Signature] |
| 29) | Anar Shishetty | Excellent | [Signature] |
| 30) | Rahil Shet. | Good | [Signature] |
| 31) | Vishal Shingade | Good | [Signature] |
| 32) | Yashodhan Bhatme | Good | [Signature] |
| 33) | Ajinkya Shegokar | Excellent | [Signature] |
| 34) | Prathamesh Shinde | Good | [Signature] |
| 35) | Darshan Kulkarni | Good | [Signature] |
| 36) | Kauna Dalwai | Good | [Signature] |
| 37) | Ishani - A. | Good | [Signature] |
| 38) | Juceya Kelwa | Good | [Signature] |
| 39) | Niranjana Joshi | Good | [Signature] |
| 40) | Khan Moazzam | Good | [Signature] |
| 41) | Vignesh Iyer | v. Good | [Signature] |
| 42) | Avinash Gupta | Good | [Signature] |
| 43) | Hemra - H | Good | [Signature] |
| 44) | Anurag Gupta | Good | [Signature] |

S. V. J. C. T's

B.K.L. Walawalkar Hospital

Diagnostic & Research Centre, Dervan

(ISO 9001: 2008 Certifide)



Dervan Newsletter 2017

Special Issue on Medical Mission by British Medicos:2017

The Mission Continues...

British Medicos Empower To Keep Serving & Succeeding

British Doctors continue to become part of the movement for better and advanced care in rural and backward area by participating in "British Camp 2017" consecutively for 12 years; at B.K.L. Walawalkar Hospital



The 2017 British Camp was extremely successful with hundreds of patients receiving treatment and true exchange of knowledge, education and technique within short span of time at B.K.L. Walawalkar Hospital, Dervan.

Dervan Newsletter 2017

Special Issue on Medical Mission by British Medicos : 2017

Index

| | |
|---|----|
| • Editorial by Dr. Suvarna Patil, Medical Director | 03 |
| • Welcome Speech by Shri. Vikas Walawalkar, Managing Trustee | 05 |
| • Nursing Education: Direction for the preparation of professional nurses | 07 |
| • Biomedical engineering | 07 |
| • Interaction with Medical college students & Special lectures | 08 |
| • Community visit – School Visit | 09 |
| • A visit to REACH Activities..... | 11 |
| • Baby shower ceremony | 12 |
| • Common birthday programme (6 month children) | 13 |
| • Nutrition: By students from 'Nirmala Niketan', Mumbai | 15 |
| • Lets Put A Smile On That Face :Clothes & toys distribution to children..... | 16 |
| • Streight from the Heart | 17 |
| • Remarks by patients | 23 |
| • Pre/Post Operative patients | 25 |
| • Celebrating Republic Day..... | 28 |
| • Felicitation programme | 29 |
| • Operated patient's list | 32 |



Editorial

Dr. Suvarna N. Patil
Medical Director

As we know India is the second most populous country of the world and has changing socio-political demographic and morbidity patterns that have been drawing global attention in recent years. Despite several growths orientated policies adopted by the government, the widening economic, regional and gender disparities are posing challenges for the health sector. About 75% of health infrastructure, medical man power and other health resources are located in cities where only 27% population lives.

To improve the prevailing situation, the problem of rural health is to be addressed both at macro (national and state) and micro (district and regional) levels. This is addressed by s.v.j.c.t B.K.L.Walawalkar Hospital in a holistic way, with a genuine effort to bring the poorest of the population to the centre of the fiscal policies. While doing this it is our aim to provide quality care to this population. We are proud that UK team is being supporting us in this endeavor for last 12 years. This team is visiting our hospital for a decade and actively participating in patient care at all levels.

In its continuous attempt aimed at the welfare of humanity to offer advanced medical treatment to the needy and poor patients and at the same time to counter the cash shortage problem since last two months due to government's decision of demonetization, B.K.L. Walawalkar Hospital started 20,000 Rupees Concessional rate scheme from 16th November 2016 in the interest of public service. The hospital bill up to Rs. 20,000 was made free for admitted patients in various departments such as In-Patient departments, Emergency patient's departments, Diagnostic Services, OT Services etc. The treatment also included Path lab tests, radiology tests, and medicines. The scheme was a huge success. Several complicated surgeries were performed by a team of doctors and health professionals. All patients felt satisfied

and pleased with the treatment facilities and availability of free medicines. Total no. of patients taken benefit of scheme is 17,623 on OPD basis and 3337 indoor patients. 851 major surgeries were performed which included 281 gen surgeries, 175 ob- gyn, with 94 ortho and 80 ENT procedures respectively.

The surgical camp at Dervan, a mission with the active voluntary participation by UK medicos this task has been a great success this year also. Almost 3000 patients visited the hospital opd as well as IPD to meet UK medicos. Various outreach camps were arranged where UK medicos participated in them. Few of them were at villagte Kondhamala, Rajeshirke wadi. Ladies from various self help groups participated in the programme (REACH for empowering the women) and demonstrated Nachani laddo. Pregnant ladies enjoyed talking with U. K. team and children's birthday was celebrated in presence of UK medicos. Laura, Kath, Natasha visited Furus Village and met village leader Mrs. Pushpatai. She showed grampanchayat office, ICDS, FLOUR mill. Baby shower was celebrated at our rural centre and hand woven sweaters were distributed to them by Laura and team.

The surgical team operated on 47 Patients Headed by Dr. Shlok and his team. 22 kidney patients life has been saved by urology team. The team was headed by Dr. Praveen, Dr. Vedant, Dr. Pavan and team. 60 patients got vision in this camp period. And the credit goes to ophthal team and Dr. Gupta and Dr. Sarpotdar, Dr. Lance Cope performed various procedures and hundreds of ultrasounds, X-rays, CT scans were done under his guidance and he introduced new techniques at Dervan. Thanks to him. Special thanks to Dr. Uday Bhat, Dr. Shiv Date for transforming 19 deformed faces of various patients and intern offering them respect from the society.

Orthopedic team was the busiest team who performed 26 surgeries and helped the patients to overcome their disabilities. Thanks to Dr. Kashyap, Dr. Kohli, Dr. Nadkarni and team. We are grateful to Dr. Sanjay Deshpande and his team for the initiation of this medical mission at Dervan. We are thankful to Dr. Lance Cope (interventional radiologist)and Davy wales Shailly, their successive visits and their encouragement in sustaining the mission towards success. Our grateful and sincere

thanks to all those UK Team Members (Elanor freeman, Ian Thompson, John Wall for taking care of all equipments for smooth running of all operations, Aron Wall a budding lawyer, Dr. Peter, Dr. Gareth, Dr. Kat, Charlotte, Kath Yates, Laura, Natasha for their participation in surgical camp.

It is a pleasure to have British team as a part of our team and looking forward to visit next year. Many thanks to British team.



The Welcome Speech by Shri Vikas Walawalkar, Managing Trustee

On behalf of Shri Vithalrao Charities Trust I would like to thank Dr. Sanjay Deshpande and all his team not only because they come here every year and give a big boost to the work we are doing last many years but also because they take a lot of efforts back in UK in arranging different events just to raise the funds for this camp. This year also he gave funds by arranging musical events and they also do other activities to raise funds so that different instruments can be donated to our hospital and other charity and other things expenses can be reimbursed. So really a big applause to all these activities!

Its not too easy to arrange such camps every year, actually the work starts six months before and all the members are intimated. Then he keeps on communicating with us. He takes lot of efforts and actually he is busy as an anesthetist, still he is doing that and not only that but he has also registered trust over there Shri Vithalrao Joshi Charities Trust. The work of charity is also increasing day by day and that also has to be looked after by him. So really I appreciate his work and many thank you for all those things.

Here at Dervan we are doing our best to ensure that more and more patients should get benefit of the medical facilities which we provide and not only that but after demonetization, we have given the benefit of first twenty thousand rupees, we waived the charges. Actually those charges were very low. The operations which cost around seventy five thousand or lakh rupees at Mumbai or Pune, were charged twenty five thousand rupees only and out of that twenty five thousand or thirty thousand rupees, first twenty thousand rupees waived and what we get, a small amount and clearly speaking it's a financial burden on the trust also. But we don't look at that. Honestly, through this medium of trust we want to help the patients in this area and that's why this scheme has been introduced and it has been well publicized on TV channel

and other media. What I want to say is because of this scheme, the workload has almost doubled after 15th December. That means more and more patients, double number of patients taking benefit of these medical facilities which is the ultimate aim of this trust and that's why we have now extended it till 28th February.

Honestly speaking, we treat these medical camps and all other activities in social "Yadnya". Yadnya means you must be knowing, we offer different material, cooked rice to a god of fire with a belief that if we offer to the fire, it goes to and reaches to the god among. Same way this is also a social "Yadnya" in which we all offer whatever we have, the medical expertise, a biomedical skill, money or a physical efforts of labour to the god of humanity with a belief that ultimately reaches the god among above. We don't expect that but it will be definitely getting deposited somewhere but I am very happy that god is everywhere, in patients also and we are trying to do our best for that and way we are serving the purpose of the trust.

I am really thankful to all of you because you have been coming here for a long time for nearly 12 years which is not a small period and every year new people are getting introduced in your senior team and I am happy for that and I am really happy that you are joining hands in this endeavor to work for the people who need it most and I am sure with our joint efforts we will try to take all such trust activities at a better height.

Thank you.



Team of Surgery performed 48 Gen. Surgeries & 14 Plastic surgeries

- Shlok Balupuri, General Surgeon, Sunderland Royal Hospital
- Eleanor Freeman, General Surgery, Gateshead Hospitals
- Peter Ayliffe, Plastic Surgeon, Great armond street London
- Uday Bhatt (plastic surgeon) Team of Urology: 30 complicated Urosurgery were done.
- Pravin Menezes, Consultant, Urological Surgeon, St. Peter Hospital
- Charlotte Kessell, Scheifield Medical School team of Anesthesia :
- Sanjay Deshpande, Anaesthetist, South Tyneside NHS Trust
- Gareth Kessell, James Cook University Hospital
- Radha Venkatesan Vadodaria, Anaesthetist, North tees hospital
- Peter Taysum, ODP, Anaesthesia, Durham University Hospital
- Kath Herneman, South mead Hospital, Bristol
- Stephen Hall, London Hospitals
- Laura Jones, South Tyneside NHS Trust

Team of Ophthal: 69 people got vision

- Dr. Bhaskar Gupta, Eye surgeon , Southamptom Hospital
- Kath Yates, Sr. Ophthalmology, Sunderland Royal Hospital

Team orthopedic: 28 ortho surgeries were performed.

- Dr Shankar Kashyap, Newcastle Hospitals
- Iain Thompson, Newcastle Hospitals

Biomedical Engineer team :

- John Wall , South Tyneside NHS Trust
- Aaron Wall, South Tyneside NHS Trust

Interventional Radiology :

- Dr. Lance Cope, South Tyneside NHS Trust

Nursing Education

- Laura Jones, South Tyneside NHS Trust
- Stephen Hall, London Hospitals

They educated nurses & medical students for communication skills & techniques.



Nursing Education

Throughout the year the institute arranges different guest lecturers for nursing students to keep them updated with latest academic as well as clinical knowledge & techniques. A special classroom was arranged for teaching new procedures, supervising, and evaluating their clinical practice. It provides direction for the preparation of professional and competitive nurses into the 21st century apart from academic nursing syllabus.



Biomedical Engineering:

Mr. John Wall, Biomedical Engineer, UK

In continuation of Strategic Research Initiatives taken by B.K.L. Walawalkar Hospital & Rural Medical College, Mr. John Wall, Biomedical Engineer, UK and Staff exchanged new techniques and innovations with clinicians.



Interaction with Medical Students & special lectures :

Transformation of medical students to become medical professionals is a core competency required for physicians in the 21st century. Role modeling was traditionally the key method of transmitting this skill. Medical colleges are developing medical curricula which are explicit in ensuring students develop the professional competency and understand the values and attributes of this role. The purpose of this meet was to determine student perception of professionalism and gain insights for improvement in promotion of professionalism in undergraduate medical education.



Gareth Kessell, Anesthesia



Sanjay Deshpande & Kathryn Herneman, Anesthesia



Lance Cope, Interventional Radiologist



Laura Jones, Anesthesia

Community Visits :



Visits to school at Furus village: With teachers & community service providers:





In every community, there is work to be done.

In every nation, there are wounds to heal.

In every heart, there is the power to do it.

Marianne Williamson



Community Visit to village Kondmala : 'REACH'

"Rural Empowerment and Community Health (REACH)" is established for the welfare of the community without the distinction of caste, creed, religion, race or other limiting considerations, for the betterment of the poor by rendering holistic services in order to make people aware of their rights and duties as well as to develop leadership, self employment.



Baby Shower Ceremony :

The common custom in India is to bless the expecting mother and pray for the well being of the mother and the baby. It is the mom-to-be who is showered with blessing and bounty-food, clothes, gifts, a sort of a 'mother-to-be shower". Also, traditionally it is attended by the women-folk.

B.K.L. Walawalkar Hospital's community department has a strong commitment to help and uplift the under privileged sections of society. The socio-economic differences in society does not make possible for poor people to celebrate such type of activities. We arrange common celebration of all expecting mother and also take this as an opportunity to educate women about managing symptoms, diet, exercise, and general care tips that will keep them and their baby healthy.



Common Birthday Programme (0 - 6 Yrs Age Children)



Nutritional demonstration to PNC mothers by Nutritionists from Nirmala Niketan, Mumbai.

Lactating mothers Workshops

After delivery a mother is educated about importance and techniques of breast-feeding. After the birth of the child, the hospital is concerned about the development of the child, vaccination & diet.



Nutrition for people :

A team of nutritionists from College of Home Science, Nirmala Niketan, affiliated to the University of Mumbai headed by Dr. Veena Yardi, associate Professor, working in the Department of Foods, Nutrition and Dietetics & Mrs. Ulka Banavali visited community school at Furus village & also participated in in-house programme 'Common Birthday of children' where importance of nutrition & proper diet was explained to children and mothers



Lets Put A Smile On That Face !!

Recognizing the unfortunate situations faced by the poor people, especially children, every time UK team distributes the clothes & toys to the children admitted in Child Development Center. These children are unable to purchase their clothes, toys and belong to very poor background.



Pre/Post Operative cases :

Vijay Shrinivas Dharma, (62/M), A/P- Bhosari, Pune: Surgery - BL TKR



Subhash Shridhar Musale, A/p Oros, Tal- Kudal, Dist- Sindhudurg: Surgery - Kyphoplasty



Milind Devgharkar, A/p- Gimhavne, Tal- Dapoli: Surgery - Decompression + Instrumentation



Gaurav Sharad Kshirsagar, A/p Nihvasa Ahamadnagar: Surgery - Laminectomy



TKR Patients:



The Orthopedics Team



Orthopedics Surgeon: Dr. Sunil Nadkarni



Orthopedics Surgeon Team: Dr. Pavan Kohali (Right) with Dr. Shankar Kashyap (Center)

The guests enjoying active leisure time, practicing sports in SVJCT's Sports Academy's indoor and outdoor sport facilities.



10 meter indoor Rifle shooting



Award function of Konkan Youth Championship



Table Tennis



Volley Ball

Celebrating Republic Day !

68th Republic Day celebrated with enthusiasm in presence of eminent guest Dr. Shivkumar Utture, Maharashtra Medical Council. Various cultural programmes were organised on this auspicious occasion.



Felicitation Programme :







Shri Vitthalrao Joshi Charities Trust's B.K.L.walawalkar Hospital, Diagnostic & Research Centre, Dervan
22nd Jan - 31st Jan 2017 - British Camp Patients

| Sr. No. | Name Of Patient & Address | Age / Sex | Operation Done | Surgeons / Anaesthetists | Cost Of Treatment (Hosp. Bill + Medicine + Investigation) (A) | | Amount Paid By Patient (B) | | Concession Given (A-B=C) | |
|---|---|-----------|-------------------------------------|---|---|-------|----------------------------|-------|--------------------------|-------|
| | | | | | In Rs. | In \$ | In Rs. | In \$ | In Rs. | In \$ |
| I. General Surgeries (45 Patients, 45 Surgeries) | | | | | | | | | | |
| 1 | Ashwini Yashwant Dike A/P- Kushiwade, Dike Wdi, Tal- Chiplun, Dist- Ratnagiri. Phone No- 8275405150 | 35/F | Sebaceous Cyst Excision Under La | Dr. Mallappa Huggi | 4958 | \$74 | 428 | \$6 | 4530 | \$68 |
| 2 | Rasika Ramesh Parab A/P- Nive Khurd, Parab Wadi Tal- Sangameshwar, Dist- Ratnagiri. Phone No- 9975851607 | 37/F | Lt. Hernioplasty | Dr. Shlok Balupuri Dr. Sushma Kashyap Dr. Nambiraj Konar | 17676 | \$264 | 1701 | \$55 | 13975 | \$209 |
| 3 | Yogesh Ganpat Shinde A/P- Kumbharli, Gurav Wadi, Tal- Khed, Dist- Ratnagiri. Phone No- 9421056255 | 38/M | Laparoscopic Appendectomy | Dr. Sushma Kashyap Dr. Shlok Balupuri Dr. Amit Mandhare Dr. Vaishali Bapat Dr. Asmita Karnalkar | 21696 | \$324 | 5129 | \$77 | 16567 | \$247 |
| 4 | Dhonda Dattaram Bhoaskar A/P- Kaundartamhane, Khalachi Wadi, Tal- Chiplun, Dist- Ratnagiri. Phone No- 9112189167 | 49/M | Rt. Hernioplasty | Dr. Shlok Balupuri Dr. Sushma Kashyap Dr. Vaishali Bapat Dr. Asmita Karnalkar | 16530 | \$247 | 3903 | \$58 | 12627 | \$189 |
| 5 | Santosh Ramchandra Kanade A/P- Nandgavon, Wanewadi, Tal- Chiplun, Dist- Ratnagiri. Phone No- 9467011796 | 50/M | Laparoscopic Cholecystectomy | Dr. Sushma Kashyap Dr. Shlok Balupuri Dr. Amit Mandhare Dr. Asmita Karnalkar Dr. Abhijeet | 28482 | \$425 | 8000 | \$119 | 20482 | \$306 |
| 6 | Aniket Anant Chopade A/P Pedhe Chopade Wadi, Tal- Chiplun, Dist- Ratnagiri. Phone No- 8806553302 | 45/M | Lap. Appendisectomy | Dr. Sushma Kashyap Dr. Amit Mandhare Dr. Nambiraj Konar | 20206 | \$302 | 3995 | \$60 | 16211 | \$242 |
| 7 | Hridaynath Sharadchandra Kharbude A/P Talavali Braamban Wadi, Tal- Guhagar, Dist- Ratnagiri. Phone No- 9405725057 | 42/M | Rt. Hernioplasty | Dr. Sushma Kashyap Dr. Shlok Balupuri Dr. Nambiraj Konar | 16199 | \$242 | 4280 | \$64 | 11919 | \$178 |
| 8 | Radhika Krushnkant Karadekar A/P - Panchodi, Hanumanwadi, Tal - Dapoli, Dist - Ratnagiri, Phone No- 9420196942 | 60/F | Excision Of Lipoma | Dr. Sushma Kashyap Dr. Amit Mandhare Dr. Sachin Dongarwar | 16930 | \$253 | 16930 | \$253 | 0 | \$0 |
| 9 | Ashok Dhonda Budar A/P Kudap Dand Wadi, Tal- Chiplun, Dist- Ratnagiri. Phone No- 8975583540 | 42/M | Rt. Hernioplasty | Dr. Sushma Kashyap Dr. Shlok Balupuri Dr. Asmita Karnalkar | 16041 | \$239 | 4170 | \$62 | 11871 | \$177 |
| 10 | Jagdish Ganpat Kanekar A/P Aravali Dattawadi, Tal- Sangameshwar, Dist- Ratnagiri, Phone No- 8805793084 | 49/M | Bl Hernioplasty | Dr. Sushma Kashyap Dr. Shlok Balupuri Dr. Asmita Karnalkar | 16416 | \$245 | 5132 | \$77 | 11284 | \$168 |
| 11 | Sulabha Anurath Kamble At/P. Kherdi, Tal- Chiplun, Dist- Ratnagiri, Phone No- 9209274828 | 48/F | Excision Of Lipoma | Dr. Shlok Balupuri Dr. Sachin Dongarwar | 11783 | \$176 | 1914 | \$29 | 9869 | \$147 |

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|----|--|------|---|---|-------|-------|------|-------|-------|-------|
| 12 | Vinayak Anaji Shivgan A/P -Karui, Gavtharwadi, Tal- Vaibhavwadi, Dist- Sindhudurg Phone No- 9404755056 | 68/M | Rt. Inguinal Hernia | Dr. Shlok Balupuri Dr. Sushma Kashyap Dr. Asmita Karnalkar | 17052 | \$255 | 4177 | \$62 | 12875 | \$192 |
| 13 | Yojana Yashwant Rangale A/P Bhile, Madhali Wadi, Tal- Chiplun, Dist- Ratnagiri. Phone No- 9209013904 | 40/F | Lt. Hemi Thyroidectomy | Dr. Abhay Desai Dr. Amit Mandhare Dr. Nambiraj Konar | 26509 | \$396 | 6509 | \$97 | 20000 | \$299 |
| 14 | Sharda Vasant Nurkar A/P- Kot, Tal- Lanja, Dist - Ratnagiri. Phone No-7208620850 | 48/F | Appendisectomy | Dr. Shlok Balupuri Dr. Amit Mandhare Dr. Sachin Dongarwar | 23588 | \$352 | 3588 | \$54 | 20000 | \$299 |
| 15 | Rajkiran Pandurang Tapkire A/P Mahad, Dist- Raigad Phone No- 9145641939 | 47/M | Lt. Hemimandibulectomy + Lt. Mnd. | Dr. Abhay Desai Dr. Uday Bhar Dr. Amit Mandhare Dr. Sachin Dongarwar Dr. Abhijeet | 58290 | \$870 | 0 | \$0 | 58290 | \$870 |
| 16 | Ujwala Manohar Ghanekar A/P Waghambhe Ghanekar Wadi, Tal- Gubagar, Dist- Ratnagiri. Phone No- 9421616132 | 40/F | Lymph Node Biopsy Under La | Dr. Amit Mandhare | 10076 | \$150 | 1699 | \$25 | 8377 | \$125 |
| 17 | Arti Umesh Patil A/P Kholcha Pat Gubagar, Tal- Gubagar, Dist- Ratnagiri. Phone No- 7066906154 | 40/F | Wide Local Excision | Dr. Abhay Desai Dr. Nambiraj Konar | 11275 | \$168 | 1628 | \$24 | 9647 | \$144 |
| 18 | Julekha Karim Mullaji A/P Sawarde, Adarekar Mohalla, Tal- Chiplun, Dist- Ratnagiri, Phone No- 9970459030 | 58/F | Hernioplasty | Dr. Shlok Balupuri Dr. Sushma Kashyap Dr. Sachin Dongarwar Dr. Abhijeet | 19301 | \$288 | 4422 | \$66 | 14879 | \$222 |
| 19 | Dikshita Sanjay Kubal A/P. mochamad, Tal - Vaibhavwadi, Dist- Sindhudurg | 16/F | Cervical Lymph Node Biopsy Under La | Dr. Amit Mandhare | 15358 | \$229 | 899 | \$13 | 14459 | \$216 |
| 20 | Sumati Bhauran Dandekar A/P Rudrawali, Post Taladhet, Tal- Mangaon, Dist- Raigad Phone No- 9028628522 | 60/F | It Feeding | Dr. Amit Mandhare Dr. Sachin Dongarwar | 9709 | \$145 | 9709 | \$145 | 0 | \$0 |
| 21 | Smita Yashodas Shedage A/P Dhopave Boudhwadi, Tal- Gubagar, Dist- Ratnagiri. Phone No- 9867707341 | 29/F | Incision & Drainage Under La | Dr. Amit Mandhare | 4816 | \$72 | 988 | \$15 | 3828 | \$57 |
| 22 | Dilip Shantaram Rane A/P Mangavali, Tal - Vengurla, Dist- Saindhudurg | 40/M | Lt. Hernioplasty | Dr. Shlok Balupuri Dr. Peter Taysum Dr. Bindiya Salunke | 23042 | \$344 | 3042 | \$45 | 20000 | \$299 |
| 23 | Sunita Shantaram Lohar A/P- Karbode, Mohitewadi, Tal & Dist- Ratnagiri Phone No- 9763738615 | 50/F | Laparoscopic Cholecystectomy | Dr. Shlok Balupuri Dr. Amit Mandhare Dr. Sachin Dongarwar | 27505 | \$411 | 7505 | \$112 | 20000 | \$299 |
| 24 | Prajakta Gaurav Naralkar At/P. Khend, Chiplun, Tal- Chiplun, Dist- Ratnagiri, Phone No- 8412009859 | 23/F | Fistulectomy | Dr. Amit Mandhare Dr. Vaishali Bapat | 11365 | \$170 | 2555 | \$38 | 8810 | \$132 |
| 25 | Ujwala Manohar Ghanekar A/P Waghambhe, Ghanekar Wadi, Tal- Gubagar, Dist- Ratnagiri Phone No- 9421616132 | 40/F | Excision Of Lipoma | Dr. Amit Mandhare Dr. Sachin Dongarwar | 10076 | \$150 | 1699 | \$25 | 8377 | \$125 |
| 26 | Priya Prabhakar Sawant A/P Sangameshwar, Rampeth, Tal- Sangameshwar, Dist- Ratnagiri, Phone No- 9552303076 | 48/F | Lt. Thyroidectomy & Central & Level 4 Nodal Clearance | Dr. Abhay Desai Dr. Amit Mandhare Dr. Sachin Dongarwar | 22932 | \$342 | 2532 | \$38 | 20400 | \$305 |
| 27 | Vishvas Babaji Dingankar A/P Bhatgaon, Dingankar Wadi, Tal- Gubagar, Dist- Ratnagiri | 23/M | Rt. Hernioplasty | Dr. Sushma Kashyap Dr. Vaishali Bapat | 22297 | \$333 | 2297 | \$34 | 20000 | \$299 |
| 28 | Sahadev Laxman Bevkar A/P Kovesi, Tal- Rajapur, Dist- Ratnagiri | 68/M | Rt. Hernioplasty | Dr. Sushma Kashyap Dr. Asmita Karnalkar | 17485 | \$261 | 4176 | \$62 | 13309 | \$199 |

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|----|---|------|--|--|-------|---------|-------|-------|-------|---------|
| 29 | Madhukar Dhonda Panchal A/P- Shivnari, Sutarwadi, Dapoli, Dist- Ratnagiri Phone No- 9221397656 | 62/M | Fissurectomy | Dr. Amit Mandhare Dr. Vaishali Bapat Dr. Abhijeet | 12095 | \$181 | 1533 | \$23 | 10562 | \$158 |
| 30 | Naresh Shankar Mestri A/P. Shiral, Bhuvadwadi, Tal- Chiplun, Dist- Ratnagiri. Phone No- 9881572018 | 20/M | Rhinoplasty | Dr. Shivprasad Date Dr. Gareth Kessell Dr. Ketki Paranjape | 21524 | \$321 | 1524 | \$23 | 20000 | \$299 |
| 31 | Shivram Tanu Waghe A/P Pali, Patil Wadi, Tal- Guhagar, Dist- Ratnagiri, Phone No- 8007494744 | 63/M | Bi Inguinal Hernia Repair | Dr. Shlok Balupuri Dr. Peter Taysum Dr. Bindiya Salunke | 3030 | \$45 | 0 | \$0 | 3030 | \$45 |
| 32 | Amol Rajaram Shinde A/P Devrukh, Khulchi Ali, Tal- Sangameshwar, Dist- Ratnagiri Phone No- 8605337433 | 43/M | Circumssion Under La | Dr. Amit Mandhare | 10461 | \$156 | 2213 | \$33 | 8248 | \$123 |
| 33 | Hanuman Perbat Lad A/P Dhakmoli, Sutarwadi, Tal-Chiplun, Dist- Ratnagiri Phone No- 9422595320 | 70/M | Exploratory Laparotomy Cysto Jejunostomy | Dr. Shlok Balupuri Dr. Amit Mandhare Dr. Asmita Karnalkar | 51056 | \$762 | 31056 | \$464 | 20000 | \$299 |
| 34 | Sarita Shripat Kansare A/P Nerul, Mavali Wadi, Ghar No.456 , Ratnagiri, Tal & Dist - Ratnagiri, Phone No- 9673155653 | 45/F | Rt. Mnd + Pmmc + Hemimandibulectomy | Dr. Abhay Desai Dr. Ketki Paranjape | 83374 | \$1,245 | 4690 | \$70 | 78684 | \$1,175 |
| 35 | Shivram Tanu Waghe A/P Pali, Patil Wadi, Tal- Guhagar, Dist - Ratnagiri Phone No- 8007494744 | 63/M | Hernioplasty | Dr. Mallappa Huggi Dr. Ketki Paranjape | 3030 | \$45 | 0 | \$0 | 3030 | \$45 |
| 36 | Anil Shankar Chavan A/P- Yegaon, Tal -Chiplun, Dist - Ratnagiri | 59/M | Laparoscopic Hernioplasty | Dr. Shlok Balupuri Dr. Bindiya Salunke | 27770 | \$415 | 8187 | \$122 | 19583 | \$292 |
| 37 | Anant Gangaram Shigwan A/P Nivali Khambe Wadi, Tal - Chiplun, Dist - Ratnagiri | 58/M | B/L Orchidectomy | Dr. Mallappa Huggi Dr. Sachin Dongarwar | 22948 | \$343 | 11310 | \$169 | 11638 | \$174 |
| 38 | Vishram Rupa Nivate A/P Murtavade, Kutal Wadi, Tal- Chiplun, Dist -Ratnagiri Phone No- 8793151087 | 65/M | B/L Orchidectomy | Dr. Mallappa Huggi Dr. Sachin Dongarwar | 25061 | \$374 | 10000 | \$149 | 15061 | \$225 |
| 39 | Mangesh Harischandra Upare A/P Palvan Koste Wadi, Tal - Chiplun, Dist - Ratnagiri, Phone No- 9145755040 | 42/M | Incisional Drainage Under La | Dr. Abhay Desai | 6428 | \$96 | 1315 | \$20 | 5113 | \$76 |
| 40 | Bhuku Jann Khule A/P Kolthare, Aaptadi, Tal- Dapoli, Dist - Ratnagiri Phone No- 9665701418 | 60/M | Hydrocele + Umbilical Hernia Repair | Dr. Mallappa Huggi Dr. Sachin Dongarwar | 14783 | \$221 | 2544 | \$38 | 12239 | \$183 |
| 41 | Ramesh Gangaram Pawar A/P Pophali Pawar Wadi, near Hanuman Mandir, Tal - Chiplun, Dist - Ratnagiri Phone No- 7767813022 | 45/M | Fistulectomy | Dr. Amit Mandhare Dr. Bindiya Salunke | 10679 | \$159 | 1256 | \$19 | 9423 | \$141 |
| 42 | Nandan Gopinath Chavana/P Sathare Banbar Tere Wadi Pali, Ratnagiri, Ratnagiri, Maharashtra Phone No- 9970246811 | 20/M | Open Appendicectomy | Dr. Pramod Bapat Dr. Sachin Katkade | 14305 | \$214 | 1509 | \$23 | 12796 | \$191 |
| 43 | Anant Mahadev Pedhambkar A/P. Nigundal, Tal- Guhagar, Dist - Ratnagiri Phone No- 8605240636 | 55/M | Hernioplasty | Dr. Amit Mandhare Dr. Sachin Katkade | 14433 | \$215 | 2649 | \$40 | 11784 | \$176 |
| 44 | Anant Mahadev Mestri A/P Makhjan, Sutar Wadi, Tal- Sangameshwar, Dist - Ratnagiri Phone No- 9404798538 | 72/M | Hernioplasty Under La | Dr. Pramod Bapat | 10741 | \$160 | 2189 | \$33 | 8552 | \$128 |

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|---|--|------|---------------------|---|--------|----------|--------|---------|--------|---------|
| 45 | Ramavati Ramesh Bhagat A/P Anjurle, Kelus, Tal- Kudal, Dist - Sindhadurg Phone No- 9404399987 | 55/F | W.Le Of Breast Lump | Dr. Abhay Desai Dr. Bindiya Salunke | 18135 | \$271 | 2010 | \$30 | 16125 | \$241 |
| Sub Total- 1 | | | | | 867446 | \$12,951 | 198992 | \$2,971 | 668454 | \$9,980 |
| 2. Urology Surgeries (28 Patients, 28 Surgeries) | | | | | | | | | | |
| 1 | Tarabai Harishchandra Kadam A/P Kaluste Madhali Wadi, Tal- Chiplun, Dist- Ratnagiri Phone No- 9823854501 | 69/F | Cystolithotomy | Dr. Pravin Manezes Dr. Mallappa Huggi Dr. Ketki Paranjape | 23211 | \$347 | 3211 | \$48 | 20000 | \$299 |
| 2 | Sushila Vasant Valopkar A/P Valope, Tambitkarwadi, Tal- Chiplun, Dist- Ratnagiri Phone No- 8888528788 | 62/F | Lt. Pcnl | Dr. Pravin Manezes Dr. Mallappa Huggi Dr. Vedant Dr. Peter Taysum Dr. Ketki Paranjape | 38557 | \$576 | 30000 | \$448 | 8557 | \$128 |
| 3 | Amay Santosh Upshete A/P Lanja Upshete Wadi, Tal- Lanja, Dist - Ratnagiri. Phone No- 8793146536 | 22/M | Pyloplasty | Dr. Vedant Dr. Peter Taysum Dr. Ketki Paranjape | 34925 | \$521 | 14925 | \$223 | 20000 | \$299 |
| 4 | Vasant Gopal Jadhav A/-P Muradpur Tal- Chiplun, Dist- Ratnagiri. Phone No- 9723047204 | 50/M | Hydrocele Repair | Dr. Sushma Kashyap Dr. Shlok Balupuri Dr. Amit Mandhare Dr. Asmita Karnalkar | 16532 | \$247 | 3159 | \$47 | 13373 | \$200 |
| 5 | Chandrakant Sakharam Shirke A/P- Khopad, Tal- Chiplun, Dist- Ratnagiri. | 72/M | Tur Prostate | Dr. Abhay Desai Dr. Vedant Dr. Gareth Kessell Dr. Ketki Paranjape | 24187 | \$361 | 24000 | \$358 | 187 | \$3 |
| 6 | Kashiram Bobau Ramane A/P- Palsbet, Ramanevadi, 1285, Near Govardhan Mandir, Tal- Gubagar, Dist- Ratnagiri. Phone No- 9604085921 | 72/M | Tur Prostate | Dr. Abhay Desai Dr. Vedant Dr. Gareth Kessell Dr. Ketki Paranjape | 25314 | \$378 | 5000 | \$75 | 20314 | \$303 |
| 7 | Bhikaji Harishchandra Rahate A/P- Dev Dhamapur, Tele Wadi, Tal- Sangameshwar, Dist- Ratnagiri. Phone No- 9689492338 | 53/M | Tur Prostate | Dr. Pravin Manezes Dr. Abhay Desai Dr. Peter Taysum Dr. Ketki Paranjape | 26115 | \$390 | 6115 | \$91 | 20000 | \$299 |
| 8 | Vinayak Vasant Dhawan A/P Kaviltali Chiplun, Chiplun, Ratnagiri-, Maharashtra Phone No- 9921686576 | 57/M | Tur Prostate | Dr. Pravin Manezes Dr. Mallappa Huggi, Dr. Gareth Kessell Dr. Ketki Paranjape | 22156 | \$331 | 2000 | \$30 | 20156 | \$301 |
| 9 | Chitra Chandrakant Kanagal A/P Kharavate Kond Wadi, Tal- Rajapur, Dist- Ratnagiri Phone No- 9767082617 | 43/F | Rt. Pcnl | Dr. Pravin Manezes Dr. Vedant | 30019 | \$448 | 10000 | \$149 | 20019 | \$299 |
| 10 | Parvati Mahadev Padye A/P Dhamapur Tambad Wadi, Tal- Sangameshwar, Dist- Ratnagiri. Phone No- 9145176041 | 52/F | Uethral Dilatation | Dr. Amit Mandhare Dr. Sachin Dongarwar | 6849 | \$102 | 1018 | \$15 | 5831 | \$87 |
| 11 | Satyabhama Shankar Salvi A/P Kasaba Kumbharwadi, Tal- Sangameshwar, Dist- Ratnagiri, Phone No- 9096756408 | 70/F | Rt. Pcnl | Dr. Pravin Manezes Dr. Peter Taysum Dr. Bindiya Salunke | 40534 | \$605 | 30000 | \$448 | 10534 | \$157 |
| 12 | Pramodini Prakash Kadam A/P Alore, Varchi Wadi, Tal- Chiplun, Dist- Ratnagiri Phone No- 9420524175 | 48/F | Lt. Urs | Dr. Pravin Manezes Dr. Vedant Dr. Peter Taysum Dr. Bindiya Salunke | 14992 | \$224 | 1906 | \$28 | 13086 | \$195 |
| 13 | Mahavir Jambu Magdum A/P Khed Patel App., Tal- Khed, Dist- Ratnagiri 9011763168 | 72/M | Lt. Urs | Dr. Pravin Manezes Dr. Vedant | 31000 | \$463 | 0 | \$0 | 31000 | \$463 |
| 14 | Mushtak Abbas Boat A/P Kalsur Koundhar, Tal- Guhagar, Dist- Ratnagiri. 8975156586 | 38/M | Lt. Nephrectomy | Dr. Pawan Dr. Vedant Dr. Nambiraj Konar | 40819 | \$609 | 20819 | \$311 | 20000 | \$299 |

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|--------------|---|------|--------------------------------------|--|--------|----------|--------|---------|--------|---------|
| 15 | Aravind Ashok Bane A/P 930 Wadekar Bangala, Fergusson Collage Road, Dhyaneswar Paduka Chowk,Pune 4, Phone No- 9823268445 | 36/M | Rt. Pcnl | Dr. Pravin Manezes Dr. Vedant Dr. Ketki Paranjape | 41201 | \$615 | 30000 | \$448 | 11201 | \$167 |
| 16 | Parvati Mahadev Padiye A/P Dhamapur, Tambad Wadi, Tal- Sangameshwar, Dist- Ratnagiri, Phone No- 9145176041 | 52/F | Urethral Dialation | Dr. Pravin Manezes Dr. Vedant Dr. Sachin Dongarwar | 6849 | \$102 | 1018 | \$15 | 5831 | \$87 |
| 17 | Vasant Gopal Jadhav A//P Muradpur Tal- Chiplun, Dist- Ratnagiri. Phone No- 9723047204 | 50/M | Rt. Pcnl | Dr. Pravin Manezes Dr. Vedant Dr. Mallappa Huggi, Dr. Peter Taysam Dr. Bindiya Salunke | 16532 | \$247 | 3159 | \$47 | 13373 | \$200 |
| 18 | Tolu Soma Ghadshi A/P- Mhabale, Ghadshi Wadi, Tal- Sangameshwar, Dist- Ratnagiri, Phone No-9860325156 | 75/M | Milins Prostatectomy | Dr. Pravin Manezes Dr. Pavan Dr. Peter Taysam Dr. Bindiya Salunke | 28014 | \$418 | 7950 | \$119 | 20064 | \$300 |
| 19 | Jaywant Harishchandra Badade A/P- KaundharKalsur, Guravwadi, Tal- Guhagar, Dist- Ratnagiri Phone No- 9623272423 | 45/M | Fistulectomy | Dr. Shlok Balupuri Dr. Sushma Kashyap Dr. Amit Mandhare Dr. Asmita Karnalkar | 14354 | \$214 | 2471 | \$37 | 11883 | \$177 |
| 20 | Anil Sambhaji Khapare A/P Ambatkhol, Tal- Chiplun, Dist- Ratnagiri, Maharashtra Phone No- 9881179647 | 40/M | Rt Pcnl | Dr. Vedant Dr. Mallappa Huggi Dr. Peter Taysam Dr. Bindiya Salunke | 44927 | \$671 | 34000 | \$508 | 10927 | \$163 |
| 21 | Shantaram Mahadev Khata A/P- Padave, Tal- Guhagar, Dist- Ratnagiri, Phone No- 9146658224 | 75/M | Rt Pcnl | Dr. Pravin Manezes Dr. Pavan Dr. Peter Taysam Dr. Bindiya Salunke | 42706 | \$638 | 30150 | \$450 | 12556 | \$187 |
| 22 | Yashwant Sonu Tambe A/P Kasaba Boudh Wadi, Tal- Sangameshwar, Dist- Ratnagiri Phone No- 9890563878 | 74/M | Turp | Dr. Pravin Manezes Dr. Pavan Dr. Peter Taysam Dr. Bindiya Salunke | 30703 | \$458 | 30703 | \$458 | 0 | \$0 |
| 23 | Rammanya Jankiram Shingade A/P Poladpur, Tal- Mahad, Dist- Raigad, Maharashtra Phone No- 9860383975 | 84/M | Rt. Pcnl | Dr. Pravin Manezes Dr. Pavan Dr. Peter Taysam Dr. Bindiya Salunke | 45826 | \$684 | 30000 | \$448 | 15826 | \$236 |
| 24 | Vilas Raghunath Jadhav A/P Mandaki, Tal- Chiplun, Dist- Ratnagiri | 46/M | Rt. Pcnl | Dr. Pravin Manezes Dr. Mallappa Huggi Dr. Pavan Dr. Peter Taysam Dr. Bindiya Salunke | 40995 | \$612 | 30000 | \$448 | 10995 | \$164 |
| 25 | Suviena Yashwant Madage A/P Mandki Madage Wadi, Tal- Chiplun, Dist- Ratnagiri | 50/F | Rt. Pcnl | Dr. Pravin Manezes Dr. Mallappa Huggi Dr. Pavan Dr. Peter Taysam Dr. Bindiya Salunke | 28602 | \$427 | 8602 | \$128 | 20000 | \$299 |
| 26 | Baban Sonu Bhurwad A/P Veldur Guhagar, Tal- Guhagar, Dist- Ratnagiri, Phone No- 9221204920 | 45/M | Lt. Dj Stenting | Dr. Pravin Manezes Dr. Mallappa Huggi Dr. Pavan Dr. Peter Taysam Dr. Bindiya Salunke | 14701 | \$219 | 1923 | \$29 | 12778 | \$191 |
| 27 | Gangaram Babu Sakpal A/P- Ombali, Pawar Wadi, Tal- Chiplun, Dist- Ratnagiri, Phone No- 9420151820 | 82/M | Cystoscopy + Urethral Dialation | Dr. Abhay Desai Dr. Sachin Dongarwar | 14201 | \$212 | 750 | \$11 | 13451 | \$201 |
| 28 | Ramesh Gangaram Pawar A/P Pophali, Pawar Wadi, Near Hanuman Mandir, Tal- Chiplun, Dist- Ratnagiri, Phone No- 7767813022 | 45/M | Fistulectomy + Urethral Dialation | Dr. Amit Mandhare Dr. Bindiya Salunke | 10679 | \$159 | 1256 | \$19 | 9423 | \$141 |
| Sub Total- 2 | | | | | 755500 | \$11,279 | 364135 | \$5,436 | 391365 | \$5,843 |

| 3. Plastic Surgeries (14 Patients, 14 Surgeries) | | | | | | | | | | |
|---|---|------|--|---|--------|---------|--------|---------|--------|---------|
| 1 | Sangita Sandip Kesarkar A/P Devrukh, Kesarkarwadi, Near Maratho School, Tal- Sangameshwar, Dist- Ratnagiri Phone No- 7721995168 | 32/F | Burn Contracture Release & Ssg | Dr. Shivprasad Date Dr. Uday Bhatt Dr. Bindiya Salunke | 40693 | \$608 | 20000 | \$299 | 20693 | \$309 |
| 2 | Satish Sambhaji Putil Shirali, Hatkangle, Kolhapur. Phone No-8378085772 | 18/M | Burn Contracture Release | Dr. Shivprasad Date Dr. Bindiya Salunke | 25424 | \$380 | 3400 | \$51 | 22024 | \$329 |
| 3 | Harshad Jitendra Mavalankar A/P Khamu Govandi Wadi, Tal & Dist - Ratnagiri, Phone No-8698176716 | 8/M | Ear Mass Excision | Dr. Shivprasad Date Dr. Gareth Kessell Dr. Bindiya Salunke | 15087 | \$225 | 3033 | \$45 | 12054 | \$180 |
| 4 | Akshada Santosh Chothe A/P Vita Ghar No 2259 Juna Vasumbe Road, Khanapur, Sangali, Maharashtra Phone No-8975537853 | 16/F | Rhinoplasty | Dr. Uday Bhatt Dr. Shivprasad Date | 27011 | \$403 | 7011 | \$105 | 20000 | \$299 |
| 5 | Supriya Vijay Shinde A/P Moravane Khalchiwadi, Tal- Chiplun, Dist- Ratnagiri Phone No- 8605175639 | 24/F | Burn Contracture Release & Ssg | Dr. Shivprasad Date Dr. Bindiya Salunke | 24511 | \$366 | 4511 | \$67 | 20000 | \$299 |
| 6 | Shiva Ramtol Sonkar A/P Bharna Naka, Samatanagar, Tal - Khed, Dist- Ratnagiri Phone No- 7798524399 | 10/M | Burn Contracture Release & Ssg | Dr. Uday Bhatt Dr. Kohali Dr. Sachin Dongarwar | 22162 | \$331 | 500 | \$7 | 21662 | \$323 |
| 7 | Sudhakar Gopal Joshi A/P- Sawarde, Tal- Chiplun, Dist- Ratnagiri. | 36/M | Burn Contract Release+ Skin Grafting | Dr. Uday Bhatt Dr. Ketki Paranjape | 22763 | \$340 | 2700 | \$40 | 20063 | \$300 |
| 8 | Sonita Dattaram Pangerkar A/P Shivrambere Sandam Wadi, Tal & Dist- Ratnagiri Phone No- 9764165031 | 49/F | Recession Of Dd Flap | Dr. Shivprasad Date Dr. Gareth Kessell Dr. Ketki Paranjape | 134895 | \$2,014 | 83720 | \$1,250 | 51175 | \$764 |
| 9 | Ratnakar Atmaram Mahadik A/P Kadavali Kasuchar Wadi, Tal- Chiplun, Dist- Ratnagiri, 9420784616 | 43/M | Rotation Flap For Bedsore | Dr. Shivprasad Date Dr. Uday Bhatt Dr. Ketki Paranjape | 26078 | \$389 | 6000 | \$90 | 20078 | \$300 |
| 10 | Supriya Chandramani Sawant A/P- Rampur, Tal- Chiplun, Dist- Ratnagiri. | 21/F | Burn Contracture Release & Ssg | Dr. Uday Bhatt Dr. Pavan Kohali Dr. Sajnay Deshpande Dr. Sachi Katkade | 25646 | \$383 | 6347 | \$95 | 19299 | \$288 |
| 11 | Kalyani Ravindra Mhetar A/P- Palu, Tal- Lanja, Dist- Ratnagiri, 9225767656 | 6/F | Cleft Palate Repair | Dr. Nishant Agni Dr. Bindiya Salunke | 2720 | \$41 | 0 | \$0 | 2720 | \$41 |
| 12 | Raj Govind Zore Archile Ahilya Nagar, Ratnagiri, Dist - Ratnagiri 9890456709 | 14/M | Cleft Lip Repair | Dr. Nishant Agni Dr. Bindiya Salunke | 15421 | \$230 | 3081 | \$46 | 12340 | \$184 |
| 13 | Vedant Vijay Bhalekar A/P- Tembe Bhalekarwadi, Tal- Lanja, Ratnagiri Phone No- 8149261595 | 10/M | Cleft Palate Repair | Dr. Nishant Agni Dr. Bindiya Salunke | 21377 | \$319 | 1377 | \$21 | 20000 | \$299 |
| 14 | Sahil Yashwant Agare A/P Kot, Agarewadi, Tal- Lanja, Ratnagiri, Phone No-9321752329 | 12/M | Cleft Palate Repair | Dr. Nishant Agni Dr. Bindiya Salunke | 18468 | \$276 | 3205 | \$48 | 15263 | \$228 |
| Sub Total- 3 | | | | | 422256 | \$6,304 | 144885 | \$2,163 | 277371 | \$4,141 |
| 4. Paediatric Surgeries (4 Patients, 4 Surgeries) | | | | | | | | | | |
| 1 | Vedant Suresh Jadhav A/P Tural Dhongad Wadi, Tal- Sangameshwar, Dist- Ratnagiri, Phone No-7507388317 | 10/M | Tonsillectomy | Dr. Sheetal Khedekar Dr. Nambiraj Konar | 16659 | \$249 | 0 | \$0 | 16659 | \$249 |
| 2 | Prem Pandharinath Dait A/P Bhambad, Divalwadi, Tal- Lanja, Dist- Ratnagiri. 8805394922 | 2/M | Circumcision | Dr. Amit Mandhare Dr. Sachin Dongarwar | 12958 | \$193 | 1147 | \$17 | 11811 | \$176 |

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|--|---|------|--|--|--------|---------|--------|---------|-------|-------|
| 3 | Arya Prakash Ghavali A/P Terre Burambi, Ghavali Wadi, Tal- Sangameshwar, Dist- Ratnagiri, Phone No- 7588857215 | 10/F | Hernioplasty | Dr. Shlok Balupuri Dr. Sushma Kashyap Dr. Asmita Karnalkar | 17965 | \$268 | 3766 | \$56 | 14199 | \$212 |
| 4 | Durvesh Shashikant Chande A/P Kasaba, Devpat Wadi, Tal-Sangameshwar, Dist- Ratnagiri Phone No- 8652228684 | 5/M | Tonge-Tie Release | Dr. Shivprasad Date Dr. Gareth Kennell Dr. Ketki Paranjape | 12294 | \$184 | 1365 | \$20 | 10929 | \$163 |
| Sub Total-4 | | | | | 59876 | \$894 | 6278 | \$94 | 53598 | \$800 |
| 5. Orthopedic Surgeries (28 Patients, 28 Surgeries) | | | | | | | | | | |
| 1 | Preeti Pramod Aklekar A/P 502 Marvel 18, Sbastri Nagar, Opp. Swami Samarth Mandir, Andheri West, Mumbai 400053, Phone No- 9920996060 | 64/F | Unicondylar Knee Replacement | Dr. Shankar Kashyap Dr. Sumeet Sonawane Dr. Sajnay Deshpande Dr. Sachin Katkade | 254696 | \$3,803 | 254045 | \$3,793 | 651 | \$10 |
| 2 | Savitri Vinayak Homkalas A/P Petmap Chiplun, Tal-Chiplun, Dist-Ratnagiri, Phone No- 7798125234 | 61/F | BI Unicondylar Knee Replacement | Dr. Shankar Kashyap Dr. Pavan Kohali Dr. Sajnay Deshpande Dr. Sachin Katkade | 219335 | \$3,275 | 200950 | \$3,000 | 18385 | \$274 |
| 3 | Savitri Sandip Hilam A/P Posare, Katkarwadi, Tal- Chiplun, Dist-Ratnagiri, Phone No-9404922640 | 11/F | Titanium Nailing | Dr. Arshaj Galikwad Dr. Sachin Katkade | 19519 | \$291 | 5000 | \$75 | 14519 | \$217 |
| 4 | Vijay Shrinivas Dharma A/P- Bhosari, Pune | 62/M | BI Tkr | Dr. Shankar Kashyap Dr. Sachin Katkade | 259252 | \$3,871 | 253670 | \$3,787 | 5582 | \$83 |
| 5 | Sumati Mohan Manjarekar A/P Varad, Sawarwad, Malvan Ghar No- 47, Tal- Malvan, Dist- Sindhudurg | 53/F | Root Block | Dr. Sunil Nadkarni Dr. Sumeet Sonawane Dr. Ketki Paranjape | 9963 | \$149 | 4000 | \$60 | 5963 | \$89 |
| 6 | Subhash Shridhar Musale A/P Oros, Tal- Kudal, Dist- Sindhudurg, Phone No- 9421269838 | 74/M | Kyphoplasty | Dr. Sunil Nadkarni Dr. Sumeet Sonawane Dr. Ketki Paranjape | 54950 | \$820 | 50795 | \$758 | 4155 | \$62 |
| 7 | Shamrao Gangaram Patil A/P Arondal, Kubharte, Bhavsargalli, Arndol, Jalgaon. | 72/M | Rt. Tkr | Dr. Shankar Kashyap Dr. Sachin Katkade | 294299 | \$4,394 | 253475 | \$3,784 | 40824 | \$609 |
| 8 | Manjiri Srikant Dandekar A/P Devrukh, Madhali Ali, Tal- Sangameshwar, Dist- Ratnagiri Phone No- 9881641500 | 55/F | BI Unicondylar Knee Replacement | Dr. Shankar Kashyap Dr. Sachin Katkade | 227538 | \$3,397 | 204345 | \$3,051 | 23193 | \$346 |
| 9 | Athiya Prashant Jadhav A/P- Agave, Baudha Wadi, Tal- Chiplun, Dist-Ratnagiri, Phone No- 9689681200 | 14/M | Osteotomy + Femur Platting | Dr. Pavan Kohali Dr. Sachin Katkade | 55913 | \$835 | 40800 | \$609 | 15113 | \$226 |
| 10 | Lalita Pasdurang Bapat A/P- Swagat, Near Central S T Bus Stand, Borumtali, Chiplun, Tal-Chiplun, Dist-Ratnagiri, Phone No-9420524938 | 62/F | BI Tkr | Dr. Shankar Kashyap Dr. Sumit Jadhav Dr. Sajnay Deshpande Dr. Sachin Katkade | 252645 | \$3,772 | 251790 | \$3,759 | 855 | \$13 |
| 11 | Shamrao Gangaram Patil A/P Arondal, Kubharte, Bhavsar Galli, Arndol, Jalgaon. | 72/M | Lt. Tkr | Dr. Shankar Kashyap Dr. Sumit Jadhav Dr. Sajnay Deshpande Dr. Sachin Katkade | 294299 | \$4,394 | 253475 | \$3,784 | 40824 | \$609 |
| 12 | Vandana Vinayak Chavan A/P Juve Chavan Wadi, Ratnagiri, Tal & Dist- Ratnagiri | 68/M | Lt. Thr | Dr. Shankar Kashyap Dr. Sumit Jadhav Dr. Sajnay Deshpande Dr. Sachin Katkade | 128827 | \$1,923 | 103210 | \$1,541 | 25617 | \$382 |
| 13 | Supeya Chandramani Sawant A/P- Rampur, Tal- Chiplun, Dist- Ratnagiri. | 37/F | Conretha Velax Soft Tissues Comsition, Burn Contracture Release | Dr. Shankar Kashyap Dr. Sumit Jadhav Dr. Sajnay Deshpande Dr. Sachin Katkade | 25646 | \$383 | 6347 | \$95 | 19299 | \$288 |

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|--|---|------|--|--|---------|----------|---------|----------|--------|---------|
| 14 | Sunil Dattaram Nikam A/P- Ovali Rajwadi, Tal- Chiplun, Dist- Ratnagiri, Phone No- 9422929507 | 25/M | Lt. Pfn | Dr. Pavan Kobali Dr. Sajnay Deshpande Dr. Sachin Katkade | 50095 | \$748 | 30095 | \$449 | 20000 | \$299 |
| 15 | Prasad Dattaram Kajave A/P Kalamhushi, Khacharwadi, Tal- Sangameshwar, Ratnagiri, Phone No- 8698024390 | 16/M | Crif With K Wire | Dr. Vijay Birajdar Dr. Nilesh Pawar Dr. Sajnay Deshpande Dr. Sachin Katkade | 11025 | \$165 | 1250 | \$19 | 9775 | \$146 |
| 16 | Niranjan Hari Tambe A 102 Swapnal App. No 2 Dervan Road Sawarde, Chiplun, Ratnagiri Phone No- 9420728474 | 44/M | Diagnostic Arthroscopy Sos Repair Acl Repair | Dr. Pavan Kobali Dr. Vijay Birajdar Dr. Sajnay Deshpande Dr. Sachin Katkade | 34439 | \$514 | 34439 | \$514 | 0 | \$0 |
| 17 | Anandi Ramchandra Karjavkar A/P Ayari Anjani, Tal- Khed, Dist- Ratnagiri | 60/F | Long Pfn | Dr. Vijay Birajdar Dr. Nilesh Pawar Dr. Sachin Katkade | 34622 | \$517 | 14622 | \$218 | 20000 | \$299 |
| 18 | Ganesh Tukaram Pawar A/P Mirjoli, Pawar Wadi, Gbar No.457, Tal- Chiplun, Dist- Ratnagiri Phone No- 7057247406 | 41/M | Implant Removal (Des Plate) | Dr. Vijay Birajdar Dr. Nilesh Pawar Dr. Sajnay Deshpande Dr. Sachin Katkade | 20318 | \$303 | 750 | \$11 | 19568 | \$292 |
| 19 | Sadhu Vishram Karande A/P Gholavali Kond, Karde Wadi, Tal- Sangameshwar, Dist- Ratnagiri | 52/M | Cervical Spine Instrumentation | Dr. Sunil Nadkarni Dr. Sumeet Sonawane Dr. Sumeet Jadhav Dr. Sachin Dongarwar | 101700 | \$1,518 | 69470 | \$1,037 | 32230 | \$481 |
| 20 | Sanjay Shankarrao Shinde A/P- Rawtale, Santosh Krupa, Tal- Chiplun, Dist- Ratnagiri, Phone No- 9075873326 | 49/M | Percutaneous Endoscopic Dissectomy | Dr. Sunil Nadkarni Dr. Sumeet Sonawane Dr. Sajnay Deshpande Dr. Bindiya Salunke | 53786 | \$803 | 53786 | \$803 | 0 | \$0 |
| 21 | Gaurav Sharad Shirsagar A/P Nihvasa Ahamadnagar, Phone No- 8881793113 | 10/M | Laminectomy | Dr. Sunil Nadkarni Dr. Sumeet Sonawane Dr. Sajnay Deshpande Dr. Bindiya Salunke | 68550 | \$1,023 | 30000 | \$448 | 38550 | \$576 |
| 22 | Prabhawati Arjun Jambhale At/P Janvule, Jambhalewadi, Tal- Gulsagar, Dist- Ratnagiri, Phone No- 9822546841 | 75/M | Pfn | Dr. Arshaj Galkwad Dr. Sumeet Jadhav Dr. Sajnay Deshpande Dr. Sachin Katkade | 38958 | \$582 | 18958 | \$283 | 20000 | \$299 |
| 23 | Dhanashree Manoj Gudekar A/P Chiplun, Markandi, Tal- Chiplun, Dist- Ratnagiri, Phone No-8971120287 | 41/F | Hybrid Fixation Of L4-L5 | Dr. Sunil Nadkarni Dr. Sumeet Sonawane Dr. Bupesh Dr. Sachin Katkade | 95110 | \$1,420 | 53350 | \$797 | 41760 | \$623 |
| 24 | Milind Prakash Devgharkar A/P- Ghimawane, Sutar Wadi, Tal- Dupoli, Dist - Ratnagiri, Phone No- 7447833191 | 36/M | Decompression + Instrumentation | Dr. Sunil Nadkarni Dr. Sumeet Sonawane Dr. Bupesh Dr. Sachin Katkade | 93591 | \$1,397 | 70900 | \$1,059 | 22691 | \$339 |
| 25 | Lalit Sibestar Kallu Banabira, Simdenga, Simdenga, Maharashtra Phone No- 9546317262 | 30/M | Amputation | Dr. Sumeet Sonawane Dr. Sumit Jadhav Dr. Sachin Katkade | 18050 | \$269 | 16050 | \$240 | 2000 | \$30 |
| 26 | Asha Prabhakar Shere A/P Ram Peth, Tal- Sangameshwar, Dist- Ratnagiri | 70/F | B/L Tkr | Dr. Pavan Kobali Dr. Arshaj Galkwad Dr. Sumit Jadhav Dr. Sachin Katkade | 318484 | \$4,755 | 257095 | \$3,838 | 61389 | \$917 |
| 27 | Yash Vilas Shelke A/P Kosumb, Ram Wadi, Tal- Sangameshwar, Dist- Ratnagiri Phone No- 9404764247 | 12/M | Root Block | Dr. Arshaj Galkwad Dr. Sumit Jadhav Dr. Sachin Katkade | 9608 | \$143 | 880 | \$13 | 8728 | \$130 |
| 28 | Badrunisa Asgar Surve A/P Majare Kashi, Tal- Chiplun, Dist - Ratnagiri 9503310116 | 55/F | Humerus Plating | Dr. Arshaj Galkwad Dr. Sumeet Sonawane Dr. Sachin Katkade | 34680 | \$518 | 14680 | \$219 | 20000 | \$299 |
| Sub Total- 5 | | | | | 3079898 | \$45,982 | 2548227 | \$38,045 | 531671 | \$7,938 |
| 6. Gynecology Surgeries (12 Patients, 12 Surgeries) | | | | | | | | | | |
| 1 | Megha Mahadev More A/P Kamathe Kadam Wadi, Tal- Chiplun, Dist- Ratnagiri, Phone No-7875301458 | 28/F | Hysterectomy | Dr. Manasi Gandhele Dr. Nambiraj Konar Dr. Sachin Dongarwar | 58825 | \$878 | 53955 | \$806 | 4870 | \$73 |

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|--|---|------|---------------------------------------|--|--------|---------|-------|---------|--------|---------|
| 2 | Varsha Sanjog Tatkare A/P Shiravali, Gudhe Fata, Tal- Chiplun, Dist- Ratnagiri | 22/F | Emergency Lacs | Dr. Manasi Gandhele Dr. Sachin Dongarwar | 17295 | \$258 | 4025 | \$60 | 13270 | \$198 |
| 3 | Vidya Vinayak Pawar A/P- Sawarde, Tal- Chiplun, Dist- Ratnagiri | 47/F | Vaginal Hysterectomy + Ap Repair | Dr. Deepak Kamble Dr. Pradip Rathod Dr. Ketki Paranjape | 20593 | \$307 | 593 | \$9 | 20000 | \$299 |
| 4 | Surekha Ramesh Sutar A/P Nadhavade, Tal - Sawantwadi, Dist- Sindhudurg | 49/F | Bartholin Cyst Removal | Dr. Pradip Rathod Dr. Asmita Karnalkar | 11182 | \$167 | 2354 | \$35 | 8828 | \$132 |
| 5 | Shailaja Sharadchandra Jadhav A/P Kosumbh Maylatwadi, Tal- Sangameshwar, Dist- Ratnagiri Phone No- 9764241074 | 60/F | Vaginal Hysterectomy + Ap Repair | Dr. Vishal Mandhe Dr. Sachin Dongarwar | 16735 | \$250 | 2730 | \$41 | 14005 | \$209 |
| 6 | Soranda Subhash Dike A/P Mandaki, Tal- Chiplun, Dist - Ratnagiri | 40/F | Total Abdominal Hysterectomy | Dr. Vishal Mandhe Dr. Abhay Desai Dr. Sachin Dongarwar | 24027 | \$359 | 4027 | \$60 | 20000 | \$299 |
| 7 | Sunita Vishram Padave A/P Vahal, Ghadshiwadi, Tal- Chiplun, Dist- Ratnagiri | 56/F | Vaginal Hysterectomy + Ap Repair | Dr. Kishor Bhosale Dr. Pradeep Rathod Dr. Sachin Dongarwar | 21862 | \$326 | 1862 | \$28 | 20000 | \$299 |
| 8 | Dipali Dattaram Chache A/P Chikhali, Rangav, Tal- Sangameshwar, Dist- Ratnagiri, Phone No- 9764937789 | 49/F | Total Abdominal Hysterectomy + Bso | Dr. Pradeep Rathod Dr. Deepak Kamble Dr. Sachin Dongarwar | 20993 | \$313 | 4455 | \$67 | 16538 | \$247 |
| 9 | Sunita Manohar Pakate A/P Nagave Sokai Nagar, Tal- Chiplun, Dist - Ratnagiri Phone No- 9422391267 | 70/F | Vaginal Hysterectomy + Ap Repair | Dr. Vishal Mandhe Dr. Sachin Dongarwar | 20454 | \$305 | 454 | \$7 | 20000 | \$299 |
| 10 | Ujwala Sitaram Ghume A/P Koundhar Ramane Wadi, Tal - Gubagar, Ratnagiri Phone No- 7875211341 | 45/F | Vaginal Hysterectomy | Dr. Deepak Kamble Dr. Sachin Katkade | 16455 | \$246 | 4218 | \$63 | 12237 | \$183 |
| 11 | Pravina Pravin Pedaneekar A/P Ratnagiri, Khedashi, Tal & Dist - Ratnagiri | 50/F | Vaginal Hysterectomy | Dr. Pradeep Rathod Dr. Sachin Katkade | 23060 | \$344 | 3060 | \$46 | 20000 | \$299 |
| 12 | Laxmi Laxman Rambade A/P Madhan, Tal-Rajapur, Dist-Ratnagiri | 65/F | Vaginal Hysterectomy | Dr. Pradeep Rathod Dr. Sachin Katkade | 21394 | \$319 | 1394 | \$21 | 20000 | \$299 |
| Sub Total- 6 | | | | | 272875 | \$4,074 | 83127 | \$1,241 | 189748 | \$2,833 |
| 7. Ophthalmic Surgeries (69 Patients, 69 Surgeries) | | | | | | | | | | |
| 1 | Jaywanti Yashwant Thakur A/P Halwal, Tal- Kankavli, Dist- Sindhudurg, Phone No- 9422346484 | 65/F | Lt. eye Sics +Iol | Dr. Bhaskar Gupta Dr. Vaibhav Thorat Sr. Kath Yates | 7894 | \$118 | 0 | \$0 | 7894 | \$118 |
| 2 | Janki Vasant Thakur A/P Halwal, Tal- Kankavli, Dist- Sindhudurg, Phone No- 8805433358 | 66/F | Lt. eye Sics +Iol | Dr. Bhaskar Gupta Dr. Vaibhav Thorat Sr. Sonali | 8164 | \$122 | 0 | \$0 | 8164 | \$122 |
| 3 | Sumitra Mohan Thakur A/P Halwal, Tal- Kankavli, Dist- Sindhudurg, Phone No- 8805433358 | 55/F | Lt. eye Phaco +Iol | Dr. Bhaskar Gupta Dr. Vaibhav Thorat Sr. Sonali | 7963 | \$119 | 2200 | \$33 | 5763 | \$86 |
| 4 | Kashibai Anant Rane A/P Halwal, Tal- Kankavli, Dist- Sindhudurg, Phone No- 8805433358 | 57/F | Rt. eye Sics +Iol | Dr. Nirmala Sarpotdar Sr. Shraddha | 8687 | \$130 | 0 | \$0 | 8687 | \$130 |
| 5 | Prabhavati Shivram Rane A/P Halwal, Tal- Kankavli, Dist- Sindhudurg, Phone No- 8805433358 | 68/F | Lt. eye Phaco +Iol | Dr. Bhaskar Gupta Sr. Shraddha | 11576 | \$173 | 0 | \$0 | 11576 | \$173 |
| 6 | Sneha Subhash Rane A/P Halwal, Tal- Kankavli, Dist- Sindhudurg, Phone No- 8805433358 | 48/F | Rt. eye Phaco +Iol | Dr. Bhaskar Gupta Sr. Shraddha | 18300 | \$273 | 10000 | \$149 | 8300 | \$124 |

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|----|--|------|---------------------|---|-------|-------|------|-------|-------|-------|
| 7 | Mangal Ramji Harekar A/P- Kamthe, Harekarwadi, Tal - Chiplun, Dist- Ratnagiri Phone No- 9850170949 | 45/F | Rt. Eye Dct | Dr. Nirmala Sarpotdar Dr. Vaibhav Thorat Sr. Sonali | 7561 | \$113 | 0 | \$0 | 7561 | \$113 |
| 8 | Dattaram Krishna Kirdavkar A/P Pimpali, Dukanpeth, Tal- Chiplun, Dist- Ratnagiri | 40/M | Rt. Eye Dct | Dr. Nirmala Sarpotdar Dr. Vaibhav Thorat Sr. Sonali | 6278 | \$94 | 0 | \$0 | 6278 | \$94 |
| 9 | Ramchandra Vitthoba Thakur A/P Halwal, Tal- Kankavli, Dist - Sindhudurg, Phone No- 8805433358 | 65/M | Rt. Eye Sics + Iol | Dr. Nirmala Sarpotdar Sr. Shradddha | 8620 | \$129 | 8620 | \$129 | 0 | \$0 |
| 10 | Laxmi Pandurang Khade A/P Ombali Chavan Wadi, Tal-Chiplun, Dist- Ratnagiri | 65/F | Lt. Eye Sics +Iol | Dr. Jahin Pavaskar Sr. Sonali | 7756 | \$116 | 0 | \$0 | 7756 | \$116 |
| 11 | Prakash Mahadev Dalvi A/P- Kokare, Chauthai Wadi, Tal- Chiplun, Dist - Ratnagiri Phone No- 9881092281 | 56/F | Lt. Eye Phaco +Iol | Dr. Bhaskar Gupta Sr. Shradddha | 14871 | \$222 | 6000 | \$90 | 8871 | \$132 |
| 12 | Nirmala Hari Joshi A/P- Pali, Bramhan Wadi, Tal & Dist- Ratnagiri, Phone No- 9763043444 | 82/F | Lt. Eye Phaco +Iol | Dr. Nirmala Sarpotdar Sr. Kath Yates | 13085 | \$195 | 6000 | \$90 | 7085 | \$106 |
| 13 | Rajaram Daulat Nachare A/P- Aravali, Nacharewadi, Tal - Sangameshwar, Dist - Ratnagiri Phone No- 8879062386 | 35/F | Rt. Eye Sics +Iol | Dr. Nirmala Sarpotdar Sr. Kath Yates | 7552 | \$113 | 0 | \$0 | 7552 | \$113 |
| 14 | Shantaram Rajaram Surve A/P Kudap, Madhali Wadi, Tal- Chiplun, Dist - Ratnagiri, Phone No- 9767411207 | 77/M | Rt. Eye Phaco+Iol | Dr. Vaibhav Thorat Sr. Kath Yates | 10591 | \$158 | 2200 | \$33 | 8391 | \$125 |
| 15 | Shantabai Baburao Chavan A/P 701 Khadiikar Galli, Visava Chowk, Gav Bag, Miraj, Dist - Sangali, Phone No- 9422420888 | 73/F | Lt. Eye Sics+Iol | Dr. Vaibhav Thorat Sr. Kath Yates | 8660 | \$129 | 0 | \$0 | 8660 | \$129 |
| 16 | Rukmini Sakharum Katkar A/P Kase, Pimpal Wadi, Tal- Sangameshwar, Dist - Ratnagiri | 70/F | Rt Eye Sics + Iol | Dr. Vaibhav Thorat Sr. Kath Yates | 7997 | \$119 | 0 | \$0 | 7997 | \$119 |
| 17 | Prabhavati Anant Ramane A/P- Nawale, Sangulwadi, Tal - Vaibhavwadi, Dist - Sindhudurg | 65/F | Lt Eye Phacco + Iol | Dr. Bhaskar Gupta Sr. Shradddha | 10562 | \$158 | 0 | \$0 | 10562 | \$158 |
| 18 | Kalpna Shivram Iswalkar A/P Nadhavade, Iswalkarwadi, Tal- Sawantwadi, Dist - Sindhudurg Phone No- 9552124865 | 65/F | Lt Eye Phacco + Iol | Dr. Bhaskar Gupta Sr. Shradddha | 11068 | \$165 | 0 | \$0 | 11068 | \$165 |
| 19 | Sonali Ganpat Bendre A/P Ambere Hanuman Wadi, Tal- Chiplun, Dist- Ratnagiri, Phone No- 9404760611 | 21/F | Ptosis | Dr. Nirmala Sarpotdar Sr. Sonali | 8415 | \$126 | 500 | \$7 | 7915 | \$118 |
| 20 | Tukaram Krushna Bandre A/P Nivali, Khambewadi, Tal- Chiplun, Dist - Ratnagiri, Phone No- 9604650166 | 60/M | Lt Dcr | Dr. Nirmala Sarpotdar Sr. Sonali | 6022 | \$90 | 0 | \$0 | 6022 | \$90 |
| 21 | Sitaram Janu Radeye A/P. Gowane, Tal- Devgad, Dist - Sindhudurg | 65/M | Rt. Eye Phaco + Iol | Dr. Bhaskar Gupta Sr. Shradddha | 10634 | \$159 | 0 | \$0 | 10634 | \$159 |
| 22 | Anant Shivram Shelar A/P Nandgav, Shelar Wadi, Tal- Chiplun, Dist - Ratnagiri, Phone No- 7448283784 | 62/M | Lt. Eye Phaco + Iol | Dr. Jahin Pavaskar Sr. Shradddha | 9239 | \$138 | 0 | \$0 | 9239 | \$138 |
| 23 | Sakharum Gangaram Dudwadkar A/P Buram Wadi, Tal- Devgad, Dist- Sindhudurg | 73/M | Rt. Eye Sics + Iol | Dr. Vaibhav Thorat Sr. Kath Yates | 6636 | \$99 | 0 | \$0 | 6636 | \$99 |

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|----|--|------|---------------------|---|-------|-------|------|------|-------|-------|
| 24 | Satyawati Namdev Pendekar A/P Nadawade, Tal- Devgad, Dist- Sindhadurg | 53/F | Rt. Eye Sics + Iol | Dr. Jahin Pavaskar Sr. Shradhdha | 7246 | \$108 | 0 | \$0 | 7246 | \$108 |
| 25 | Prakash Tukaram Munjarekar A/P Burambwadi, Tal- Vaibhavwadi, Dist- Sindhadurg | 58/M | Rt. Eye Sics + Iol | Dr. Bhaskar Gupta Sr. Kath Yates | 7282 | \$109 | 0 | \$0 | 7282 | \$109 |
| 26 | Anant Laxman Ramane A/P Nawale, Sangul Wadi, Tal- Vaibhavwadi, Dist- Sindhadurg | 75/M | Rt. Eye Sics + Iol | Dr. Jahin Pavaskar Sr. Shradhdha | 6625 | \$99 | 0 | \$0 | 6625 | \$99 |
| 27 | Vijaya Vijay Mangale A/P Devrukh, Near Jain Mandir, Tal- Sangameshwar, Dist - Ratnagiri | 60/F | Rt. Eye Phaco+Iol | Dr. Bhaskar Gupta Sr. Kath Yates | 9854 | \$147 | 0 | \$0 | 9854 | \$147 |
| 28 | Shyamsundar Atmaram Bashte A/P- Makhajan, Tal- Sangameshwar Dist - Ratnagiri | 82/M | Lt. Eye Phaco+Iol | Dr. Bhaskar Gupta Sr. Shradhdha | 10749 | \$160 | 2200 | \$33 | 8549 | \$128 |
| 29 | Gangadhar Rajaram Shirvadkar A/P Madban, Tal- Rajapur, Dist - Ratnagiri | 53/M | Lt. Eye Phaco+Iol | Dr. Bhaskar Gupta Sr. Shradhdha | 10918 | \$163 | 0 | \$0 | 10918 | \$163 |
| 30 | Mangala Damodar Jagashte A/P- Ozarkond, Ganesh Wadi, Tal- Sangameshwar, Dist - Ratnagiri | 65/F | Rt. Eye Sics + Iol | Dr. Vaibhav Thorat Sr. Shradhdha | 7180 | \$107 | 2200 | \$33 | 4980 | \$74 |
| 31 | Sharda Bhgvan Sakharkar A/P- Madban, Tal- Rajapur, Dist - Ratnagiri | 75/F | Rt. Eye Phaco+Iol | Dr. Bhaskar Gupta Sr. Shradhdha | 11250 | \$168 | 0 | \$0 | 11250 | \$168 |
| 32 | Vijaya Ankush Rambade A/P Bakale Rajapur, Tal- Rajapur, Dist - Ratnagiri | 60/F | Rt. Eye Sics + Iol | Dr. Sanhita Kose Sr. Sonali | 7555 | \$113 | 0 | \$0 | 7555 | \$113 |
| 33 | Anant Ramchandra Tharval A/P Kalmundi, Hanuman Wadi, Tal- Chiplun, Dist- Ratnagiri Phone No- 7875194644 | 75/M | Rt. Eye Sics + Iol | Dr. Vaibhav Thorat Sr. Sonali | 7146 | \$107 | 0 | \$0 | 7146 | \$107 |
| 34 | Ramchandra Daulat Mundekar A/P Malozare, Mundekar Wadi, Tal- Sangameshwar, Dist - Ratnagiri Phone No- 9975319923 | 66/M | Rt. Eye Sics + Iol | Dr. Jahin Pavaskar Sr. Sonali | 8445 | \$126 | 0 | \$0 | 8445 | \$126 |
| 35 | Rajashri Anant Tharval A/P Kalmundi Hanuman Wadi, Tal- Chiplun, Dist- Ratnagiri, Phone No- 7875194644 | 65/F | Rt. Eye Sics + Iol | Dr. Jahin Pavaskar Sr. Shradhdha | 7192 | \$107 | 0 | \$0 | 7192 | \$107 |
| 36 | Vasanti Ratna Madage A/P Mandki, Tal- Chiplun, Dist- Ratnagiri, | 58/F | Rt. Eye Phaco+Iol | Dr. Bhaskar Gupta Sr. Shradhdha | 10741 | \$160 | 2200 | \$33 | 8541 | \$128 |
| 37 | Bhagirathi Mahadev Bharde A/P- Nadavade, Brahmanwadi, Tal- Vaibhavwadi, Dist- Sindhadurg | 60/F | Rt. Eye Sics + Iol | Dr. Vaibhav Thorat Sr. Sonali | 6962 | \$104 | 0 | \$0 | 6962 | \$104 |
| 38 | Sitabai Kashiram Gurav A/P Nadavade, Gurav Wadi, Tal- Vaibhavwadi, Dist- Sindhadurg | 75/F | Rt. Eye Phaco+Iol | Dr. Bhaskar Gupta Sr. Sonali | 10878 | \$162 | 0 | \$0 | 10878 | \$162 |
| 39 | Sumati Shankar Madage A/P Mandaki Madagewadi, Chiplun, Ratnagiri | 51/F | Rt. Eye Phaco + Iol | Dr. Bhaskar Gupta Dr. Jahin Pavaskar Sr. Sonali | 11327 | \$169 | 2200 | \$33 | 9127 | \$136 |
| 40 | Pandurang Shankar Bharde A/P Nadhavade, Tal- Vaibhavwadi, Dist- Sindhadurg | 80/M | Rt. Eye Sics + Iol | Dr. Vaibhav Thorat Sr. Shradhdha | 7584 | \$113 | 0 | \$0 | 7584 | \$113 |
| 41 | Santosh Sakharan Rajeshirke A/P Kudap, Mokas Wadi, Tal- Chiplun, Dist- Ratnagiri, | 50/M | Lt. Eye Phaco + Iol | Dr. Bhaskar Gupta | 10750 | \$160 | 2200 | \$33 | 8550 | \$128 |

| | | | | | | | | | | |
|----|--|------|---------------------|---|-------|-------|-------|-------|-------|-------|
| 42 | Malati Harashchandra Gangan A/P Khandotri, Deul Wadi, Tal-Chiplun, Dist- Ratnagiri, Phone No- 9273180887 | 72/F | Lt. Eye Phaco + Iol | Dr. Vaibhav Thorat Sc. Shradha | 11832 | \$177 | 3500 | \$52 | 8332 | \$124 |
| 43 | Laxmi Ratan Chavan A/P Ubale, Deval Wadi, Tal-Chiplun, Dist - Ratnagiri | 70/F | Lt. Eye Sics + Iol | Dr. Jahin Pavaskar Br. Raj | 7097 | \$106 | 3000 | \$45 | 4097 | \$61 |
| 44 | Sulochana Takaram Manjarekar A/P Sakhar, Gotiware, Tal- Rajapur, Dist- Ratnagiri, Phone No- 8007305902 | 60/F | Rt. Eye Sics + Iol | Dr. Jahin Pavaskar Br. Sangam | 9055 | \$135 | 0 | \$0 | 9055 | \$135 |
| 45 | Atamaram Arjun Pawar A/P Khandotri, Boudh Wadi, Tal-Chiplun, Dist- Ratnagiri, Phone No- 9011679377 | 64/M | Lt. Eye Sics + Iol | Dr. Jahin Pavaskar Br. Raj | 7521 | \$112 | 0 | \$0 | 7521 | \$112 |
| 46 | Daulat Raju Gomane A/P Patepilavali, Khol Wadi, Tal-Chiplun, Dist - Ratnagiri, Phone No- 9225795036 | 62/M | Lt. Eye Sics + Iol | Dr. Vaibhav Thorat Sc. Shradha | 8228 | \$123 | 0 | \$0 | 8228 | \$123 |
| 47 | Arjun Bhiva Kherade A/P/ Sawarde, Kherade Wadi, Tal-Chiplun, Dist - Ratnagiri, Phone No- 9892908082 | 65/M | Rt. Eye Sics + Iol | Dr. Jahin Pavaskar Dr. Vaibhav Thorat Br. Raj | 10638 | \$159 | 0 | \$0 | 10638 | \$159 |
| 48 | Nirmala Dattaram Pawar A/P Shriyalay, Flat No 301, Near Gurukul Chiplun, Tal-Chiplun, Dist - Ratnagiri, Phone No- 9049011194 | 68/F | Lt. Eye Phaco + Iol | Dr. Vaibhav Thorat Sc. Shradha | 9806 | \$146 | 2200 | \$33 | 7606 | \$114 |
| 49 | Jaywanti Laxman Basvankar A/P Shirgaon, Dhangade Wadi, Tal-Chiplun, Dist - Ratnagiri, Phone No- 8975857438 | 55/F | Lt. Eye Sics + Iol | Dr. Vaibhav Thorat Sc. Shradha | 7395 | \$110 | 0 | \$0 | 7395 | \$110 |
| 50 | Dadasabeb Thanu Kambale A/P Sawarde Bhuwadwadi, Tal-Chiplun, Dist - Ratnagiri, Phone No- 8390366789 | 61/M | Lt. Eye Sics + Iol | Dr. Vaibhav Thorat Sc. Shradha | 7537 | \$113 | 0 | \$0 | 7537 | \$113 |
| 51 | Mahadev Krushna Raut A/P- Tural, Teli Wadi, Tal- Sangameshwar, Dist - Ratnagiri, Phone No- 02355-657342 | 65/M | Lt. Eye Phaco + Iol | Dr. Vaibhav Thorat Dr. Jahin Pavaskar Sc. Shradha | 15635 | \$233 | 10000 | \$149 | 5635 | \$84 |
| 52 | Takaram Babi Thul A/P Satkondi, Post- Saitavade, Tal & Dist- Ratnagiri, Phone No- 7507157488 | 70/M | Lt. Eye Sics + Iol | Dr. Vaibhav Thorat Sc. Shradha | 6616 | \$99 | 0 | \$0 | 6616 | \$99 |
| 53 | Kishor Rajaram Pangerkar A/P Ansure Pagerewadi, Tal- Rajapur, Dist- Ratnagiri, Phone No- 9225719030 | 55/M | Rt. Eye Sics + Iol | Dr. Vaibhav Thorat Sc. Shradha | 6705 | \$100 | 0 | \$0 | 6705 | \$100 |
| 54 | Rahul Govind Sawant A/P Sawarde, Bajar Peth, Tal- Chiplun, Dist- Ratnagiri, Phone No- 7776997308 | 60/M | Lt. Eye Sics + Iol | Dr. Jahin Pavaskar Sc. Sonali | 6371 | \$95 | 0 | \$0 | 6371 | \$95 |
| 55 | Vasanti Govind Gimavkar (Sutar) A/P Gimavi, Sutarwadi, Tal- Guhagar, Dist- Ratnagiri, Phone No- 9921186075 | 55/F | Lt. Eye Sics + Iol | Dr. Vaibhav Thorat Sc. Shradha | 6560 | \$98 | 0 | \$0 | 6560 | \$98 |
| 56 | Yashodhara Shripat Kambale A/P Nandgaon, Boudh Wadi, Tal-Chiplun, Dist - Ratnagiri, | 65/F | Lt. Eye Phaco + Iol | Dr. Jahin Pavaskar Dr. Vaibhav Thorat Sc. Shradha | 9972 | \$149 | 0 | \$0 | 9972 | \$149 |
| 57 | Devakibai Bhaguram Kambale A/P Nandgaon, Boudh Wadi, Tal-Chiplun, Dist - Ratnagiri, | 65/F | Rt. Eye Sics + Iol | Dr. Vaibhav Thorat Sc. Shradha | 6398 | \$96 | 0 | \$0 | 6398 | \$96 |
| 58 | Bhagyshri Bhagwan Ganjekar A/P Kadwad Sutarwadi, Tal-Chiplun, Dist - Ratnagiri, Phone No- 9823416384 | 45/F | Rt. Eye Sics + Iol | Dr. Jahin Pavaskar Sc. Shradha | 6262 | \$93 | 0 | \$0 | 6262 | \$93 |

| | | | | | | | | | | |
|---------------------------------------|--|------|---------------------|----------------------------------|---------|----------|---------|----------|---------|----------|
| 59 | Laxmi Daulat Phepade A/P Kushiwade, Shigwan Wadi, Tal-Chiplun, Dist - Ratnagiri, Phone No- 9657898720 | 65/F | Lt. Eye Sics +Iol | Dr. Jahin Pavaskar Sr. Sonali | 5869 | \$88 | 3500 | \$52 | 2369 | \$35 |
| 60 | Basavraj Damsodar Kinekar A/P Bklwh Campus, Deervan, Tal- Chiplun, Dist - Ratnagiri, Phone No- 9850808135 | 57/M | Lt. Eye Phaco + Iol | Dr. Vaibhav Thorat Sr. Sonali | 13466 | \$201 | 6000 | \$90 | 7466 | \$111 |
| 61 | Dattaram Pilaji Dalvi A/P Kokare, Chausopi Wadi, Tal-Chiplun, Dist - Ratnagiri, | 69/M | Lt. Eye Phaco + Iol | Dr. Vaibhav Thorat Sr. Sonali | 11348 | \$169 | 3000 | \$45 | 8348 | \$125 |
| 62 | Vishal Mahendra Jadhav At/P. Sonavade, Tal- Sangameshwar, Dist - Ratnagiri Phone No- 9403110769 | 31/M | Pterygium | Dr. Vaibhav Thorat Sr. Sonali | 4788 | \$71 | 1400 | \$21 | 3388 | \$51 |
| 63 | Harischandra Dhaktoba Repal At/P. Nivali Kostewadi, Tal-Chiplun, Dist - Ratnagiri, Phone No- 9975818083 | 73/M | Rt. Eye Sics +Iol | Dr. Jahin Pavaskar Sr. Sonali | 12000 | \$179 | 12000 | \$179 | 0 | \$0 |
| 64 | Manki Mahadev Kangane A/P Karjave, Bhoi Wadi, Tal- Sangameshwar, Dist - Ratnagiri Phone No- 9763380061 | 69/F | Rt. Eye Sics +Iol | Dr. Jahin Pavaskar Sr. Sonali | 6745 | \$101 | 0 | \$0 | 6745 | \$101 |
| 65 | Dattaram Manohar Dalvi At/P. Kokare Chausopi, Tal- Chiplun, Dist - Ratnagiri, Phone No- 9221975354 | 55/M | Rt. Eye Sics +Iol | Dr. Sanhita Kose Sr. Sonali | 6846 | \$102 | 3000 | \$45 | 3846 | \$57 |
| 66 | Sharad Sadkaji Gamare At/P. Kalambat, Baudhdhawadi, Tal-Chiplun, Dist - Ratnagiri, Phone No- 8308940147 | 50/M | Lt. Eye Sics +Iol | Dr. Jahin Pavaskar Sr. Raj | 5867 | \$88 | 0 | \$0 | 5867 | \$88 |
| 67 | Solochana Shantaram Gamare A/P Kalambat, Boudh Wadi, Tal- Chiplun, Dist - Ratnagiri, | 65/F | Lt. Eye Sics +Iol | Dr. Jahin Pavaskar Sr. Raj | 6373 | \$95 | 0 | \$0 | 6373 | \$95 |
| 68 | Ranjana Ramesh Jadhav A/P Khershet, Jadhav Wadi, Tal- Chiplun, Dist - Ratnagiri, Phone No- 9075276260 | 60/F | Lt. Eye Sics +Iol | Dr. Jahin Pavaskar Sr. Raj | 6048 | \$90 | 0 | \$0 | 6048 | \$90 |
| 69 | Sunanda Ganpat Ambede A/P Veer, Mogarewadi, Tal- Chiplun, Dist - Ratnagiri, Phone No- 8692891194 | 65/F | Lt. Eye Sics +Iol | Dr. Sanhita Kose Sr. Raj | 5944 | \$89 | 0 | \$0 | 5944 | \$89 |
| Sub Total- 7 | | | | | 606737 | \$9,058 | 94120 | \$1,405 | 512617 | \$7,653 |
| Grand Total (Sub Total-1+2+3+4+5+6+7) | | | | | 6064588 | \$90,543 | 3439764 | \$51,355 | 2624824 | \$39,188 |



**B.K.L.Walawalkar Hospital
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Straight from the Heart.....

Remarks by British Medicos: 2017



Sanjay Deshpande
Anesthetics/Intensive Care

“ We were delighted to be back with my UK team for the 12th year camp.

The love, greetings & festivity we had during the camp was overwhelming.

We learn a lot from these visits. The staff are friendly, always willing to help & on the top smiling all the time.

Every happy event has to have an ending. I wish my regards to Shree Kaka Maharaj for his continuous inspiration and morale support. I thank all the members for looking after us. What is important that the patients visiting the hospital hopefully get better & gives us immense satisfaction.”



Kathryn Herneman
Anesthetics

“ What a fantastic experience!. We have been treated like royally! And I am very privileged to have been part of the experience.

Amongst other things I have noticed the kindness and respect of the local people, who couldn't do enough for us. For that I am very grateful to all.

The hospital teams are making great advances in the face of limited resources and should be congratulated for their positive attitude and extremely hard work. I would love to see more collaboration across the two countries; perhaps some of the Walawalkar doctors could visit us in the UK? I look forward to continuing the exchange of knowledge and social interaction over email and whatsapp!

Many thanks for a fabulous experience!!!!”



Gareth Kessell

Anesthetics

“ A wonderful warm welcome in Mumbai from Nandan and Shashi, Thank you!

My expressions –

- A fabulous hospital complex; quite unexpected in such a rural setting.
- Very knowledgeable anesthetics, particularly Bindiya who has all the attributes to be outstanding UK consultants.
- The theatre team, OT's and staff work very long hours and are very keen, helpful and friendly.
- Although the anaesthetic monitoring and Machines were much better than I expected, being able to monitor volatile graph would be of great benefit to patients and also staff as it would be possible to reduce anaesthetic gas pollution in theatres

The accommodation, food and service was first class

Thank you!”



Laura Jones

Anesthetics

“ I have had a wonderful time at the hospital. Firstly, I have never experienced such a wonderful hospitality & felt so welcome somewhere new.

I was lucky enough to spend time in the community going to the nutritional camp for new mothers. I found this really interesting & was very impressed with the difference this has made to the birth weight of children. I then got to go to a village and saw the educational sessions for young children, again this was fantastic! I was honored to meet the lady in charge of the village & see what a fantastic job she is doing.

The baby shower again was fantastic. I am extremely impressed with everything that is being done in the community.

I also got involved in teaching medical students, nursing students & ICCU Staff. I was impressed with their knowledge & level of English. I hope that if I come back in future years, I will be able to design & run a teaching programme focusing on the students needs.

Thank you for a fantastic opportunity.”



Peter Taysum

Anesthetics



This is my second year as year guest. My experience has been excellent. A fantastic welcome from all of the people we all met. Thank you for the wonderful food, the lovely accommodation and for this amazing experience.

The people in theatre have worked very long hard hours to ensure we treated as many patients as possible.

For me, I think the 'highlights' this year were the "India Day" Celebration held at Sports ground and the school presentation of awards & celebration. To see the children being so enthusiastic with wonderful dress with presentations will stay with me forever. I feel very lucky to have experienced those; I think hence are some future "film stars" amongst them. I know that the future is bright because of the opportunities they are being given.

A big thank you from my heart. Please keep up this amazing work. With Love!"



Shlokarth Balupuri

Gen. Surgery



From arrival at airport, it was clear that I would be overwhelmed by the selfless hospitality of Nandan, Shashi and all of others. I am impressed with the greatness of India

In hospital, the welcome & guidance we received cannot be compared to any other hospital I had visited. The spiritual attitude to work and sacrifices of doctors and nurses was an inspiration to me.

Visit to temple and medical school opened my mind to the dreams that I saw in the young students of Medical/Nursing students. Temple complex and statue of Shivaji Maharaj and the 'Veena' brought me home.

I am sure that I have put weight on due to the exquisite food that varied every day. Many thanks to the cooks & team.

Overall, selfless commitment to faith was evident in the environment. This faith enveloped us in love that I will cherish forever.

Personally, it is said that you can take Indian out of India, but you can't take India out of Indian. Now I know it is true!! "



Eleanor Freeman

Gen. Surgery



This has been my 11th visit to the hospital and again I have been so impressed with the progress since my last visit.

The staff continues to impress me with their skills & knowledge. They love their work and this is very easy to see as smile, I am greeted with each day conveying that.

The expansion by the hospital and surrounding areas can only be a positive move, bringing prosperity to the villages.

The vision of the hospital remains very strong and I wish for its continued success.

I shall work forward to our next visit with the knowledge that further progress will be made to help those less fortunate than ourselves!"



Lance Cope

Interventional Radiology



During my visits for the post decade I have witnessed the incredible expansion, improvement and development of health care services at the trust and seen the benefits for the local population.

The vision and leadership of the Kaka Maharaj and an inspiration and the dedication, commitment of all the staff is as impressive as my first visit!"



Kath Yates
Ophthalmology

“ My 5th year of another wonderful week working and sharing experiences with colleagues of Walawalkar Hospital including sharing my skills and knowledge with students from other universities who showed keenness to learn and listen.

Also sharing my experience with a great team from UK gives me satisfaction of a job done well and the students gain self esteem and job satisfaction of doing good.

The hospital is expanding further, keep up the good work. I hope to see all in the next year. Its been a privileged to be involved once again!”



Natasha Verrail-Bhasin
Nurse

“ This is my first year on the camp, my first visit to Dervan and my first visit to India. I have been amazed by this beautiful country and by the hospitality of the people who are here. During this week, I have been blessed to attend many activities outside the hospital. This opened my eyes to the passion which exists in Dervan to promote healthy lifestyles. I have witnessed surgery at the fantastic hospital facility which I would otherwise not have witnessed. The smiles on the patient's faces speak volumes. I was lucky to visit the school and was bowled over by the enthusiasm and thirst for knowledge coming from the children of all ages.

It was my privilege to be a part of the venous cultural ceremonies by far the most inspirational aspect of my visit. It is the commitment to the faith which anvils these wonderful people to want to give to those less fortunate. I will forever be grateful for this lesson in life.

A huge thank you to everyone who has been there to help and advise me this week and a special thanks to Kaka Maharaj and Mr. Walawalkar for the vision and efforts to make this wonderful dream a reality.

From the bottom of my heart.. Thank you! ”



John Wall
Biomedical Engineering

“ Once again I would like to express my deepest gratitude to all of the amazing people in Dervan who have welcomed me as a member of the B.K.L.Walawalkar Hospital family.

It has been a brilliant week and the staff at the hospital has been implementing my suggestions for equipment maintenance and fault reporting that are making the hospital a safer place for the staff and the patients.

Thank you for the amazing experience.

Lots of love!”



Charlotte
Medical Student

“ I have had the most incredible time here. It has been an invaluable experience for me, especially only being a medical student. I have learnt a huge amount – the UK team and especially the hospital staff has been so willing to share their knowledge with me.

I had not expected the overwhelming hospitality shown by everyone I have met! I have particularly enjoyed the visits into the community to witness the 'REACH' programme and all the work put into educating and empowering the local women.

It was brilliant to meet the medical students studying here and to find we had so much in common!

Walawalkar hospital would be a brilliant place to come for my elective. I really hope this will be possible. There is so much to learn here!

Thank you to all! ”



Aaron Wall

Student



For my first trip, I found all the staff to be very polite and I could not have as had for more!

The organization and respect in the schools was amazing. Not only did the people here tell us how much we learn from them but I also look away a lot of new things I learnt and for that I am very thankful.

I hope to return in future to see many more fantastic improvements."

improvements."

Remarks by

Dr. Abhay Desai

Gen. Surgeon, B.K.L. Walawalkar Hospital

Dear friends & colleagues,

This is my 10th year at Walawalkar Hospital and also my 10th year participating in UK Camp.

This annual event is awaited with excitement and anticipation by the staff and patients alike in this locality.

This is also an occasion to exchange each other's views, experience, different work culture and learn from it. As I go back years, I remember De. Kamil Wynn, Surgeon with great skills. The present generation of younger surgeons at Walawalkar Hospital would have loved to watch him operate.

Then Dr. Attwood, Dr. Bhattacharya and now Dr. Shlok followed and have been very helpful sharing their knowledge & experience and appreciate the work being done here.

Urology is my hobby and I take it seriously. With Dr. Pravin Menezes at my side I have advanced it further and now is among our closer circle of friends.

And off course, there is rest of the team which easily mixes with the staff here and equally contributes to the success of UK camp.

Thanks to the B.K.L.W. Hospital doctors, nurses and other ancillary staff who as always worked overtime, cheerfully giving their best and without a single complaint. And all credit to UK team leader Dr. Deshpande and B.K.L.W. Hospital team leader Dr. Suvarna Patil for their efforts in success of this venture.

Thank to all again.

Its not how you express yourself that matters, sometimes its smallest of gesture that makes a huge difference!

Patients Feedback

Savitri Vinayak Homkalas, Pethmap, Chiplun

In 'Surgery week 2017, I was successfully operated for Bilateral Total Knee replacement by a team of orthopedic surgeons headed by Dr. Shankar Kashyap and Dr. Kohali on 23rd January 2017. Before that Dr. Kohali and Dr. Nilesh Pawar boosted my confidence which psychologically prepared my mind for operation.

After operation, proper exercise taught by physiotherapists Dr. Khanapurkar and Dr. Meghana which helped me a lot.

The eight days stay in hospital was full of hope and comfort. All doctors, nurses and assistants guided me properly and cooperated very well. The hospital is really boon for the poor patients in this rural region.

The guidance and cooperation by you and your staff is highly appreciated.

Thank you.

Mr. Shamrao Patil, Jalgaon

The purpose of coming to this hospital which is far away from my place Jalgaon is one patient (driver) who was previously operated successfully in this hospital. He told us that this is a very good hospital and insisted to approach here.

Accordingly we came here for check up and Dr. Kohali told us about the surgery camp and British doctor's team. I am suffering from Left Ventricular dysfunction. So many doctors had refused to operate on me. But in spite of poor cardiac function, I got operated here successfully. This happened only because of Dr. Sanjay Deshpande who took the challenge and made it possible and now I am walking on my own foot.

I am very grateful to you.

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE

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Year wise list of foreign students visited B.K.L. Walawalkar Rural Medical College

Index

| Name of the student | Duration | No of days | university | Mentor from UK |
|-----------------------------|--------------------------------|------------|--|----------------------|
| YEAR 2022 | | | | |
| Dr. Tegan Devlin | 27/06/2022 to 24/07/2022 | 24 days | Newcastle University | Dr. Sanjay Deshpande |
| YEAR 2020 | | | | |
| Dr. Madeleine Isabel Storey | 25/01/2020 to 02/02/2020 | 9 days | University of Edinburgh | |
| YEAR 2019 | | | | |
| BECK JOSHUA | 08/06/2019 to 08/08/2019 | 60 days | Newcastle | Dr. Sanjay Deshpande |
| ABIGALI HARPER | 06/09/2019 to 30/11/2019 | 60 days | Royal College of Anaesthesia, UK | Dr. Sanjay Deshpande |
| ANNA WILKINSAN | 01/09/2019 to 30/11/2019 | 60 days | Royal College of Anaesthesia, UK | Dr. Sanjay Deshpande |
| RYAN Pereira | 28 & 29 /01/2019 & 1-2/02/2019 | 3 days | The Royal College of Surgeons of Edinburgh, UK | Dr. Sanjay Deshpande |
| YEAR 2018 | | | | |
| Cook Georgina | 11/6/2018 to 10/8/2018 | 20 | Newcastle university | Dr. Sanjay Deshpande |
| Homes Anna | 11/6/2018 to 10/8/2018 | 20 | Newcastle upon Tyne, UK | Dr. Sanjay Deshpande |
| Year 2017 | | | | |
| Aaron Wall | 21-28/01/2017 | 8 Days | South Tyneside NHS Trust | Dr. Sanjay Deshpande |
| Charlotte Kessell | 21-28/01/2017 | 8 Days | James Cook University Hosptial | Dr. Sanjay Deshpande |
| Laura Jones | 21-28/01/2017 | 8 Days | South Tyneside NHS FT | Dr. Sanjay Deshpande |
| Rhea COLVIN | 24/04/2017 till 20/05/2017 | 27 Days | Université Libre de Bruxelles, Belgium | Dr. Sanjay Deshpande |
| Nityanand Rewalkar | 13/08/2017 till 23/08 2017 | 10 days | Ottawa, Canada | Dr. Sanjay Deshpande |


 DEAN

| | | | | |
|-----------------|----------------------------|---------|----------------------|----------------------|
| Arjun Chidvawar | 13/08/2017 till 23/08 2017 | 10 days | Denville, New Jersey | Dr. Sanjay Deshpande |
| Ravi Bhindi | 13/08/2017 till 23/08 2017 | 10 days | Ottawa, Canada | Dr. Sanjay Deshpande |
| Jackson Xiao | 13/08/2017 till 23/08 2017 | 10 days | Ottawa, Canada | Dr. Sanjay Deshpande |



DEAN

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



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Summary of foreign students visited B.K.L.Walawalkar Rural medical college in 2022

Following students are posted at our college for their elective postings.

| Name of the student | Duration | No of days | university | Mentor from UK |
|---------------------|--------------------------|------------|----------------------|----------------------|
| Dr. Tegan Devlin | 27/06/2022 to 24/07/2022 | 24 days | Newcastle University | Dr. Sanjay Deshpande |



DEAN

Dr. Tegan, Certificate of Arrival



Certificate of Arrival

Please confirm the date you started your placement

Instructions & Information

- Complete this certificate on the first day of your placement
- Upload the certificate to Terra Dotta (<http://international.ncl.ac.uk>) on your first day
- Your placement start date will influence the final grant payment if you receive Erasmus funding
- Your placement start date is the first date you were required to attend which can include orientation
- Erasmus grant information is online: www.ncl.ac.uk/mobility/experience-world/outgoing_funding

Your Personal Information

What is your full name?

Tegan Denton

Your Placement Details

What is the name of your host university/employer?

B.K.L. Walawalkar Hospital and Medical College

Did you start this placement virtually? If yes, what was your virtual start date?

No

What date did you start your placement physically?

27/06/2022

What date do you expect to finish your placement?

For Your Host (please complete to confirm the above information)

Name of representative

DR. SUVARNA N. PAFIL.

Job Title

Medical Director

Signature

Date of Signature

27/06/2022

Stamp



DEAN

Dr. Tegan, Learning Agreement



LEARNING AGREEMENT

Student

| | | | |
|------------------|---------------|---------------|--------------------------|
| Last name(s) | Devlin | First name(s) | Tegan |
| Date of birth | 04/01/2000 | Student ID | 180022085 |
| Degree Programme | MBS A100 | Academic year | Stage 4 |
| Phone | +447734715828 | E-mail | t.devlin@newcastle.ac.uk |

Sending Institution

| | | | |
|--------------|--------------------------------|------------------------|---|
| Name | Newcastle University | Faculty | FMS |
| Address | Newcastle upon Tyne NE1 7RU | Department | MBS |
| Contact name | Elena Stafford | Contact e-mail / phone | Medical.electives@newcastle.ac.uk 0191 208 8091 |

Receiving Institution

| | | | |
|--------------|---|-------------------------------|---|
| Name | Walawalkar Hospital | Department | TBD on arrival |
| Address | B.K.L. Walawalkar Rural Medical College & Hospital, Taluka-Chiplun, Ratnagiri, Maharashtra | Country | India |
| Contact name | Dr. Suvarna Patil | Contact person e-mail / phone | dr.suvarnapatil@gmail.com 09921251695 |

BEFORE MOBILITY – PLACEMENT AT RECEIVING ORGANIZATION

Planned period of the mobility:

Start Date [27/06/2022] End Date [24/07/2022]

This Learning Agreement includes all the educational components to be carried out by the student at the receiving institution.

Table A



DEAN



The Medical Elective component of the curriculum maps to the Student Selected Choice strand and provides the ultimate opportunity to exercise student choice. The learning outcomes which all students should be able to meet as a consequence of their Elective will not be dependent on the specific content

All Elective experiences will enable the following learning outcomes to be met:

Professional Behaviour

Outcomes for Personal Development:

| Learning Outcome |
|---|
| Conduct oneself as a reflective and accountable practitioner |
| Reflect on the Elective Experience |
| Manage one's own learning |
| Demonstrate an ability to achieve and reflect on self-defined Elective outcomes |
| Recognise key personal motivating factors and their importance in sustaining a high level of commitment |
| Reflect on motivation for choice of Elective |
| Recognise your role within a host institution/host country |
| Reflect on what you can bring to the host institution and country |

COMMITMENT OF THE THREE PARTIES

By signing this document, student, sending institution and receiving institution confirm that they approve proposed Learning Agreement and that they will comply with all the arrangements agreed by all parties.

Receiving institution confirms that the components listed in Table A are in line with its programme catalogue and should be available to the student.

Student and receiving institution will communicate to the sending institution any problems or changes regarding the proposed mobility programme, responsible persons and/or study period.

Student: Tegan Devlin

Student's signature: *Tegan Devlin*

[Signature]
DEAN

Date: 18.05.2022

Sending Institution

Signature:
Date: 16.05.2022

Receiving Institution
Programme Coordinator's Signature: 
Date: 21.5.2022


DEAN

Dr. Tegan, Certificate of Departure



Certificate of Departure

Please confirm the date you finished your placement

Instructions & Information

- Complete this certificate on the last day of your placement
- Upload the certificate to Terra Dotta (<http://international.ncl.ac.uk>) on your last day
- Your placement end date will influence the final grant payment if you receive Erasmus funding
- Your placement end date is the last day you attended your placement and not your date of return travel
- Erasmus grant information is online: www.ncl.ac.uk/mobility/experience-world/outgoing_funding

Your Personal Information

What is your full name?

Tegan Devlin

Your Placement Details

What is the name of your host university/employer?

B.K.L. Walawalkar Hospital
and Medical College

Did you finish this placement virtually? If yes, what was your virtual end date?

-

What date did you end your placement physically?

8/2/22

For Your Host (please complete to confirm the above information)

Name of representative

Dr. Juvana Patel

Job Title

Medical Director

Signature

Juvana Patel

Date of Signature

8/2/22

Stamp



[Signature]
DEAN

Summer Internship letter

Shri Vithalrao Joshi Charities Trust's

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



Kasarwadi, Post Sawarde, Taluka Chiplun,
Dist. Ratnagiri - 415606, Maharashtra State, INDIA
Tel. : +91 02355 -264137 / 264149 / 9356427731 /
8847790149 / 9856510149 Email : info@bklwrmc.com
Website : www.walawalkarmedicalcollege.com
www.bklwrmc.com

Outward No. SVJCT/BKLWRMC/349/2022

Date: 21/05/2022

To,
Dear Tegan Devlin,

This is with reference to your application dated 03. 05.2022 for summer
internship Program. Your Summer internship is confirmed from 27/06/2022 until
24/07/2022 at B.K.L. Walawalkar Rural Medical College and Hospital Dervan,
India.

Looking forward to your visit.

Thanking You,


Dr. Suvarna N. Patil,
Medical Director,
B.K.L. Walawalkar Rural Medical College & Hospital

Director
B.K.L. Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606


DEAN

B.K.L. Walawalkar Rural Medical College
At Kasarwadi, Post Sawarde
Tal. Chiplun, Dist. Ratnagiri

Tegan & Dr. Asmita Karnalkar, Anesthetist, Professor



Community group


DEAN

B.K.L. Wairwekar Rural Medical College
Al.Kasarwadi, Post.Sawarde
Tal.Chiplun,Dist.Ratnagiri



Kasarwadi, At-Post Sawarda, Taluka Chiplun,
Dist. Ratnagiri - 415006, Maharashtra State, INDIA
Tel. : +91 02355 264636 / 264637
Fax : +91 02355 264693 Email : info@bklwmc.com
Website : www.walawalkarmedicalcollege.com

Summary of foreign students visited B.K.L.Walawalkar Rural medical college in 2020

Following student is posted at our college for their elective postings.

| Name of the student | Duration | No of days | University | Mentor from UK |
|-----------------------------|--------------------------------|------------|-------------------------|----------------------|
| Dr. Madeleine Isabel Storey | 25/01/2020 to 02/02/2020 | 9 days | University of Edinburgh | Dr. Sanjay Deshpande |

DEAN

Snapshots from Dervan Newsletter 2020

Department of Urology:

1. Dr. Pravin Menezes, Consultant, Urological Surgeon, St. Peter Hospital
2. Dr. Madhavi Natarajan, Urologist

Department of Anaesthesia:

1. Dr. Sanjay Deshpande, Consultant Anaesthetist, South Tyneside and Sunderland NHS FT
2. Dr. Peter Taysum, A+E Specialist Doctor, Durham University Hospital.
3. Ms. Madeleine Isabel Storey, Anaesthetic Registrar
4. Dr. Vinayak Desurkar, Consultant Anaesthetist
5. Dr. Bhavani Lekhak, Consultant Anaesthetist
6. Dr. Sarang Puranik, Consultant Anaesthetist.

Department of Orthopaedics:

1. Dr. Johnathan Loughhead, Consultant Orthopaedic Surgeon
2. Mrs. Maria Pinho, Senior Theatre Sister

Biomedical Engineer:

1. Mr. John Wall, Senior Biomedical Engineer

Workshops



Training


DEAN



Summary of foreign students visited B.K.L.Walawalkar Rural medical college in 2019

Following students are posted at our college for their elective postings.

| Name of the student | Duration | No of days | university | Mentor from UK |
|---------------------|--------------------------------------|------------|--|----------------------|
| BECK JOSHUA | 08/06/2019 to 08/08/2019 | 60 days | Newcastle | Dr. Sanjay Deshpande |
| ABIGALI HARPER | 06/09/2019 to 30/11/2019 | 60 days | Royal College of Anaesthesia, UK | Dr. Sanjay Deshpande |
| ANNA WILKINSAN | 01/09/2019 to 30/11/2019 | 60 days | Royal College of Anaesthesia, UK | Dr. Sanjay Deshpande |
| RYAN Pereira | 28 & 29 /01/2019 & 1-2/02/2019 | BSS COURSE | The Royal College of Surgeons of Edinburgh, UK | Dr. Sanjay Deshpande |

DEAN

Dr. Abby Harper Letter

12 Hatton Road
Bristol
BS16 1AH
South Gloucestershire
United Kingdom

14th May 2019

Dr Mrs Patil, Medical Director
BKL Walawalkar Hospital
Diagnostic and Research Centre
Shreekshetra Dervan
Tal. - Chiplun, Dist. - Ratnagiri - 415606
Maharashtra
India

Dear Dr Patil,

I was delighted to find out from Dr Sanjay Deshpande that I have been offered a 3 month fellowship with you at BKL Walawalkar Hospital. I have followed guidelines on the Medical Council of India website and have completed the form 5B - *Application form for grant of temporary registration U/S 14(1) of Indian Medical Council Act, 1956, to foreign nationals for the purposes of postgraduate training/course/fellowship in a medical college/hospital in India.*

Please find enclosed the following:

1. Two completed application forms
2. Two passport copies, duly attested
3. Two copies of MBBS Degree certificate, duly attested
4. Two copies of General Medical Council certificate of proof of entry on the register, duly attested
5. Two copies of Primary FRCA Examination results, duly attested
6. Two copies of ALS Certificate, duly attested
7. Two copies of APLS Certificate, duly attested
8. Two copies of ATLS Certificate, duly attested
9. Two copies of email from Dr Deshpande confirming offer of fellowship.
10. ~~Bank draft for Rs-5000~~ Dr Deshpande said this was not necessary -

The application requires a formal selection or acceptance letter from the hospital concerned in India. I have not yet received this from BKL Walawalkar Hospital, so instead I have included the email I received from Dr Deshpande confirming the fellowship offer. Will this be sufficient? If not, do you think you would be able to provide an acceptance letter that would suffice?

Documents have been signed and attested by myself, as well as my current Educational Supervisor Dr Jenny Tuckey. If you require any more information please let me know and I will endeavour to provide it as soon as possible. My phone number is 00 44 (0) 7805229838 and my email is dr.abbyharper@gmail.com.


DEAN

B.K.L. Walawalkar Rural Medical College
Al.Kasarwadi, Post.Sawarde
Tal.Chiplun,Dist.Ratnagiri

Thank you in advance for your help and I look forward to joining your team very soon!

Best wishes,



Dr Abby Harper
MBBS DMM Primary FRCA
CT3 Anaesthetics, Royal United Hospital, Bath


DEAN

B.K.L. Wairwadekar Rural Medical College
Al.Kasarwadi, Post.Sawarde
Tal.Chiplun, Dist.Ratnagiri

Dr. Abby Harper & Dr. Anna Wilkinson Correspondence mail

2/3/23, 4:26 PM

Gmail - Temporary Registration for SEPTEMBER 2019



Dr. Suvarna Patil <dr.suvarnapatil@gmail.com>

Temporary Registration for SEPTEMBER 2019

1 message

HARPER, Abigail (ROYAL UNITED HOSPITALS BATH NHS FOUNDATION TRUST)

Wed, Aug 7, 2019 at

<abigail.harper2@nhs.net>

4:17 PM

To: "registration@mciindia.org" <registration@mciindia.org>, "mci@bol.net.in" <mci@bol.net.in>

Cc: "WILKINSON, Anna (NHS TAYSIDE)" <anna.wilkinson1@nhs.net>, "DESHPANDE, Sanjay (SOUTH TYNESIDE AND SUNDERLAND NHS FOUNDATION TRUST)" <sanjay.deshpande@nhs.net>, "dr.suvarnapatil@gmail.com" <dr.suvarnapatil@gmail.com>

Dear Sir/Madam,

RE: MCI-202(FT19-100797)2019-Regn./127552 and MCI-202(FT19-100799)2019-Regn./127537

Myself and Dr Anna Wilkinson are Anaesthetic Doctors from the UK and are due to start at BKL Walawalkar Hospital, Dervan, Maharashtra on 1ST SEPTEMBER 2019. I spoke to yourselves on the phone today to clarify we are starting in SEPTEMBER and need to have our registration completed before then.

One of your team advised that the letter of acceptance from BKL Walawalkar Hospital is still outstanding. I have attached copies of Acceptance Letters for both Dr Wilkinson and myself to this email. I have also asked Dr Patil at BKL Walawalkar to email copies as well. The gentleman I spoke to said that if these are received today then our registration can be processed by the middle of next week.

I would be very grateful if you could reply to me and confirm you have received these letters. Please also advise on when registration will be completed as we still need to organise employment visas and flights to start on 1ST SEPTEMBER 2019.

Any assistance in expediting our registration would be very gratefully received. Both Dr Wilkinson and myself are very keen to work at BKL Walawalkar and do not want to delay our start dates!

Thank you in advance for your help.

Best wishes,

Dr Abby Harper

<https://mail.google.com/mail/u/0/?ik=185f9971db&view=pt&search=all&permthid=thread-f%3A1641204807715585322&siml=msg-f%3A1641204...> 1/3

DEAN

B.K.L. Walawalkar Rural Medical College
Al.Kasarwadi, Post.Sawarde
Tal.Chiplun,Dist.Ratnagiri

Dr. Ryan Pereira



Dr Ryan Pereira: (Australia)

"Ryan: My name is Ryan Pereira and I attended the Basic Surgical Skills Course. I thought it was a very good experience to improve my timing and get a quick feedback about my techniques. Also, it was very senior faculty which was teaching us and I recommend this course to other students."

Dr. Beck, Community Visit




DEAN

Snapshots from Dervan Newsletter 2019

२८ ते ३० जून या कालावधीत दुभंग ओठ आणि टाळू उपचार शिविर

दुभंग ओठ आणि टाळू उपचारबद्दल बऱ्याच जुन्या गैरसमजूती व अंधविश्वास आहेत. यातून रुग्णांना बाहेर काढण्यासाठी भ.क.स.वालावलकर रुग्णालयाने आजपर्यंत वेगवेगळ्या शिविरांचे आयोजन केले आहे. २००५ सालापासून येथे 'दुभंग ओठ आणि टाळू उपचार' या प्रकल्पाला सुरुवात झाली. सुरुवातीच्या काळात 'स्माइल ट्रेन' अंतर्गत हा प्रकल्प राबविण्यात आला. नंतर हाच प्रकल्प भ.क.स.वालावलकर रुग्णालयाने स्वखर्चाने पुढे चालू ठेवला.

२०१७ साली "treatment for cleft lip and cleft palate" या प्रकल्पावर भ.क.स. वालावलकर रुग्णालय व ABMSS (अखिल भारत महिला सेवा समाज), बंगलोर आणि DCKH (डब्ल्यू क्लेफ्ट किडरहेलीफ), (German cleft children's aid society) यांनी बरोबर काम करण्यास सुरुवात केली. या सर्व शस्त्रक्रिया मोफत केल्या जातात. या प्रकल्पाचा फायदा रत्नागिरी जिल्ह्यातील रुग्णांचा झाला नाही तर सिंपुदुर्ग, फोल्हापूर, सातारा जिल्हा आणि इतर अनेक ठिकाणांच्या रुग्णांना झाला आहे. एका छताखाली रुग्णाला उपचारांच्या प्रोटोकॉलनुसार शस्त्रक्रिया आणि इतर दंत उपचार मिळू शकतात. दि. २८ ते ३० जून या काळात डॉ. निरीत आरी यांनी डेरवन रुग्णालयात शिविर घेऊन सुमारे पन्नास मुलांची तपासणी

केली. त्यातील दहा मुलांवर शस्त्रक्रिया करण्यात आल्या. आणखी दहा मुलांवर पुढील शिविरात शस्त्रक्रिया करण्यात येतील.

गेल्या १४ वर्षांपासून भ.क.स.वालावलकर रुग्णालय या प्रकल्पसाठी उत्तम दर्जाची सेवा देत आहे व या प्रकल्पाअंतर्गत सुमारे १५० ते २०० लाभार्थींना फायदा झाला आहे. भ.क.स.वालावलकर रुग्णालयामधील आधुनिक सुविधा ही ग्रामीण रुग्णांसाठी बरदान ठरली आहे.



दुभंग ओठ आणि टाळू उपचार शिविर - डॉ. निरीत आरी शिविरात रुग्णांसाठी तपासणी




DEAN

B.K.L. Wairwarkar Rural Medical College
Al.Kasarwadi, Post.Sawarde
Tal.Chiplun, Dist.Ratnagiri

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



Kasarwadi, At-Post Sawarda, Taluka Chiplun,
Dist. Ratnagiri - 415606. Maharashtra State, INDIA
Tel : +91 02355 264636 / 264637
Fax : +91 02355 264693 Email : info@bklwrmc.com
Website : www.walawalkarmedicalcollege.com


Summary of foreign students visited B.K.L.Walawalkar Rural Medical College in 2018

Following students are posted at our college for their elective postings.

| Name of the student | Duration | No of days | university | Mentor from UK |
|---------------------|------------------------|------------|-------------------------|----------------------|
| Cook Georgina | 11/6/2018 to 10/8/2018 | 20 | Newcastle university | Dr. Sanjay Deshpande |
| Homes Anna | 11/6/2018 to 10/8/2018 | 20 | Newcastle upon Tyne, UK | Dr. Sanjay Deshpande |

DEAN

Dr. Cook, Georgina Elective Host Report



Elective Host Report on Student's Performance

11 JUNE TO 10 AUGUST 2018

| | |
|--|--|
| Name of student: <small>Surname, Forename</small> | Cook, Georgina |
| Dates of attendance: <small>Day/Month/Year to Day/Month/Year</small> | 18 July 2018 - 10 August 2018 |
| Number of Days: | 21 |
| Hospital address: | B.K.L. Walawalkar Hospital, Shroekshetra, Deras, 415606, INDIA |
| Specialties: | Pediatrics |
| Supervising medical staff: <small>Email:</small> <small>Tel No:</small> | Dr Sanjay Deshpande, Sanjay.Deshpande@adft.nhs.uk, 00 91 2355-264137 / 264149 |
| Objectives set by student: | Improve communication skills Improve examination skills Improve clinical reasoning |

| <u>REPORT</u> | Satisfactory | Unsatisfactory |
|----------------------------------|--------------|----------------|
| Attendance | ✓ | |
| Interest and enthusiasm to learn | ✓ | |
| Knowledge and clinical skills | ✓ | |
| Standard of behaviour | ✓ | |

Any other comments:

She is sincere & has urge to learn new things.


FUTURE ELECTIVE APPLICATIONS

Please tick as appropriate:

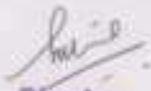
I am agreeable to my name being used as a contact for future students.

I am not agreeable to my name being used as a contact for future students.

Report completed by: DR. SUVARNA N. PATIL

Signature: 

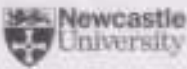
Date: _____


Director
B.K.L. Walawalkar Rural Medical College,
Sawade, Maharashtra Pin - 415606

Please return to:
Mrs Gillian Lane, Medical Student Office, School of Medical Education, Newcastle University, Framlington Place, Newcastle upon Tyne,
NE2 4BQ, UK, by 12 noon on Tuesday 16 October 2018.


DEAN

Dr. Homes, Anna Elective Host Report



Elective Host Report on Student's Performance

11 JUNE TO 10 AUGUST 2018

| | |
|--|--|
| Name of student: <small>Sumana, Forename</small> | Homes, Anna |
| Dates of attendance: <small>Day/Month/Year to Day/Month/Year</small> | 16 July 2018 - 10 August 2018 |
| Number of Days: | 20 |
| Hospital address: | Walawalker Hospital, Dattamandir Road, - 415606, INDIA |
| Specialties: | Acute Medicine |
| Supervising medical staff: Email: Tel No: | Dr Suvarna Patel, dr.suvarnapatel@gmail.com, 00 91 2385-264137 / 264148 |
| Objectives set by student: | To gain understanding of working in a different healthcare system To gain a greater understanding of the presentation and treatment of tropical disease To gain experience in a rural environment, where patients typically present late with conditions |

| <u>REPORT</u> | Satisfactory | Unsatisfactory |
|----------------------------------|--------------|----------------|
| Attendance | ✓ | |
| Interest and enthusiasm to learn | ✓ | |
| Knowledge and clinical skills | ✓ | |
| Standard of behaviour | ✓ | |

Any other comments:

She is hard working participated in community program


FUTURE ELECTIVE APPLICATIONS


Please tick as appropriate:

I am agreeable to my name being used as a contact for future students

I am not agreeable to my name being used as a contact for future students.

Report completed by: DR SUVARNA N. PATIL

Signed: 


Director
 B.K.L. Walawalker Rural Medical College,
 Sawarde, Kaskarwadi, Dist. Ratnagiri - 415606

Date: _____

Please return to:
 Mrs Gillian Linn, Medical Studies Office, School of Medical Education, Newcastle University, Framlington Place, Newcastle upon Tyne,
 NE2 4HH, UK by 12 noon on Tuesday 16 October 2018.


DEAN

परदेशी विद्यार्थिनी डेरवण येथे वैद्यकीय प्रशिक्षणासाठी

रॉयल कॉलेज ऑफ एडिनबर्ग, इंग्लंड येथील तृतीय वर्ष एम.बी.बी. एस.च्या दोन विद्यार्थिनी अॅना कुक व जॉर्जिया या दि.२४.०७.२०१८ ते दि.०८.०८.२०१८ या कालावधीत भ.क.ल.वालावलकर रुग्णालय रोगनिदान व संशोधन केंद्र, श्रीक्षेत्र डेरवण येथे आल्या होत्या. या दोन विद्यार्थिनींनी या कालावधीत पी.एच.सी. सेंटर, गरोदर स्त्रियांची तपासणी, ० ते ६ वर्षे वयोगटातील मुलांची तपासणी केली. तसेच रुग्णालयाच्या कम्युनिटी, मेडिसीन, सर्जरी, ऑन्को,

ऑफ्तल, गायनेक या सर्व ओ.पी.डी. विभागात रुग्णालयातील तज्ज्ञ डॉक्टरांच्या मार्गदर्शनाखाली रुग्णांची तपासणी केली. त्या रुग्णालयात नेहमीच साजऱ्या होणाऱ्या सामुदायिक डोहाळे जेवण व सामुदायिक वाढदिवस या कार्यक्रमात उत्साहाने सहभागी झाल्या होत्या. त्यांच्या अल्पदिवसांच्या भारतातील वास्तव्याच्या काळात ग्रामीण भारतीय जीवन त्यांना जवळून अनुभवण्याला मिळाले.



रॉयल कॉलेज ऑफ एडिनबर्ग, इंग्लंड येथील वैद्यकीय विद्यार्थिनी अॅना कुक व जॉर्जिया सामुदायिक वाढदिवस समारंभात सहभागी



रॉयल कॉलेज ऑफ एडिनबर्ग, इंग्लंड येथील वैद्यकीय विद्यार्थिनी अॅना कुक व जॉर्जिया यांची ग्रामीण भागातील आरोग्य केंद्राला भेट


DEAN



Summary of foreign students visited B.K.L.Walawalkar Rural medical college in 2017

Following students were posted at our college for their elective postings.

| Name of the student | Duration | No of days | University | Mentor from UK |
|---------------------|----------------------------|------------|--|----------------------|
| Aaron Wall | 21-28/01/2017 | 8 Days | South Tyneside NHS Trust | Dr. Sanjay Deshpande |
| Charlotte Kessell | 21-28/01/2017 | 8 Days | James Cook University Hosptial | Dr. Sanjay Deshpande |
| Laura Jones | 21-28/01/2017 | 8 Days | South Tyneside NHS FT | Dr. Sanjay Deshpande |
| Rhea COLVIN | 24/04/2017 till 20/05/2017 | 27 Days | Université Libre de Bruxelles, Belgium | Dr. Sanjay Deshpande |
| Nityanand Rewalkar | 13/08/2017 till 23/08 2017 | 10 days | Ottawa, Canada | Dr. Sanjay Deshpande |
| Arjun Chidvawar | 13/08/2017 till 23/08 2017 | 10 days | Denville, New Jersey | Dr. Sanjay Deshpande |
| Ravi Bhindi | 13/08/2017 till 23/08 2017 | 10 days | Ottawa, Canada | Dr. Sanjay Deshpande |
| Jackson Xiao | 13/08/2017 till 23/08 2017 | 10 days | Ottawa, Canada | Dr. Sanjay Deshpande |


DEAN

Snapshots from Dervan Newsletter 2017

22



Aaron Wall
Student

“ For my first trip, I found all the staff to be very polite and I could not have as had for more!

The organization and respect in the schools was amazing. Not only did the people here tell us how much we learn from them but I also look away a lot of new things I learnt and for that I am very thankful.

I hope to return in future to see many more fantastic improvements.”

improvements.”



Charlotte
Medical Student

“ I have had the most incredible time here. It has been an invaluable experience for me, especially only being a medical student. I have learnt a huge amount – the UK team and especially the hospital staff has been so willing to share their knowledge with me.

I had not expected the overwhelming hospitality shown by everyone I have met! I have particularly enjoyed the visits into the community to witness the 'REACH' programme and all the work put into educating and empowering the local women.

It was brilliant to meet the medical students studying here and to find we had so much in common!

Walawalkar hospital would be a brilliant place to come for my elective. I really hope this will be possible. There is so much to learn here!

Thank you to all! ”

22


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Laura Jones
Anesthetics



I have had a wonderful time at the hospital. Firstly, I have never experienced such a wonderful hospitality & felt so welcome somewhere new.

I was lucky enough to spend time in the community going to the nutritional camp for new mothers. I found this really interesting & was very impressed with the difference this has made to the birth weight of children. I then got to go to a village and saw the educational sessions for young children, again this was fantastic! I was honored to meet the lady in charge of the village & see what a fantastic job she is doing.

The baby shower again was fantastic. I am extremely impressed with everything that is being done in the community.

I also got involved in teaching medical students, nursing students & ICCU Staff. I was impressed with their knowledge & level of English. I hope that if I come back in future years, I will be able to design & run a teaching programme focusing on the students needs.

Thank you for a fantastic opportunity."

Pre Medical Students




DEAN

B.K.L. Wairwekar Rural Medical College
Al.Kasarwadi, Post.Sawarde
Tal.Chiplun,Dist.Ratnagiri



Schedule for Pre Medical Students from 13/08/2017 till 23/08 2017

| Day | Date | Work done |
|-----------|----------|---------------------|
| Sunday | 13/08/17 | OT |
| Monday | 14/08/17 | Weekly off |
| Tuesday | 15/08/17 | PH |
| Wednesday | 16/08/17 | Reach Camp |
| Thursday | 17/08/17 | Surgery ward + OPD |
| Friday | 18/08/17 | Dental camp |
| Saturday | 19/08/17 | Adolescent camp |
| Sunday | 20/08/17 | OT |
| Monday | 21/08/17 | Weekly off |
| Tuesday | 22/08/17 | OT |
| Wednesday | 23/08/17 | Medicine ward + OPD |

| Students name | place |
|-----------------------|----------------------|
| 1) Nityanand Rewalkar | Ottawa, Canada |
| 2) Arjun Chidvawar | Denville, New Jersey |
| 3) Ravi Bhindi | Ottawa, Canada |
| 4) Jackson Xiao | Ottawa, Canada |

DEAN

Interaction with Medical students and special lectures:



Interaction with Medical Students & special lectures :

Transformation of medical students to become medical professionals is a core competency required for physicians in the 21st century. Role modeling was traditionally the key method of transmitting this skill. Medical colleges are developing medical curricula which are explicit in ensuring students develop the professional competency and understand the values and attributes of this role. The purpose of this meet was to determine student perception of professionalism and gain insights for improvement in promotion of professionalism in undergraduate medical education.



Garth Kessel, Anesthesiologist



Sargay Doshpande & Kathryn Horneman, Anesthesiologists


DEAN

Rhea Colvin Feedback Form

U.L.B.
Faculté de Médecine
Commission des Stages

Demande de stage extra-muros

Nom: Colvin Prénom: Rhea

Année d'étude en cours: MA2

Année d'étude lors du stage: MA2 - Grande clinique de Gynécologie

Période du stage: du 24/04/17 au 21/05/17

Monsieur le Président de la Commission des Stages,
J'ai pris connaissance du règlement concernant la réalisation des stages extra-muros.
Par la présente, j'ai l'honneur de solliciter l'autorisation d'effectuer un stage extra-muros
dans le service repris ci-après:

Ville: Darwin Pays: Inde

Hôpital: Wolawakar Hospital Service: Gynécologie & Obstétrique

Chef de service: Dr. Suvama Patti

Les motivations qui me poussent à réaliser ce stage sont les suivantes:

INDIA HAS DIVERSITY IN CULTURE, HAS DIFFERENT SOCIO ECONOMIC
BACKGROUND. STUDENTS SHOULD VISIT FROM UNIVERSITIES ABROAD
AND HELP US LEARNING PATROGYNOLOGY & TREATMENTS.

Je joins à la présente l'attestation du chef de service.

Date:

Signature: 
18/5/17

Avis de la Commission des Stages

| Décision | Remarques | Date |
|-------------|--|------|
| Favorable | Sous réserve de ce que l'étudiant n'ait pas à occuper une place obligatoire dans la grille de stage pour la période concernée, la commission des stages marque son accord. | |
| Défavorable | | |
| En suspens | Etudiant à convoquer pour compléments d'information | |


DEAN



COMMUNITY VISITS



ANC Visit



Snapshots from Dervan Vartpatrak

डेरवण रुग्णालयात 'बंध्यत्व निवारण' उपचारांची सोय

भारतातील पहिली यशस्वी गर्भारोपण शस्त्रक्रिया करणाऱ्या 'गॅलॅक्सी केअर हॉस्पिटल', पुणे येथील शस्त्रक्रिया विशारदांच्या चमूत सहभागी असणाऱ्या डॉ. वैजाली गायकवाड-सुरसे (MBBS, DGO, FCPS) आता डेरवण रुग्णालयात कायम स्वरूपाची पूर्ण वेळ उपलब्ध आहेत. मुंबई येथील जे.जे. रुग्णालयात शिक्षण पूर्ण करून त्या वाडिया आणि सेव्हन हिल्स रुग्णालय येथे कार्यरत होत्या. गेल्या दहा वर्षांत सुमारे एक हजार जोडप्यांना त्यांच्या उपचारांनी अपत्यप्राप्ती झाली आहे.

अपत्यप्राप्तीसाठीच्या उपचारात विशेष रक्त तपासणी, सोनोग्राफी, एक्स-रे, एच.एस.जी., फॅलोपिन ट्युब टेस्टिंग, या व अन्य आवश्यक तपासण्या केल्या जातात. तसेच आय.यु.आय. (गर्भ पिशवीत वीर्य सोडणे) व टेस्ट ट्युब चेबी बाबावतशी उपचार केले जातात. इच्छुक जोडप्यांनी रुग्णालयात डॉ. गायकवाड-सुरसे यांना भेटून या सोबीचा अवश्य लाभ घ्यावा.




DEAN



B. K. L. Walawalkar Rural Medical College

BIRAC FUNDED STUDY

A Phase I/II clinical trial to examine the safety and efficacy of autologous, cultured disc chondrocytes embedded in PRF transplanted in patients' disc to maintain its function

PRINCIPAL INVESTIGATOR: DR SUNIL NADKARNI

PARTNER AGENCY:

**Samarthkrupa Life Sciences Pvt. Ltd. Floor-1, Plot-52, Parijat Building,
Gokhale Road , Pune**

INDEX

| Sr. No. | Title | Page No |
|----------------|--|----------------|
| 1 | BIRAC grant letter of funding support under Biotech Ignition Grant | 1-2 |
| 2 | Publications of Project | 3-10 |

From: Venture Center <big@venturecenter.co.in>

Date: 12 December 2017 at 5:09:21 PM IST

To: Sunil Nadkarni <sunilnadkarni@gmail.com>

Cc: Manisha Premnath <gm@venturecenter.co.in>, Premnath V <director@venturecenter.co.in>, Ranganayaki Nagaraj <priya@venturecenter.co.in>, Shruti Devasthali <shruti@venturecenter.co.in>, Namrata S <namrata@venturecenter.co.in>

Subject: Regarding your BIG-11 Project Proposal

BIG Proposal Reference No: BIRAC/VENTURE0261/BIG-11/17

Proposal Title: To demonstrate proof of concept for autologous regenerative therapy using platelet rich fibrin enriched with human herniated intervertebral disc tissue to enhance regeneration of human herniated intervertebral disc.

Applicant: Dr.Sunil Nadkarni

Dear Dr.Nadkarni,

We are happy to inform you that your proposal (as per the details above) under BIG Round 11 has been accorded an **in principle approval** by the Expert Selection Committee (ESC) for grant funding support under Biotech Ignition Grant.

Now we are going to execute the following activities:

- Due diligence by BIG partner
- Collection of information from applicant by BIG partner
- Site visit to the facilities by BIG partner
- Submission of the due diligence & site visit report by BIG partner to BIRAC
- Final recommendations & budget approval by BIRAC
- Finalization of agreement (BIG partner-innovator) with applicant by BIG partner
- Release of funds & project start

For ease of doing due diligence process we have created a restricted website where all the formats for completion of due diligence activity are uploaded. You are requested to go through the website and download all relevant documents (as individual/ company) and start completing them. **Please note that this site is created for the use by BIG grantees associated only with Venture Center as BIG partner.**

In case you have any query please get back to us.

Venture Center BIG team shall be in touch with you to assist and advise you on how to fill up the form and any other action needed on your part.

Please plan the budget as per allowable cost caps mentioned in the BIG scheme guidelines doc (also attached).

The budget should be planned as per the planned project activities for the duration of **18 months**. **No extensions are allowed.**

Kindly use the format for Due diligence form attached in this mail and not the one from above mentioned website.

Kindly send us all the documents listed at the restricted website over email by or before **December 27, 2017, (Wednesday)** to enable us to facilitate timely completion of due diligence process.

The comments received during the Expert Selection Committee (ESC) meeting are shared for your reference, please provide the clarifications asked by the ESC, if any.

| | |
|----------------------------------|---|
| Proposal reference number | BIRAC/VENTURE0261/BIG-11/17 |
| Category | Individual |
| Proposal title | To demonstrate proof of concept for autologous regenerative therapy using platelet rich fibrin enriched with human herniated intervertebral disc tissue to enhance regeneration of human herniated intervertebral disc. |
| Applicant Name | Dr. Sunil Nadkarni |
| ESC remarks | The committee reviewed the proposal and was of opinion that the study has high commercialization potential. The applicant has proposed the novel usage of autologous platelet rich fibrin and intervertebral disc cells. They have shown enough supporting data. It was suggested by the committee that tensile |

strength ex vivo needs to be demonstrated in the proposed study. The committee recommended the proposal for further considerations.

Decision

Recommended

Congratulations on reaching this stage and we hope to talk to you soon.

Please acknowledge the receipt of this email.

Thanks.

Dr. Roshan D. Yedery, PhD

BIG Team @ Venture Center

100, NCL Innovation Park

Dr. Homi Bhabha Road

Pashan, Pune – 411008


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Expansion and characterization of cells from surgically removed intervertebral disc fragments in xenogen-free medium

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RITA MULHERKAR^{2*} 

¹Smartha Krupa Life Sciences, BKL Walawalkar Rural Hospital, Ratnagiri, India

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MS received 2 May 2020; accepted 26 August 2020

Low back pain due to degeneration of intervertebral disc (IVD) is a major health problem resulting in significant disability as well as adding to the economic burden. Discectomy is a very common procedure done worldwide to relieve this pain. At present all the surgically removed disc tissue is mostly discarded. However, there are reports that state that progenitor cells in the IVD can be grown *ex vivo* and have the potential to be used for IVD repair and regeneration. We report here that viable cells can be harvested from surgically removed, herniated disc tissue and can be potentially used in cell based therapy. Further, we have successfully replaced xenogenic supplements such as foetal bovine serum with either autologous serum or human platelet lysate for culturing IVD cells from patient's surgically removed disc tissue, without loss of any cell characteristics, including cell surface markers, growth factor secretion in the conditioned medium and osteogenic and chondrogenic differentiation potential *in vitro*. The present work will not only contribute to overcoming some of the major barriers in carrying out human clinical trials, but also provide a cheap, alternate source of proteins and growth factors for growing IVD cells *ex vivo* for therapy.

Keywords. Autologous serum; cell-based therapy; intervertebral disc; mesenchymal stem cell; non-xenogenic supplements; platelet lysate

1. Introduction

Herniated intervertebral (IVD) disc tissue is the most common cause of back and leg pain adding to the economic burden (Vos *et al.* 2012). The vertebral column is made of segments with IVD which is a fibrocartilaginous tissue situated between two adjacent vertebrae and contributes to motion, weight-bearing and flexibility of the spine. The IVD itself consists of a hydrophilic, gelatinous core, the nucleus pulposus (NP) which is surrounded by several layers of radially arranged collagen fibres forming the annulus fibrosus (AF) (Sakai and Schol 2017). A tear in the AF results in protrusion of disc tissue. The loss of disc tissue sets up a degenerative cascade in the motion segment. Due to disc desiccation and gradual loss of disc height there is narrowing of the space available for the nervous tissue causing limitations in walking and exercise

tolerance hampering the individual's effort to maintain good health through exercise. The degenerated disc protruding out of AF is often surgically removed to relieve pain. Considerable number of disc tissue fragments which contain regenerative cells, are being presently removed world over and discarded. On the other hand, symptoms from degeneration of discs poses a huge economic burden on society.

Disc degeneration is known to result in reduced proteoglycan synthesis and increased production of matrix-degrading proteins. Loss of proteoglycans leads to loss of hydration and disorganization of collagen fibres (Sakai and Schol 2017). Suboptimal healing increases the risk for recurrence of disc herniation after discectomy. Therefore, regeneration and repair of cells expanded *ex vivo* from AF and NP tissue is a very promising option for treating the disease (Sakai *et al.* 2003). Recent advances in

regenerative medicine, using either autologous disc cells (Centeno *et al.* 2017; Risbud *et al.* 2007; Blanco *et al.* 2010) or allogenic mesenchymal stem cells (MSC) (Sakai and Andersson 2015; Shu *et al.* 2018; Ganey *et al.* 2003) have shown promising results in inhibition of progression of disc degeneration in animal models as well as in humans.

MSCs are being used in numerous cell based clinical trials world over since they have the ability to migrate to the site of injury, self-renew and are multipotent cells capable of differentiating into multiple cell lineages (Blanco *et al.* 2010). However, MSC have routinely been grown in medium containing foetal bovine serum (FBS) which is being discouraged by the regulatory bodies. Also, clinical grade FBS, free from prions and other zoonoses, is exorbitantly expensive. We have successfully grown progenitor cells from IVD in autologous serum as well as in platelet lysate (hPL) prepared from patient's own platelets or expired platelets, obtained from the blood bank. Cells grown in all these xenogen-free media are immunophenotypically and functionally identical to cells grown in FBS. The present work will not only contribute to overcoming some of the major barriers in carrying out human cell therapy clinical trials, but also provide a cheap, alternate source of proteins and growth factors for growing cells *in vitro*.

2. Materials and methods

2.1 Human subjects

The intervertebral disc (IVD) tissue samples were collected from patients undergoing surgery for disc herniation at BKL Walawalkar Rural Hospital, Dervan, Ratnagiri after obtaining IEC approvals and informed consent from all the patients. These were patients who had disabling radicular symptoms which had failed to respond to conservative treatment or had neurological dysfunction. There was concomitant pathology seen on images. These would be standard indication for discectomy world over. The tissue sample was collected in a sterile container in 5 ml collection medium comprising of DMEM (Gibco, USA) with 2x antibiotic solution (200U Penicillin + 0.2 mg Streptomycin/ml, HiMedia, India) or in 5 ml sterile 0.9% normal saline (Fresenius Kabi, India). The collected tissue samples were transported to the laboratory in a cool box, and processed within 48 hrs of collection. Patient details were recorded.

2.2 Preparation of autologous serum

Ten ml whole blood was collected from the patient before undergoing surgery in a sterile centrifuge tube without anticoagulants and allowed to clot by leaving it at 4°C. The sample was transported to the laboratory in a cool box within 48 h of collection. It was centrifuged at 105g for 5 min at 4°C. The clear serum (AuS) was separated aseptically and heat inactivated at 56°C for 30 min before using as a supplement in the growth medium.

2.3 Preparation of human platelet lysate (hPL)

Expired platelets were obtained from blood bank of BKL Walawalkar Hospital, Dervan, Ratnagiri after obtaining IEC approval. They were subjected to three freeze-thaw cycles at low temperatures and at 37°C. The lysate was centrifuged at 4975g for 20 min at room temperature and the supernatant filtered through 1.0 µm glass fibre pre-filters (Nalgene, Thermo Scientific, USA) and then sterilized by filtering through 0.22 µm filter. Filtered lysate was stored in aliquots at -20°C until further use. In a few cases, where the patient consented to give blood, platelet-rich plasma was collected from 40 ml blood and treated as described above to obtain autologous platelet lysate (AuPL).

2.4 Sample processing and culturing of IVD cells

Before processing the sample an aliquot of the collection medium containing the tissue sample was inoculated into sterile thioglycolate broth and incubated at 37°C to check for bacterial contamination if any. The sterile samples were processed by aseptically washing the tissue in fresh collection medium and minced with sterile forceps and scalpel. The tissue was then treated with 0.2% Collagenase type II (Gibco, USA) for 4 h at 37°C. The collagenase activity was inhibited by refrigerating the sample at 4°C for 10 mins. Wherever possible, the digested tissue was divided into 3 parts and transferred to 3 wells in a 6-well plate (Nest, China) along with DMEM supplemented with either (A) 20% AuS; or (B) 5–10% hPL/AuPL, or (C) 20% FBS (HiMedia, India). The medium was supplemented with 100 U/ml Penicillin, 0.1 mg/ml Streptomycin (HiMedia, India) and 2 mM L-glutamine (Gibco, USA). The cultures were incubated in a humidified atmosphere at 37°C with 5% CO₂. The medium was

replaced every 3–5 days once cell growth was observed. In most cases, the cells in (A) and (B) were found to grow as anchorage independent, suspension cultures, growing in clumps (figure 1a, b), whereas in (C) cells grew as monolayers adhering to plastic (figure 1c). Anchorage independent cells in A and B media were passaged by collecting the medium, spinning it for 10 min at 4°C and resuspending the pellet in fresh medium. Cells in medium (C) were passaged by gently trypsinizing in 0.001% Trypsin (Sigma Aldrich, USA) with 5 mM EDTA (Qualigen, India).

2.5 Immunophenotyping cells by flow cytometry

Approximately 5×10^5 cells were collected and centrifuged at 657g for 10 min at 25°C. The pellet was resuspended in 100 μ l Attune 1x Focussing Fluid (Life technologies, USA) and incubated with 5 μ l of the following antibodies: FITC/488 anti-CD24 (BD

Biosciences, USA), PE-Cy5 anti-hCD29 (BD Biosciences, USA), APC/640 anti-CD54 (BD Biosciences, USA), PE-Cy7/561 anti-CD73 (BD Biosciences, USA), PerCP-Cy5.5/488 anti-CD90 (BD Biosciences, USA), PE/561 anti-CD105 (BD Biosciences, USA) and BV510/405 anti-integrin alpha-6 (BD Biosciences, USA), in dark for 40 min. The labelled cells were run on Attune NxT Acoustic Focusing Cytometer (Life technologies, USA). Data were analysed by FlowJo software (FlowJo LLC, Ashland, OR, USA).

2.6 Osteogenic differentiation

Cells were seeded at a density of 2500/cm² in a 24-well plate in complete growth medium. After 24 h the cells were exposed to osteoblast induction medium (DMEM supplemented with 10% FBS, 1% AA, 0.1 μ M dexamethasone, 50 μ M ascorbate-2-phosphate, and 10 mM β -glycerophosphate). The medium was changed thrice

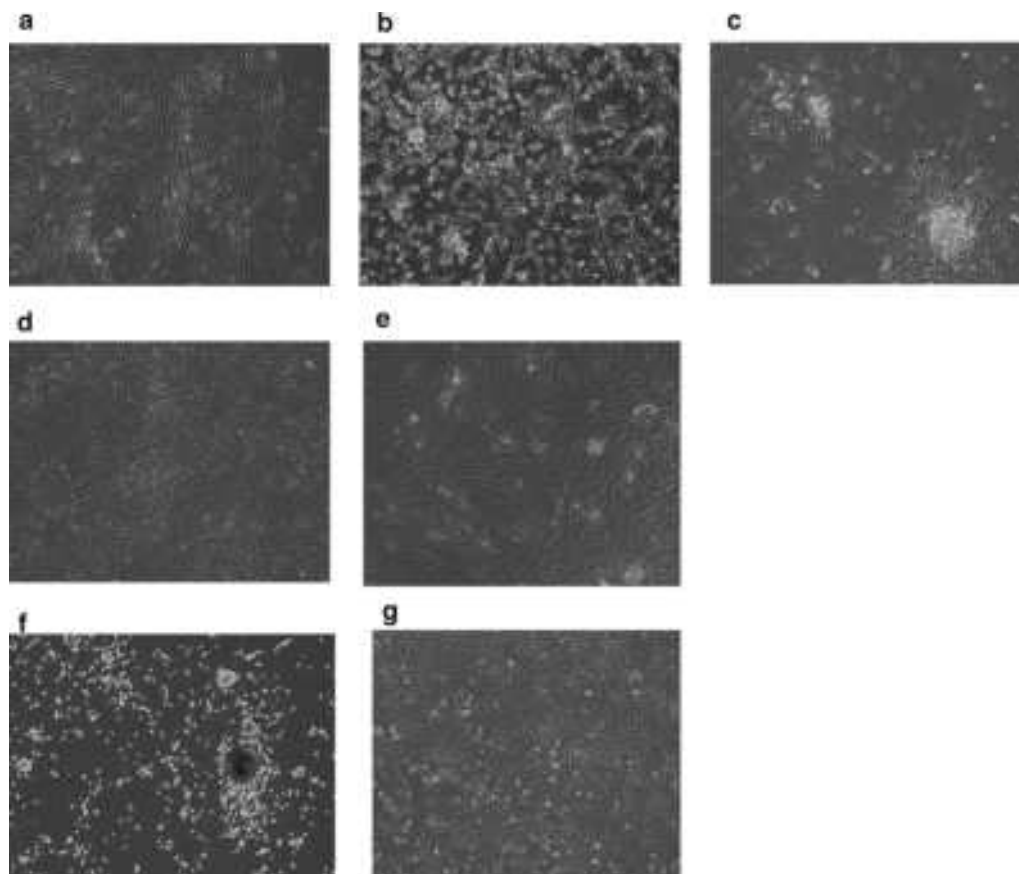


Figure 1. IVD cells cultured from surgically removed disc fragments. Tissue fragments were minced, digested enzymatically and transferred to growth medium. Cell growth was observed within 3–4 days. Cell morphology seen in surgical specimen #196 cultured in (a) FBS, (b) hPL, (c) AuS, and specimen #212 cultured in (d) hPL and (e) FBS. Specimen #217 cultured in AuPL grew as anchorage independent round cells in suspension (f). On subculturing, the same cells grew as a monolayer (g) (microphotographs 40x magnification).

a week. Cells in basal medium were used as controls. To demonstrate the osteogenic differentiation and mineralization after 21 days, the cells were fixed and stained with 2% alizarin red S (pH 4.1–4.3).

2.7 Chondrogenic differentiation

Cells were seeded at a density of 2500/cm² in a 24-well plate with complete growth medium. After 24 h the cells were exposed to chondrocytes induction medium (DMEM supplemented with 1X-ITS, 1 mM sodium pyruvate, 100 nM dexamethasone, 50 µg/ml ascorbate-2-phosphate, 40 µg/ml L-proline and 10 ng/ml TGF-β3). Cultures were incubated for 4 weeks at 37°C with 5% CO₂. The medium was changed after every 2–3 days. To demonstrate the chondrogenic differentiation, after 28 days the cells were fixed and stained for proteoglycans using 0.1% safranin O.

2.8 Growth factor estimation in the conditioned medium from disc cells in culture

Conditioned medium (CM) was collected from sub-confluent cultures at P1 from sample 196 grown in media supplemented with either 20% FBS, 10% hPL or 20% AuS, and stored frozen at –20°C. PL containing medium was taken as a control. Growth factor analysis was carried out using Multi-Analyte Flow Assay Kit (Cat #740180; Biolegend, USA) as per manufacturer's instructions. The CM was thawed and centrifuged at 1500g at 4°C for 10 min and assayed immediately. Samples were mixed with assay buffer, premixed antibody-immobilized beads and detection antibody, and incubated in dark for 2 h at RT, on shaker. The samples were then mixed with SA-PE reagent and incubated for another 30 min in dark on shaker. Finally, the beads were washed with wash buffer and acquired on flow cytometer.

3. Results

3.1 *Ex vivo* culture of surgically removed IVD tissue

Herniated disc tissue samples were obtained from the surgery department at BKL Walawalkar Rural Hospital, Dervan and processed within 48 h, in the GLP Tissue Culture Lab at the same hospital. Although, initially the tissue samples were collected in DMEM with 2x

antibiotics, it was observed that tissue collected in sterile saline solution and stored at 4°C was equally good in maintaining cell viability and ability to divide in culture. Hence the practice followed presently is to collect the surgical specimen in sterile saline and stored at 4°C until further use. The enzyme-digested tissue was divided into 3 parts and cultured in DMEM supplemented with either 20% fetal bovine serum (FBS), or 20% heat inactivated autologous serum (AuS) or 5–10% platelet lysate (hPL) prepared from expired platelets from the blood bank or from autologous hPL (AuhPL) without FBS.

3.2 Morphology of cells in different media

Cell growth was observed within 4–5 days in all 3 media in greater than 90% of the surgical specimens. Primary cultures from disc cells in AuS or AuPL often showed anchorage independent growth initially. Later the cells adhered to the plastic substrate. The morphology of cells growing in media supplemented with either FBS or AuS or hPL or AuPL at later passages was comparable. The cells were slightly more elongated and spindle shaped in FBS containing medium compared to those growing in AuS or PL containing medium. Sometimes cells were seen to grow as single cells in suspension or in clumps initially and later attached and grew as mixed cultures (figure 1). However, the cells appeared smaller and less elongated than the cells in FBS containing medium. So far, more than a 100 disc tissue samples have been grown successfully and characterized, in autologous serum and autologous hPL, without FBS.

3.3 Phenotypic characterization of cultured IVD cells

Cells cultured in all the three growth media – FBS, autologous serum and platelet lysate, were phenotypically characterized. Where cells were growing in suspension, the supernatant was collected and centrifuged for immunostaining. Cells grown from the same surgically removed disc tissue, in all 3 media, whether as a monolayer or in suspension, were seen to be phenotypically identical. The cells cultured from one of the representative samples, grown in all 3 media as well as an unrelated sample grown in hPL are presented here. As seen from the figure, the cells grown in the 3 different media were all negative for CD24 and HLA-DR, whereas the cells were moderately positive for CD105; and strongly positive for CD90 and CD73 (figure 2).

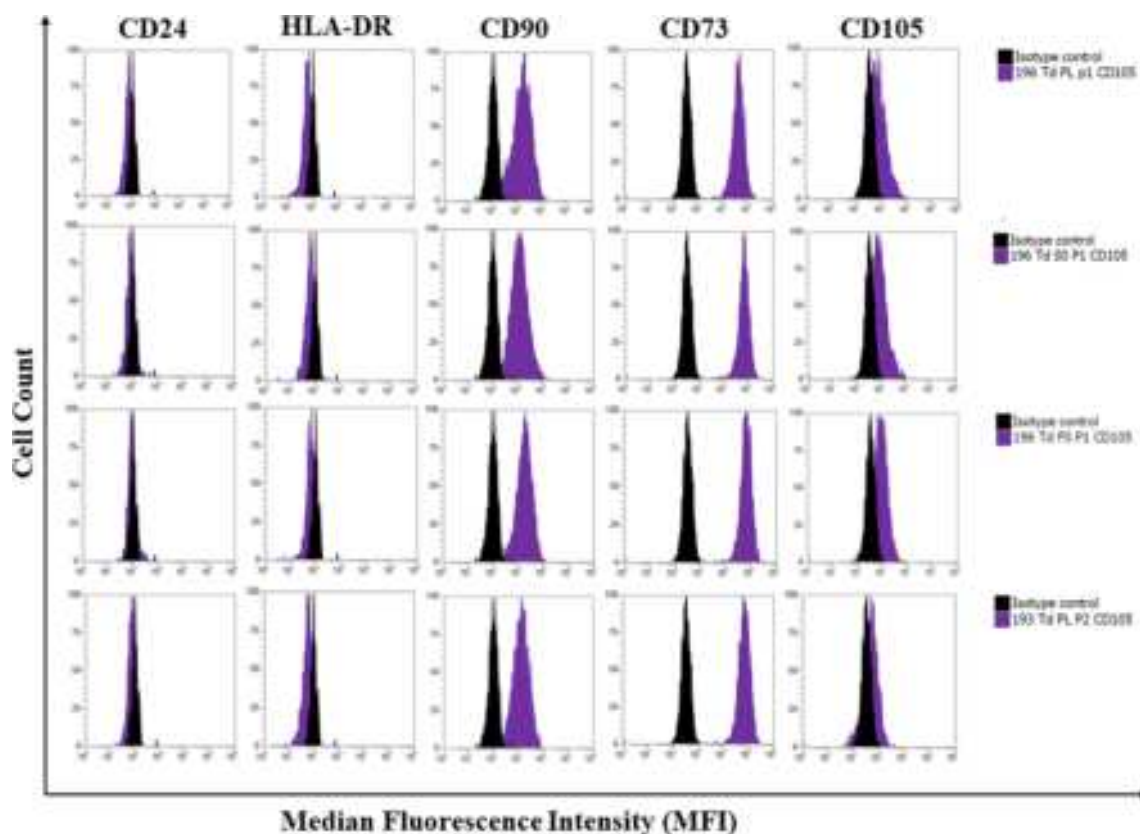


Figure 2. Immunophenotyping of progenitor cells from IVD tissue. Cells in row 1 and 4 were cultured in 10% hPL; cells in row 2, in 20% AuS, and cells in row 3, in 20% FBS. Cells were in either Passage 1 (P1) or Passage 2 (P2). Note that the cells were phenotypically identical under all three culture conditions and displayed markers of undifferentiated MSC. Isotype control antibody is in black and expressed markers are in purple. (Nomenclature of the cells – number stands for patient number, T for tissue, d for Dervan [OT from where the surgical specimen was obtained], PL for hPL, S0 for AuS and F0 for FBS, followed by P for passage number).

Besides these markers, cells were also found to be positive for CD29, CD54 and Integrin- α 6 (data not shown). Regardless of the supplement used in the medium for the primary cultures, the progenitor disc cells expressed the same cell surface markers.

3.4 Functional characterization of cultured IVD cells

The intrinsic differentiation potency *in vitro* of the cells grown in all 3 media remained the same. The ability to differentiate into osteocytes and chondrocytes was unaffected regardless of the medium in which they were grown initially (figure 3). The Cell Doubling time was between 24–30 h in all 3 media (data not shown). Disc cells grown from the same surgical specimen (#196), in different media, were found to secrete Growth Factors in the medium, almost to the same extent (table 1).

4. Discussion

Prolapsed disc due to IVD degeneration is a common cause of chronic lower back pain worldwide. The loss of local tissue leads to potential recurrence of the disability. Clinical therapies range from symptomatic relief from pain, to surgeries such as disc arthroplasty, spinal fusion and disc decompression. However, in order to restore native functional state of IVD and long term relief from pain, regenerative medicine is gaining credence. In the present study, we have successfully grown regenerative cells from surgically removed, herniated disc tissue from patients who had disabling radicular symptoms which had failed to respond to conservative treatment or had neurological dysfunction. The tissue was grown in different media including xenogen-free medium. The cultured cells expressed the same cell surface markers, irrespective of the medium in which they were grown, the cells expressed MSC-like markers, although one major difference was the

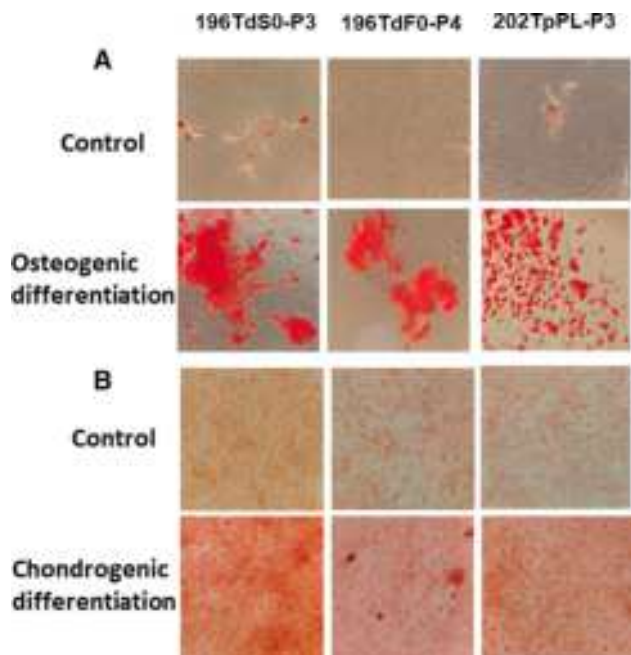


Figure 3. Representative qualitative evaluation of the differentiation capacity of cells grown in 2 different media. Column 1 depicts cells from surgical sample #196 grown in AuS and column 2 are cells from the same sample grown in FBS. Column 3 are cells from surgical sample #202 grown in hPL medium. Differentiation towards (A) osteocyte phenotype and (B) chondrocyte phenotype in 3 different media. (Nomenclature of the cells – number stands for patient number, T for tissue, d for Dervan, p for Pune [OT from where the surgical specimen was obtained], S0 for AuS, F0 for FBS, PL for hPL, followed by P for passage number.)

cells, could grow in suspension. One of the properties of MSCs is they adhere to the plastic (Dominici *et al.* 2006).

Animal studies in rabbit model have demonstrated that *ex vivo* expanded mesenchymal stem cells injected into the nucleus of the degenerated disc resulted in slowing down the degenerative process (Sakai and Schol 2017). This provided the proof of concept for further regenerative therapy. Numerous animal studies (Shu *et al.* 2018; Ganey *et al.* 2003; Gruber *et al.* 2002; Sakai *et al.* 2005) as well as human clinical trials have been carried out using either MSCs (Centeno *et al.* 2017; Mochida *et al.* 2015; Leung *et al.* 2006; Bertolo *et al.* 2015) or autologous cells grown from the prolapsed disc (Risbud *et al.* 2007; Blanco *et al.* 2010).

Most of the published literature on *ex vivo* expansion of progenitor cells from IVD from animal studies (Shu *et al.* 2018) or human clinical trials, have used MSCs cultured in the presence of FBS as the growth supplement (Risbud *et al.* 2007; Bertolo *et al.* 2015;

Tschugg *et al.* 2016). However, for clinical trials, animal-free media are recommended to avoid the risk of transmission of pathogens and immunological reactions (van der Valk *et al.* 2018). In order to replace animal supplements, a few studies have reported use of platelet-rich plasma (Atashi *et al.* 2015), platelet lysate (Centeno *et al.* 2017; Bari *et al.* 2018; Kandoi *et al.* 2018) and autologous serum (Choi *et al.* 2013; Trombi *et al.* 2016) for growing MSCs or progenitor cells.

We have successfully replaced FBS with allogenic platelet lysate (hPL) or autologous platelet lysate (AuPL) or autologous serum (AuS) to culture surgically removed disc cells. Human platelets which are more than 5 days old are not suitable for blood transfusion and have to be discarded. These can be obtained from the blood bank to prepare allogenic platelet lysate. Platelets are a rich source of growth factors (Strandberg *et al.* 2017) and platelet lysates have been shown to support growth of MSC (Becherucci *et al.* 2018). Altaie *et al.* (2016) have demonstrated that MSC colony formation in human platelet lysate is higher than in Foetal Calf Serum. We have demonstrated that autologous hPL prepared from platelet-rich plasma as well as hPL from expired platelets from the blood bank support growth of disc cells. The cells cultured in non-xenogen supplemented media were similar to cells cultured in FBS in all respects. Autologous PL or autologous serum would be ideal for regenerative therapy as it would reduce the risk of immunologic reactions or infections from xenogenic supplement.

Mochida *et al.* (2015) have reported results from a human clinical trial to assess the safety of autologous, activated NP cell transplantation in patients with degenerated intervertebral disc where NP cells were co-cultured with MSCs grown in autologous serum. Blanco *et al.* (2010) separated autologous MSCs, from bone marrow (BM) and from NP from IVD, during surgery and cultured them in FBS containing medium. The MSCs from IVD and BM were similar in all respects. Thus, they report that MSC like cells can be harvested from IVD. This was also demonstrated earlier by Risbud *et al.* (2007), who isolated MSC like cells from degenerate disc and called them endogenous progenitor skeletal cells. In the present study we demonstrate that disc progenitor cells can be isolated and expanded *in vitro* from IVD fragments following discectomy in FBS free medium.

Due to increasing interest in hPL, the AABB and the International Society of Cell Therapy (ISCT) have established a joint working group to address the potential of hPL (Bieback *et al.* 2019). The PL preparation however, needs to be standardized with

Table 1. IVD cells in culture secrete growth factors in the conditioned medium

| Sample number | Human Angiopoietin-2 (pg/ml) | Human FGF-basic (pg/ml) | Human HGF (pg/ml) | Human PDGF-AA (pg/ml) | Human VEGF (pg/ml) |
|---------------|------------------------------|-------------------------|-------------------|-----------------------|--------------------|
| PL Medium | 209.8305 | 16.3806 | 620.9722 | 5493.99 | 0 |
| 196 TdPL-P1 | 616.6102 | 20.11194 | 648.75 | 468.0829 | 5113.986 |
| 196 TdS0-P1 | 413.2203 | 20.11194 | 620.9722 | 364.456 | 16316.78 |
| 196 TdF0-P1 | 486.6667 | 20.11194 | 634.8611 | 369.6373 | 8456.643 |

PL medium – control (DMEM supplemented with 10% hPL) as well as conditioned medium from IVD cells cultured from specimen number #196 in medium supplemented with PL (10% hPL); S0 (20% AuS) or F0 (20% FBS), at passage 1 (P1), were analysed for growth factor secretion using the bead assay as described in the section on Materials and Methods.

respect to platelet numbers, lymphocyte contamination, etc., to avoid batch-to-batch variation. This would be a welcome substitute to FBS in biologic therapies which have provided very encouraging results *in vitro* as well as *in vivo* and in human clinical trials.

The novelty of the present study is the *ex vivo* expansion of autologous IVD cells with MSC like characteristics, with at least one early passage as anchorage independent cells, in platelet lysate or autologous serum without use of FBS. These cells will be best suited for clinical trials in patients with degenerated IVD. In addition, this would result in bringing down the cost of cell based therapy as the cost of clinical grade FBS is exorbitantly high.

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ICMR FUNDED STUDY

A Multi-Centric Randomized Controlled Trial to Assess Effectiveness of the Brief Nursing Intervention for Depression in Pregnancy

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INDEX

| Sr. No. | Title | Page No |
|----------------|-------------------------|----------------|
| 1 | Project details | 1-6 |
| 2 | Publications of Project | 7-14 |



Clinical Trial Details (PDF Generation Date :- Sat, 18 Feb 2023 14:20:57 GMT)

| | | |
|--|---|---|
| CTRI Number | CTRI/2018/07/014836 [Registered on: 12/07/2018] - Trial Registered Prospectively | |
| Last Modified On | 13/01/2023 | |
| Post Graduate Thesis | No | |
| Type of Trial | Interventional | |
| Type of Study | Behavioral | |
| Study Design | Randomized, Parallel Group Trial | |
| Public Title of Study | A clinical trial to study the effectiveness of psychological intervention by antenatal nurse for depression in pregnancy. | |
| Scientific Title of Study | A Multi-Centric Randomized Controlled Trial to Assess Effectiveness of the Brief Nursing Intervention for Depression in Pregnancy | |
| Secondary IDs if Any | Secondary ID | Identifier |
| | NIL | NIL |
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Details of Ethics Committee

| Name of Committee | Approval Status | Date of Approval | Is Independent Ethics Committee? |
|--|-----------------|------------------|----------------------------------|
| Ethics Committee for Human Research, Lady Hardinge Medical College | Approved | 05/09/2018 | No |
| Institutional Ethical Review Board, Dharwad institute of Mental Health and Neurosciences (DIMHANS) | Approved | 05/06/2017 | No |
| Institutional Ethics Committee, BKL Walawalkar Rural Medical college | Approved | 21/07/2018 | No |
| Yenepoya University Ethics Committee | Approved | 08/08/2019 | No |

Regulatory Clearance Status from DCGI

| Status | Date |
|----------------|-------------------|
| Not Applicable | No Date Specified |

Health Condition / Problems Studied

| Health Type | Condition |
|--------------------------|---|
| Healthy Human Volunteers | Antenatal, Perinatal and Post Natal women |
| Patients | Antenatal/Perinatal/Postnatal women with Depression |

Intervention / Comparator Agent

| Type | Name | Details |
|------------------|-----------------------------------|--|
| Intervention | Brief Nursing Intervention Module | Antenatal care trained nurse will administer the Brief Nursing Intervention Module to the patients enrolled in intervention arm. |
| Comparator Agent | Treatment As Usual | Treatment given by psychiatrist for depression in pregnancy as per standardized protocol uniform for all four centers. |

Inclusion Criteria

| Inclusion Criteria | |
|--------------------|--|
| Age From | 18.00 Year(s) |
| Age To | 45.00 Year(s) |
| Gender | Female |
| Details | 1) Pregnant women with spontaneous conception attending the Obstetric and Gynecology (OBG) OPD of the selected Hospital for first trimester antenatal care (ANC) visit 2) Clients planning to follow up for ANC care, delivery and postnatal follow up in the index Hospital. 2) Willing to give consent for participation in the study. |

Exclusion Criteria

| Exclusion Criteria | |
|--------------------|--|
| Details | 1) History of intellectual disability, 2) Already on psychiatric treatment for any mental illness including depression. |

Method of Generating Random Sequence

Permuted block randomization, variable

Method of Concealment

Sequentially numbered, sealed, opaque envelopes

Blinding/Masking

Open Label



| | | |
|---|---|---|
| Primary Outcome | Outcome | Timepoints |
| | PHQ-9 score depressive symptoms | After three sessions of intervention delivered at gap of two weeks. |
| Secondary Outcome | Outcome | Timepoints |
| | Complications in pregnancy and during delivery | 9 months ANC and 4 weeks after delivery |
| | Type and mode of delivery | 0-4 weeks after delivery |
| | birth weight, neonatal complications, postnatal complications | 0-4 weeks after delivery |
| | feeding practices, nutritional and immunization status of the infant | 0-6 months after delivery |
| | Physical, Neuro-developmental growth of Infant, Mother-child interaction | 0-6 months after delivery |
| Target Sample Size | Total Sample Size=776 Sample Size from India=776 Final Enrollment numbers achieved (Total)=Applicable only for Completed/Terminated trials Final Enrollment numbers achieved (India)=Applicable only for Completed/Terminated trials | |
| Phase of Trial | N/A | |
| Date of First Enrollment (India) | 01/09/2018 | |
| Date of First Enrollment (Global) | No Date Specified | |
| Estimated Duration of Trial | Years=2 Months=0 Days=0 | |
| Recruitment Status of Trial (Global) | Closed to Recruitment of Participants | |
| Recruitment Status of Trial (India) | Closed to Recruitment of Participants | |
| Publication Details | | |
| Brief Summary | <p>This study is a randomized, open label, parallel group, multi-center trial comparing the effectiveness of brief Nursing intervention for depression in pregnancy. The study will be</p> | |



conducted at four centers in India for 36 months. A total of 192 pregnant women (at each site) with mild depression will be assessed for the effectiveness of the intervention. The primary outcome measures will be PHQ-9 Score after three sessions of intervention delivered at gap of two weeks. The secondary outcomes will be complications in pregnancy and




during delivery, Type and mode of delivery, birth weight, neonatal complications, postnatal

complications, feeding practices, nutritional status, immunization status and physical growth of the

infant.

Effectiveness of a Brief Psychological Intervention Delivered by Nurse for Depression in Pregnancy: Study Protocol for a Multicentric Randomized Controlled Trial from India

Pracheth Raghuvver¹, Ramdas Ransing², Prerna Kukreti³, Mahesh Mahadevaiah⁴ , Wafaa Abdelhakim Elbahaey⁵, Satish Iyengar⁶, Harish Pemde⁷, Smita N. Deshpande⁸

ABSTRACT

Background: Perinatal depression (PD) has important implications for maternal and infant well-being but largely goes undetected. There is a need to develop low-intensity psychosocial interventions applicable to obstetric health care facilities.

Objective: To assess the effectiveness of a brief psychological intervention for mild to moderate PD delivered by a nurse as compared to treatment-as-usual (TAU).

Methods: This study is a randomized, open-label, parallel-group, multicentric trial being conducted in four sites of India. A total of 816 pregnant women with mild to moderately severe depression (Patient Health Questionnaire-9 score of 5–19) are being assessed for the effectiveness of the intervention. Participants are randomly allocated to two groups of trial

intervention (psychological intervention given by nurse) and TAU. The primary outcome is to compare the proportion of women reporting improvement across both groups. Participants are serially followed-up in each trimester and at 6, 10, 14 weeks, and 6 months postpartum. Secondary outcomes include pregnancy outcomes, feeding practices, physical growth, and immunization status of the infants.

Conclusion: It is a prospective pregnancy birth cohort with a robust design and long-term follow-up. This is one of the largest studies utilizing non-specialist health workers for the screening and management of PD. This study also holds promise to cast light on the course and outcome of depression during pregnancy in different parts of India. It is envisaged to help in developing a sound screening and referral-based protocol for obstetric settings.

Keywords: Perinatal, depression, randomized controlled trial, brief intervention, nursing, treatment gap

Key Messages: This is the study protocol of a multicentric study whose primary objective is to assess whether a brief psychological intervention for mild to moderately severe PD delivered by nurses be effective when compared to treatment-as-usual. The secondary objective is to identify the sociodemographic, obstetric, and pregnancy outcome predictors associated with mild to moderately severe depression.

Depression is the most common cause of disability worldwide, with over 300 million people living with depression, an increase of more than 18% between 2005 and 2015.¹ Pregnancy and transition to parenthood are associated with significant

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biological, psychological, and social changes. Of this, the perinatal period that commences at the time of conception, continues throughout the pregnancy and extends till one year after delivery is considered as a highly vulnerable phase.² One in five women are reported to have depression during this period, known as, perinatal depression (PD).³ PD has emerged as a cause of global concern.⁴ The onset of PD usually begins in the antenatal period.^{5,7} If unaddressed during the antenatal period, this could result in postnatal depression.⁸⁻¹⁰ PD not only increases maternal morbidity but also has deleterious effects on fetal outcome.¹¹

Early identification and prompt management is the key to reduce morbidity associated with PD. To achieve this, the American Congress of Obstetricians and Gynecologists (ACOG) recommends that all obstetric care providers carry out a comprehensive assessment of the pregnant woman's mood and emotional well-being, including screening for depression and anxiety using a validated instrument, during antenatal and postnatal visits. This needs to be linked with appropriate referral care.¹² Further, the World Health Assembly (WHA) recommended the incorporation of maternal mental health as an integral component of maternal and child health care.¹³

In recent years, there has been an increased focus on the development of feasible and effective psychological interventions for PD.¹⁴⁻¹⁶ An ongoing study in Italy aims to develop and assess the efficacy of a psychological intervention for PD.¹⁴ The United States Preventive Task Force reported that psychological interventions are effective in reducing PD through a systematic review.¹⁷ A cluster randomized controlled trial (RCT) conducted among Indian rural women reported that a participatory intervention with a women's group reduced maternal depression by 57%.¹⁸ Another RCT carried out in South India found that a community-based depression intervention program implemented through the existing health system was effective in managing women with depression in primary care.¹⁹ There are a few other studies that have attempted to assess the integration of perinatal mental health initiatives within existing maternal health settings.^{20,21}

However, despite the existing evidence and recommendations, there is a high

treatment gap of 76%–85% for mental health disorders in developing countries.²² In India alone, the treatment gap for any mental health disorder is as high as 83%. Reasons cited for such a huge gap include the dearth of mental health professionals (0.2 psychiatrists per 10,000 population against the ideal of 1 per 10,000) and inequitable distribution of available trained health professionals.²³

To address this gap, task-shifting with the involvement of non-specialist health workers (NSHWs) becomes imperative.^{24,25} This group may include general physicians, nursing professionals as well as personnel like the accredited social health activists (ASHAs) and the auxiliary nurse midwives (ANMs). Further, the World Health Organization (WHO) stressed the need for developing a low-intensity psychological intervention. This refers to an intervention being delivered by a less intense level of specialist human resources, that is, utilizing NSHWs for health care delivery.²⁶

There have been no systematic assessments of the effectiveness of these low intensity psychosocial interventions delivered by NSHWs across various levels of health care in India. It is important to assess the effectiveness of such interventions in different health care settings and challenges of implementation. In this context, the present study, funded by the Indian Council of Medical Research (ICMR) Task Force on Capacity Building for National Mental Health Programme (NMHP), is being conducted to assess whether a brief psychological intervention delivered by the nurse is effective in the treatment of depression in pregnancy as compared to treatment-as-usual (TAU), which includes assessment and management for PD by psychiatrists using a common protocol.²⁷ It is hypothesized that this intervention will not be inferior to TAU.

Material and Methods

Study Design

This study is an RCT that compares a brief psychological intervention for PD with TAU.

Study Duration

The study is ongoing at the time of this report and is being carried out for three

years. The study timeline is depicted in Table 1.

Study Setting

This study is being conducted in four health care facilities across India: (1) Smt. Sucheta Kriplani Hospital, attached to Lady Hardinge Medical College, New Delhi in north India, (2) BKL Walawalkar Rural Medical College, Sawarde, Maharashtra state, western India, and two sites in the southern state of Karnataka, (3) Yenepoya Medical College in Mangaluru, and (4) District Hospital, Dharwad. These sites were selected considering the geographical representation and levels of health care provided. The first three sites mentioned above are tertiary care teaching hospitals attached to Medical Colleges, while the fourth site is a secondary care district hospital. The characteristics of the four study sites are described in Table 2.

Sample Size

To be able to detect a 20% difference in the depression scores between the intervention and control group with 80% power using a two-sided test with an alpha (α) value of 0.05, a total of 170 pregnant women with mild depression are required. After considering an attrition of 30% (design effect of 0.5), the sample size is calculated to be 204.²⁸ Thus, the sample size is calculated to be 204 for each site, so 816 is the total sample size for all the four sites. Thus, 102 women each in both the experimental and control groups are being recruited in every study site.

Complete enumeration is being done to screen all pregnant women visiting the antenatal OPD. Thereafter, pregnant women with a PHQ-9 score of 5–19 are being invited to participate in the trial, until the desired sample size of 204 pregnant women is reached.

Participants

Participants must satisfy all of the following inclusion criteria to be considered for this study: (1) pregnant women with a gestational age of ≤ 20 weeks (first trimester/early second trimester) attending the OPD of the four study sites for antenatal care, (2) those with a score of 5–19 on Patient Health Questionnaire-9 (PHQ-9) (mild to moderately

TABLE 1.
Timeline of the Study

| Schedule of Research Activities | 1st Year | | | | 2nd Year | | | | 3rd Year | | | |
|--|----------|----|----|----|----------|----|----|----|----------|----|----|----|
| | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Recruitment of research staff and induction training | ✓ | | | | | | | | | | | |
| Preparation, translation, and pilot testing of study tools, modules, and training of nursing staff | ✓ | ✓ | | | | | | | | | | |
| Data collection: Recruitment of participants, interventions, and follow-up | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Data analysis, preparation of report, sharing of data and publications | | | | | | | | | | ✓ | ✓ | ✓ |

Q: quarters = three months.

TABLE 2.
Characteristics of the Four Study Sites

| Institute/Characteristics | Smt. Sucheta Kriplani Hospital, Lady Hardinge Medical College | BKL Walawalkar Rural Medical College | Yenepoya Medical College | Dharwad Institute of Mental Health and Neurosciences |
|---------------------------|---|--|--|--|
| Management | Government of India (Central) | Charitable Trust (Private) | Charitable Trust (Private) | Government of Karnataka (State) |
| Year of establishment | 1916 | 2015 | 1999 | 1845 |
| State | Delhi | Maharashtra | Karnataka | Karnataka |
| Region | North | Western | South | South |
| Population served | Urban, underprivileged | Rural, underprivileged | Rural and urban, underprivileged | Urban, underprivileged |
| Study site | Tertiary care hospital attached to a medical college | Tertiary care hospital attached to a medical college | Tertiary care hospital attached to a medical college | District hospital |

severe depression), and (3) intending to continue antenatal care, undergo delivery at the study site and post-delivery, willingness to visit the study site for postnatal care and immunization of the infant.

The exclusion criteria are as follows: (1) unmarried women, (2) history suggestive of assisted conception, (3) history suggestive of intellectual disability, (4) history suggestive of already being on psychiatric treatment for any mental illness, and (5) those expressing self-harm ideation or having a score of ≥ 20 on PHQ-9 (severe depression).

Brief Psychological Intervention (BIND-P Intervention)

An assessment of mental health needs and help-seeking for PD was conducted. We also gained insights from health care providers, particularly physicians and nurses, about their experiences of providing care for PD.^{13,29} We brainstormed and prepared the first draft of the intervention after an extensive literature review on various aspects of PD like systematic

reviews on clinical and psychosocial presentations, epidemiological studies, existing interventions and models, potential challenges in implementations and strategies. We sought inputs from research experts in a capacity building workshop and fine-tuned the intervention.³⁰ The content was then validated by obstetricians, pediatricians, psychiatrists, and public health experts across India. Thereafter, we arrived at a consensus and finalized the intervention. The intervention was developed in the English language, and then translated to three languages (Marathi, Hindi, and Kannada).

The BIND-P intervention is primarily conceptualized as a health care worker based psychological intervention comprising of three brief sessions of 15–20 minutes duration sessions delivered once in two weeks. The first session includes psychoeducation with a focus on depression and its implications in pregnancy and measures to alleviate the same. During this session, initially, the nurse introduces herself and builds a rapport with the participant. Thereafter,

the nurse provides more details about mental health, depression, and the core therapeutic component for the three sessions. Two weeks later, the second session that includes relaxation and breathing exercises and visual imagery techniques is being delivered. The second session begins with a quick recap of the contents of the first session, after which, the nurse demonstrates certain brief and simple progressive muscle relaxation exercises. This is followed by demonstration of simple breathing techniques and visual guided imagery. The third session carried out two weeks after the second session. This session focuses on health promotion activities like nutrition, exercise, social support, sleep hygiene, and training for thinking healthy. The self-explanatory diet, exercise, and sleep charts will be provided to the participants for self-monitoring. All the three sessions conclude with a summary of the contents delivered.

The BIND-P intervention is brief, pragmatic, generalizable, and culturally grounded. It includes integral components of the WHO Thinking

Healthy Program like psychoeducation, sleep, nutrition, and exercises.³¹ However, the BIND-P intervention has been developed considering factors like the diverse Indian health care setting, ease of implementation, long-term sustainability, and improvement of the referral system for specialist care. On the contrary, the WHO Thinking Healthy Program is an evidence-based, non-specialist-delivered depression intervention.

Treatment as Usual

The control group were assessed and treated by a psychiatrist independent of the research team. A TAU protocol for this arm was developed after reviewing the recent guidelines published in 12 countries and the Indian Psychiatric Society (IPS) guidelines for the management of depression in pregnancy.^{32,33} Further, we also reviewed the guidelines provided by Kazdin et al. while drafting the TAU protocol.²⁷ The TAU protocol was kept uniform across all four sites. However, the psychiatrists may use the drugs or therapy based on their experiences, as and when required.

Study Tools

The following validated tools will be used: (1) a semi-structured pro forma to capture the study variables, (2) Modified BG Prasad Scale, 2016 and Modified Kuppuswamy Scale for socioeconomic status assessment,^{34,35} (3) Patient Health Questionnaire-2 (PHQ-2) for depression screening and Patient Health Questionnaire-9 (PHQ-9) for rating the severity of depression in both groups,^{36,37} and (4) diagnostic and statistical manual 5th edition (DSM 5) for diagnosis of depression by a psychiatrist in the TAU group.³⁸

Recruitment of Staff and Training

In each site, two Junior Research Fellows (JRFs), who are qualified psychologists or psychiatric social workers, and one staff nurse or two ANMs were recruited. The JRFs and the staff nurse/ANMs underwent induction training by the PI at each site for participant enrollment and data collection. The PI and the other members of the study team, which included experts from psychiatry, obstetrics and gynecology, and community medicine trained the

staff nurses/ANMs at each site, through a three-day workshop. To ensure uniformity of contents of the training program across the four sites, a training manual was developed by the study team in English and translated to Hindi, Marathi, and Kannada. All four sites adhered to the training manual while conducting the training program for nurses. The training included didactic lectures, case-based learning, demonstrations, and assignments. Emphasis was given to hands-on training. The topics covered were rapport building, communication skills, screening for PD, BIND-P intervention, referral, and follow-up assessment. Monthly reorientation sessions are also being conducted.³⁹ Additionally, we have also trained registered staff nurses working in antenatal or postnatal OPD of all the four sites to deliver the intervention. Reorientation sessions to these staff nurses are also being held every quarter.

Data Collection Procedure

Participant Recruitment

The internationally accepted and validated PHQ is used as the screening tool for PD.⁴⁰ After the JRFs obtain consent for screening, the staff nurse/ANMs screen the pregnant women with PHQ-2. It consists of two items that enquire about the frequency of the symptoms of depressed mood and anhedonia, scoring each as 0 (not at all) to 3 (nearly every day). The purpose of PHQ-2 is for initial screening as a “first step” approach.⁴¹ A score of ≥ 3 is considered as the cut-off for risk of PD and such women are then further evaluated with PHQ-9 by the nurse/ANMs. It has nine questions with a score from 0 to 3 for each question (maximum score of 27). A threshold score of 5–9 is regarded as mild depression, a score of 10–15 is regarded as moderate depression, 15–19 signifies moderately severe depression, and 20 or higher severe major depression.⁴² Those with a PHQ-9 score of 5–19, that is, mild to moderately severe PD, which includes (1) minor depression (PHQ-9 scores ranging from 5 to 9), (2) dysthymia and major depression-mild (PHQ-9 scores ranging from 10 to 14), and (3) major depression, moderate (PHQ-9 scores ranging from 15 to 19) are invited to participate in the trial with another written informed consent obtained by the

JRFs. Recruited participants are further interviewed with a semistructured and pretested pro forma by the JRFs. The pro forma gathered socio-demographic variables, marital history, key obstetric variables like gravidity, complications in the present, and past pregnancies, and modes of past deliveries.

Randomization

Eligible and consenting participants are allocated to the intervention or the control groups using a computer-generated random number sequence by the members of the research team/JRFs. Block randomization using random permuted blocks of different sizes, where the size of the next block is randomly chosen from the available block sizes is followed. To ensure that all participants have an equal chance of being in the intervention or control group, we selected a 1:1 allocation ratio.⁴³ As the research staff were actively involved in the screening and recruitment process, it was not possible to mask the information about the allocation of the trial participants into the intervention and the control groups.

Delivery of BIND-P Intervention, TAU, and Outcome Assessment

Both the intervention and the control groups receive routine antenatal care. The intervention group has been receiving the BIND-P intervention delivered by the trained staff nurses/ANMs. The intervention composes of three sessions delivered fortnightly at an interval of two weeks. The first session is being delivered at the time of recruitment, followed by the second session, which is delivered two weeks after the first session. The third session is delivered two weeks after the second session. Participants allocated to the TAU group were referred for assessment and treatment of PD by psychiatrists independent of the research team. The primary outcome assessment for both the arms is being carried out using PHQ-9 at two weeks after the third and final session of BIND-P intervention/TAU is delivered.

Follow-up

All the trial participants are being followed up in the antenatal OPD of the study sites once in every trimester during their routine antenatal visits. Later, the

participants are being follow-up at 6, 10, 14 weeks, and 6 months post-delivery, during the infant's scheduled immunization visits. Timely telephonic reminders are given to ensure that the participants adhere to the follow-up schedule and to minimize attrition. Any participant missing three consecutive follow-up visits is considered as a non-respondent.

Each of these follow-up visits include an interview with PHQ-9. Additionally, semi-structured follow-up pro formas tailored for each trimester of pregnancy and post-delivery are being used to collect key information related to maternal and infant outcomes, as and when applicable. At any stage during the follow-up visits, a participant having signs or symptoms of major depression-severe with a PHQ-9 score of ≥ 20 is referred for psychiatric evaluation.

Outcome Measures

Data on socio-demographic variables, obstetric profile, and PHQ-9 scores were taken at the baseline at the time of recruitment and at different intervals of the peripartum period (each trimester, at the time of delivery, 6, 10, 14 weeks, and 6 months post-delivery).

The primary outcome refers to the proportion of participants in the intervention group reporting improvement in depression as defined by a 20% reduction in PHQ-9 scores following three sessions of the intervention when compared to the TAU group.

The secondary outcomes include the following:

1. Association between socio-demographic variables and depressive symptoms, which includes maternal age, education, family income, occupation, and socioeconomic status, which will be captured at recruitment.
2. Association between key obstetric variables and depressive symptoms, which includes past obstetric history, past pregnancy details, medical comorbidities, and complications in the current pregnancy, which will be captured once in every trimester.
3. Maternal-related outcomes like mode of delivery and outcome (live birth/stillbirth/ neonatal death), which will be assessed at birth.
4. Infant-related outcomes measured at birth, 6, 10, 14 weeks, and 6 months of age, which includes birth weight, breastfeeding practices, weight at

6 months of age, immunization practices, and developmental milestones, which includes the gross motor, fine motor, language, and social/cognitive, which are a part of the maternal and child health card, Government of India. These assessments are being carried out by the JRFs. The data collection procedure is diagrammatically depicted in **Figure 1**.

Statistical Analysis

Data are entered in Microsoft Excel in addition to entry at District Health Information System-2 (DHIS-2) developed and maintained by the Data Management Unit (DMU), ICMR. Statistical analysis will be performed using Statistical Package for the Social Sciences (SPSS) Inc., Chicago, USA, Version 17.0. Continuous variables will be expressed as means/medians \pm SD/quartiles and categorical variables as percentages. Percentages and proportions will be used to summarize categorical variables. The dependent variables include categories of depression scores, while variables like sociodemographic factors, obstetric risk factors, and pregnancy outcomes will be considered as covariates. The bivariate analysis will be conducted by applying the chi-square test (Fisher's exact test when the expected value is < 5) for categorical variables. A P value of < 0.05 will be considered as the criterion for statistical significance. Multiple logistic regression analysis will be done on the outcome variables found to be statistically significant in the bivariate analysis. Adjusted odds ratios (AOR) with 95% confidence intervals (95% CI) will be computed for adjustment of the confounding variables and to explain the net bearing effect of the different independent variables. Missing data will be dealt with using several methods: completer analysis, last observation carried forward, and multiple imputations to do sensitivity analyses.

Ethical Considerations

The study is approved by the Institutional Ethics Committee of all four study sites. Permission from the authorities like Principal/Director of the institutes, Medical Superintendent of the attached hospitals have been obtained. Detailed information about the nature, objectives

of the study, the risks and benefits if any, the contents of the brief intervention, number of follow-up visits are provided to the study participants. Written informed consent is obtained at two stages, once for the eligibility survey and subsequently, before recruiting the participants into the trial. To ensure the privacy of the participants, data collection is carried out in a separate space or room in the OPD attached to the study site. Counseling is delivered on a one-on-one basis with only the research staff being present at the site. The participants are compensated for travel and indirect costs. The anonymity of the study participants is ensured. Strict confidentiality of the information collected is maintained. The participants are given the absolute right to withdraw from the study at any stage without specifying the reason.

Expected Harms and Management

The expected foreseeable unwanted events in this trial could be stigma, psychological trauma, worsening of existing symptoms, or the emergence of new symptoms and lack of improvement. To address the issue of stigma due to the detection of depression among the participants, the data collection will be carried out in a separate space within the OPD ensuring privacy. To address the issues of the severity of symptoms or lack of response, the participants will be followed up periodically and anyone with the PHQ-9 scores ≥ 20 or with self-harm ideation will be referred to a psychiatrist urgently.

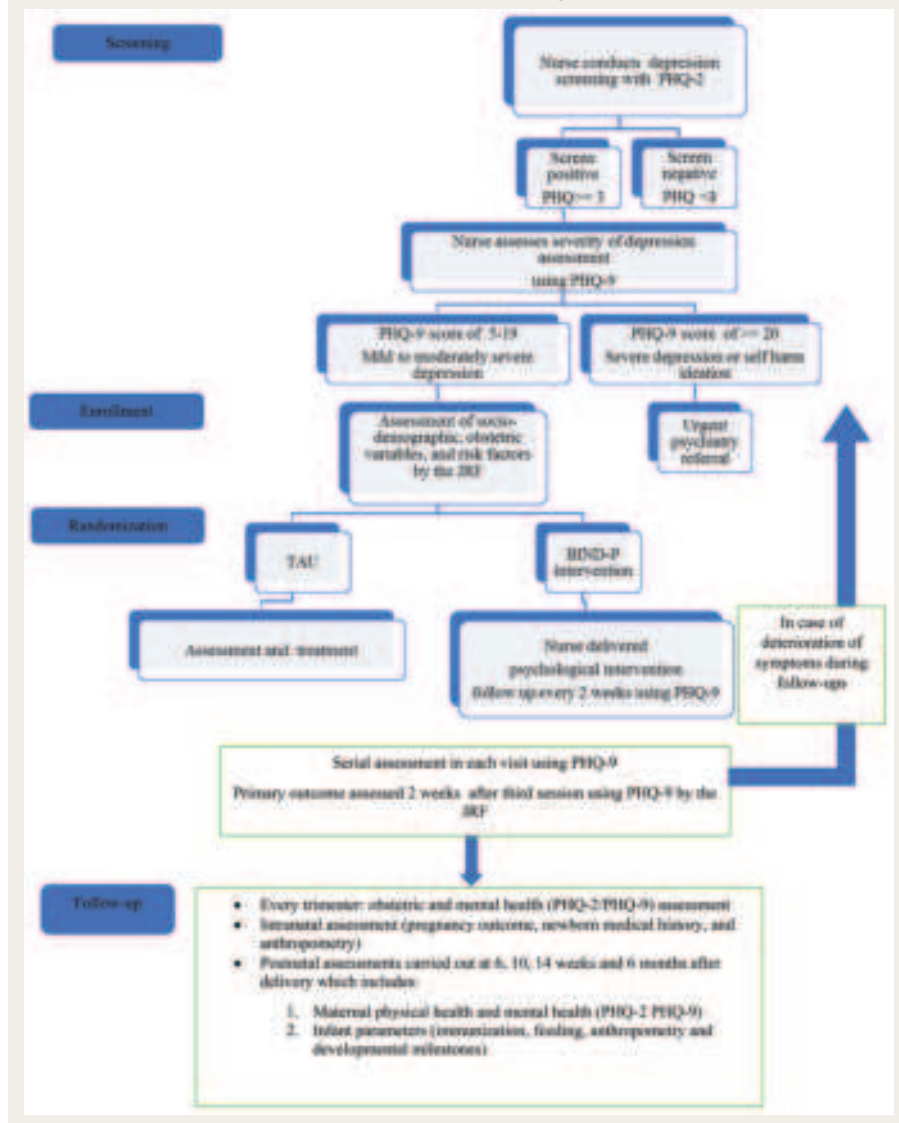
All four study sites have the required infrastructure, expertise, and facilities for handling any adverse event. In case of any adverse event/s related or unrelated to an investigational intervention, the PI will notify the Institutional Ethics Committee and the sponsor. In case of any injury occurring to a participant as a result of her/his participation in the study, the PI will facilitate free medical treatment at the hospital.

Data Monitoring

A National Coordinating Unit (NCU) has been set up by the ICMR, which will facilitate the project in terms of scientific inputs, administrative oversight (meeting deadlines, meeting scientific

FIGURE 1.

Data Collection Procedure Which is Being Followed in This Trial



targets, quality control). Each site interacts with members of the NCU for a progress review of the project through conference calls once a month. Standard Operating Procedures (SOPs) have been formulated by the NCU and have been shared with the PIs of individual sites. The DMU at the ICMR has developed a software called the DHIS-2, in which the data collected at each site are entered by the research staff daily. Data collected on their respective sites are checked for errors by the PI weekly so that corrections can be made in a timely fashion. All registers and records maintained by the research staff are reviewed by the PI weekly. At least 25% of the interviews carried out by the research staff are cross-checked randomly on-site by the PI

for completeness and adherence to the study protocol. Supportive supervision is being provided to the research staff by the PI. Additionally, random site visits are carried out by the PI and other members of the study team, once a week on any working day.

Discussion

The existing research on the effectiveness of a brief psychological intervention for depression in pregnancy is confined to a few studies conducted abroad and studies with follow-up are scant. To our knowledge, this is one of the largest multicentric studies that test the effectiveness of a psychological intervention for PD delivered by nurses. It also includes follow-up of antenatal women right from

conception to mother—child dyad till 6 months postpartum with serial assessments. This is likely to provide valuable insights about maternal depression, its course during the perinatal period, its impacts on pregnancy and infant outcomes in low middle-income countries.

Furthermore, our study uses PHQ for screening as well as assessment of the severity of PD. It has been translated and is widely available in various Indian languages. It has been validated for screening and severity assessment of PD.^{44,45} Other scales like Beck's Depression Inventory (BDI), Edinburgh Postnatal Depression Scale (EPDS), Hospital Anxiety and Depression Scale (HADS), and Hamilton Depression Rating Scale (HAM-D) were considered during the development of the protocol. However, translated and validated versions of these scales having robust psychometric properties in different Indian languages were not available at the time of protocol development.⁴⁶ Therefore, the use of a study tool that has robust psychometric properties like PHQ adds merit to our study.

Our study is not devoid of limitations. The four study sites were not randomly selected across India. There is no representation from central and eastern India that would have made the findings of the study more generalizable. However, this study is an outcome measure of a capacity building workshop on implementation research in mental health that was organized by the ICMR. Four of the authors of this publication (PR, RR, PK, MM), who are faculty members in the four study sites were trainees at this workshop. They demonstrated an interest in developing and testing the effectiveness of a psychological intervention for PD. Due to this like-mindedness, the four authors decided to collaborate for this multicentric trial. Therefore, the four study sites (one each in northern and western India and two in the south Indian state of Karnataka) were selected.

Nevertheless, our study has policy implications and would facilitate the incorporation of mandatory screening of pregnant women for depression into routine antenatal care. This may be instrumental in developing an effective program for universal screening of common mental disorders in antenatal clinics at par with screening for physical illnesses. This could also facilitate

the development of an effective referral system and empower NSHWs in providing care for mild illnesses, thereby reducing the treatment gap. In the long run, studies of such nature would help in early detection of depression and prevent the associated unfavorable outcomes.

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Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Trial Registration

The trial is registered prospectively before the recruitment of the study participants commenced in the Clinical Trial Registry maintained by the Government of India (CTRI/2018/07/014836).

This detail can be found at the International Clinical Trial Registry Platform maintained by the World Health Organization.

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Menstruation Predication Kit during luteal phase of menstrual cycle

Principal Investigator

Dr. Suvarna Patil

MD Medicine

Associate professor, Medicine

BKL Walawalkar Rural Medical college, Chiplun, Ratnagiri

Submitted to :

Biotechnology Industry Research Assistance Council (BIRAC)

Start Date:

11th March 2020

OUR TEAM



Dr Suvarna Patil
Principal Investigator

MD Medicine
Medical director,
BKL Walawalkar Hospital,
Dervan.



Dr Rohit Bhat

Senior Scientist

PhD Medicinal
Chemistry
Medicinal Biochemistry



Mr Charudutta Joglekar

Biostatistician

MS Biostatistics
Biostatistics, BKLWH



Dr Arvind Yadav

Professor

M.Sc. PhD,
Biochemistry.



Dr Anup Nilawar

Professor

MD Biochemistry
HOD, Biochemistry







Mr Ajit Nandoskar

Sr Lab Technician

M.Sc.
Biochemistry

Staff Members

| Sr No | Name | Designation | Qualification | |
|-------|----------------------|---|----------------------------|---|
| 1 | Dr Rohin Shinde | Project In charge | BHMS |  |
| 2 | Ms Shraddha Desai | Lab Technician | BSc Microbiology, ADMLT |  |
| 3 | Ms Dhanashree Chavan | Lab Technician | BSc Microbiology, ADMLT |  |
| 4 | Mrs Megha Pise | Scientific Administrative Assistant | MBA, BCA |  |

SHRI VITHALRAO JOSHI CHARITIES TRUST

PUBLIC TRUST REGISTRATION NO. E/6678 (BOMBAY)

C-28, 'Suyash' Apartment, Gokhale Road, (North), Dadar (W), Mumbai - 400 028. Phone : 2430 2517, 2422 6833

Resolution No. NIL.

Resolutions passed at a meeting of the Board of Trustees dated 27th February 2020 for acceptance of the terms and conditions of Letter of Intent and execution of documents for Grant-in-aid assistance

The Chairman informed the Board that the Biotechnology Industry Research Assistance Council, a Government of India Enterprise (BIRAC) has agreed, in principle, to provide a Grant-In-Aid assistance to the trust not exceeding Rs. 50.00 Lakhs (Rupees Fifty Lakhs only) for the trust project titled " Menstruation Prediction Kit during luteal phase of menstrual cycle " under (PACE).

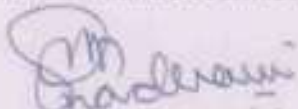
After some discussion, the following resolutions were passed:

RESOLVED

1. THAT the trust do accept the offer of BIRAC to grant to the trust Grant-In-Aid assistance not exceeding Rs. 50.00 Lakhs (Rupees Fifty Lakhs only) on the terms and conditions set out in the standard form of Grant-In-Aid Letter Agreement (GLA) received from BIRAC (copies whereof duly signed by the Chairman of the Board for purposes of identification, have been circulated to the Board/ placed on the table the meeting) and also avail of disbursement(s) in part or full from time to time as may be allowed by BIRAC under PACE.
2. THAT the following Trustees, viz. Shri Vikas Walawalkar, Dr. Sunil Nadkarni and Shri Prabhakar Kajrekar be and are hereby authorised severally to convey to BIRAC acceptance on behalf of the trust of the said offer for financial assistance on the terms and conditions contained in GLA referred to above and to execute such deeds, documents and other writings as may be necessary or required for this purpose including all amendments therein as may be suggested by and acceptable to BIRAC from time to time.
3. THAT the official seal of the trust be affixed to
 - a. the stamped engrossment(s) in duplicate of GLA
 - b. the stamped engrossment(s) of other documents as may be required to be executed under the official seal in favour of BIRAC to secure the aforesaid facilities in the presence of any of the following Trustees viz. Shri Vikas Walawalkar, Dr. Sunil Nadkarni and Shri Prabhakar Kajrekar who shall sign the same in token thereof.

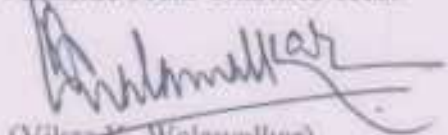
CERTIFIED TO BE TRUE EXTRACT OF THE MINUTES BOOK OF THE
PROCEEDINGS OF THE BOARD OF DIRECTORS

For Shri Vithalrao Joshi Charities Trust


(Dr. Sunil Nadkarni)
Trustee



For Shri Vithalrao Joshi Charities Trust


(Vikas K. Walawalkar)
Trustee & Chairman of the meeting

SHRI VITHALRAO JOSHI CHARITIES TRUST

PUBLIC TRUST REGISTRATION NO. E/6678 (BOMBAY)

C-28, 'Suyash' Apartment, Gokhale Road, (North), Dadar (W), Mumbai - 400 028. Phone : 2430 2517, 2422 8833

The Biotechnology Industry Research Assistance Council (BIRAC) has agreed, in principle, to provide a Grant-In-Aid assistance not exceeding Rs. 50.00 Lakhs (Rupees Fifty Lakhs only) to our Institute, viz. Shri Vithalrao Joshi Charities Trust, for the Project entitled "Menstruation Prediction Kit during luteal phase of menstrual cycle" under PACE.

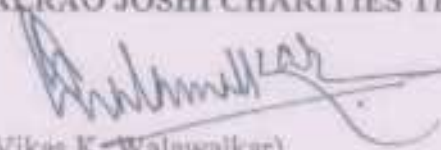
We, on behalf of Shri Vithalrao Joshi Charities Trust (the Institute), accept the offer of BIRAC to support the Project through Grant-In-Aid assistance not exceeding Rs. 50.00 Lakhs (Rupees Fifty Lakhs only) on the terms and conditions set out in the standard form of Grant-In-Aid Letter Agreement (GLA) received from BIRAC and also avail of disbursement(s) in part or full from time to time as may be allowed by BIRAC under PACE.

The following Trustees, viz. Shri Vikas Walawalkar, Dr. Sunil Nadkarni and Shri Prabhakar Kajrekar be and are hereby authorised severally to convey to BIRAC acceptance on behalf of the Institute of the said offer for financial assistance on the terms and conditions contained in the GLA referred to above and to execute such deeds, documents and other writings as may be necessary or required for this purpose, including all amendments therein as may be suggested by and acceptable to BIRAC from time to time.

THAT the Seal of the Trust be affixed to

- a. the stamped engrossment(s) in duplicate of the GLA
- b. the stamped engrossment(s) of other documents as may be required to be executed in favour of BIRAC to secure the aforesaid facilities by any of the following Trustees viz. Shri Vikas Walawalkar, Dr. Sunil Nadkarni and Shri Prabhakar Kajrekar.

FOR SHRI VITHALRAO JOSHI CHARITIES TRUST


(Vikas K. Walawalkar)
Managing Trustee

Date : 29th February 2020

Place : Mumbai

SHRI VITHALRAO JOSHI CHARITIES TRUST

PUBLIC TRUST REGISTRATION NO. E/6678 (BOMBAY)

C-28, 'Suyash' Apartment, Gokhale Road, (North), Dadar (W), Mumbai - 400 028. Phone : 2430 2517, 2422 6833

BANK DETAILS

| | |
|---------------------------|--------------------------------------|
| Name of the Bank | Bank of India |
| Branch Address | Dadar West, Mumbai-400 028. |
| Branch Code | 000015 |
| Account Number | 001520100000321 |
| Account Holder's Name | Shri Vithalrao Joshi Charities Trust |
| PAN Number | AABTS7103H |
| MICR Number (on Cheque) | 400013019 |
| NEFT/IFSC Code | BKID0000015 |
| Contact No. for any query | Dr Suvama Patil |

For SHRI VITHALRAO JOSHI CHARITIES TRUST


18/12/2020 TRUSTEE
(VIKAS K. WALAWALKAR)



Biotechnology Industry Research Assistance Council

(A Government of India Enterprise)

Ref. No. BT/AIR0775/PACE-18/19

Dated : 26.2.2020

Sub: Funding of Project entitled "Menstruation Prediction Kit during luteal phase of menstrual cycle" for funding under AIR-(PACE)

GRANT-IN-AID LETTER AGREEMENT

This Grant-in-aid Letter Agreement (hereinafter called as "GLA") is between Biotechnology Industry Research Assistance Council, a Government of India enterprise, incorporated under the Companies Act, 2013 having its office at 1st Floor, MTNL Building, 9, CGO Complex, Lodhi Road, New Delhi- 110003 (the "BIRAC") and the entities mentioned below for research proposal entitled "Menstruation Prediction Kit during luteal phase of menstrual cycle"

1. Recipient(s) and Designated Project Investigator(s):

| S. No. | Recipient(s) | Designated Project Investigator |
|--------|--|--|
| 1 | B.K.L. Walawalkar Hospital, Diagnostic & Research Centre, under the Trust named Shri Vithalrao Joshi Charities Trust having its office at C-28, 'Suyash' Apartment, Gokhale Road, (North), Dadar (N), Mumbai - 400028, hereinafter referred to as the "Trust" (which expression shall wherever the context so admits include its successors in interest, liquidators, administrators and permitted assignees). | Dr. Suvarna Netaji Patil Medical Director, Associate Professor, General Medicine B.K.L. Walawalkar Hospital, Diagnostic & Research Centre At & Post: Sawarde, Kasarwadi, Taluka: Chiplun, District: Ratnagiri, Maharashtra State, PIN- 415606 Email- director.bk(wrmc@gmail.com |

2. Aims & Objectives:

The detailed aims and the objectives that are to be executed by the aforesaid are as per the detailed Project document, submitted including revisions/modifications incorporated therein (hereinafter called as "Project") and appended herein as Schedule 3.

The main objectives proposed to be achieved from the project are enumerated hereunder:

1. Levels of Serum, urinary and Salivary progesterone will be measured early morning of all women participants during 4 consecutive premenstrual days.
2. Prototype development of a kit using lateral flow technology for quantitative estimation of Salivary progesterone.
3. Kit will be used for prediction of onset of menstrual cycle in all women.

3. **Project Duration:** The Recipients shall complete the Project within the stipulated period of 18 months from the date of acceptance of the GLA by all the recipients. In the event the Parties affix their signatures to this GLA on separate dates, the GLA shall be effective from the date on which the last set of signatures is affixed thereto "Effective Date". Project Duration is subject to the Change order(s) issued by the BIRAC from time to time.



(Signature)
Page 1 of 14

(Signature)



TRUSTEE

1st Floor, MTNL Building, 9, CGO Complex, Lodhi Road, New Delhi - 110003, India
Phone: +91-11-24389600 Fax: +91-11-24389611 Website: www.birac.nic.in E-mail: birac.dbi@nic.in
CIN No. : U73100DL2012NPL233152

4. Project Implementation Site:

B.K.L. Walawalkar Hospital, Diagnostic & Research Centre
 At & Post: Sawarde, Kasarwadi,
 Taluka: Chiplun, District: Ratnagiri,
 Maharashtra State - 415606

5. Project Cost and Contribution: The total estimated cost of the Project is Rs. 50.00 Lakhs (Rupees Fifty Lakhs only). The contribution of BIRAC is Rs. 50.00 Lakhs (Rupees Fifty Lakhs only) as Grant-in-aid to the BKL Walawalkar Hospital Diagnostic Research, on the terms and conditions detailed in this GLA.

6. BIRAC Budget break-up : (Rs.in Lakhs)

| Details | Support under PACE to | Total |
|---------------|--|--------------|
| | BKL Walawalkar Hospital Diagnostic Research Centre | |
| Non-recurring | 5.00 | 5.00 |
| Recurring | 45.00 | 45.00 |
| Total | 50.00 | 50.00 |

| Budget Break-up Recurring(Rs In Lakhs) | | |
|--|---|--------------|
| Recurring items | Contribution by BIRAC to BKL Walawalkar Hospital Diagnostic Research Centre | Total |
| Manpower | 16.02 | 16.02 |
| Consumables | 18.43 | 18.43 |
| Travel | 1.00 | 1.00 |
| Outsourcing | 8.55 | 8.55 |
| Contingency & Other Costs | 1.00 | 1.00 |
| Total | 45.00 | 45.00 |

Details of equipment proposed to be acquired through BIRAC contribution for applicant Trust

| S. No | Infrastructure/Equipment | Capacity | Quantity | Specific Requirement In The Project | Estimated Value (Rs. In Lakhs) |
|---|--------------------------|----------|----------|--|--------------------------------|
| 1 | ELISA reader and washer | NA | 1 | To measure progesterone in blood, urine & saliva | 5.00 |
| Accessories To Be Acquired (Rs in Lakhs): | | | | | 0.00 |
| Total : | | | | | 5.00 |



SHREE VITHALRAJ CHARITIES TRUST

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TRUSTEE
 Page 2 of 14

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7. Milestones/Timelines

| S. No. | Milestones | Month of end of activity | Required financial input (Rs. In Lakhs) |
|--------|---|--------------------------|---|
| 1 | Acceptance of Undertaking under GLA <i>And</i> Fulfillment of fund release requirements | 0 | 15.00 (30% of BIRAC contribution) |
| 2 | Status report on Testing of blood, urinary and salivary progesterone by ELISA method in 100 participants. Selection of the sample and showing correlation of progesterone in salivary samples. Data analysis (TRL 3) <i>And</i> Submission of UC/SOE for the corresponding milestone certified by internal finance. | 5 | 10.00 (20% of BIRAC contribution) |
| 3 | Status report on Prototype development of Kit. ELISA testing for saliva with Kit prototype, and initiation of study for prediction of onset of menstrual cycle in 100 women (TRL 4) <i>And</i> Submission of UC/SOE for the corresponding milestone certified by internal finance. | 14 | 10.00 (20% of BIRAC contribution) |
| 4 | Status report on Validation of kit Sensitivity, Specificity In 100 women (TRL 5) <i>And</i> Submission of UC/SOE for the corresponding milestone certified by internal finance. | 18 | 10.00 (20% of BIRAC contribution) |
| 5 | Submission of final completion report and consolidated Utilization Certificate (UC) and Statement of Expenses (SOE) | 18 | 5.00 (10% of BIRAC contribution) |
| | | Total | 50.00 |

Note:- Utilization Certificate (UC) and Statements of Expenses (SOE) duly audited by a chartered accountant for the expenditure incurred towards the Project for every half year period, ending 30th September and 31st March, to BIRAC, within a month of closure of the accounts for the respective half year should be submitted by the Fund Recipient till completion of Project Duration.

8. Periodic Payment/Release Arrangements of the project support based on milestones

| Instalment | Contribution by BIRAC under PACE to BKL Walawalkar Hospital Diagnostic Research Centre | Total (Rs. in Lakhs) |
|------------|--|----------------------|
| First | 15.00 | 15.00 |
| Second | 10.00 | 10.00 |
| Third | 10.00 | 10.00 |



SHREE VITHALRAO JOSHI CHARITIES TRUST

Page 3 of 14

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| | | |
|--------|-------|-------|
| Fourth | 10.00 | 10.00 |
| Fifth | 5.00 | 5.00 |
| Total | 50.00 | 50.00 |

Regulatory Requirement : *Human Ethics Committee approval before start of the Project.*

9. The recipient of the fund should convey their acceptance to the terms and conditions of this GLA within four (4) weeks of the issue of GLA failing which the present offer of the funding support will be considered as infructuous and the project will be treated as withdrawn.

10. Inclusion by Reference:

| | |
|---|---|
| This GLA includes and incorporates by this reference: | <ul style="list-style-type: none"> - Terms and Conditions (Schedule 1) - Acceptance and Undertaking (Schedule 2) - Project document (Schedule 3) - Intellectual Property Governing Framework (Schedule 4) |
|---|---|

11. The Expenditure is debit to B.04 - Head of Accounts for the financial year 2019-20.

12. This issue with the approval of competent authority vide BFD No. BFD/AD/B.04/0143/2019-20 dated 24/02/2020

13. The GLA has been noted at Serial No. 27 in the Register of Grant/Cost.



SHREE VITHALRAO JOSHI CHARITIES TRUST

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This GLA is between Biotechnology Industry Research Assistance Council ("BIRAC") and B.K.L. Walawalkar Hospital, Diagnostic & Research Centre, and is effective as of the date of last signature. Each party to this GLA may be referred to individually as a "Party", B.K.L. Walawalkar Hospital, Diagnostic & Research Centre as "Fund Recipient" and all Party together as the "Parties". As a condition of this grant, the Parties enter into this GLA by having their authorized representatives sign below:

| | |
|--|--|
| I) For and on behalf of BIRAC | |
| Signature |  |
| Name: Dr. Sanjay Saxena | |
| Designation : GM & Head – Investment | |
| Official Seal |  |
| I) For and on behalf of B.K.L. Walawalkar Hospital, Diagnostic & Research Centre, the "fund recipient" duly authorized vide letter dated by its concerned authority. | |
| Signature | SHREE VITHALRAO JOSHI CHARITIES TRUST, SHRI VITHALRAO JOSHI CHARITIES TRUST  |
| Name | (NIKAS K. WALAWALKAR) TRUSTEE (DR. SUNIL NADKARNI) TRUSTEE |
| Designation | |
| Trust Seal |   |

Schedule 1

The terms and conditions for Project support under Grant-in-aid Letter Agreement (hereinafter called as "GLA") are as follows;

1. FUND DISBURSEMENT

- a. First installment of the Grant-in-aid will be released after issue of the GLA subject to fulfilment of the terms and conditions for such release by the relevant Parties. Further release of funds shall be subject to satisfactory progress against the objectives, outputs, milestones and targets specified in the Project which progress shall be determined by BIRAC and on submission of audited/certified statements of accounts and utilization certificates as provided for in Point 2 (a).

2. FUND UTILISATION AND ACCOUNTING

- a. The Fund Recipient shall submit the Utilization Certificate (UC) and Statements of Expenses (SOE) duly audited by a Chartered Accountant (CA) for the expenditure incurred towards the Project for every half year period, ending 30th September and 31st March, to BIRAC, within a month of closure of the accounts for the respective half year, in the format provided by BIRAC.
- b. The Fund Recipient shall submit UC and SOE duly certified by Internal finance personnel to BIRAC in the format provided on the completion of the respective milestones.
- c. The input credit for the expenditures incurred under the project out of Grant-in-aid shall be reported to BIRAC as a part of utilization certificate against the corresponding entry- "Amount of GST Input credit". Such amount, if any, will be considered accordingly at the time of the release of the next instalment.
- d. The Fund Recipient shall submit audited Annual reports along with the audited balance sheets and profit & loss accounts to BIRAC within seven months of the completion of the financial year ending 31st March till the completion of the Project Duration.
- e. The Fund Recipient shall keep the Grant-in-aid assistance in an interest bearing account with a Scheduled Bank (as defined under the RBI Act, 1934), the withdrawals and payments from which account shall be subject to verification by BIRAC. The interest earned on the Grant-in-aid should be reported to BIRAC. The interest thus earned on the grant in aid will be adjusted towards further instalment of the fund.
- f. The Fund Recipient shall ensure that the funds released for the Project are actually utilized only for the purposes of the Project and as expressly provided for in this GLA. Re-appropriation of BIRAC funds from one budget head to another shall not be effected without the specific written approval of BIRAC;



SHREE VITHALRAO JOSHI CHARITIES TRUST

Page 6 of 14
Shree Vithalrao Joshi
TRUSTEE



- g. The Fund Recipient shall refund such part of Grant-in-aid funds disbursed to it that remains unutilized with it upon completion of all the responsibilities, duties and functions specified in connection with the Project, within one month of such completion, to BIRAC along with consolidated accounts of the funds received and utilized and of the unutilized balance returned (UC & SOE);
- h. The Fund Recipient at their own cost shall take adequate care to maintain the capital assets acquired for the Project through BIRAC's Grant-in-aid. The capital assets acquired through BIRAC's Grant-in-aid shall not be disposed of or hypothecated without the specific approval of BIRAC till full and final settlement of all dues to the satisfaction of BIRAC.

3. PROJECT MONITORING

A Project Monitoring Committee (PMC) comprising of eminent experts from the relevant field(s) will be constituted by BIRAC to monitor the progress of the objective(s) of the Project. BIRAC shall have at least one representative in the PMC.

The functions of the PMC shall be as follows:

- a. To monitor the progress of the Project in conformity with the outputs, milestones, targets objectives and other terms and conditions as contained in the GLA
- b. To keep track of funding from any other source for the Project.
- c. To assess the global developments impacting the domain of the Project.
- d. Based on the foregoing, to assess and recommend:
 - i. the release of next instalment or part release thereof by the BIRAC.
 - ii. revision of Project Duration
 - iii. closing, dropping or modifying any of the components of the Project, within the overall approved objectives, budget and time-frame,
 - iv. inclusion of additional industrial/institutional partner(s), if the Trust requests involvement of such partner(s), in the overall interest of the Project; and
 - v. revision of the financial assistance.
- e. To advise on issues related to securing of IPR and mentor to overcome any technological problem faced in the Project implementation; and
- f. To advise on any other matter as referred to it by BIRAC and/or otherwise reasonably necessary for effective discharge of its duties and/or achievement of aims and objectives of the Schemes.

4. INDEMNIFICATION

- a) The Fund Recipient shall, at all times, indemnify and keep indemnified BIRAC against any claims or suits in respect of any losses, damages or compensation payable in consequences of any accident, death or injury sustained by their employees or by any other third party resulting from or by any act, omission or operation conducted by or on their behalf;



Page 7 of 14
SHREE WITHALDAD JOSHI CHARITIES TRUST

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- b) The Fund Recipient shall, at all times, indemnify and keep indemnified BIRAC against all claims/damages etc. by any infringement of any Intellectual Property Rights (IPR) while carrying out their responsibilities/work under the Project and this GLA.
- c) The provision of Grant-in-aid funds by BIRAC does not create any liability, explicit or implicit, on BIRAC in respect of the manpower engaged in the Project.
- d) The Parties shall not be held responsible for non-fulfilment of their respective obligations in successful completion of the Project under this GLA due to the exigency of one or more force majeure events such as but not limited to acts of God, war, flood, earthquakes etc.

5. CHANGE OF CONTROL:

BIRAC shall reserve the right to reconsider further funding assistance, governance of the New Intellectual Property and consider refund of the amount of Grant-in-aid in such circumstances of change of control as mentioned the following paragraphs;

- a. The Fund Recipient and the Trusts shall notify BIRAC of any material change in its entity status, entity name, Project Coordinator, implementation site, registered office or any such change that would impact on performance of its obligations under the Project and this GLA.

6. FORECLOSURE AND TERMINATION

- i. In case, during the tenure of the Project, it is found that the Project or any Project component is not likely to lead to successful completion, BIRAC may decide to foreclose the Project or the Project component as warranted. The decision of the BIRAC shall be final in all respects. The Fund Recipient shall immediately refund any grant-in-aid unutilized out of BIRAC's disbursements, along with detailed accounts of funds received, utilized and unutilized. If Fund Recipient like to continue the Project at its own cost, it would be able to do so without restrictions from BIRAC after complying with these provisions.
- ii. The Fund Recipient may, before the completion of the Project, terminate this Agreement by giving three months' notice in writing to BIRAC. BIRAC may also terminate this Agreement by written notice to "Fund Recipient" committing breach of any term of this Agreement and either not rectifying it to the satisfaction of BIRAC or not satisfying BIRAC about its inevitability within a specified period. In the event of termination of the Agreement, no further disbursement shall be made by BIRAC. The Fund Recipient shall be liable to return immediately the amount of Grant-in-aid already availed of from BIRAC with additional simple interest at the rate of 12 (twelve) per cent per annum within 30 (thirty) days of termination of the GLA. Interest on the quantum of funding assistance shall accrue from the date of release of the grant in aid assistance. In case of failure to repay, without prejudice to any other rights under this Agreement, the amount can be recovered by initiating any procedure available in Law.



SHREE VITHALRAO JOSHI CHARITIES TRUST

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 Page 8 of 14
TRUSTEE



7. DISPUTE RESOLUTION AND ARBITRATION

In the event of any dispute or difference whatsoever arising between the Parties out of or relation to the construction, meaning, scope, operation or effect of this agreement or the validity the breach thereof shall be resolved amicably by mutual consultation or through the good offices of the Chairman, BIRAC.

If such resolution is not possible, then the unresolved dispute or difference whatsoever arising between the Parties out of or relation to the construction, meaning, scope, operation or effect of this GLA or the validity the breach thereof or in respect of any defined legal relationship associated therewith or derived there from dispute shall be submitted for arbitration to International Center for Alternate Dispute Resolution (ICADR), an autonomous organization working under the aegis of the Ministry of Law & Justice, Department of Legal Affairs, Government of India. The Authority to appoint the arbitrator(s) shall be the ICADR. The Arbitration under this Clause and provision of administrative services by ICADR shall be in accordance with the ICADR Arbitration Rules, 1996. The award made in pursuance thereof shall be binding on the Parties. The venue of arbitration shall be New Delhi and the arbitration proceedings shall be conducted in English Language.

The provision of this Clause shall not become inoperative notwithstanding the GLA expiring or ceasing to exist or being terminated or foreclosed.

8. EFFECT AND AMENDMENTS TO THE GLA

- i. GLA shall remain in force for whichever of these is the longest time unless suspended sooner:
 - a. For **18 Months** from the above Effective Date subject to the Change Order(s) issued by the BIRAC from time to time;
 - b. As long as any part of the amount disbursed for the Project remains unspent; or
 - c. For as long as any monitoring or recording or IP governance is required under any relevant laws and regulations.
- ii. No amendment or modification of this GLA shall be valid unless the same is made in writing by the Parties or their authorized representatives specifically stating the same to be an amendment of this GLA. The modifications / changes shall be effective from the date on which they are made / executed unless otherwise agreed to.

9. SEVERABILITY

In case any one or more of the provisions or parts of a provision contained in this GLA shall, for any reason, be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision or part of a provision of this GLA; and this GLA shall, to the fullest extent lawful, be construed as if such invalid or illegal or unenforceable provision, or part of a provision, had never been contained herein.

10. GOVERNING LAW

This GLA and the associated undertaking shall be governed and interpreted in accordance with the laws of India subject to the exclusive jurisdiction of the Courts at New Delhi.



SHREE WITHALRAO JOSHI CHARITIES TRUST

Page 9 of 14

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TRUSTEE



Acceptance & Undertaking

Schedule 2

In consideration of the foregoing, the fund recipient, intending to be admittedly bound by the terms set forth above, undertake as stated below;

The recipient of the Grant shall;

1. Execute the activities as set out in the Project document and shall conform to the specified objectives, outputs, milestones, and targets therein at Schedule 3.
2. Submit periodic Progress report to BIRAC as per the Project milestones, details of activities involved in performing the Project activities, Utilization Certificate (UC) and Statements of Accounts Expenses (SOE) as per Schedule 1.
3. Comply with the fund utilization and accounting requirements as per Schedule 1.
4. Obtain all the necessary requisite approvals, clearance certificates, permissions and licenses from the Government/local authorities for conducting its activities/ operations in connection with the Project.
5. Abide by the decisions of BIRAC to modify the objectives, outputs, milestones, targets, Project Grant-in-aid as also the foreclosure of the Project or any of its components as may be arrived at after mutual discussion.
6. Subject themselves to Project monitoring of the Project Monitoring Committee (PMC).
7. Maintain strict confidentiality and refrain from disclosure thereof, of all or any part of such information and data exchanged/generated from the Project which is not in the public domain by use and/or publication at the time of its disclosure except for purposes in accordance with this Project or is required by public authority, by law or decree.
8. Shall verify the completion of the milestone and the utilization of the funds as stated which will be a pre requisite for the next fund release.
9. Complete the Project within the stipulated period subject to the Change Order(s) issued by the BIRAC from time to time.
10. The Fund Recipient shall not sub-delegate or outsource the obligations under this GLA without express permission of BIRAC except as provided for in the Project Document.
11. Adhere to this GLA and the Conditions of Grant, as, violation of any provision of which shall be the reason for suspension of the Grant.
12. Consider any changes to the provisions of this GLA when made in writing only and shall consider any notice duly served if the same shall have been delivered electronically through the official mail of the Project Coordinator or delivered by post at the addresses mentioned in the GLA.
13. Acknowledge the assistance of BIRAC while publishing or presenting in any manner the details of the Project, its progress or its success or commercialization of the Product.



Page 10 of 14
SHREE VITHALRAO JOSHI CHARITIES TRUST

[Handwritten Signature]
TRUSTEE



IN ACCEPTANCE WHEREOF the fund recipient hereto through their duly authorized representatives have signed this undertaking as set below:

| | |
|--|------------------------------------|
| For and on behalf of B.K.L. Walawalkar Hospital, Diagnostic & Research Centre, the "Trust" | |
| "Fund Recipient" | |
| Date and Place: <i>Shri Chaudhary</i> | |
| Signature: <i>Shree Vithalrao Joshi</i> SHREE VITHALRAO JOSHI CHARITIES TRUST SHRI VITHALRAO JOSHI CHARITIES TRUST | |
| Name: (VJAS K. WALAWALKAR) TRUSTEE (DR. SUNIL MADKAR) TRUSTEE | |
| Designation | |
| Seal  | |
| Witness | |
| Name: <i>Nekaji Ramkrishna Prati.</i> | Name: <i>Milind V. Yashwantrao</i> |
| Signature: <i>Nekaji</i> | Signature: <i>Milind</i> |
| Address: <i>B.K.L.W. HOSPITAL.</i> | Address: <i>B.K.L.W. HOSPITAL</i> |



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Shree Vithalrao Joshi
TRUSTEE

SHRI VITHALRAO JOSHI CHARITIES TRUST

Shri Chaudhary

TRUSTEE



Sgt

| OBJECTIVE AND TIMELINES |
|---|
| PROPOSAL OBJECTIVES & WORK PLAN |
| Objective 1: Levels of Serum, urinary and Salivary progesterone will be measured early morning of all women participants during 4 consecutive premenstrual days |
| Methodology/Experimental Design To Accomplish The Stated Objective: Total 100 girls/ women from fertile age will be selected. Early morning blood, urine & Saliva sample will be collected for progesterone PG. PG will be measured by ELISA method for 4 premenstrual days till the onset of menses. Data will be collected and analysed. |
| Alternate Strategies: Blood, urine and saliva can be collected simultaneously and results will be correlated. But saliva can be tested once the kit is ready and correlation can be established. |
| Objective 2: Prototype development of a kit using lateral flow technology for quantitative estimation of salivary progesterone. |
| Methodology/Experimental Design To Accomplish The Stated Objective: Methodology- Kit will be outsourced to Bhat Biotech company and they will supply the kits. 2 ml of early morning saliva will be deposited on the sample pad and will migrate towards the conjugate. In the middle, the conjugated antibodies will bind the target analyte and bottom migrate to the test line, where the bound target analyte will be captured. Detection limit will be tested. It will detect particular range of progesterone in the form of colour bands. Range of band will be in three groups less than 10 ng/dl, 10-50 ng/dl & greater than 50 ng/dl. |
| Alternate Strategies: The technology is based on a series of capillary beds, such as pieces of porous paper or sintered polymer. Each of these elements has the capacity to transport fluid e.g., saliva spontaneously. Accordingly membrane type can be changed during experiment. Chemicals used like tetrachlorouric acid, tween 20, tritonx100, ovalbumin, substrate etc. will be used as per the availability or will be replaced by available ones. |
| Objective 3: Kit will be used for prediction of onset of menstrual cycle in all women |
| Methodology/Experimental Design To Accomplish The Stated Objective: Kit will be used for 4 days prior to onset of menstrual cycle in selected women on daily basis. Data will be analysed. Graphs will be plotted. Results will be verified. |
| Alternate Strategies: If kits are designed in time we may start all the steps simultaneously. |



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| TIME LINES | | |
|--|--------------------------|---|
| Activities | Month Of End Of Activity | Indicators Of Progress |
| OBJECTIVE 1: Levels of Serum, urinary and salivary progesterone will be measured early morning of all women participants during 4 consecutive premenstrual days. | | |
| Developing SOP for Progesterone testing and protocol. Enrolment of participants. | 3 | Staff appointment and training done.SOP and protocols ready. Equipment installation |
| Testing of blood, urinary & salivary progesterone by ELISA method in 100 participants. Selection of the sample and showing correlation of progesterone in salivary samples. Data analysis. | 5 | SOP will be prepared. Serum progesterone, urine progesterone and salivary progesterone levels will be correlated to ensure that saliva is an equally good source of progesterone. Also the data will be correlated with the individual's menstrual cycle. |
| Activities | Month Of End Of Activity | Indicators Of Progress |
| OBJECTIVE 2 : Prototype development of a kit using lateral flow technology for quantitative estimation of salivary progesterone. | | |
| Prototype development of the Kit. ELISA testing for saliva with Kit prototype, and initiation of study for prediction of onset of menstrual cycle in 100 women | 14 | Outsource to a company-design of kit. Getting the required raw materials |
| Activities | Month Of End Of Activity | Indicators Of Progress |
| OBJECTIVE 3: Kit will be used for prediction of onset of menstrual cycle in all women | | |
| Scheduling participants for usage of kit as per the time table of their menstrual cycle. | 18 | Salivary Progesterone levels detected by kit and correlation with day of menstrual cycle. |
| Validation of kit Sensitivity and Specificity in 100 women | 18 | Testing and Development stage |



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Page 13 of 14



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INTELLECTUAL PROPERTY GOVERNING FRAMEWORK

a. Background IP Rights:

All rights, title and interest in or to any information, data, reports, documents, procedures, forecasts, technology, know-how, and inventions, including any patents, designs, copyrights, trademarks and any applications for patents, designs, copyrights or trademarks, in India and anywhere else in the world, that are owned by or vest in any Party before execution of this Agreement ("Background IP") shall remain the property of such Party.

b. New IP:

For the purpose of PACE, New IP means intellectual property generated during the conduct of the Project by the Fund Recipient excluding the intellectual property generated by the Trust before execution of this Agreement and any New IP generated by the Fund Recipient outside the scope of this Agreement even during the term of this Agreement. All rights, title and interest in New IP in India and anywhere else in the world, shall be owned by or vest in the applicant academia unless agreed otherwise between the parties.

The fund recipient will not publish in any manner with regard to the results of the Project which will be in derogation to the creation and protection of IP and related rights as stated above.

NOTE:For the purpose of this GLA, New IP means intellectual property generated during the conduct of the Project by the Fund Recipient, but excluding the intellectual property generated by the Fund Recipient before execution of this GLA and any IP generated outside the scope of this GLA even during the term of this GLA.

1. The background Intellectual Property (IP) generated by the Fund Recipient before execution of this GLA are as provided hereunder;

| | |
|----|---|
| I. | Background IP of the Trust |
| | IN201921024182: A Menstruation Prediction Kit |
| | APPLICANT: B. K. L. Walawalkar Hospital and Research Center |



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MILESTONE COMPLETION REPORT TO BE SUBMITTED BY LEAD INSTITUTE

GENERAL INFORMATION

Section A

1. **Proposal Reference No.:** BT/AIR0775/PACE-18/19
2. **Title of the Proposal:** Menstruation Prediction Kit during luteal phase of menstrual cycle
3. **Name of the Lead Institute:** B. K. L. Walawalkar Hospital Diagnostics and research centre
4. **Name of the Project Co-ordinator:** Dr. Suvarna Patil
5. **Address (Project implementation site as per GLA):** At & Post Sawarde, Tal- Chiplun, Dist- Ratnagiri, Maharashtra , 415606
6. **Sole/Collaborative:** Sole
7. **Name and address of the Collaborator, if any:** N.A.
8. **Date of start of the project:** 11/03/2020
9. **Scheduled completion date of the project:** 18 Months
10. **Sanctioned Objectives:**
 - a. Levels of serum, urinary and salivary progesterone will be measured early morning of all women participants during 4 consecutive premenstrual days.
 - b. Prototype development of a kit using lateral flow technology for quantitative estimation of salivary progesterone.
 - c. Kit will be used for predication of onset of menstrual cycle in all women.
11. **A. Technical Milestones (with scheduled time of completion):** Revised recommended milestones as per CHANGE ORDER dated 23.12.2020

| S.No. | Milestones | Date of start of the milestone | Date of completion of the milestone |
|-------|---|--|-------------------------------------|
| 1 | Signing of GLA | 22/02/20 | 01/03/2020 |
| 2 | Testing of blood, urinary and salivary progesterone by ELISA method in 100 participants. Selection of the sample and showing correlation of progesterone in salivary samples. Data analysis (TRL 3) | 11/03/2020 | 10/02/2021 |
| 3 | Prototype development of the Kit. ELISA testing for saliva with Kit prototype, and initiation of study for prediction of onset of menstrual cycle in | 11/02/21 (merger of second and third milestone) | 10/03/2022 |

| | | | |
|---|--|--|---|
| | 100 women (TRL 4) & Validation of kit sensitivity and Specificity in 100 women (TRL 5) | | |
| 4 | Submission of report | | - |

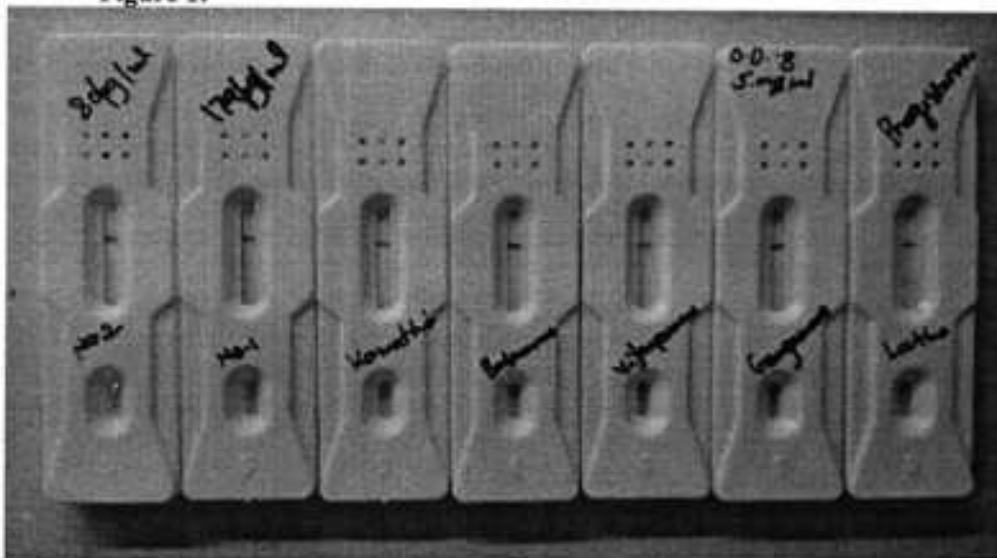
12. Milestone under evaluation (2nd, 3rd or 4th milestone): 3rd

- Start date: 11/02/21
- Scheduled end date: 10/09/2021
- Actual end date: 10 March 2022
- Reason for variation:

Development of LFA Prototype:

- We have completed 100% testing of biospecimens; serum (N=145), saliva (N=147) for progesterone and urine (N=137) for pregnanediol glucuronide (PDG). (N = individual)
- Based on ELISA testing of these samples, we identified 50-80 pg/ml as the cut off range for estimation of salivary progesterone for the predication of menstrual cycle 2 to 3 days in advance.
- We shared our results with our industrial partner Bhat Biotech for the development of PG LFA kit.
- They provided 2 prototypes for testing of saliva samples. However we are in process improvising to achieve the desired sensitivity.
- Bhat Biotech has made changes as per data given by us about the limit of the detection antibody and developed 3rd prototype. They have tested this prototype against their in house standards and saliva samples and claimed to have achieved 80 pg/ml cut off for progesterone. Results are provided below with short description:

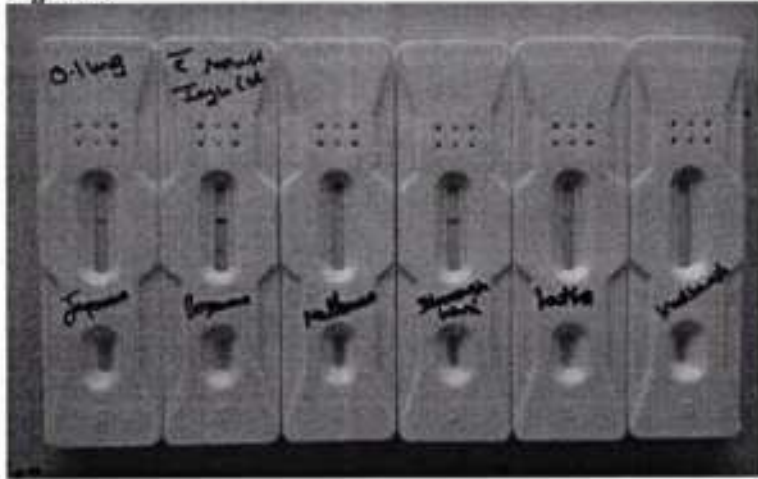
Figure 1:



Description: Experiment performed on 19/08/2021. New lot of Progesterone Monoclonal antibody gold conjugate was used. Progesterone BSA antigen on membrane was coated. In this experiment 80pg/ml and 179 pg/ml saliva sample and five unknown saliva samples were

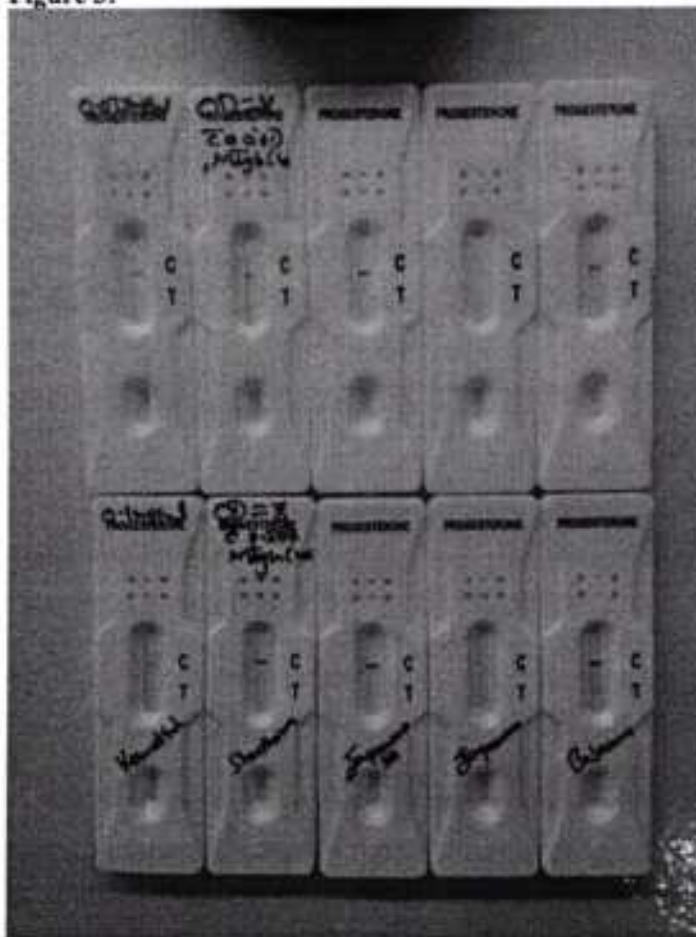
tested. 80pg and 179pg did not showed any test band, where as in unknown saliva sample one of the samples showed prominent test band within 15minute

Figure 2:



Description: Experiment performed on 23/08/2021. The above experiment (Fig.1) was repeated on nine unknown saliva samples. Four of them showed test band within 15minutes. Rest of the samples were clear.

Figure 3:



Description: Experiment performed on 26/08/2021. Higher OD gold conjugate was used for this experiment. Out of five samples tested, two samples have shown positive result (both test and control line appearing; i.e., salivary progesterone was below the threshold of 80pg/ml) and three samples have shown negative result (only control line is appearing) in 15 minutes reading time.

- We are in the process of acquiring this new prototype to be tested on our saliva samples.

13. **Recommendations from last review:**

(To be filled in by the Lead Institute) Section B

(Detailed technical report to be uploaded as annexure)

1. Present Stage of the project

(Pl. tick the appropriate box and define)

| Pre-PoC (TRL 1/2) (TRL(0)) | PoC (TRL 3-6) | Early-stage validation (TRL 7) | Late-stage validation (TRL 8) | Pre commercialization (TRL 9) | Commercialization |
|----------------------------|---------------|--------------------------------|-------------------------------|-------------------------------|-------------------|
| ✓ | ✓ | | | | |

2. Status of Technical Milestone under evaluation :

| Assessment | Achievement | | | | Additional time required to achieve the milestone (if needed) with comments |
|---------------------------|-------------|-----|-----|------|---|
| | 25% | 50% | 75% | 100% | |
| As per GLA | | ✓ | | | |
| As per the Lead Institute | | ✓ | | | |

3. For completed projects :

| Assessment | Achievement | | | | Extension (in months) required to complete the project with comments on expected deliverables |
|---------------------------|-------------|-----|-----|------|---|
| | 25% | 50% | 75% | 100% | |
| As per GLA | | | | | |
| As per the Lead Institute | | | | | |

4. Action taken on previous recommendations (if applicable) NA

5. Status of Regulatory Approvals, if any: NA

6. Suggested Plan of action for taking the technology/product forward (for completed Projects): NA

7. Details of publications/ patents applied for/granted

8. Any license/Agreements related to the project signed during the period (To be substantiated with a detailed report, copies of license/agreements signed, if any to be enclosed)
9. Date of Expiry of R&D recognition given by DSIR (If applicable) –
(If getting expired before the completion of the project whether applied for DSIR recognition) (Yes / No)
10. Are any Mid-term corrections in the Milestones required? Yes/No
If yes, please provide the following details:

| S. No. | Milestones | | |
|--------|---|--|--|
| | Original | Revised | Justification for the suggested modification(s) |
| 1. | | | |
| 2. | Status report (Table 1 and 2) on testing of blood, urinary and salivary progesterone by ELISA method in 100 participants. Selection of sample and showing correlation of progesterone in salivary sample (Figure 8). Data analysis TRL 3 Additional data analysis (Figure 1 to Figure 7) | Collection of samples of blood, urinary & salivary progesterone in 100 participants. Showing correlation of progesterone in salivary samples in 100% participants. Data analysis (TRL 3) | Acquisition of kits and raw material was delayed due to lockdown. COVID-19 pandemic affected the enrolment of subjects and was delayed. Biospecimen collection from 100 participants and sample analysis by ELISA is complete. TRL 3 achieved. |

Table 1: Sample collection and testing: Saliva, serum & urine testing for 4 days prior to onset of menstrual cycle
(Status report until 13/10/2021)

| Saliva | Serum | Urine |
|--|-----------------------------------|-----------------------------------|
| 1. Expected participants N=100 | 1. Expected participants N=100 | 1. Expected participants N=100 |
| 2. Enrolled participants N=175 | 2. Enrolled participants N=175 | 2. Enrolled participants N=175 |
| 3. Eligible participants N=147 | 3. Eligible participants N=145 | 3. Eligible participants N=137 |
| 4. *Sample analysed n=831 | 4. *Sample analysed n=784 | 4. *Sample analysed n=362 |
| <p>*Reasons for dropout candidates/missing samples:</p> <p>Samples could not be collected during Covid-19 lockdown period, some samples could not be collected due to early onset of menses and some individuals did not consent to give blood samples due to fear of prick. Other reasons, such as fever, sore throat, cough, mouth ulcer, delayed menses also contributed to loss during follow-up.</p> <p>In Group C, females who reported premenopausal symptoms or irregular menses were excluded from the study and their biological samples were not analysed.</p> | | |

N: for individuals, n: for sample

Table 2: Mean and median levels of saliva, serum progesterone (P) and urinary pregnanediol glucuronide (PDG) of samples collected in the morning during 4 consecutive premenstrual days.

| Days before menstruation | Saliva (P) (pg/ml) | | | Serum (P) (ng/ml) | | | Urine (PDG) (pg/ml) | | |
|--------------------------|-----------------------|---------------|--------|-------------------------|-----------|--------|------------------------|---------------|--------|
| | n | Mean (SD) | Median | n | Mean (SD) | Median | n | Mean (SD) | Median |
| -4 | 128 | 174.2 (127.2) | 146.2 | 114 | 8.2 (4.7) | 7.9 | 71 | 358.1 (331.6) | 239.4 |
| -3 | 152 | 132.0 (132.0) | 80.1 | 140 | 5.9 (4.8) | 4.6 | 88 | 310.0 (307.0) | 152.4 |
| -2 | 189 | 73.5 (78.7) | 41.7 | 180 | 3.5 (4.6) | 2.0 | 99 | 379.7 (361.6) | 217.7 |
| -1 | 205 | 50.2 (72.7) | 26.7 | 198 | 2.2 (4.6) | 1.0 | 104 | 346.7 (317.8) | 202.7 |
| 0 | 157 | 44.7 (62.7) | 24.3 | 152 | 1.5 (3.8) | 0.7 | - | - | - |
| Total | 831 | - | - | 784 | | | 362 | | |

There is a gradual drop in serum and salivary progesterone during the late luteal phase. However similar trend was not observed in the urine PDG analysis.

Figure 1: Median salivary progesterone (pg/ml) of morning samples collected during 4 consecutive premenstrual days.

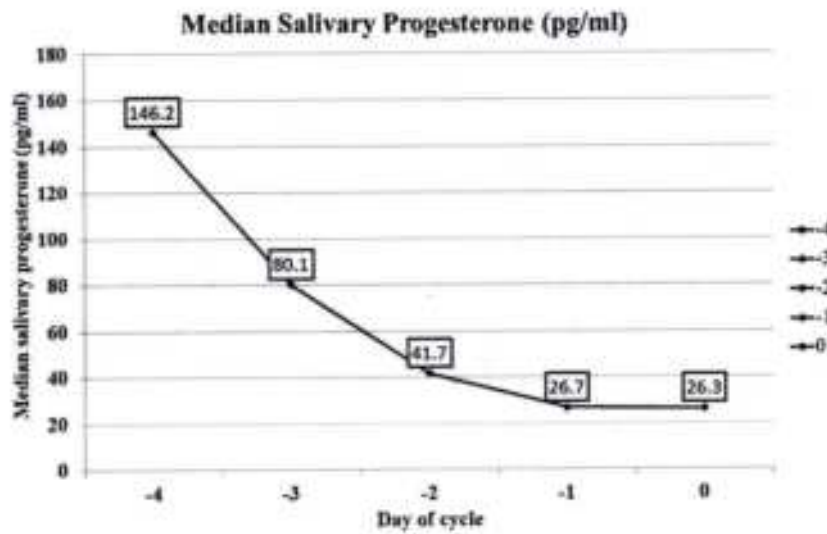


Figure 2: Median serum progesterone (ng/ml) of morning samples collected during 4 consecutive premenstrual days.

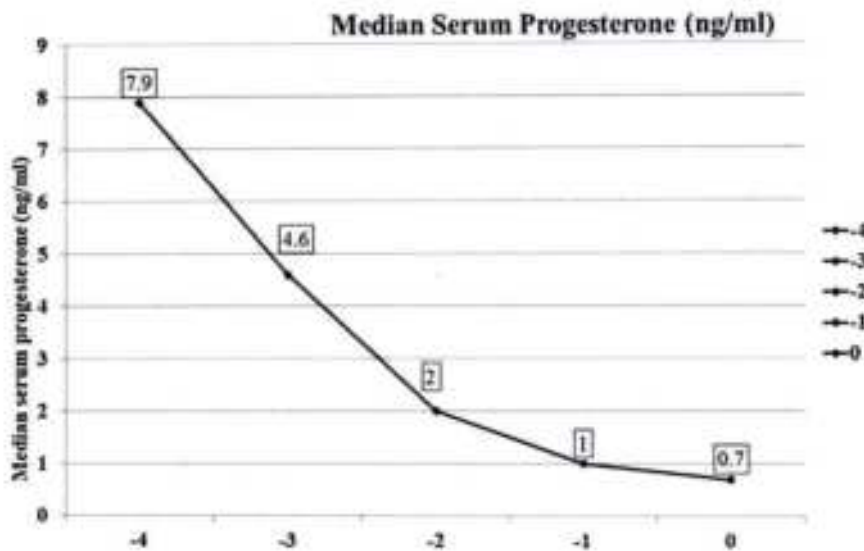


Figure 3: Median urine PDG (pg/ml) of morning samples collected during 4 consecutive premenstrual days.

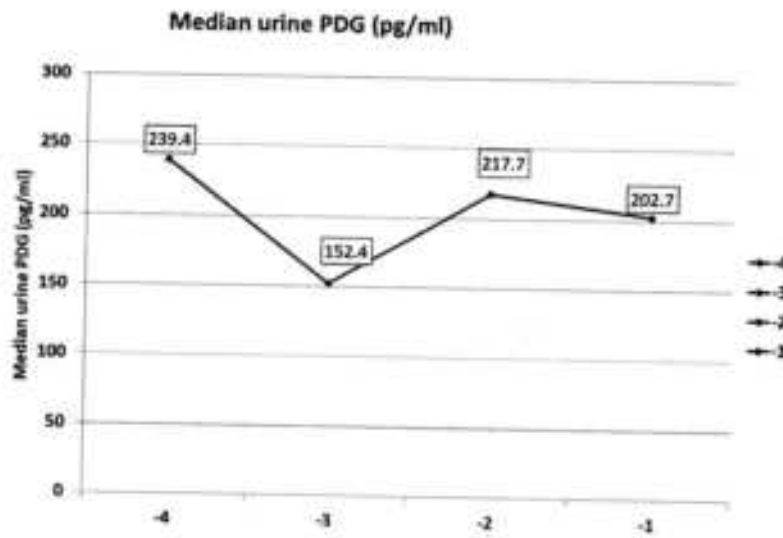


Figure 4: Median urinary PDG (ng/mg Cr)

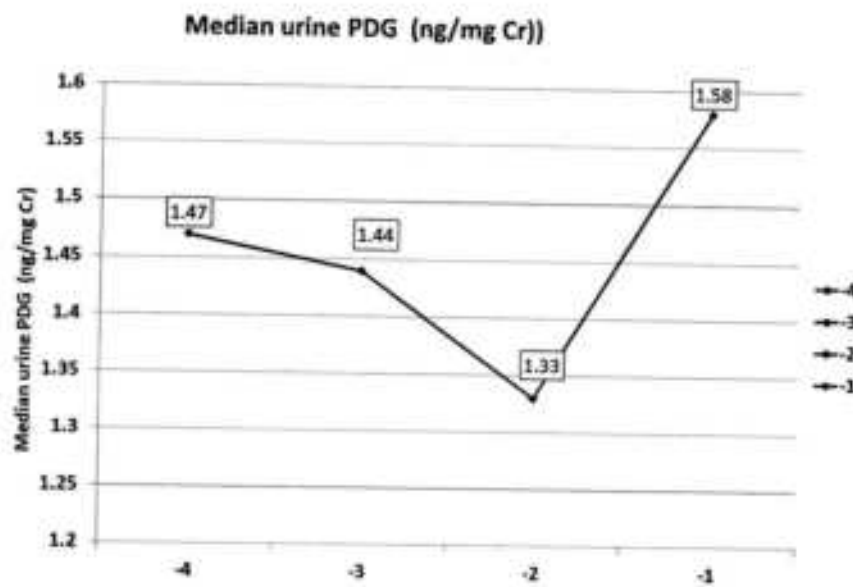


Figure 5 : Median salivary progesterone (pg/ml) in 3 age groups.

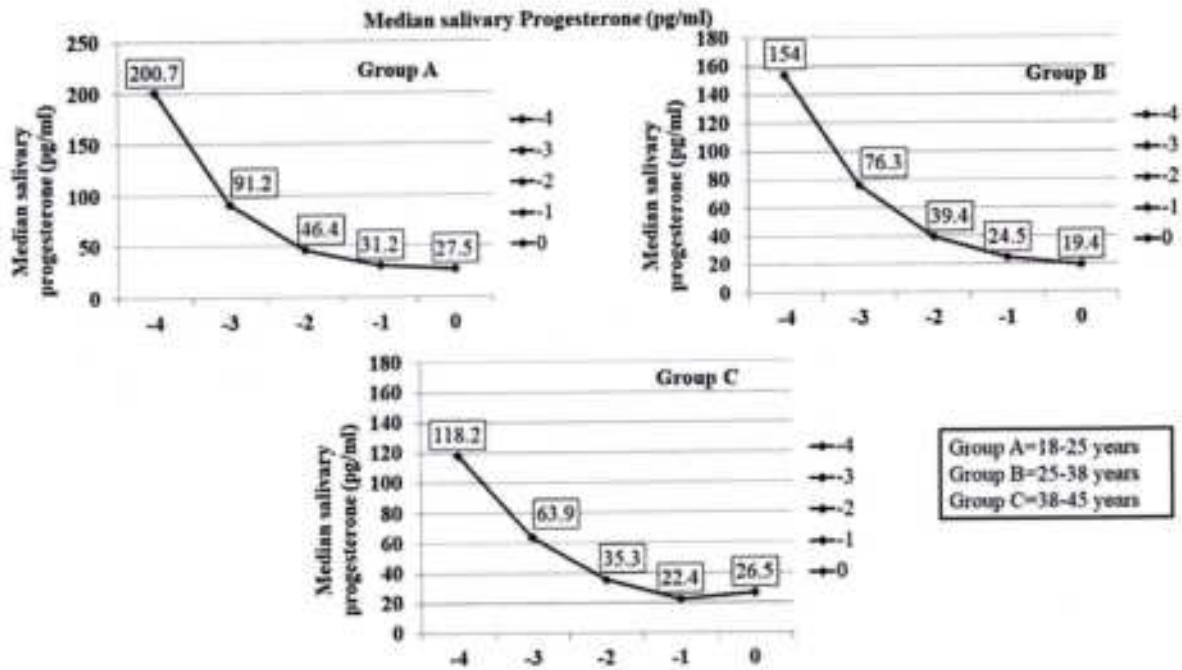


Figure 6: Median serum progesterone (ng/ml) in 3 age groups.

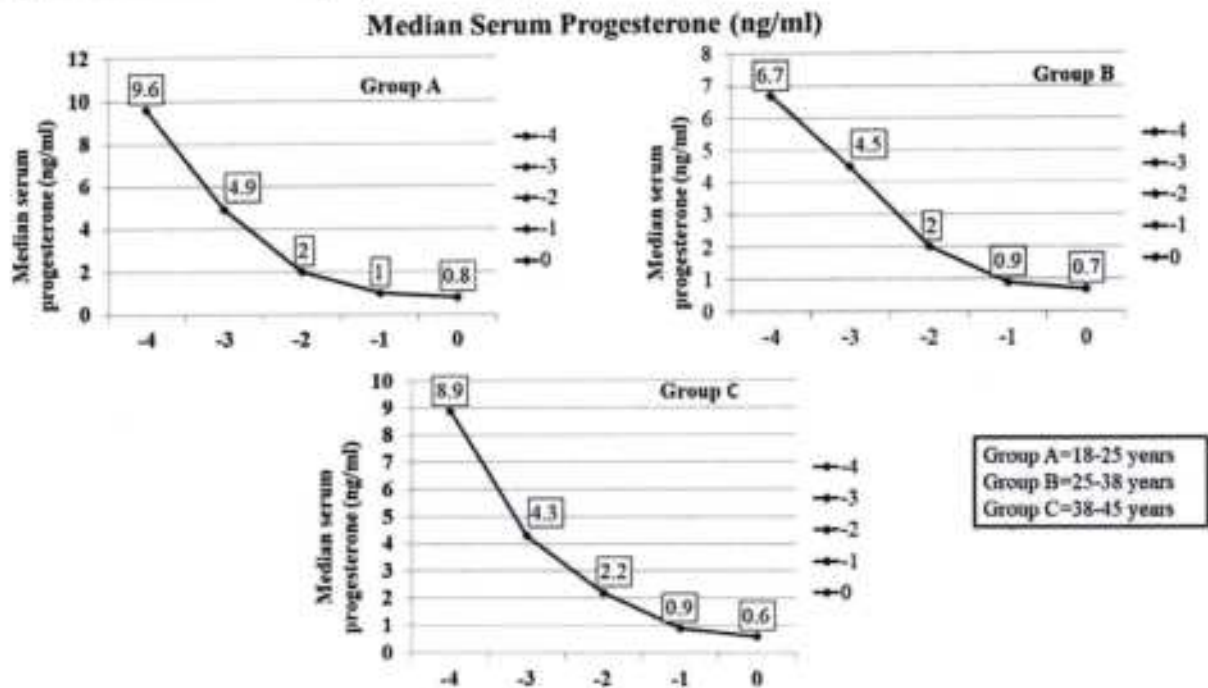


Figure 7: Median urine PDG (pg/ml) in 3 age groups.

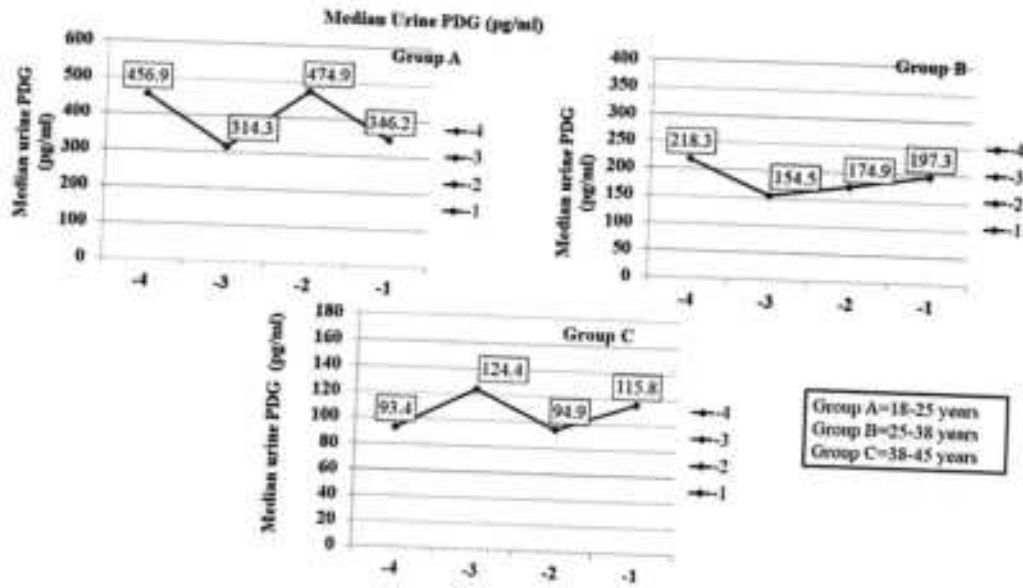
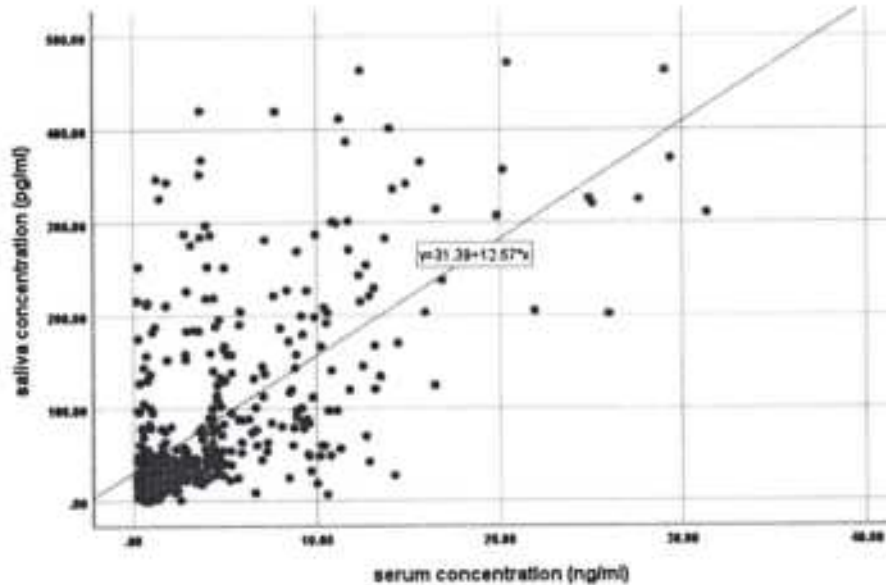


Figure 8: Scatter plot shows correlation between levels of progesterone in saliva and serum.



Analysis of the samples showed a high positive correlation between levels of progesterone in saliva and serum (Pearson Correlation coefficient: $r = 0.653$ $p < 0.001$).



(Signatures of Principal Investigator)
Dr. Suvarna Patil





B. K. L. Walawalkar Rural Medical College

TALENT Study

Transforming Adolescent Lives through Nutrition

(Collaborative network for adolescent nutrition and health in sub-Saharan Africa and India)

Index

| Sr. No. | Title | Page No |
|----------------|--|----------------|
| 1 | Approval letter from Chief Executive officer Ratnagiri for study work in schools | 1 |
| 2 | Study Protocol | 2-9 |
| 3 | Case Record form | 10-16 |
| 4 | Participant Information Sheet For Adolescents | 17-23 |
| 5 | APPENDIX A: Investigators in the TALENT network | 24-25 |
| 5 | Publications | 26-68 |
| 6 | Details of Workshop conducted under collaboration /project | 69-80 |

आरोग्य विभाग, जिल्हा परिषद रत्नागिरी



पत्ता :- आरोग्य विभाग, जिल्हा परिषद, रत्नागिरी
फोन नं. :- ०२३५२ - २२१४०३ / २२७६९८
फॅक्स नं. :- ०२३५२ - २२१४०३

जाक्र/रजिप/आवि/आरसीएच/५१०८/२०१८,
आरोग्य विभाग जिल्हा परिषद रत्नागिरी,
दिनांक:- 13-06-2018

प्रति,

✓ वैद्यकीय अधिकारी

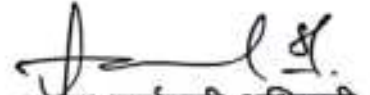
बी. के. एल. बालावलकर हॉस्पिटल डेरवण चिपळूण

विषय :- जिल्हा परिषदंतर्गत असणाऱ्या शाळा व कॉलेजमध्ये
संशोधना करिता परवानगी मिळणेबाबत...

संदर्भ :- SVJCT /BKLWH/256/2018

उपरोक्त सदरमिथ विषयान्वये आपल्या संस्थेकडून प्राप्त झालेल्या पत्रानुसार आपल्या संस्थेने जिल्हा परिषदेअंतर्गत असणाऱ्या शाळा व कॉलेजमध्ये Talent (Transforming Adolescent Live Through Nutrition) या विषयावर संशोधनाकरीता परवानगी मागितली आहे.

शाळा व कॉलेजमध्ये संशोधन करण्याकरीता संबंधित शाळेतील विद्यार्थी व त्यांचे पालक यांची लेखी परवानगी घेण्यांत यावी. संबंधित शाळेतील मुख्याध्यापक यांना आपल्या भेटीची तारीख व वेळ आगावू कळविण्यांत यावी. आपल्या संशोधना करिता आपण किशोरवयीन मुले व मुली यांचा गट निवडलेला आहे Privacy and Confidentiality राखणे गरजेचे आहे. याबाबत काही तक्रार उदभवल्यास त्याची सर्वस्वी जबाबदारी आपणांवर राहिल याची नोंद घ्यावी.


मुख्य कार्यकारी अधिकारी
जिल्हा परिषद रत्नागिरी

प्रत माहितीस्तव व कार्यवाहीस्तव

- १) तालुका आरोग्य अधिकारी, तालुका सर्व,
- २) गटविकास अधिकारी, पंचायत समिती सर्व,
- ३) महिला बाल विकास प्रकल्प अधिकारी, प्रकल्प सर्व.
- ४) गटशिक्षणाधिकारी, माध्यमिक व प्राथमिक, तालुका सर्व.

२/- आपल्या अधिनस्त असणाऱ्या सर्व संस्थांना बालावलकर हॉस्पिटल डेरवण तालुका चिपळूण यांना वरील कार्यक्रमासाठी सहकार्य करणेबाबत कळविण्यात यावे.

TALENT STUDY (Transforming Adolescent Lives through Nutrition)

PROTOCOL

Background

Adolescence is the stage of life (10-19 years) in which a child transitions into an adult. It is characterized by accelerated growth, sexual maturation, substantial brain re-modelling, and an increase in the complexity of psycho-social interactions. The age of onset of puberty has fallen globally over the last century and social changes such as longer schooling and later marriage have postponed the transition to independent adulthood, prolonging adolescence. There are over 1 billion adolescents in the world, the largest number in history, and a doubling since 1970. Half of them live in sub-Saharan Africa and South Asia, where they form 20-35% of the population^{1,2}.

Adolescence has a special importance for long-term health because it is a critical period of development, in which the physical, psychological, behavioural, social and economic foundations of adult health are consolidated. Peak muscle and bone mass and cardio-respiratory fitness, which are nutritionally sensitive and predictive of later health³⁻⁶ are achieved. Widespread brain re-modelling leads to a large increase in cognitive ability⁷. It is a key time for the development of executive function and 'agency', the capacity to make independent choices, follow them through and achieve goals, and the ability to form healthy social networks and sexual relationships. Lifelong adaptive or maladaptive behaviour patterns are established, such as choices about diet, physical activity, and substance use including tobacco and alcohol⁸.

It has been suggested that adolescence is also a critical period in which optimal nutrition could mitigate the effects of poor fetal and infant nutrition^{8,9}. However, the potential for good adolescent nutrition to remedy stunting, cognitive impairment or adverse early life cardiovascular and metabolic programming remains largely unknown. Greater gain in adiposity during adolescence is associated with higher cardio-metabolic risk markers in adult life, while greater height gain is associated with lower risk^{10,11}. Conversely, taller adult height is associated with an increased risk of some cancers¹². There is a need for better understanding of the impact of nutrition in adolescence on pubertal growth, body composition, human capital and physical and mental health.

Most adolescents are future parents and will also influence the nutrition and health of the next generation. Parents' knowledge about and attitudes to nutrition have a strong impact on the way they feed their children and their children's dietary preferences^{13,14}. In addition, recent research has shown that maternal nutrition, through effects on fetal development, influences metabolism throughout life. Both maternal undernutrition and obesity adversely 'programme' the fetus, leading to an increased risk of adult non-communicable disease (NCDs)¹⁵⁻¹⁸. Epigenetic changes, which are sensitive to nutrition, are thought to be one mechanism linking maternal nutrition, fetal development and cardio-metabolic programming¹⁹⁻²³. Research in animals suggests paternal as well as maternal effects on offspring epigenetic characteristics^{24,25}, highlighting the potential importance of young men's as well as young women's nutrition for inter-generational health effects.

Optimising adolescent diet and nutrition therefore has the potential to deliver triple benefits: to i) increase physical, psychological and cognitive capital; ii) protect against future disease and iii) improve the development and health of the next generation.

Despite this potential, and the recognition that adolescents have increased nutritional requirements to support growth and maturation, nutrition at this age has been relatively neglected. Research has tended to focus on 'problem behaviours' (violence and unintentional injury, risky sexual behaviour and addictions) including nutritional problem behaviours (eating disorders). Adolescence is seen as a relatively healthy age, coming after the high infectious disease mortality of infancy and childhood,

approaching the attainment of peak physical and cognitive capacity, and before the onset of degenerative disorders and NCDs. Adolescents are often seen as difficult to engage in research, uninterested or too socially and educationally busy, and unlikely to comply with interventions. Frequency of follow-up in many cohort studies has therefore tended to 'thin out' in adolescence, when capturing the rapid developmental and behavioural changes, starting and finishing at differing ages, would actually require more intensive follow-up. The result is major knowledge gaps.

There is clearly a 'dual burden of malnutrition' among young people in LMICs²⁶. Under-nutrition, food insecurity and poor-quality monotonous diets remain common, especially in vulnerable populations in sub-Saharan Africa and South Asia, resulting in continuing high rates of underweight, stunting and anaemia. Under-nutrition is particularly critical in girls because of the demands of menstruation and pregnancy. Gender gaps in nutrition are often small in childhood, but girls tend to become disadvantaged in adolescence^{1,27}. Adolescent marriage and childbearing are common in some countries, presenting major nutritional challenges and leading to poor newborn and child outcomes²⁸⁻³². In settings with high HIV prevalence emerging in adolescents, HIV and malnutrition interact, creating a vicious circle³³⁻³⁵. Alongside persisting under-nutrition, growing access to energy-dense micronutrient-poor processed foods and insufficient physical activity are leading to obesity in some settings, with concomitant metabolic disorders that predict a high future burden of diabetes and cardiovascular disease^{26,36}. Adolescents are vulnerable to marketing and social pressures that can lead to unhealthy food choices³⁷. They are acutely sensitive to the opinions of peers; a desire for new experiences goes hand-in-hand with a need to 'belong'. What foods they eat, and share with their friends, is a 'social currency'³⁸. Physical activity varies between settings but is increasingly inadequate. Rural adolescents help with farming and domestic work and may walk long distances to school, but these are often low intensity activities³⁹. The built and traffic environment in towns and cities, and academic pressures, limit opportunities for activity⁴⁰ and, in girls, cultural barriers to activity tend to emerge in adolescence⁴¹.

Action to address this 'broad' picture is hampered by a lack of detail. A seminal 2017 report highlighted a lack of rigorous, comprehensive and context-specific information about adolescent nutrition in LMICs²⁶. Existing data are often limited to weight, height and anaemia prevalence. Small surveys and indirect estimates have identified common deficiencies in iron, zinc, calcium, and vitamins A, B1, B2, B12, D and folate but recent data from different settings and on other important micronutrients is lacking^{42,43}. There are few, if any, longitudinal studies to understand how diet, activity and nutritional status change through adolescence, what determines these changes, and how they relate to health outcomes^{44-46,10}. Few studies have evaluated the effectiveness, optimal timing, and beneficial versus adverse effects of nutritional interventions in adolescents^{47,48}. We do not know how to change unhealthy food choices among adolescents and they are rarely invited to contribute to the design of interventions⁴⁹. Epigenetic changes in adolescence have been linked to brain development⁵⁰ but little is known about their sensitivity to nutrition and relationship to health. Thus, while recent reports have highlighted the importance of adolescent nutrition and called for its greater prioritisation^{1,8,26,49,51-53}, insufficient data hinders the evidence-based formulation of policies. This may explain why few LMICs have specific nutritional policies for adolescents, and why those that exist are limited in scope (eg. iron/folate supplementation) and rarely integrated⁴⁹.

Research plan

We have formed a consortium of researchers in the UK, sub-Saharan Africa and India who have a special interest in adolescent health and the ability to work together to conduct major population-based nutrition research in diverse LMIC settings (TALENT study group: Transforming Adolescent Lives Through Nutrition). We aim to fill knowledge gaps about the dietary behaviour, food security, nutritional status and physical activity of adolescents in LMICs, the factors that influence these and how they change through the course of adolescence. We will use this new knowledge and

understanding to develop and assess context-specific interventions to improve adolescent nutrition, engaging with adolescents themselves, their communities, and policy-makers to ensure impact and scalability. We will also build within-country capacity for quantitative and qualitative nutrition research, and intervention development, in the adolescent age group.

Overall, in the long term we will address the following broad research questions in adolescent boys and girls, including food insecure and vulnerable groups, in different countries and urban, peri-urban and rural settings:

- What are adolescents eating, what physical activity are they doing, and what influences these behaviours?
- What is the nutritional status of adolescents?
- How do nutrition behaviours and nutritional status change during adolescence?
- What is the impact of diet and nutrition on adolescent growth, body composition, cognitive development and bio-markers of later disease risk?
- What context-specific interventions will improve adolescent nutrition?

We will initially carry out ‘pump-priming’ research to inform a future large-scale study in Africa and India in which we propose to: i) characterise in depth the diet, nutritional status and activity of adolescents; ii) study the drivers of their diet and activity behaviour using qualitative methods; iii) assess how diet, nutritional status and activity, and the influences upon these, change through adolescence; iv) assess how diet, nutritional status and activity relate to their growth, body composition, cognitive development and health-related biomarkers; and v) develop and pilot context-specific interventions aimed at improving adolescent health through better nutrition.

Pump-priming research plan

The study group comes from the UK, five African countries (Ethiopia, Cote d’Ivoire, The Gambia, Kenya and South Africa) and four centres in India (Mumbai, Pune, Dervan and Mysore) covering different settings (Table 1). Due to budgetary constraints, the Kenya centre will not participate in data collection during the pump-priming phase, but will be supported to attend the workshops. See appendix A for the full list of members.

Table 1: Nutritional indicators from adolescents in the different settings represented

| | Ethiopia* | Cote d’Ivoire† | The Gambia* | Kenya† | South Africa* | Mumbai† | Pune* | Dervan* | Mysore* |
|--|---------------------------|-----------------------------|--------------------------|------------------------|-------------------------------|------------------------|-------------------------------|---------------------------|------------------------------|
| Setting | Jimma Low-income urban | Abidjan Low-income urban | Keneba Rural villages | Nairobi City slums | Soweto Poor urban township | City slums | Rural and peri-urban villages | Rural and tribal villages | Urban low- and middle-income |
| Anaemia (%) | 57 | Girls: 48 Boys: N/K | Girls: 15 Boys: 7 | 14 | 9 | Girls: 30 Boys: N/K | Girls: 54 Boys: 13 | Girls: 72 Boys: N/K | Girls: 29 Boys: 11 |
| Underweight (%) | 23 | 11 | Girls: 26 Boys: 47 | Girls: 17 Boys: N/K | 2 | Girls: 44 Boys: N/K | 15 | Girls: 79 Boys: N/K | Girls: 15 Boys: 24 |
| Overweight/obesity (%) | 3 | 10 | Girls: 3 Boys: <1 | Girls: 12 Boys: N/K | Girls: 21 Boys: 9 | Girls <1 Boys: N/K | Girls: <1 Boys: 3 | Girls: 1 Boys: N/K | Girls: 16 Boys: 8 |
| Teenage pregnancy (%) | 10 | 11 | 20 | 18 | 15 | N/K | <1 | <1 | 2 |
| HIV positive (%) | 2 | Girls: 2 Boys: 1 | N/K | Girls: 4 Boys: 2 | 8 | N/K | N/K | Girls: <1 Boys: N/K | N/K |
| Pre-hypertension (%) | 16 | 1 | Girls: 6 Boys: 4 | N/K | 13 | N/K | Girls: <1 Boys: 2 | Girls: 0 Boys: N/K | Girls: 11 Boys: 3 |
| Abnormal glucose tolerance (IFG/IGT/DM) (%) | 7 | 2 | Girls: <1 Boys: <1 | N/K | 5 | N/K | Girls: 11 Boys: 24 | Girls: 1 Boys: N/K | Girls: <1 Boys: 2 |
| Households with access to electricity (%) | 56 | 95 | <10 | 68 | 99 | 99 | 98 | 99 | 99 |

Data from adolescents aged 12-18 years; N/K=not known; IFG=impaired fasting glucose; IGT=impaired glucose tolerance; DM=diabetes; *data collected by the study group investigators or † published survey data

We will carry out the following activities:

- Two **workshops** to consolidate cross-site partnerships, share knowledge and expertise and

plan the larger study, with a view to submitting a major grant application in 2018.

We will hold two 5-day workshops, for one or two PIs from each LMIC centre, one early- or mid-career nutritionist from each centre, and our external advisors. At the first workshop (February 5th-9th 2018, Dervan, India) we clarified the objectives of the pump-priming data collection, and timelines; provided training in qualitative data collection; shared ideas on strategies for engaging adolescents; set the responsibilities, parameters and timelines for the literature and policy reviews and secondary analyses (see below); and started to plan in more detail the larger future study. At the second workshop (August 6th-11th 2018, Johannesburg, South Africa) we will provide training in qualitative data analysis and share initial qualitative findings, results of literature and policy reviews and secondary analyses, and build these into further planning of the larger study.

- Preliminary data collection to facilitate the design of the larger study, establish methods of engaging with adolescents and their families, and build capacity; the main focus will be **qualitative research**, for which we will provide **training**, with additional **quantitative data collection**, limited to what is needed to inform the future study design.

Qualitative research will be the most informative pump-priming activity for a) engaging our participants and assessing their likely retention for future studies; b) identifying the areas we need to cover, and the challenges, in future measurements of nutritional status; and c) designing the future study, especially interventions. The workshops will provide intensive training in qualitative research methods, drawing upon models that have proved successful in LMICs^{54,55}.

- **Literature reviews** to identify and summarise *existing* data on the nutritional status of adolescents in each country represented and to identify existing policies for adolescent nutrition in each country, and any evaluations of these.

The investigators in all centres will review (including 'grey' literature) data currently available on nutritional status among adolescents, and on existing policies for adolescent nutrition, in their country/setting, and any evaluations of the quality, implementation and impact of these policies.

- **Mapping of stakeholders including policy-makers** in each country/setting.

Budget limitations in the pump-priming phase make major policy-maker engagement, or inclusion of policy-makers from all sites in the workshops, unfeasible. Teams will meet with policy-makers already known to them or accessible through existing contacts, who have the capacity and influence to implement interventions to improve adolescent nutrition. In Workshop 2 we will set out detailed strategies for stakeholder engagement in the larger future study.

- **Secondary data analysis** from selected existing cohorts within the group of investigators, to examine relationships of diet and nutrition in childhood or early adolescence to final height, and adult cognitive function and health outcomes.

Four of the participating centres (Pune, India⁵⁶, Johannesburg, South Africa⁵⁷, Mysore, India⁵⁸, and Keneba, The Gambia⁵⁹) have adult birth cohorts that had weight and height measured before and after puberty, some dietary and/or other nutritional status measured pre-pubertally, and some outcomes of interest post-pubertally, such as final height, body composition, bone health, cognitive function or non-communicable disease risk markers. We will analyse these data for evidence linking nutrition before or in early adolescence to outcomes at the age of final or near-final height attainment.

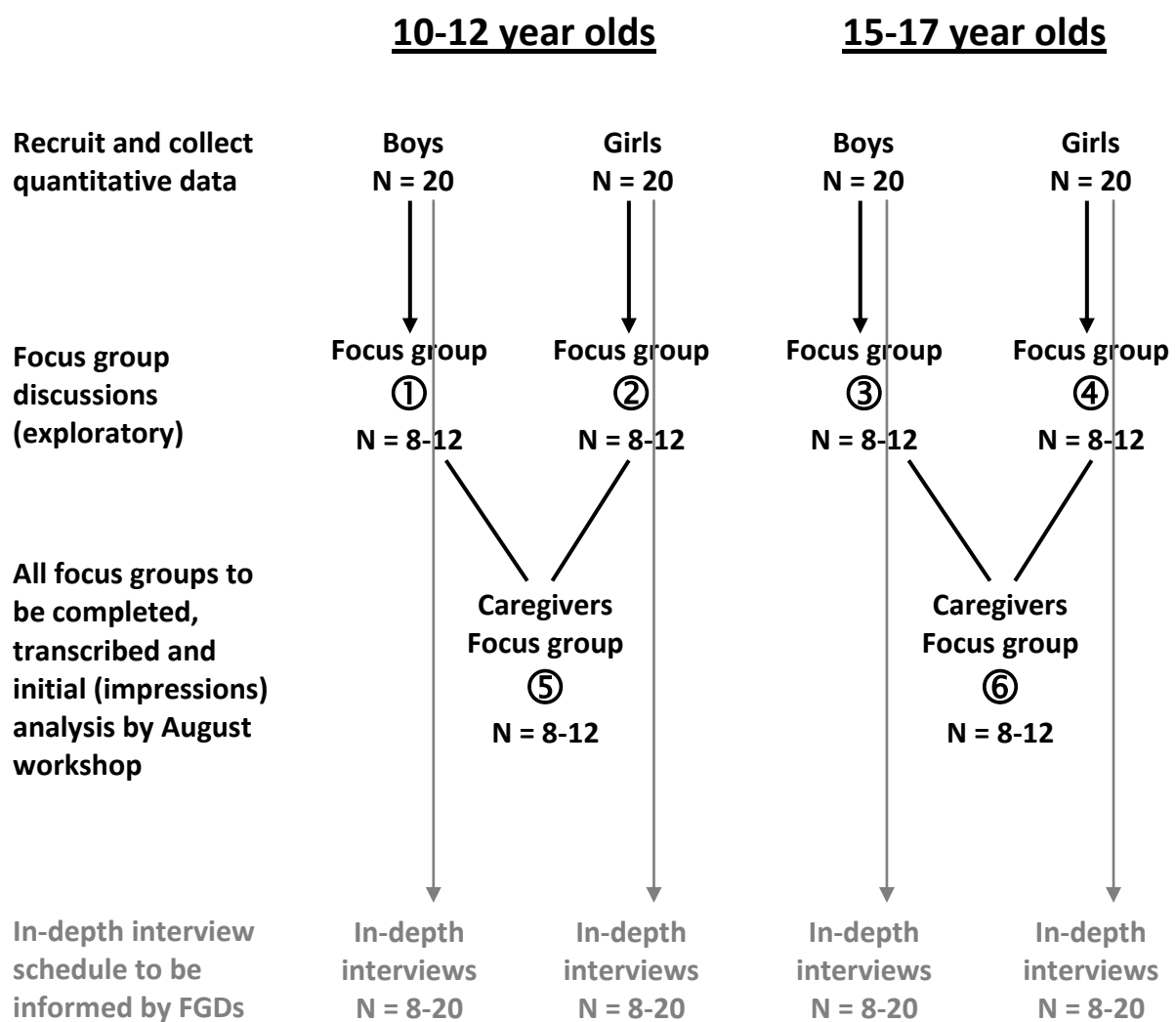
DETAILED PROTOCOL

New data collection - qualitative and quantitative research

Ethics committee approval for the study will be sought by each centre through their institutional ethics committees. Informed assent will be obtained from all participating adolescents and consent from parents/caregivers. Each centre will design information sheets and assent/consent forms to suit their own population, but examples can be found on pages 16-22.

Each of the 8 participating centres will recruit 80 adolescents and their caregivers, 40 each of young adolescents aged 10-12 years and older adolescents aged 15-17 years, half boys and half girls in each age group (Figure 1). For logistic reasons, samples of adolescents will be recruited differently in each centre. The preferred method will be by random selection from a population survey, to obtain the most representative samples. If this is not practical during the pump-priming phase, recruitment will be cohort-based, or school-based, recognising that some adolescents not attending school will be missed out.

Figure 1: Quantitative and qualitative data collection in each centre



Quantitative data will be collected from all of these adolescents, including a short questionnaire (see CRF1, pages 10-15 below) and anthropometry (lightly clothed body weight and standing height). The questionnaire will record name, address, sex, date of birth, contact details, information about parental educational attainment and occupation, other socio-economic data, information about diet using a brief food frequency questionnaire/diet diversity score, and questions about screen time. Depending on logistics in each centre, the questionnaire can be administered at the time of

recruitment, or when the adolescents come to the focus group sessions, or in part at both these times. The dietary questionnaire must be administered by a nutritionist, while the rest of the questionnaire can be administered by the nutritionist or by a trained research assistant.

NB: The diet questionnaire shown (pages 13-14) will be modified for each centre, so that locally appropriate food items are listed in each food group.

Qualitative data will be collected from sub-samples of the adolescents in two stages: firstly, exploratory focus groups, and then in-depth individual interviews. Focus groups will explore what young people and parents think about diet, nutrition and activity and their influence on health; how important these are to them; what and who decide and shape their eating and activity habits; and what might engage them in changing their diet and activity. We will discuss household food insecurity, eating outside the family, food-sharing with friends, and gender differences. We will explore the use of dyadic interviews, with pairs of adolescents, to explore peer influences on behaviour, and interview main caregivers to understand barriers/facilitators at home. We will use youth-centred methods^{60,61} and tools tailored to specific contexts (eg. Photo Voice, story boards, games, drawing, body mapping). Conversations will be recorded, transcribed verbatim and translated. Overall, each team will aim to complete 6 focus groups (Figure 1): four adolescent groups and two parent/caregiver groups, each with a minimum of 8 participants and a maximum of 12. The detailed schedule for the subsequent in-depth interviews will be developed following analysis of the focus group discussions. During the in-depth interviews we will also ask young people and their caregivers what they think about taking part in research.

Each centre to insert their context-specific focus group schedules here.

Transcripts and visual material will be analysed thematically using constant comparative methods, and synthesised, documenting similarities and differences between sites and age groups. Ongoing support for the data collection will be provided by the trainers and facilitators in Southampton using skype and an interactive web platform.

Literature and policy reviews

Purpose:

1. To identify and summarise what is already known about the nutritional status of adolescents in each country or region represented
2. To identify and summarise what policies exist currently for adolescents in each country or region represented
3. To inform the design of the future study

Literature search on nutritional status of adolescents: A two-layered approach will be adopted, starting with published data from each centre's research groups or institution, moving outwards to cover each country or region, and in both cases covering literature on 10-19 year olds, published since the year 2000. We will overlay policy changes onto the findings. The review will cover data on body weight or BMI, stunting, underweight and overweight/obesity, anaemia, micronutrient status, dietary intakes and patterns, and physical activity. Quantitative and qualitative studies will be included. It will also cover intervention studies that aimed to change diet, nutrition and/or physical activity in order to influence outcomes of interest (height, weight, cardio-metabolic risk markers or cognitive ability).

Review of policies: We will identify policies relating to the diet, nutrition and physical activity of adolescents, using publications, grey literature and government documents/reports/websites.

Activities will be co-ordinated by a working group selected from the PI and trainee groups, and results will be presented at Workshop 2.

Secondary analysis

Secondary analyses will be performed using data from 4 birth cohorts:

- The PS Cohort in the Gambia (Investigator: Dr Kate Ward)
- The Birth to Twenty Cohort in Johannesburg (Investigator: Prof Shane Norris)
- The Pune Maternal Nutrition Study in India (Investigator: Prof CS Yajnik)
- The Mysore Parthenon Birth Cohort in India (Investigator: Dr GV Krishnaveni)

In common, these are birth cohorts whose members are now aged 18 years or above and have achieved final or near final height. All have data on the cohort members' nutritional status pre-pubertally, and a range of outcomes measured at age 18+ years (Table 2).

Table 2: Details of the 4 cohorts

| Cohort | Instrument for adult outcomes | | | | Age | Exposures | Adjustment | | Adult Outcome at 18 y or above |
|--------|--|-----------|----|---------------------|-------|---|------------------------------------|----------------|--|
| | Diet | Body comp | BP | Cognition (if time) | | | SES | Puberty timing | |
| Bt20 | FFQ, 196 foods | DXA | ✓ | | 7-8y | Principal components from dietary analysis (food or nutrient) | ✓ | ✓ (APV) | Height BMI |
| Mysore | FFQ, ~170 foods | BIA | ✓ | ✓ | 9y | | ✓ | Tanner | Fat mass Lean mass |
| Pune | FFQ, ~170 food | DXA | ✓ | ✓ | 12y | | ✓ | Tanner | FMI, LMI and conditional changes in these (define r'ship between fat and lean and height before creating these |
| Gambia | Weighed 24 hour diaries (nutrients), calcium FFQ | DXA | ✓ | X | 8-12y | | Dietary pattern Nutrient intake | X | ✓ (APV) |

Primary questions:

- Does pre-/early pubertal diet predict height, BMI (including lean and fat mass) at the end (or near to) of growth?
- Does pre-/early pubertal diet predict blood pressure and cognitive function at the end (or near to) of growth?

Secondary questions:

- Replacing diet with body composition, how does childhood body composition predict final height, BMI and body composition?
- Meta-analysis of all the cohorts with body composition as an exposure and final height/adiposity
- Does high protein intake at the start of pubertal growth predict later adiposity?

The dietary data is from context-specific food frequency questionnaires in S Africa, Pune and Mysore, and from nutrient intakes derived from 4-day food diaries in The Gambia. The frequency of

intake of food groups or nutrient intakes, and diet/nutrient patterns derived using principal components analysis, will be related to the following outcomes:

- Final or near-final height, and final or near-final height SD score conditional upon pre-pubertal height SD score
- Young adult body mass index (BMI), and young adult BMI SD score conditional upon pre-pubertal BMI SD score
- Young adult lean mass, young adult lean mass SD score conditional upon pre-pubertal lean mass SD score and young adult lean mass index (LMI: lean mass/height²)
- Young adult fat mass, young adult fat mass SD score conditional upon pre-pubertal fat mass SD score, and fat mass index (FMI: fat mass/height²)

Activities will be co-ordinated by a working group comprising the 4 cohort investigators and selected trainees, and results will be presented at Workshop 2.

Stakeholder engagement

Each centre will identify and meet (face-to-face or round table) at least one local/regional/national policy maker whose 'jurisdiction' encompasses adolescent health/nutrition. If feasible, groups extend engagement to international agency representatives, NGOs, and other academics in public health, health economics, social science and dietetics. The objectives of the meetings will be to:

- Introduce the importance of adolescent nutrition
- Introduce the TALENT network
- Find out what current adolescent nutrition policies and programmes exist
- Find out what the adolescent health priorities are from their point of view
- Ask what information/evidence would be helpful for them
- Make it clear that we wish to help them make their interventions more impactful/efficient
- Ask how we can help them and how we can work together
- For the future grant application, obtain a letter of support saying some or all of the following: that our work is of interest and potential help to them; aligns with their priorities/programmes/future plans; they will support our research in terms of permissions/contacts/assistance with interventions

Activities will be co-ordinated by a working group of selected PIs and trainees, which will report back during workshop 2.

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CRF 1

TALENT Study (Transforming Adolescent Lives through Nutrition) Global Challenges Research Fund, Network for Adolescent Nutrition

Centre (circle): Gambia/Ethiopia/Ivory Coast/
South Africa/Kenya/Mumbai/Pune/Dervan/Mysore

Unique Study ID number

| | | |
|--|--|--|
| | | |
|--|--|--|

Date of
interview

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| d | d | m | m | y | y | y | y |
| | | | | | | | |

Name of interviewer _____

Interviewer code

| | | |
|--|--|--|
| | | |
|--|--|--|

IDENTIFYING DETAILS

1. Name _____

2. Sex

1 Male 2 Female

| |
|--|
| |
|--|

3. Date of birth

| | | | | | | | |
|--|--|--|--|--|--|--|--|
| | | | | | | | |
|--|--|--|--|--|--|--|--|

4. Father's/Guardian's name _____

5. Mother's/Guardian's name _____

6. Address

7. Guardian mobile phone number _____

8. Alternative phone number and relationship _____

EDUCATION

9. Total number of years of schooling/education (Mother)

10. Total number of years of schooling/education (Head of household)

Specify head of household (and relationship) _____

OCCUPATION

11. Occupation status of mother

1. Paid employment
2. Self-employed
3. Not employed

12. Occupation status of head of household

1. Paid employment
2. Self-employed
3. Not employed

SOCIO-ECONOMIC STATUS

13. Household composition – record number of people living in the same house

Adults

Children

14. What is the main source of drinking water for the household?

- | | |
|----------------|--------------------------|
| 1. Piped water | 5. River/stream |
| 2. Hand pump | 6. Tanker |
| 3. Well | 7. Other (specify) _____ |
| 4. Public tap | |

15. What kind of toilet facility does your household have?

- | | |
|------------------------|--------------------------|
| 1. Own flush toilet | 5. Shared pit toilet |
| 2. Shared flush toilet | 6. Public pit toilet |
| 3. Public flush toilet | 7. Non/fields |
| 4. Own pit toilet | 8. Other (specify) _____ |

16. How many rooms are there in your house?

17. Does this household own this house, or any other house? 1 Yes 0 No

18. Does this household own any of the following?

1. Mattress 1 Yes 0 No

2. Chair 1 Yes 0 No

3. Cot/bed 1 Yes 0 No

4. Table 1 Yes 0 No

5. Clock/watch 1 Yes 0 No

6. Electric fan 1 Yes 0 No

7. Bicycle 1 Yes 0 No

8. Radio/transistor/music player 1 Yes 0 No

9. Television 1 Yes 0 No

10. Two-wheeler (moped/scooter/motorcycle) 1 Yes 0 No

11. Car/jeep 1 Yes 0 No

12. Water pump 1 Yes 0 No

13. Animal-drawn cart 1 Yes 0 No

14. Thresher 1 Yes 0 No

15. Tractor 1 Yes 0 No

| | | | |
|-------------------------|-------|------|--------------------------|
| 16. Refrigerator | 1 Yes | 0 No | <input type="checkbox"/> |
| 17. Air conditioner | 1 Yes | 0 No | <input type="checkbox"/> |
| 18. Washing machine | 1 Yes | 0 No | <input type="checkbox"/> |
| 19. Computer/laptop | 1 Yes | 0 No | <input type="checkbox"/> |
| 20. Broadband internet | 1 Yes | 0 No | <input type="checkbox"/> |
| 21. Geyser/water heater | 1 Yes | 0 No | <input type="checkbox"/> |

DIETARY INFORMATION

19. Yesterday during the day or at night, did you eat or drink:

How often did you eat these foods over the past one month?

1. Every day
2. 2-4 times per week
3. 5-6 times per week
4. Once a week
5. Less than once a week

| | | | | |
|--|--|---------------|--------------------------|--------------------------|
| <i>Any foods made from grains, like:</i> | Porridge, bread, rice, pasta/noodles, ragi or other foods made from grains | 1 Yes 0 No | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Any vegetables or roots that are orange-coloured inside, like:</i> | Pumpkin, carrots, squash or sweet potatoes that are yellow or orange inside | 1 Yes 0 No | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Any white roots and tubers or plantains, such as:</i> | White potatoes, white yams, cassava/radish, or any other foods made from white-fleshed roots or tubers, or plantains | 1 Yes 0 No | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Any dark green leafy vegetables, such as:</i> | List examples of any medium-to-dark green leafy vegetables, including wild/foraged leaves | 1 Yes 0 No | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Any fruits that are dark yellow or orange inside, like:</i> | Ripe mango, ripe papaya [see Appendix 2 for other less-common vitamin A-rich fruits] | 1 Yes 0 No | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Any other fruits</i> | List examples of any other fruits | 1 Yes 0 No | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Any other vegetables</i> | List examples of any other vegetables | 1 Yes 0 No | <input type="checkbox"/> | <input type="checkbox"/> |

| | | | | |
|--|--|---------------|--------------------------|--------------------------|
| Any meat made from animal organs, such as: | Liver, kidney, heart or other organ meats or blood-based foods, including from wild game | 1 Yes 0 No | <input type="checkbox"/> | <input type="checkbox"/> |
| Any other types of meat or poultry, like: | Beef, pork, lamb, goat, rabbit, wild game meat, chicken, duck, other birds | 1 Yes 0 No | <input type="checkbox"/> | <input type="checkbox"/> |
| Any eggs | Eggs from poultry or any other bird | 1 Yes 0 No | <input type="checkbox"/> | <input type="checkbox"/> |
| Any fish or seafood, whether fresh or dried | Fresh or dried fish, shellfish or seafood | 1 Yes 0 No | <input type="checkbox"/> | <input type="checkbox"/> |
| Any beans or peas, such as: | Mature beans or peas (fresh or dried seed), lentils or bean/ pea products, including hummus, tofu and tempeh | 1 Yes 0 No | <input type="checkbox"/> | <input type="checkbox"/> |
| Any nuts or seeds, like: | Any tree nut, ground nut, peanut, or certain seeds or nut/seed "butters" or pastes | 1 Yes 0 No | <input type="checkbox"/> | <input type="checkbox"/> |
| Any milk or milk products, such as: | Milk, cheese, yoghurt or other milk products, but NOT including butter, ice cream, cream or sour cream | 1 Yes 0 No | <input type="checkbox"/> | <input type="checkbox"/> |
| Any condiments and seasonings, such as: | Condiments and seasonings: Ingredients used in small quantities for flavour, such as chilies, spices, herbs, fish powder, tomato paste, flavour cubes or seeds | 1 Yes 0 No | <input type="checkbox"/> | <input type="checkbox"/> |
| Freshly cooked fried snacks, like: | Samosa, wada, fritter | 1 Yes 0 No | <input type="checkbox"/> | <input type="checkbox"/> |
| Savoury snacks in packets, like: | Potato crisps, Lays, kukure, and other similar snacks | 1 Yes 0 No | <input type="checkbox"/> | <input type="checkbox"/> |
| Bakery items, such as: | Cake, biscuits, puffs | 1 Yes 0 No | <input type="checkbox"/> | <input type="checkbox"/> |
| Sweets | | 1 Yes 0 No | <input type="checkbox"/> | <input type="checkbox"/> |
| Fast food/street food/restaurant food | | 1 Yes 0 No | <input type="checkbox"/> | <input type="checkbox"/> |
| Fizzy drinks, such as: | Coca Cola, Fanta, Limca | 1 Yes 0 No | <input type="checkbox"/> | <input type="checkbox"/> |

ANTHROPOMETRY

20. Weight (kg)

| | | | | |
|--|--|--|---|--|
| | | | ● | |
|--|--|--|---|--|

21. Height (cm)

| | | | | |
|--|--|--|---|--|
| | | | ● | |
|--|--|--|---|--|

MOBILE PHONE

22. Do you have your own mobile phone? 1 Yes 0 No

23. If yes, is it a smartphone? 1 Yes 0 No

SCREEN TIME

24. How much time do you spend watching entertainment programmes on average every day (TV/computer/mobile phone) (hrs)

25. How much do you spend playing computer games on average every day (on a computer/laptop/game console/mobile phone) (hrs)

26. How much time do you spend doing school work on a computer on average every day (hrs)

TALENT STUDY
(Transforming Adolescent Lives through Nutrition)
PARTICIPANT INFORMATION SHEET FOR ADOLESCENTS

What is informed consent?

You and your parents/caregivers are invited to take part in a research study. Participating in a research study is not the same as getting regular medical care. The purpose of regular medical care is to improve your health. The purpose of a research study is to gather information that may be useful in future for the whole population. It is your choice to take part and you can stop any time.

Before you decide, you need to understand all the information about this study and what it will involve. Please take time to read the following information or get the information explained to you in your language. Listen carefully and feel free to ask if there is anything that you do not understand. Ask for it to be explained until you are satisfied. You may also wish to consult your parents, family members or others before deciding to take part in the study.

If you decide to join the study, you will need to sign an assent form saying that you agree to be in the study. If you are unable to read or write we will ask you indicate your agreement to take part by a thumbprint. You will receive a copy of this sheet and the consent form.

Why is this study being done?

It has recently become clear that adolescence – the stage from 10 to 19 years of age - is a very important phase in our lives. The choices and decisions we make about our behaviours and lifestyle at this time may have a critical impact on our health for the rest of our life. Examples of these are the types of food we choose to eat, do we share food with friends or family or how much exercise we do? Despite knowing this is an important time of life, we know very little about factors that influence the decisions we make. By understanding these we can try to make positive changes to improve our life-long health.

In this study, we hope to gain a better understanding of what influences the understanding of, and decision-making about, health and lifestyle decisions of this age group. We will do this by talking directly to adolescent males and females aged 10-17 years, and their parents and caregivers.

This study is part of a larger project collecting the same information from other groups of adolescent boys and girls in Africa and India. Together, the information we collect will help us to develop a much better understanding of what is important to adolescent boys and girls and young men and young women from these different settings, so interventions can be developed to help improve healthy living both now, and into the future.

What does this study involve?

We aim to recruit up to 80 adolescent boys and girls from your area/school, along with groups of parents and caregivers of this age group. You have been selected because you are an adolescent yourself. If you agree to take part, we would like you to participate in a series of interviews (either by yourself, or with other adolescents/parents from your community in a group interview, or both) where a trained researcher will ask you questions about what influences the diet, food choices, nutrition and lifestyle behaviours of adolescents in this community. The types of questions we will include in these interviews will include:

- What factors influence how much or how little food you and your family has?

- How often do you eat with your family and how often you eat with other families/elsewhere in the community?
- Do you ever share food with your friends?
- Do you think there are any differences in food availability between boys and girls?
- What do you think about children/young adults of your age taking part in research projects?

INSERT YOUR OWN CONTEXT-SPECIFIC INTERVIEW SCHEDULE HERE IN ADDITION TO OR INSTEAD OF THE ABOVE QUESTIONS

All of the interviews will be recorded by the research team so that the valuable information you give can be used for this research.

In addition to the, we will collect some information from you, using a short questionnaire, including your name, address, contact details, age, diet and screen time, your parents' education and occupation, information about your house and amenities and household possessions. We will also measure your weight and height.

What will happen to the data collected in this study?

All of the discussions that we record will be listened to by a member of the study team, so they can be carefully translated into English. This translation will then be used by the research team both in specify city/town/country and the larger research team EITHER: elsewhere across Africa and overseas OR: elsewhere in India and overseas, to help understand issues that are important to you. We will not be able to identify you once the interviews are transcribed, and so all the conversations you have will be anonymous beyond the initial interview. We will just record if you are male or female, what age you are, and whether you are from the adolescent group or from the parent/caregiver group, as this information will help us to understand your opinions better.

The information that we collect by questionnaire will be entered onto a computer. It will only be accessible to authorised members of the research team. It may be shared with the larger research team elsewhere in India/Africa and overseas, but before that we will ensure that you cannot be identified by removing all personal details such as your name, address, contact details and date of birth.

What harm or discomfort can you expect in the study?

This study will only involve face-to-face interviews, a short questionnaire and measurement of your weight and height by members of the research team. Altogether, the process will take approximately 1.5-2 hours. There is no risk of harm or discomfort from participating in this study.

What benefits can you expect in the study?

There is no specific benefit associated with participating in this research study. We think that the knowledge gained from this research will benefit other children and adolescents in the future.

Will you be compensated for your participation in the study?

You will not be paid for participation in this study. EITHER: All interviews will be conducted near your home so there will be no transport costs involved OR: You will be reimbursed for any travel expenses that you incur in reaching the research centre for the interviews and measurements. We will try to arrange interviews around your other commitments. For young people still at school, if we have to hold interviews during school hours, we will approach your head teacher first to ensure you have permission to be absent during certain times.

What happens if you refuse to participate in the study or change your mind later?

You are free to join or not join in the study and you are free to stop taking part at any time without giving a reason. You will not be treated any differently if you decide that you do not want to take part, or if you decide to drop out. If you do not want to continue in the study we will use only the information already collected from you.

How will your information be kept and who will be allowed to see it?

All information that is collected about you in the study will be kept strictly confidential. Your personal information will only be seen by the study team members, the sponsor and if necessary the Ethics Committee and Government authorities.

Who should you contact if you have questions?

If you have any queries regarding the study you can contact: (name and contact details of PI or other appropriate member of the research team).

Please feel free to ask any question you might have about the research study.

Who has reviewed this study?

This study has been checked by scientists and others on the Ethics Committee of (institution name). The Ethics Committee's duty is to protect your rights and wellbeing, and has given permission for it to take place.

TALENT STUDY

(Transforming Adolescent Lives through Nutrition)

PARTICIPANT INFORMATION SHEET FOR PARENTS/CAREGIVERS

What is informed consent?

You and your child are invited to take part in a research study. Participating in a research study is not the same as getting regular medical care. The purpose of regular medical care is to improve your health. The purpose of a research study is to gather information that may be useful in future for the whole population. It is your choice to take part and you can stop any time.

Before you decide, you need to understand all the information about this study and what it will involve. Please take time to read the following information or get the information explained to you in your language. Listen carefully and feel free to ask if there is anything that you do not understand. Ask for it to be explained until you are satisfied. You may also wish to consult your spouse, family members or others before deciding to take part in the study.

If you decide to join the study, you will need to sign a consent form saying that you agree to be in the study. If you are unable to read or write we will ask you indicate your agreement to take part by a thumbprint. You will receive a copy of this sheet and the consent form.

Why is this study being done?

It has recently become clear that adolescence – the stage from 10 to 19 years of age - is a very important phase in our lives. The choices and decisions adolescents make about their behaviours and lifestyle may have a critical impact on their health for the rest of their life. Examples of these are the types of food they choose to eat, whether they share food with friends or family and how much exercise they do? Despite knowing this is an important time of life, we know very little about factors that influence the decisions adolescents make. By understanding these we can try to support adolescents to make positive changes to improve their life-long health.

In this study, we hope to gain a better understanding of what influences the understanding of, and decision-making about, health and lifestyle decisions of this age group. We will do this by talking directly to adolescent males and females aged 10-17 years, and their parents and caregivers.

This study is part of a larger project collecting the same information from other groups of adolescent boys and girls, and their parents/caregivers, in Africa and India. Together, the information we collect will help us to develop a much better understanding of what is important to adolescent boys and girls and young men and young women from these different settings, so interventions can be developed to help improve healthy living both now, and into the future.

What does this study involve?

We aim to recruit up to 80 adolescent boys and girls from your area/school, along with groups of parents and caregivers of this age group. You have been selected because you are the parent/caregiver of an adolescent child. If you agree to take part, we would like you and your child to participate in a series of interviews (either by yourself, or with other caregivers/parents from your community in a group interview, or both) where a trained researcher will ask you questions about the factors that influence diet, nutrition and lifestyle behaviours of adolescents in this community. The types of questions we will include in these interviews will include:

- What factors influence how much or how little food you and your family has?
- How often does your child eat with the family and how often do they eat with other families/elsewhere in the community?

- Does your child ever share food with friends?
- Do you think there are any differences in food availability between boys and girls?
- What do you think about children/young adults taking part in research projects?

INSERT YOUR OWN CONTEXT-SPECIFIC INTERVIEW SCHEDULE HERE IN ADDITION TO OR INSTEAD OF THE ABOVE QUESTIONS

All of the interviews will be recorded by the research team so that the valuable information you give can be used for this research.

In addition to the, we will collect some information from you, using a short questionnaire, including your and your child's name, address, contact details, age and diet, your and your spouse/partner's education and occupation, and information about your house and amenities and household possessions. We will also measure your child's weight and height.

What will happen to the data collected in this study?

All of the discussions that we record will be listened to by a member of the study team, so they can be carefully translated into English. This translation will then be used by the research team both in specify city/town/country and the larger research team EITHER: elsewhere across Africa and overseas OR: elsewhere in India and overseas to help understand issues that are important to you and your child. We will not be able to identify you or your child once the interviews are transcribed, and so all the conversations you have will be anonymous beyond the initial interview. We will just record if you are male or female, what age you are, and whether you are from the adolescent group or from the parent/caregiver group, as this information will help us to understand your opinions better.

The information that we collect by questionnaire will be entered onto a computer. It will only be accessible to authorised members of the research team. It may be shared with the larger research team elsewhere in India/Africa and overseas, but before that we will ensure that you cannot be identified by removing all personal details such as your and your child's name, address, contact details and date of birth.

What harm or discomfort can you expect in the study?

This study will only involve face-to-face interviews, a short questionnaire and measurement of your child's weight and height, by members of the research team. Altogether, the process will take approximately 1.5-2 hours. There is no risk of harm or discomfort from participating in this study.

What benefits can you expect in the study?

There is no specific benefit associated with participating in this research study. We think that the knowledge gained from this research will benefit children and adolescents in the future.

Will you be compensated for your participation in the study?

You will not be paid for participation in this study. EITHER: All interviews will be conducted near your home so there will be no transport costs involved OR: You will be reimbursed for any travel expenses that you incur in reaching the research centre for the interviews and measurements. We will try to arrange interviews around your other commitments. For young people still at school, if we have to hold interviews during school hours, we will approach the head teacher first to ensure your child has permission to be absent during certain times.

What happens if you or your child refuse to participate in the study or change your mind later?

You and your child are free to join or not in the study and to stop taking part at any time without giving a reason. You will not be treated any differently if you decide that you do not want to take

part, or if you decide to drop out. If you do not want to continue in the study we will use only the information already collected from you/your child.

How will your information be kept and who will be allowed to see it?

All information that is collected about you and your child in this study will be kept strictly confidential. Your and your child's personal information will only be seen by the study team members, the sponsor and if necessary the Ethics Committee and Government authorities.

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Please feel free to ask any question you might have about the research study.

Who has reviewed this study?

This study has been checked by scientists and others on the Ethics Committee of (institution name). The Ethics Committee's duty is to protect your rights and wellbeing, and has given permission for it to take place.

APPENDIX A: Investigators in the TALENT network

PI/leader group#

Qualitative researcher/trainee group*

Qualitative trainer group†

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Anthropometric nutritional status, and social and dietary characteristics of African and Indian adolescents taking part in the TALENT (Transforming Adolescent Lives through Nutrition) qualitative study

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Abstract

Objective: To describe the anthropometry, socioeconomic circumstances, diet and screen time usage of adolescents in India and Africa as context to a qualitative study of barriers to healthy eating and activity.

Design: Cross-sectional survey, including measured height and weight and derived rates of stunting, low BMI, overweight and obesity. Parental schooling and employment status, household assets and amenities, and adolescents' dietary diversity, intake of snack foods, mobile/smartphone ownership and TV/computer time were obtained via a questionnaire.

Setting: Four settings each in Africa (rural villages, West Kiang, The Gambia; low-income urban communities, Abidjan, Cote D'Ivoire; low/middle-class urban communities, Jimma, Ethiopia; low-income township, Johannesburg, South Africa) and India (rural villages, Dervan; semi-rural villages, Pune; city slums, Mumbai; low-middle/middle-class urban communities, Mysore).

Participants: Convenience samples (n 41–112 per site) of boys and girls, half aged 10–12 years and another half aged 15–17 years, were recruited for a qualitative study.

Results: Both undernutrition (stunting and/or low BMI) and overweight/obesity were present in all settings. Rural settings had the most undernutrition, least overweight/obesity and greatest diet diversity. Urban Johannesburg (27 %) and Abidjan (16 %), and semi-rural Pune (16 %) had the most overweight/obesity. In all settings,

Keywords

Adolescents
Low- and middle-income countries
Nutritional status
Diet
Household assets
Mobile phones

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adolescents reported low intakes of micronutrient-rich fruits and vegetables, and substantial intakes of salted snacks, cakes/biscuits, sweets and fizzy drinks. Smartphone ownership ranged from 5% (West Kiang) to 69% (Johannesburg), higher among older adolescents.

Conclusions: The 'double burden of malnutrition' is present in all TALENT settings. Greater urban transition is associated with less undernutrition, more overweight/obesity, less diet diversity and higher intakes of unhealthy/snack foods.

The long-term objectives of the TALENT (Transforming Adolescent Lives Through Nutrition) consortium are to: (1) understand what adolescents in low- and middle-income countries (LMIC) are eating, what physical activity they are doing, and what drives their diet and activity choices; (2) ascertain the relationship of diet and activity with their nutritional status, growth, development and health; and (3) use this information to develop interventions to optimise adolescents' diets and physical activity. The current study was the first stage in this process: through the qualitative research described in the papers in this issue, we aimed to understand adolescents' diet and activity behaviour, and the key people and factors that influence that behaviour.

We carried out the study in eight LMIC settings representing varying stages of 'urban transition' – the trend away from 'living off the land' towards wage-earning in industries or through provision of services; from growing food to buying it; and from living in small remote hamlets to larger crowded villages, towns and cities. Urbanisation is associated with many nutritional/dietary changes, including greater year-round food availability but less home-cooked and more processed food, and generally lower levels of physical activity due to activity-sparing technologies⁽¹⁾. These changes have led to the emergence of 'a double burden of malnutrition' in LMIC, with persistent poverty, food insecurity and dietary deficiencies alongside emerging overweight occurring within the same community, household or individual^(1,2). There are knowledge gaps about how these transitions impact upon the diet and physical activity of adolescents in LMIC, which have in turn limited the development of nutrition policies targeted at this critical age group^(3,4).

Along with qualitative data, we collected harmonised quantitative data that would enable us to describe some of the anthropometric, dietary and socioeconomic characteristics of adolescents. This was not intended to be representative of adolescents in general in each country, but rather to illustrate the context of adolescents whose qualitative data we collected; to describe nutritional vulnerabilities to inform the development of interventions; and, by bringing together information from all the settings, to illustrate the contrasts between them.

As described in qualitative papers, each of the eight TALENT centres had a target to recruit about eighty adolescents, half in the 10–12-year age group ('young adolescents') and half aged 15–17 years ('older adolescents'), and with

equal number of boys and girls, from whom a subset was chosen to participate in focus group discussions. The young adolescent group represents a pre- or early-pubertal stage of development, when adolescents are still largely under parental control for most aspects of their living, while the older group represents late or completed pubertal development and greater independence from parents in relation to diet and activity. Quantitative data were collected from this larger group, mainly to illustrate the context of their lives. The main objective of the study was to collect qualitative data; because we were asking adolescents to spend a considerable amount of time with us for focus group discussions, quantitative data collection was kept to a minimum. We therefore limited this to measurements of weight and height and a questionnaire that would take no more than 15–20 min to administer.

Methods

Study settings and participants

The communities studied included remote rural villages, urban slums or deprived townships and urban low-middle-class and middle-class residential areas (Table 1). Most study samples were 'convenience' samples, accessed through schools or community health workers; in The Gambia, purposive sampling from a demographic surveillance system database was used⁽⁵⁾. Samples ranged from *N*41 in Jimma, Ethiopia, to *N*112 in Dervan, India. Data were collected face-to-face by trained and experienced research staff (nutritionists, nurses or social workers) using local language(s) in each setting, or French (Abidjan) or English (Mysore) if preferred by participants. All teams were experienced in anthropometry from earlier research; they received additional training for the questionnaire in this study. The questionnaire was administered to adolescents alone (Abidjan, Jimma, Johannesburg, Dervan, Pune, Mysore) or adolescents together with their caregiver (West Kiang and Mumbai) by a researcher, except among older adolescents in Jimma, who self-completed it.

Questionnaire

A working group within TALENT, with representation from all eight centres, designed the questionnaire (see online supplementary material, Appendix 1). It included questions about family/household possessions, household amenities (drinking water source and toilet facilities),


Table 1 Description of study settings, methods of quantitative survey, data collection dates and sample sizes

| Setting | Population characteristics | Sample selection | Dates of data collection | Final sample | | | | |
|---|--|--|--------------------------|-----------------------|-----------------------|----------------------|-----------------------|------------------------------|
| | | | | Boys, 10–12 years (N) | Girls 10–12 years (N) | Boys 15–17 years (N) | Girls 15–17 years (N) | Total (N) (% response rate)* |
| West Kiang, The Gambia (see Janha RE <i>et al.</i> in this issue) | Poor, rural, subsistence farming villages, non-electrified and connected by earth roads. Some commercial farming (groundnuts). Nutrition and workload strongly influenced by season. Households comprise extended family compounds. High rates of adult illiteracy. Food is predominantly from home gardening and farming, local markets and small shop outlets. | Purposive selection from demographic surveillance system, avoiding Keneba village (site of MRC Unit) | July 2018 | 21 | 19 | 22 | 18 | 80 (96 %) |
| Abidjan, Cote D'Ivoire (see Jesson J <i>et al.</i> in this issue) | Three districts of Abidjan city. Low-income families. Dwellings have solid walls and roofing but limited space and access to electricity, and poor sanitation. Food mainly purchased from roadside market stalls. | Convenience sampling through schools and community associations | June 2018 | 29 | 38 | 18 | 24 | 109 (N/A) |
| Jimma, Ethiopia (see Abera M <i>et al.</i> in this issue) | Low and middle socioeconomic classes in Jimma City. Small, rapidly growing and industrialising city, population ~200 000. Main local industry is coffee-growing. Food purchased from vendors, shops, markets and supermarkets. | Convenience sampling through CHW | June–July 2018 | 7 | 9 | 10 | 15 | 41 (82 %) |
| Johannesburg, South Africa (see Wrottesley S <i>et al.</i> in this issue) | Disadvantaged urban township (Soweto) in Johannesburg (population 7.9 million). Good infrastructure (roads, electricity) due to post-Apartheid investment. Recent rapid emergence of shopping malls and fast-food chains. | Convenience sampling through CHW | July 2018 | 22 | 20 | 20 | 19 | 81 (100 %) |
| Dervan, Maharashtra, India (see Banavali U <i>et al.</i> in this issue) | Villages in deprived rural regions of Konkan. Main livelihood is farming (rice) but land quality is poor; many men earn by working in cities. Earth roads. Erratic electricity. Food purchased in local markets. Sample included 'tribals' (historically hunter-gatherers). | Convenience sampling in government schools | June–September 2018 | 25 | 25 | 35 | 27 | 112 (100 %) |
| Pune, Maharashtra, India (see Joshi-Reddy K <i>et al.</i> in this issue) | Rural villages, previously a subsistence farming community, now transformed by improved roads, electrification and irrigation, enabling cash crops (e.g., sugar cane) and small industries, with greatly increased local wealth. | Convenience sample recruited through CHW | May–August 2018 | 20 | 20 | 20 | 21 | 81 (88 %) |
| Mumbai, Maharashtra, India (see Chopra H <i>et al.</i> in this issue) | City slums in India's commercial capital. Multiple occupation groups represented (labourers through professionals). Mostly one-room, closely packed concrete dwellings, and public toilet facilities. Most have access to electricity. Food sources: abundant vendors and markets. | Convenience sample recruited through CHW | June–August 2018 | 20 | 20 | 20 | 20 | 80 [†] (98 %) |
| Mysore, Karnataka, South India | Low-middle/middle-class neighbourhoods in one of the best developed cities in India. Mainly detached houses or apartments. Several parks for public recreation and physical activity. Food sources: abundant food shops and markets. | Convenience sampling via schools and the community | July–November 2018 | 19 | 20 | 20 | 21 | 80 (N/A) |

CHW = community health worker.

*Percentage of adolescents approached who agreed to participate; not available for Cote D'Ivoire and Mysore, where community meetings were held and participants asked to volunteer.

†Dietary data were collected from sixty-seven adolescents in Mumbai.



maternal and head-of-household education level and occupational status, adolescents' mobile phone ownership and screen time, and frequencies of intake of food groups.

Family socioeconomic status, caregiver education and employment

We chose household possessions/assets as a measure of socioeconomic status. The list of possessions was based upon those in the Standard of Living Index questionnaire, used in the National Family Health Survey-4 (NFHS-4) in India⁽⁶⁾. We removed electricity, pressure cooker and sewing machine and added water heater; the final list of twenty-one possessions was as follows: mattress, chair, bed, table, clock/watch, electric fan, bicycle, radio/transistor/music player, television, motorised two-wheeler (moped/scooter/motorcycle), car, water pump, animal-drawn cart, thresher, tractor, refrigerator, air conditioner, washing machine, computer/laptop, broadband internet connection and water heater. Additional socioeconomic questions included caregiver education level (mother's and head of household's years of schooling) and employment status (paid employment, self-employed or not employed) and the household's drinking water source (categories from 'piped direct to the house' to 'river') and toilet facilities (from 'private flush toilet' to 'open fields').

Adolescents' diet

Diet questions were based on the Minimum Dietary Diversity Score for Women produced by the Food and Agriculture Organization and USAID's Food and Nutrition Technical Assistance III Project (FANTA), which is used to primarily derive a diet diversity score (DDS) as an indicator of dietary macro- and micronutrient adequacy⁽⁷⁾. It has questions about fourteen mutually exclusive food groups: (1) grains, (2) vegetables or roots that are orange-coloured inside, (3) white roots and tubers or plantains, (4) dark green leafy vegetables, (5) fruits that are dark yellow or orange inside, (6) any other vegetables, (7) any other fruits, (8) meat made from animal organs, (9) meat and poultry, (10) eggs, (11) fish or seafood (fresh or dried), (12) beans, peas or lentils, (13) nuts or seeds, (14) milk or milk products. As recommended in the use of this questionnaire⁽⁷⁾, teams were asked to select foods eaten by their population as examples, and to record whether adolescents had eaten foods in each group within the past 24 h. We additionally asked how often they ate foods in each group ('every day', 5–6 times per week, 2–4 times per week, once a week, or less than once a week, including never).

We also asked about snack and 'fast' foods, using the same two questions: (1) fried snacks, (2) savoury snacks in packets, (3) bakery items (e.g. cakes/biscuits/puffs), (4) sweets, (5) fast food/street food/restaurant food and (6) fizzy drinks (sugar-sweetened beverages). 'Restaurant food' was the term thought to be most understandable to participants to capture eating meals cooked in a café/restaurant setting, sometimes as takeaway food to eat at home, which tends to be high in fat or sugar. These snack and fast foods did not contribute to the DDS.

Adolescents' mobile phone ownership and screen time

Thinking of developing interventions (including the potential use of digital platforms) to improve adolescents' diets and activity in these settings, we wanted to know how many adolescents had access to phones and computers. We asked if adolescents owned their own mobile phone, and specifically whether it was a smartphone, how much time the adolescents spent on a computer each day (for schoolwork or entertainment) and for how many hours they watched television.

Anthropometry

Adolescents' weight (to the nearest 100 g) and height (to the nearest millimetre) were measured using portable digital weighing scales and stadiometers.

Data processing

A DDS was calculated⁽⁷⁾ by allotting 1 point if the adolescents reported eating foods from the following groups in the preceding 24 h, making a maximum possible score of 10: (1) either grains or white roots/tubers, (2) green leafy vegetables, (3) either orange-coloured vegetables/roots or orange-coloured fruits, (4) other vegetables, (5) other fruits, (6) either meat/poultry or fish/seafood or animal organs, (7) eggs, (8) milk/milk products, (9) beans/peas/lentils, (10) nuts/seeds. Height and weight were used to calculate the prevalence of stunting (≤ 2 SD height for age), low BMI/thinness (≤ 2 SD BMI for age), overweight (> 1 SD and < 2 SD BMI for age) and obesity (> 2 SD BMI for age) using the WHO 2007 growth reference⁽⁸⁾. Each site produced group-level metadata using SPSS or STATA (various versions), stratified by sex and age group, according to a common template. The sample size in each setting was small (Table 1), and so we describe gross differences between subgroups (e.g. between sexes and age groups) but did not test these statistically. We pooled data for both sexes and/or age groups in tables and figures if there was no clear evidence of subgroup differences.

Results

Anthropometry

Figure 1a and b shows the prevalence of stunting, low BMI, overweight and obesity in younger and older adolescents, respectively, by site. Stunting was present in all settings, and was similar between both sexes. The prevalence was higher among older than younger adolescents, and in India compared with the four African settings. The prevalence ranged in young adolescents from 0% in Jimma to 16% in Dervan, India, and in older adolescents from 8% in Jimma to 37% in Mysore, India. In most settings, low BMI was more prominent than overweight and obesity, with the exception of Johannesburg, where 26% of young adolescents and 28% of older adolescents were overweight or obese, while 0 and 5%, respectively, had a low BMI. The highest prevalence of low

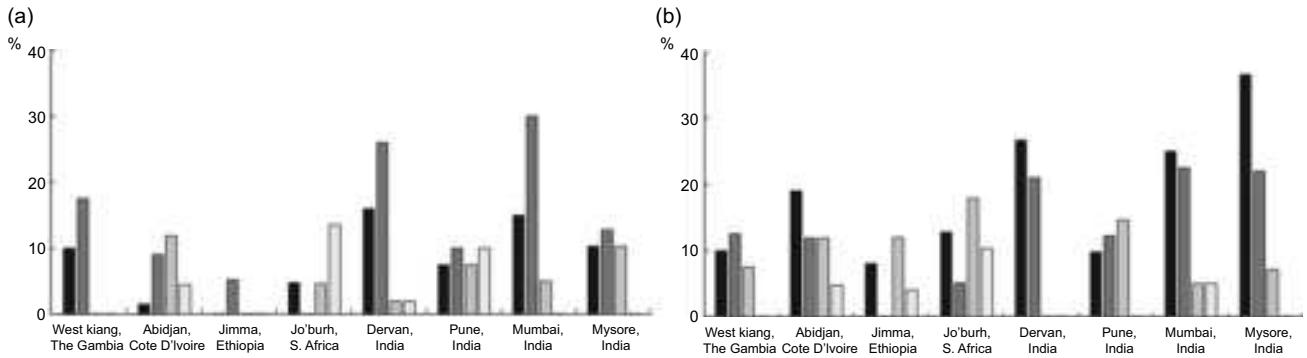


Fig. 1 Prevalence (%) of stunting, low BMI, overweight and obesity among (a) young adolescents and (b) older adolescents. ■, stunted (height -2 sd), WHO 2007; ■, low BMI (BMI -2 sd), WHO 2007; ■, overweight (BMI >+1 sd), WHO 2007; ■, obese (BMI >+2 sd), WHO 2007

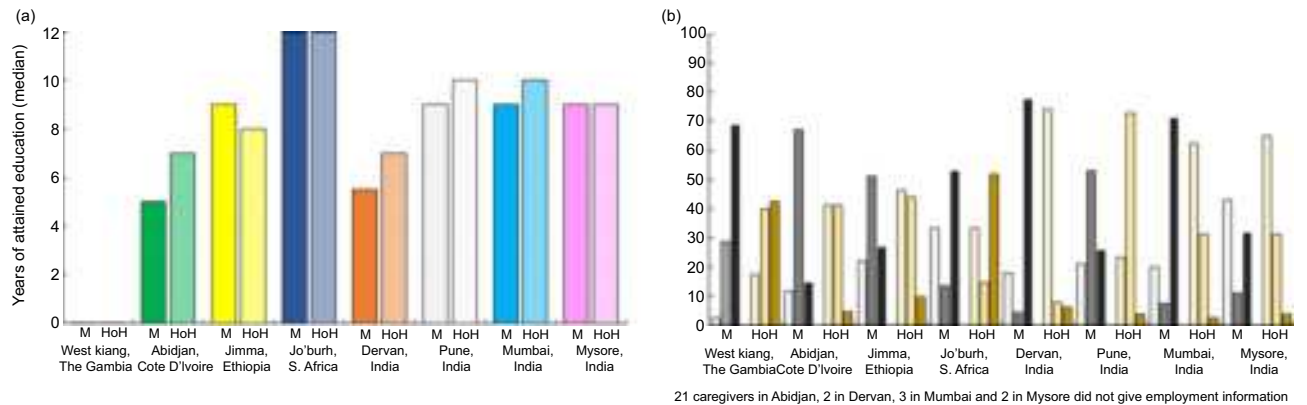


Fig. 2 Education level (a) and employment status (b) of mothers and HoH. M, mother; HoH, head of household; ■, paid employment; ■, self-employed; ■, not employed

If a caregiver was both a mother and a HoH, she was included in both analyses (5 % in West Kiang, 17 % in Cote D'Ivoire, 7 % in Ethiopia, 0 % in Johannesburg, 10 % in Dervan, 5 % in Pune, 9 % in Mumbai and 11 % in Mysore).

BMI was among young adolescents in the two rural settings (West Kiang, The Gambia (18 %), Dervan, India (26 %)) and in the slum population of Mumbai, India (30 %); the same was true for older adolescents. The prevalence of overweight or obesity was low (<math><5</math> %) in the two rural settings (West Kiang and Dervan), followed by Jimma (10 %), Mumbai (8 %), Mysore (9 %), Abidjan (17 %), Pune (16 %) and Johannesburg (27 %). There were no clear differences in the prevalence of overweight or obesity between younger and older adolescents or between the sexes.

Maternal and head of household's education and employment status, house ownership, household possessions, drinking water source and toilet facilities

Data from younger and older adolescents were pooled for these analyses, because the data related to households rather than individuals.

Caregiver education and employment

The median years of schooling was the highest (12 years for both mother and head of household) in Johannesburg and the lowest (0 year) in West Kiang (Fig. 2a). It was 8–10 years in

Jimma and in all the Indian settings, except Dervan, and 5–7 years in Abidjan and Dervan. Employment status varied between settings (Fig. 2b). In Africa, the percentages of mothers in paid employment ranged from 3 % in rural West Kiang to 33 % in urban Johannesburg, and among the Indian settings from 18 % in rural Dervan to 43 % in urban Mysore. A high proportion of mothers in West Kiang (29 %), Abidjan (67 %), Jimma (51 %) and Pune (53 %) were self-employed, and a high proportion were not in paid employment in West Kiang (69 %), Johannesburg (53 %), Dervan (78 %) and Mumbai (71 %). Heads of household in paid employment ranged from 17 % in West Kiang to 46 % in Jimma, and among Indian settings from 23 % in Pune to 74 % in Dervan. Self-employed heads of household ranged from 15 % in Johannesburg to ~40 % in West Kiang, Abidjan and Jimma. A substantial proportion of heads of household were not in paid employment in West Kiang (43 %) and Johannesburg (52 %), but head-of-household non-employment was minimal in other settings.

Household assets/possessions

Television ownership was ≥ 90 % in Johannesburg, Cote D'Ivoire, Pune, Mumbai and Mysore, and >70 % in all other

centres except the non-electrified villages of West Kiang (5%). Refrigerator ownership ranged from 0% in West Kiang and 21% in Dervan to 30–60% in most other settings and 100% in Johannesburg. Washing machine ownership was low ($\leq 12\%$) in rural settings. Ownership of an animal-drawn cart was mostly limited to rural or semi-rural settings (West Kiang and Pune). The highest ownership of a water pump was in semi-rural Pune, where the villages are electrified and irrigation water is available because of a local dam. Bicycle ownership was the highest in rural settings and low in large cities. Ownership of a moped or motorcycle was low in all the African settings, but was substantial in all Indian settings, except Mumbai. Fifty-seven per cent of families in Johannesburg owned a car (the highest among all settings), while two-wheeler ownership was negligible. Car ownership was 15–30% in other urban settings, though lower (4%) in Mumbai. It was zero in West Kiang and 8% in Dervan (both rural settings), but as high as 37% in semi-rural Pune. Computer ownership was the highest in Johannesburg (44%), 20–30% in Abidjan and Jimma, <20% in all other settings, and zero in West Kiang. The items that showed the greatest range in ownership across settings were refrigerators, washing machines and motorised two-wheelers. See online supplementary material, Supplemental Figure 1.

Household amenities

The main drinking water source was a private supply piped directly into the house in cities (Johannesburg 100%, Jimma 95% and Mysore 88%), around 40% in other urban settings and rural Dervan, with the remainder mainly using a public tap (Fig. 3a). In West Kiang, none had water piped to the house. A private flush toilet within the household was the norm in Johannesburg, and owned by most families in Mysore (Fig. 3b). In Dervan, Pune and Abidjan, almost all households had their own pit toilet, while in West Kiang and Mumbai, almost all families used a shared or public pit toilet. Very small number of families had no toilet facilities and used open spaces for defaecation.

Adolescents' diet

Dietary diversity

Taking all adolescents together in each setting, proportions achieving a DDS ≥ 5 ranged from 41% in Mumbai and 44% in Jimma to 100% in West Kiang (Fig. 4a, see online supplementary material, Supplemental Figure 2). Median DDS showed a similar pattern, ranging from 4 in Jimma to 9 in West Kiang. Diet diversity was not markedly different between younger and older adolescents (Fig. 4b). It was lower in girls than boys in all the Indian settings, though the differences were mostly small; this was due to fewer girls than boys reporting the consumption of yellow/orange vegetables/roots and yellow/orange fruits in the past 24 h, while the opposite was true for white roots/tubers (data not shown). In Dervan, fewer girls than boys also reported eating fish, organ meat and nuts; in Pune and Mumbai, fewer girls than boys reported eating beans/peas/lentils; and in Mysore, fewer girls than boys reported having milk or milk products (data not shown).

Frequency of intake of foods

The frequency of eating eight selected food groups is shown in online supplementary material, Supplemental Figure 3; data are missing for Johannesburg and for some foods in West Kiang due to a misunderstanding about how these questions should be asked (missing data are labelled N/A in these figures). In all the settings with data, most adolescents ate micronutrient-rich vegetables and fruits (green leafy vegetables, yellow/orange vegetables/fruits) 2–4 times or less per week, and there were substantial proportions of adolescents who ate them less than once a week, especially in India. Protein- and micronutrient-rich foods of animal origin, such as eggs, meat and fish, were eaten infrequently in all settings. Although the intakes of milk/milk products and beans/peas/lentils were higher than those of eggs, fish and meat, most adolescents ate them only 2–4 times or less per week.

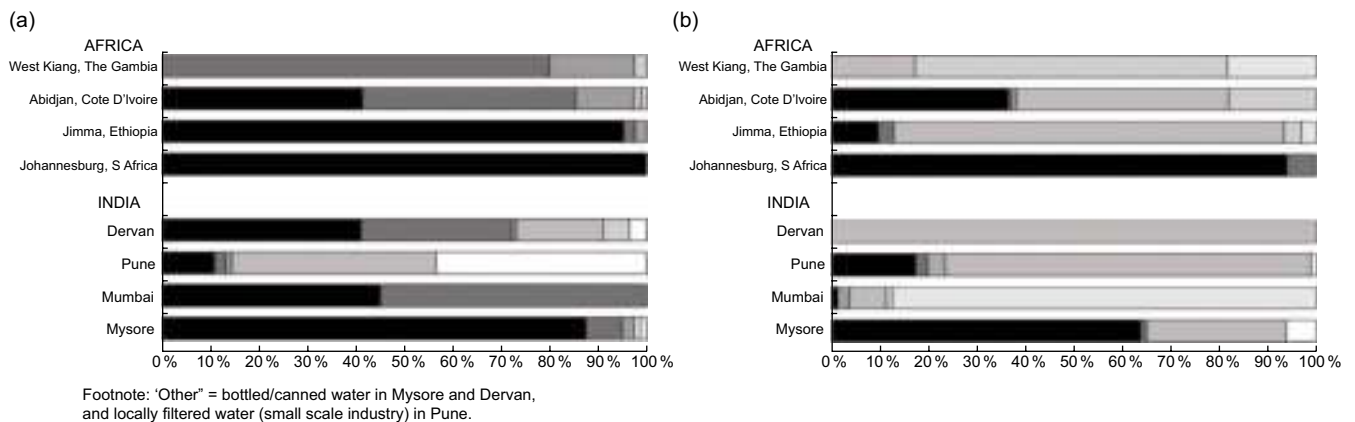


Fig. 3 Main source of drinking water (a) and toilet facilities (b) by setting (percentages, sexes and age groups pooled). ■, piped direct to house; ■, public tap; ■, hand pump; ■, well; ■, river; ■, tanker; ■, other; ■, own flush toilet; ■, shared flush toilet; ■, public flush toilet; ■, own pit toilet; ■, shared pit toilet; ■, public pit toilet; ■, open fields/no facilities

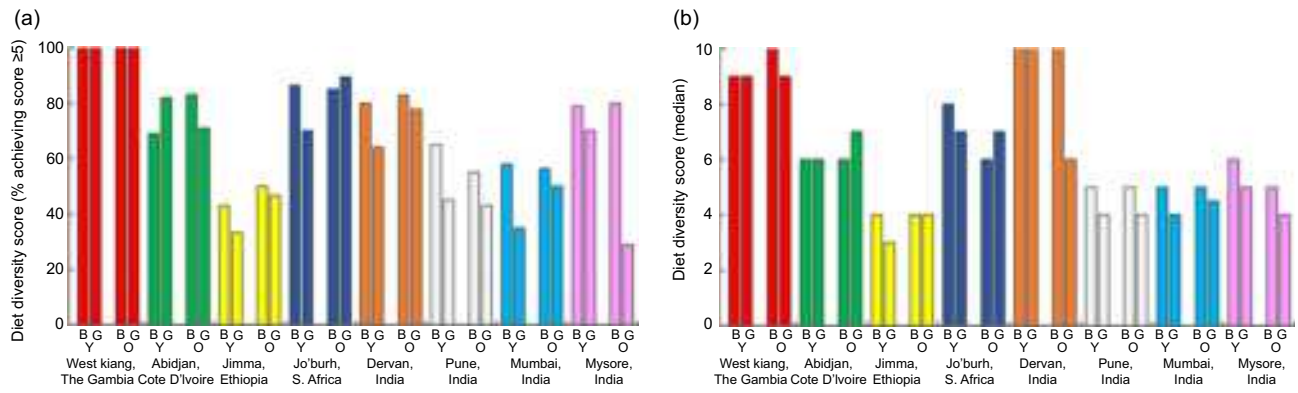


Fig. 4 Proportions of adolescents achieving a diet diversity score ≥ 5 (a) and median diet diversity scores (b) by setting, stratified by sex and age group. B, boys; G, girls; Y, young; O, older

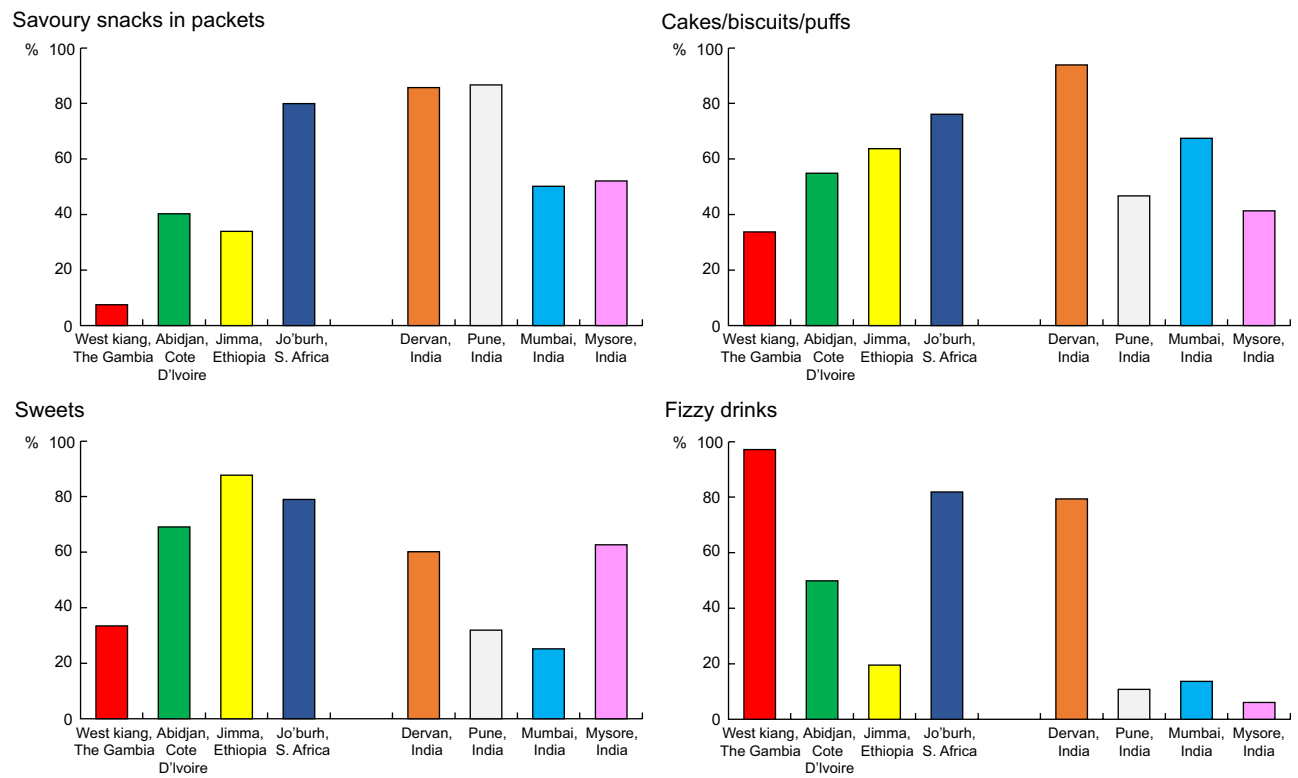


Fig. 5 Proportions of adolescents who ate selected snack foods in the past 24 h by setting (sexes and age groups pooled)

Snack foods

There were no obvious differences between boys and girls or younger and older adolescents in the consumption of snacks. The proportions of adolescents who reported eating savoury snacks in packets, bakery foods (e.g. cakes, biscuits, puffs) and sweets in the past 24 h were consistently high (70–90%) in urban Johannesburg and rural Dervan (Fig. 5, see online supplementary material, Supplemental Figure 4). In semi-rural Pune, 86% of adolescents reported eating savoury snacks in packets in the last 24 h, while only 7.5% reported this in rural West Kiang.

Otherwise, between 30 and 60% of adolescents reported eating these foods in the past 24 h. Across the African sites, there was a consistent pattern suggesting that the intakes of savoury snacks, bakery items and sweets were higher in more urbanised or affluent settings; there was no clear pattern in India. The consumption of fizzy drinks varied widely across sites (Fig. 5). Over 80% of adolescents in West Kiang, Johannesburg and Dervan reported drinking these in the past 24 h. In contrast, <20% of adolescents in Jimma, Pune, Mumbai and Mysore did so. In West Kiang and Dervan, adolescents were probably reporting locally produced drinks,

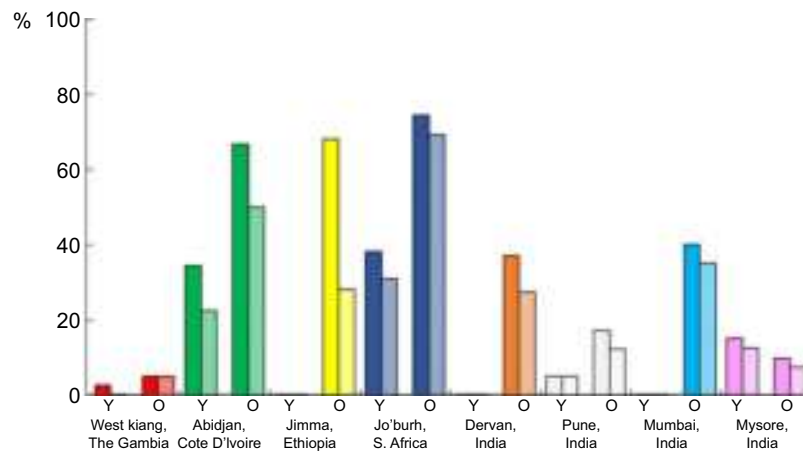


Fig. 6 Ownership of any mobile phone (solid bars) and a smartphone (hatched bars), stratified by age group, sexes pooled. Y, young; O, older adolescents; ■, any mobile phone; ▨, smartphone

Table 2 Screen time

| Setting | Younger or older adolescents | Watching entertainment (TV, computer, phone), hours per day | | Playing games (computer, phone), hours per day | | Doing schoolwork on a computer, hours per day | |
|------------------------|------------------------------|---|-------|--|-------|---|--------|
| | | Median | Range | Median | Range | Median | Range |
| West Kiang, Gambia | Younger | 1 | 0–3 | 0 | 0–0 | 0 | 0–0 |
| | Older | 1 | 0–3 | 0 | 0–0 | 0 | 0–0 |
| Abidjan, Cote D'Ivoire | Younger | 2 | 0–11 | 2 | 0–6 | 0 | 0–2 |
| | Older | 3 | 0–10 | 1 | 0–6 | 0 | 0–4 |
| Jimma, Ethiopia | Younger | 1 | 0–11 | 1 | 0–14 | 0 | 0–0 |
| | Older | 4 | 1–6 | 0 | 0–6 | 0 | 0–6 |
| Jo'burg, S Africa | Younger | 3 | 2–5 | 2 | 0–3 | 1 | 0–3 |
| | Older | 3 | 2–4 | 1 | 0–3 | 0 | 0–1 |
| Dervan, India | Younger | 1 | 0–3 | 0 | 0–2 | 1 | 0–4 |
| | Older | 1 | 0–4 | 0 | 0–4 | 1 | 0–6 |
| Pune, India | Younger | 1 | 0–4 | 0.5 | 0–3.5 | 0 | 0–0 |
| | Older | 1.5 | 0–6.5 | 0.25 | 0–2 | 0 | 0–0 |
| Mumbai, India | Younger | 1 | 0–4 | 0.4 | 0–2 | 0 | 0–0.05 |
| | Older | 2 | 0–5 | 0.5 | 0–3 | 0 | 0–3 |
| Mysore, India | Younger | 1 | 0–6 | 0.5 | 0–3 | 0 | 0–5 |
| | Older | 2 | 0–6 | 0 | 0–5 | 0 | 0–2 |

made from fruit juices/cordials/syrups with added bicarbonate to make them appear fizzy, which have less added sugar compared with branded sugar-sweetened beverages.

Mobile phones, smartphones and screen time

Ownership of a mobile phone was higher among older than younger adolescents (Fig. 6). It was the highest in Johannesburg and Abidjan (~60–70% among older adolescents and 30–40% among younger adolescents) and among older adolescents in Jimma (68%). It was negligible in West Kiang for both age groups, among young adolescents in Jimma, and all the Indian centres. Most adolescents using a mobile phone had a smartphone (except in Jimma). Median hours of TV watching for leisure/entertainment ranged from 1 to 4 h in Africa and 1–2 h in India, with a large variation everywhere, and were generally higher among older

adolescents (Table 2). Median time spent playing computer games was <1 h in most places, but was as high as 2 h among young adolescents in Abidjan and Johannesburg. A striking finding was that there was very little computer use for school work (median 0–1 h everywhere and in both age groups).

Discussion

We collected quantitative data to describe the context of qualitative data collection, illustrate the contrast between settings and inform our thinking about the development of interventions to improve adolescents' diet and physical activity levels in these settings. Although we included a middle-class area in one Indian setting (Mysore), we mainly targeted deprived neighbourhoods.



Anthropometry

Undernutrition (stunting and low BMI) was more prominent than overweight or obesity in most of the settings in our study. It was most prevalent in the least transitioned, rural settings and in the slums of Mumbai, where obesity was uncommon. Johannesburg had the highest prevalence of overweight/obesity (27% overall) and yet >5% of adolescents were stunted. The semi-rural Pune setting has experienced substantial economic improvement over the past 20 years due to electrification, irrigation, better roads and small industries, and here there were approximately equal prevalence rates of stunting, low BMI and overweight/obesity. There is an upward shift in BMI in most LMIC, and overweight and obesity are increasing, while underweight and thinness are decreasing⁽⁹⁾. Within populations, the prevalence of thinness is inversely correlated with the prevalence of overweight/obesity^(2,9). However, inequalities in transition mean that both are often present, with persistent stunting and/or thinness in some individuals alongside emergent overweight/obesity in others – the ‘double burden of malnutrition’. South Asia and sub-Saharan Africa stand out with a high prevalence of both undernutrition and overweight^(9,10). Few, if any, LMIC seem to have escaped from hunger and avoided the emergence of overweight/obesity^(9,10). This has important implications for later health, because accelerated weight gain during adolescence is associated with a higher risk of type 2 diabetes, hypertension and metabolic syndrome^(11,12).

Consistent with published data, stunting was more prevalent in India than Africa⁽¹³⁾. Within each of the TALENT settings, the prevalence of low BMI was similar for both age groups, while stunting was more prominent in older adolescents. This illustrates the difficulty in comparing adolescent growth across different settings. Stunting in LMIC has its onset prenatally and in infancy⁽¹⁴⁾, and height z-scores tend to be stable through childhood⁽¹⁵⁾. Thus, higher stunting rates at 15–17 years do not necessarily reflect the appearance of new cases of stunting, but could be an artefact resulting from a different *tempo* of growth during adolescence compared with the WHO reference. Because of variations in the onset and duration of pubertal growth, there is limited population-based data from LMIC that documents the entire period, which can start anytime from 10 to 15 years and continue until the age of ≥ 20 years^(16–18). Information on how nutrition before and during puberty influences the pubertal growth spurt and final height as well as other aspects of human capital, such as cognitive function, is needed.

Household-level information

The household assets data give a snapshot of material wealth of adolescents’ families, and illustrate marked contrasts between the settings. Refrigerator ownership was one with most variability between settings. There is little data on how refrigerator ownership influences diet. Nigerian children whose families owned a refrigerator had higher

intakes of micronutrient-rich foods; the authors attributed this to children’s greater access to fruit and vegetables⁽¹⁹⁾. On the other hand, a study in South Africa has found that refrigerator ownership was associated with a greater intake of sugar-sweetened beverages and greater adiposity among adolescents, which, the authors suggested, reflected more disposable wealth⁽²⁰⁾.

Parents’ education varied from 0 year in West Kiang to 12 years in Johannesburg, reflecting large differences in the past in LMIC’s access to universal education. There was also large variation in the employment status of mothers and heads of the household. Other studies, mostly from high-income settings, have shown a complex relationship of parental education, occupation, income and work patterns with adolescents’ diet, nutritional status and physical activity. These factors have been related to adolescents’ food security, BMI, diet quality, opportunities for the choice of diet and physical activity, family meal patterns and parental control of adolescents’ food intake^(21–25). In future work in TALENT settings, it will be important to develop an understanding of how parental education and employment influences adolescents’ nutrition. Some adolescents had no access to safe drinking water and/or were using open spaces for urination and defaecation. Almost all had access to at least a shared pit or flush toilet, and a substantial number had a toilet in their house. This reflects recent improvements in water and sanitation facilities in LMIC, with India recording a significant improvement⁽²⁶⁾. Arguably, the situation in Mumbai slums was the worst, where most adolescents use public pit toilets, which are often poorly maintained. Apart from the possibility of an infection risk, lack of privacy can be a problem for girls coping with menstruation. With the level of population densities seen in the slums of ‘megacities’ like Mumbai, universal private toilet facilities seem less likely to be achievable, and current efforts are directed at improving the quality of shared facilities.

Diet

Diet diversity was the greatest in the two least transitioned rural settings, which also had the most undernutrition. This may be because of local agriculture and opportunities for home gardening and/or foraging, but food quantities were not assessed in our study. So, although the diets were diverse, they may not be sufficient to meet other dietary requirements. Diet diversity was lower for girls than boys in India. Given our small sample size, this should be interpreted with caution, but, consistent with evidence, especially from rural Indian communities, there is a tendency for boys to be fed on priority and, thus, have access to a greater variety of foods⁽²⁷⁾. Our data indicate that adolescents’ intakes of micronutrient-rich fruits and vegetables and protein source foods are sub-optimal in all our study settings. This is consistent with previous data, and access to such foods partly reflects their affordability in all the



settings^(28,29). At the same time, adolescents, even in rural communities, were frequently eating unhealthy snacks and drinks, often locally made and sold at extremely cheap prices. As reported in other studies in LMIC, the intakes of such foods often exceeded that of nutritious foods⁽³⁰⁾. Finding sustainable ways to improve diet quality among adolescents should be a research priority.

Screen time and mobile phone ownership

Screen time varied across settings, but adolescents in urban Abidjan and Johannesburg were spending on average ≥ 2 h a day watching television and ≥ 1 h playing computer games. The displacement of physical activity by screen time was a major concern reported by caregivers, as confirmed by other articles in this issue. Television ownership was almost universal among the families studied, except in The Gambia. TV time has been robustly linked to BMI in adolescents, through a combination of sedentariness, snacking, exposure to food advertisements and reduced sleep time^(31,32). Ownership of computers, access to the internet and the use of computers for schoolwork were all markedly low. Investigators from all the settings reported that school students use internet centres and smartphones for school projects. Smartphone ownership was negligible in most settings, but ~20–40% of young adolescents and ≥ 50 % of older adolescents in Abidjan and Johannesburg had smartphones. We did not collect data on this, but we are aware anecdotally that smartphones owned by family members are frequently shared with adolescents. There is evidence that smartphone usage is associated with reduced physical activity, a risk factor for obesity, and with problems of mental health, possibly because of sleep impairment and/or exposure to harmful online material or bullying^(33–35). However, they are also a valuable platform to provide health information and engage adolescents in interventions to improve health^(36,37). Smartphone ownership among adults was estimated in 2017 at 22% in India and 51% in South Africa, which increased by 10–20% between 2015 and 2017 in LMIC⁽³⁸⁾, but there is limited ownership data relating to adolescents.

Strengths and limitations

A major strength of our data is the harmonised approach across eight settings, providing valuable and contextual information about the pool of adolescents from which the focus groups were derived and for whom we have qualitative data. Data were collected by trained staff fluent in languages spoken by the participants. A limitation was that, except for West Kiang, the adolescents were recruited by schools or health workers (convenience sampling), and not population-based. A further limitation was that the sample size for quantitative data in each setting was small, limiting robust sub-group comparisons. One site (Jimma, Ethiopia) did not reach the target sample for recruitment; this could reduce the generalisability of their data, but

the data remained useful in contextualising their qualitative work. Two centres (South Africa and The Gambia) did not have data on the frequency of intake of all foods, due to a misunderstanding in asking questions (they asked about the frequency of intake of foods only if the adolescent reported eating that food within the past 24 h); the frequency data are, therefore, incomplete for these two sites. Other data collected from these sites were, however, useful. Finally, the possibility of under- or overreporting (e.g. social desirability bias) could not be verified.

Conclusions

Our quantitative data captured considerable diversity in anthropometry, socioeconomic parameters, diet and mobile phone usage and screen time across the TALENT settings. Our findings imply that there is a need to address the ‘double burden of malnutrition’ across the settings and, particularly, increasing diet diversity and reducing intakes of unhealthy snack foods and sugar-sweetened beverages are important targets. One useful approach will be to work with adolescents in these communities and other stakeholders to co-create solutions that are feasible, acceptable and scalable to improve the nutrition of young people.

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Committee, Mumbai, India; the Institutional Ethics Committee of the BKL Walawalkar Rural Medical College, Dervan, India; the Institutional Ethics Committee of the King Edward Memorial Hospital, Pune, India; and the Research Ethics Committee of the University of Southampton, UK. Written informed consent was obtained from all caregivers for their own and their child's participation; written or verbal assent was obtained from younger adolescents.

Supplementary material

For supplementary material accompanying this article visit <https://doi.org/10.1017/S1368980020001901>.

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What shapes adolescents' diet and physical activity habits in rural Konkan, India? Adolescents' and caregivers' perspectives

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Abstract

Objective: To explore, adolescents' and caregivers' perspectives, about shaping of diet and physical activity habits in rural Konkan, India.

Design: Five focus group discussions (FGD) were conducted with adolescents and two with caregivers. Data were analysed using thematic analysis.

Setting: FGD were conducted in secondary schools located in remote rural villages in the Ratnagiri district, Konkan region, Maharashtra, India.

Participants: Forty-eight adolescents were recruited including twenty younger (10–12 years) and twenty-eight older (15–17 years) adolescents. Sixteen caregivers (all mothers) were also recruited.

Results: Three themes emerged from discussion: (i) adolescents' and caregivers' perceptions of the barriers to healthy diet and physical activity, (ii) acceptance of the status quo and (iii) salience of social and economic transition. Adolescents' basic dietary and physical activity needs were rarely met by the resources available and infrastructure of the villages. There were few opportunities for physical activity, other than performing household chores and walking long distances to school. Adolescents and their caregivers accepted these limitations and their inability to change them. Increased use of digital media and availability of junk foods marked the beginning of a social and economic transition.

Conclusion: FGD with adolescents and their caregivers provided insights into factors influencing adolescent diet and physical activity in rural India. Scarcity of basic resources limited adolescent diet and opportunities for physical activity. To achieve current nutritional and physical activity recommendations for adolescents requires improved infrastructure in these settings, changes which may accompany the current Indian social and economic transition.

Keywords
Adolescence
Food choices
Diet
Physical activity
Rural India
Qualitative study

Adolescence, the phase during which a child transitions into adulthood, is developmentally second only to infancy in terms of rate of growth. The process of physical and emotional maturation is nutritionally and physiologically

demanding and is characterised by complex psychosocial interactions⁽¹⁾. Optimal growth and development during adolescence is supported by adequate nutrition. Since adolescence serves as the foundation for a healthy

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adulthood, it is imperative that nutrition during this life-course phase is not neglected.

Developing countries like India face a triple burden of malnutrition, describing the coexistence of both under- and over-nutrition. In many areas, under-nutrition is the primary cause of ill-health and stunting in children⁽²⁾. When stunted children reach puberty, the associated physiological changes impose an additional burden on their health, making them vulnerable to diseases in later life^(1,3,4). The prevalence of malnutrition adolescents in rural India is alarming⁽⁵⁾. Studies conducted at our centre in rural Konkan found 41 % of adolescents to be anaemic, while two-thirds were undernourished (BMI < 18.5 kg/m²)⁽⁶⁾. Additionally, over-nutrition is increasingly prevalent in India and is associated with obesity and the development of non-communicable diseases. Many non-communicable diseases, which are generally manifested in later life, have their origins early in fetal life⁽⁷⁾. Adequate nutrition during pregnancy has a major role in optimising outcomes and confers long-term health benefits to the offspring. Adolescents, as prospective parents, assume an important role in shaping the health of future generations; however, large segment of the young population is exposed to poor diet diversity and lack of nutrient-dense food⁽³⁾. Therefore, addressing the nutritional concerns of adolescents has the potential for triple benefit, to adolescents now, in the future, and for their children.

Socio-ecological theory posits that health behaviours are determined by inter-related personal and environmental factors⁽⁸⁾. Food security, including accessibility and availability, is associated with malnutrition in developing countries. As part of their conceptual framework, Turner *et al.*⁽⁹⁾ distinguished between availability, the presence or absence of particular foods, and accessibility, which includes personal and contextual factors^(10,11). There are many other factors during adolescence that may shape diet and physical activity behaviours. In addition, obesity could be attributed to increased consumption of high-fat foods and an inclination towards a sedentary lifestyle during adolescence⁽¹²⁾. To date, adolescents' and caregivers' perspectives on factors influencing their diet and physical activity habits in Konkan, India have not been explored. Adolescents are difficult to engage in behaviour change and unless their perspectives are acknowledged, interventions are unlikely to be effective. A qualitative methodology was chosen to address this gap. This study formed part of Transforming Adolescent Lives through Nutrition (TALENT), an international collaboration aiming to understand adolescents' dietary behaviour and opportunities for physical activity (Barker *et al.*, this issue).

Methods

Setting

This study was carried out in two villages in the Ratnagiri district, a rural part of the Konkan region of Maharashtra, India⁽¹³⁾. Although the villages have electricity, access roads

are poorly lit with limited power supply. Farming is the main occupation of the village inhabitants; the main crop of Ratnagiri district is rice. Vegetables and fruits are generally imported from other districts as the hilly terrain has fragmented holdings making cultivation difficult. Basic commodities such as groceries are available in the local weekly market shared by 10–12 villages. In general, the population here belongs to lower socio-economic strata. Government-run schools are generally located close to the highways meaning that children living in remote areas must walk long distances to school. This study was conducted by the BKL Walawalkar Hospital and Research Centre. This is the only multispecialty hospital with state-of-the-art medical facilities along the Konkan belt. The trust which runs the hospital has initiated several local welfare schemes and, as a result, staff have good rapport with surrounding communities.

Research design and participants

Students studying in Grade V were selected to represent the younger adolescent age group (10–12 years) and those studying in Grade X formed the older adolescent group (15–17 years). A total of 112 adolescents were recruited from the selected schools to participate in a demographic survey, which included a diet diversity questionnaire. A subset of willing survey respondents were conveniently sampled for participation in focus group discussions (FGD). FGD were used to explore adolescents' and their parents' (hereafter, caregivers) perceptions of influences on adolescent diet and physical activity and to collect their ideas about effective health interventions⁽¹⁴⁾. Seven FGD were conducted: two with 10–12 year olds, three with 15–17 year olds, one with caregivers of the 10–12 year olds and one with caregivers of the 15–17 year olds. Girls and boys, adolescents and caregivers, participated separately. FGD were facilitated and observed by researchers who had worked as psychologists in the community for 2 years, were well-acquainted with the community and had a good relationship with local schools. These researchers received training from the TALENT collaboration in qualitative research prior to the commencement of the project and on-going support during the data collection.

Data collection

Contextual data

Anthropometric data collection comprised height (to the nearest 0.1 cm) and weight (in kg) and was used to calculate BMI. The WHO's definition to stunting was used (height Z-score < -2)⁽¹⁵⁾. Ten food groups were used to calculate dietary diversity by adding individual scores (either 1 or 0) with 10 being the maximum.

Focus group discussions

FGD were carried out (June–September 2018) using separate semi-structured FGD guides for adolescents and caregivers (see online supplementary material). All FGD were



conducted in schools, except one which was held at the research centre. Each FGD consisted of 8–10 participants and lasted 45–60 min. A facilitator guided the discussions and an observer recorded the proceedings. R.C. and S.S. facilitated and observed the FGD, alternating their roles. All were audio-recorded. At the start of each FGD, the researchers introduced themselves, the purpose of the study, and asked participants if they were happy for the audio-recording to begin. Discussions were held in the participants' local language, Marathi.

Data analysis

The audio-recorded FGD were transcribed verbatim into the local Marathi language. Subsequently, the recordings were translated into English by R.C., C.J. and U.B. to enable discussion of findings across the TALENT group. The accuracy of translations was judged by listening to the audio-recordings while matching them with the translations. The transcripts were analysed thematically, guided by Braun and Clarke's approach⁽¹⁶⁾ and using the qualitative analysis software NVivo (version 12). The researchers immersed themselves in the data, (re)reading the transcripts thoroughly. To begin, emerging themes were identified which informed the development of an initial coding framework. The data were then coded inductively by U.B., R.C. and S.S.. The coding pattern was subsequently checked by experts (P.H.J. and S.W.) to ensure accuracy and the patterns emerging from the data were discussed. After scrutiny and discussion among the research team, similar codes were grouped together and categorised. These categories were revised and eventually developed into themes and sub-themes.

Results

In total, fifty 10–12 year olds (twenty-five boys, twenty-five girls) and sixty-two 15–17 year olds (thirty-five boys, twenty-seven girls) took part in the survey (see Table 1). Adolescents in both the age groups had mean BMI values below WHO averages⁽¹⁶⁾. Stunting was apparent in 16% of the 10–12 year olds. Among older adolescents, stunting was observed in 40% boys and 8.7% girls. Twenty of these younger adolescents (ten boys, ten girls), twenty-eight of the older adolescents (ten boys, eighteen girls) and sixteen of their caregivers participated in the FGD. Average years of parental education (father and mother) were 5.7 and 6.5, respectively, among parents of older adolescents, compared with 4.9 and 5.7 years, respectively, for the younger group. Approximately 80% of fathers of older adolescents and 69% of younger adolescents were employed. A substantial number of mothers (66% in older and 87% in younger) were not employed.

Analysis of data derived from FGD led to the emergence of three key themes: (i) adolescents' and caregivers' perceptions of the barriers to healthy diet and physical activity, (ii) acceptance of the status quo and (iii) salience of the

social and economic transition. These main themes are presented in the text below, followed by a conceptual diagram outlining the key findings.

Theme 1: Adolescents' and caregivers' perceptions of the barriers to healthy diet and physical activity

Availability of food

Adolescents revealed that their consumption of fruits and vegetables was very low, and that availability was an important limitation to their food choices. Most of the participants mentioned that the vegetables and fruits were not always available in the local markets, making it difficult for them to buy. Food availability was equated with ability to buy produce at the market and grow food at home. From these data, participants' felt that availability had a large influence on food consumption despite the locally available, nourishing seasonal fruits and vegetables:

P: We don't get root vegetables or fruits that often . . . only once a month (FGD 1, older girls)

One girl said she believed there to be greater food availability in cities and explained how this influenced local nutrition:

P: We have limited choice of vegetables in our village. You get more in urban areas. If we get those we will get better nutrition. (FGD 1, older girls)

Access and affordability of food

In accordance with Turner *et al.*'s⁽⁹⁾ conceptual framework of food security, availability precedes accessibility whereby certain foods cannot be accessible without being available⁽¹⁰⁾. However, adolescents in this study perceived both availability and accessibility as barriers to a healthy diet. Even when certain foods were available, they were not always accessible. The remote villages in Konkan do not have easy access to markets, which are usually held just once a week, on a fixed day. Limited transport options meant that the villagers had to walk long distances (>30 min) to the market.

Purchasing power was another factor which determined how often groceries were bought. Most parents explained that this happened 'whenever we have money':

F: How often do you buy groceries?

P: Some of us every 4 months, some every 6 months (FGD 7, parent of older adolescent)

P: . . . Depends on money (FGD 7, parent of older adolescent)

Seasonality

Seasonality was another important factor determining food availability. The Konkan region of Maharashtra is well known for fruits like Alphonso mangoes and jackfruit. Consumption of these when in season (approximately 2 months) contributes significantly to the nutrient intake in

Table 1 Anthropometry and socio-demographic characteristics of the adolescents

| | Age groups | | | | | | | |
|--|--------------------|------|-------|------|--------------------|------|-------|------|
| | 10–12 years (n 50) | | | | 15–17 years (n 62) | | | |
| | Boys | | Girls | | Boys | | Girls | |
| Anthropometry | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| <i>n</i> | 25 | | 25 | | 35 | | 27 | |
| Weight (kg) | 26.8 | 4.5 | 29.7 | 5.2 | 45.9 | 9.2 | 42.9 | 7.5 |
| Height (cm) | 135.0 | 6.8 | 136.5 | 7.8 | 160.6 | 9.8 | 155.9 | 5.6 |
| Height-for-age Z | -1.21 | 0.84 | -1.21 | 1.02 | -1.36 | 1.24 | -0.85 | 0.79 |
| Stunting (%) | 16 | | 16 | | 40 | | 8.7 | |
| BMI (kg/m ²) | 14.7 | 2.2 | 15.8 | 1.7 | 17.7 | 1.8 | 17.6 | 2.3 |
| BMI-for-age Z | -1.58 | 1.35 | -0.84 | 1.07 | -1.27 | 0.97 | -1.37 | 1.09 |
| Thin (%) | 37.5 | | 16.0 | | 22.9 | | 21.7 | |
| Overweight (%) | 4.2 | | 0 | | 0 | | 0 | |
| Obese (%) | 4.2 | | 0 | | 0 | | 0 | |
| Dietary diversity score* | 8.1 | 2.7 | 7.1 | 3.5 | 8.1 | 3.0 | 6.7 | 2.2 |
| Socio-demographic data | | | | | | | | |
| Ownership of mobile phones, <i>n</i> (%) | 0 | 0 | 0 | 0 | 12 | 34.3 | 11 | 40.7 |
| Average screen time (h/d) | 1.2 | 0.7 | 1.4 | 0.8 | 1.4 | 0.8 | 2.1 | 0.7 |
| Education in years | | | | | | | | |
| Mother | | | | | | | | |
| Mean | | | 4.9 | | | | 5.7 | |
| SD | | | 3.2 | | | | 3.5 | |
| Father | | | | | | | | |
| Mean | | | 5.7 | | | | 6.5 | |
| SD | | | 4.1 | | | | 3.7 | |
| Mother's occupation (%) | | | | | | | | |
| Paid employed | | | 26 | | | | 11.3 | |
| Self-employed | | | 8 | | | | 1.6 | |
| Not employed | | | 66 | | | | 87.1 | |
| No response | | | 0 | | | | 0 | |
| Father's occupation (%) | | | | | | | | |
| Paid employed | | | 80 | | | | 69.4 | |
| Self employed | | | 12 | | | | 22.6 | |
| Not employed | | | 4 | | | | 8.0 | |
| No response | | | 4 | | | | 0 | |
| Household members | | | | | | | | |
| Adults | | | | | | | | |
| Mean | | | 3.3 | | | | 3.6 | |
| SD | | | 1.7 | | | | 1.5 | |
| Children | | | | | | | | |
| Mean | | | 2.5 | | | | 2.1 | |
| SD | | | 1.2 | | | | 1.1 | |

Height-for-age Z, BMI-for-age Z, stunting, thin, overweight and obese are defined using WHO 2007.

*Dietary diversity score was calculated based on the consumption of the following ten food categories: **1.** Either grains or white roots/tubers; **2.** Either orange-coloured vegetables/roots or orange-coloured fruits; **3.** Other vegetables; **4.** Other fruits; **5.** Either organ meats or meat/poultry or fish/seafood; **6.** Eggs; **7.** Milk/milk products; **8.** Green leafy vegetables; **9.** Nuts/seeds; **10.** Beans/peas/lentils.

this population who are otherwise deprived of these nutrients for the rest of the year. Seasonality also determined consumption of certain vegetables. Participants reported, for example, going without green leafy vegetables during the monsoon season.

P: Just now it's [the] season so we eat mango, jackfruit (FGD 2, older adolescents)

P: Don't get many leafy vegetables in the rainy season (FGD 6, parents of younger adolescents)

Lack of dietary diversity

Discussions revealed that adolescents' staple diet consisted of cereals (rice or wheat), millets (sorghum, pearl millet and finger millet), pulses and vegetables and lacked dairy

products and fruits, giving the diet diversity score in the range of 6.7–8.1 (see Table 1). There was not much variation reported in the adolescents' meal patterns. The parents backed their claims about the monotony of their diets, but some mothers had innovative ways of modifying dishes:

P: If same thing is cooked again and again we also get bored. They [adolescents] don't like ladies fingers (okra). We sprinkle gram flour and make it crispy, then they will eat (FGD 6, parent of younger adolescent)

The younger adolescents were provided with one meal in school through the government's midday meal scheme. However, parents felt the quality and adequacy of these meals was debatable:



P: They have mid-day meal in school... It is not very nutritious. Sometimes vegetable is there, sometimes it is not there, sometimes only pulse and rice. (FGD 6, parent of younger adolescent)

Other influences on food choices

There was a feeling of excitement when adolescents discussed food that they purchased and ate outside of the home. Purchasing street food was a rare opportunity for the, usually older, adolescents to express some dietary autonomy. However, their parents' choices often took precedence and it was with the family that they occasionally visited restaurants in a nearby town. Generally, participants were not able to say how often they ate away from home, suggesting that it was infrequent.

Adolescents were also able to express some dietary autonomy during school break-times, although not very often. Adolescents largely felt that peers were not an influence on these choices. Rather, pocket money given by parents and the availability of cheap, appealing food within the vicinity of schools were more influential. Commonly purchased items included candies, packets of chips (Kurkure) and Indian Chinese food, readily available from roadside food vendors. These foods were also valued because they offered a change from the monotony of their daily diets.

P: I like the taste and if it is more spicy, then I like it better. (FGD 4, older boys)

P: It tastes better than [a] meal. (FGD 3, younger boys)

When adolescents and caregivers were asked who decided the menu at home, the most common answer was mothers. However, mothers took into consideration the preferences of the entire household.

P: My mother asks everybody. She takes consensus and then cooks. (FGD 1, older girls)

Opportunities for physical activity

Adolescents understood the association between physical activity and health:

P: If we do physical activity we will remain healthy.

P: Bones become strong. (FGD 2, older girls)

Despite some knowledge of the health benefits, in general, physical activity was not a priority for adolescents. None made purposive efforts to stay fit. Adolescents participated in sports requiring limited equipment and infrastructure (e.g., kabaddi, kho-kho and wrestling). These were usually played after school.

Gender differences in physical activity habits were evident. Girls indicated that they preferred indoor, whilst boys favoured outdoor games. One caregiver gave a lack of other girls to play with as the reason for her daughter not

being more active. There was no suggestion that she might play with boys:

P: My daughter does not have friends here, as we do not have many females here. (FGD 7, parent of older adolescent)

Household chores such as fetching water, farming activities, washing clothes, cleaning utensils and household cleaning constituted a major part of physical activity for adolescents, particularly girls:

F: What work you do at home?

P: Fetch water, wash clothes, clean vessels, clean the house. (FGD 2, older girls)

Fetching water required significant physical activity, since in rural India water scarcity is a major problem especially in summer. People must fetch water in pots from either a common borewell, a well, river or a common tap, often up to 2 km from the village. The few schools and lack of transportation mean that children walk to school for up to 60 min' each way.

P: Our school is very far away from our home. We have to walk a lot. That itself is an exercise. (FGD 2, older girls)

Adolescents also had some opportunities for engaging in physical activity in school, with fixed hours for physical education.

P: In school we have physical training class sometimes. (FGD 3, younger boys)

Little encouragement from caregivers, few places to play and a general lack of infrastructure were the main reasons cited for not participating in sports. Older adolescents and their caregivers also mentioned academic studies as a barrier:

P: Parents tell [you] to do work and not to play. (FGD 5, younger adolescent)

P: They come home [from school] and sit down for studies. (FGD 7, caregivers of older adolescents).

Theme 2: Acceptance of the status quo

Lack of adolescent voice

In general, younger adolescents seemed reticent to discuss the topics of these focus groups. This may reflect the local culture which discouraged young people from talking freely to 'outsiders'. The older adolescent groups were, however, more vocal and engaged more in discussion. Adult participants may also have lacked confidence to express their opinions in front of the research team, whose high levels of education may have been inhibiting.

Fatalistic view of circumstance

Adolescents' acceptance of their current lives was striking. With limited exposure to the outside world, they appeared content. When asked about what changes they would like to make to their lives, they were silent, which could be interpreted that there was nothing they would like to change. When the facilitator probed further, however, the adolescents began to create a wish list of changes they would like to see in their environment. This list consisted primarily of basic infrastructure such as better roads, improved power and water supplies, and more facilities:

P: There is no shop of any kind near our house or nearby area. Some facility of that kind needs to be there. (FGD 1, older girls)

P: Plenty of tree plantations or gardens. (FGD 1, older girls)

The initial fatalism of both all participants could be a learnt response having become accustomed to accepting and coping with the restrictions of their limited resources. This was reflected in some of the discussion about the availability of food.

P: Just now there are not many vegetables. So we have pulses. Children have to eat it. They get bored but we can't do much. Market is not close by. So they are forced to eat pulses. (FGD 6, parent of younger adolescents)

P: It's a village and we may not get all the vegetables we want, so we eat whatever is available. (FGD 2, older girls)

Theme 3: Salience of social and economic transition

The data indicate that few adolescents in this region owned a smartphone or a computer (see Table 1). Limited and erratic power supply to the village was the main deterrent to use of these devices. Although their access to digital media was limited, the availability of televisions was increasing, and some described the effect that television advertisements had on them. Caregivers spoke about the influence of media and advertising with some frustration. Most caregivers, in this case mothers, succumbed to

adolescents' demands, believing their desires were shaped by advertisements:

P: They see these fried food items on TV and then we have to cook them. (FGD 6, caregivers of younger adolescents)

There was also some evidence that cultural norms for physical activity are also changing in response to local social and economic transition. Displacement of physical activity, by sedentary pursuits, such as watching TV could be an indication of the beginnings of transition to a more inactive lifestyle:

F: Which games do your children play?

P: They don't play much. They watch more TV. (FGD 6, parent of younger adolescent)

The access within the vicinity of school to cheap, sugary and salty foods described by adolescents may be another indication of transition. Cultural changes in how girls' education is perceived also indicate a step towards societal transition in Dervan. One adolescent girl expressed hope for a change in the traditional and conservative attitudes of people in general towards girls.

P: There are many boys and girls from outside who are staying here for education. Rather than making fun of them . . . change the attitude of people about [girls'] education so that many more students come in. (FGD 2, older girls)

As shown in Fig. 1, adolescents perceived their current diet and physical activity opportunities to be lacking in diversity, driven by necessity rather than choice, and largely based on tradition and home-cooked foods. In contrast, they aspired towards variety and choice over their diets and opportunities for physical activity. They indicated a desire for a more modern diet and capacity to challenge the status quo. The adolescents suggested that improved availability and accessibility including education, purchasing power, transport and infrastructure would allow them to realise these aspirations.

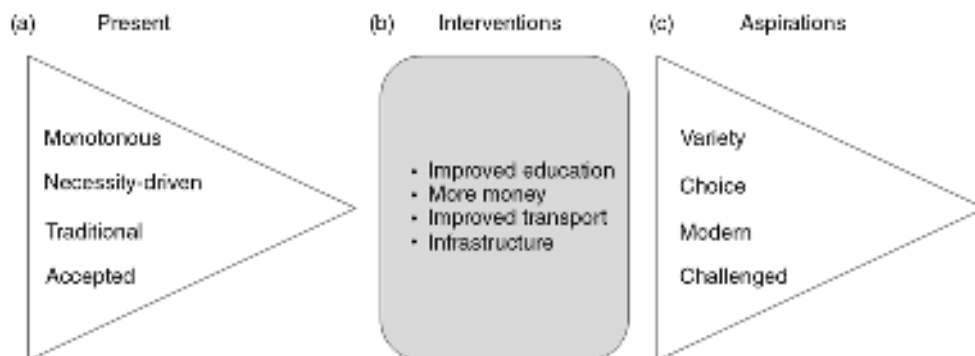


Fig. 1 Thematic map depicting adolescents' perspectives on their (a) current diet and physical activity opportunities, (b) aspirations for the future and (c) the focus of the interventions that would lead to these aspirations being realised



Discussion

This study was conducted in order to understand influences on the health of adolescents in rural India, in relation to their diet and physical activity. Using FGD, we have identified some important constraints to rural adolescent food choices and engagement with physical activity. It appears that, in the struggle to meet the basic necessities of life, adolescents and their caregivers in this underdeveloped part of Konkan were often unable to prioritise a good quality diet or physical activity outside of what was required by chores and transportation. When asked what they thought could be done to improve adolescent diet and physical activity, participants required encouragement to think about anything that could be changed. Ultimately, infrastructure improvements that would increase their access to food, water and education were the only solutions suggested.

Baseline prevalence of underweight and stunting was high, especially among boys, who are likely to be more physically active. Despite their heightened physical activity, they face the same barriers to healthy diet as the girls, including food availability, food access and affordability. It is possible that this imbalance is reflected in stunting and underweight among them.

Although there are many studies documenting the nutritional status of adolescents⁽¹⁷⁻¹⁹⁾, very few explore adolescents' own perceptions or those of their caregivers of the factors influencing their diet and physical activity habits and their relation to health^(20,21). Malnutrition among adolescents is highly prevalent in developing countries^(22,23). The effects of impoverishment are more pronounced in rural parts of the country where people are lacking in basic resources. Many of the adolescents and their mothers who took part in this study displayed a fatalistic acceptance of the diet and physical activity restrictions they experienced and required prompting and encouragement to begin thinking about what might be changed.

Limitations to food choices

Food availability and accessibility have been identified as two dimensions of food security which may be important determinants of adolescents' dietary pattern^(24,25). Data from the study reported in this paper suggest that the food choices of adolescents in Konkan were limited by both dimensions, especially with respect to fruits and vegetables which depended on seasonality. No policies to address seasonality or the impact of seasonality on food availability in Konkan currently exist.

When foods were available, accessibility acted as a barrier including limited transport options and purchasing power. In tandem, societal and economic transition is leading to increasing availability and accessibility of cheap dense 'junk' foods from food vendors outside of schools. This is consistent with previous suggestions that food prices

as well as vendor and product characteristics affect how affordability and convenience are perceived⁽⁸⁾. These findings are also consistent with the results from a qualitative study among women of reproductive age in rural Maharashtra⁽²⁵⁾. Quantitative studies have confirmed that consumption of vegetables was low in rural compared with that of urban areas⁽²⁵⁾. Data from this and other studies indicate that differences in eating patterns between urban and rural areas could be attributed to seasonal availability, lack of transportation and storage facilities in rural areas, thus making access to fresh produce more problematic. Consequently, diets have been found to be much less diverse in rural areas which is likely to lead to suboptimal nutrient intake⁽²⁶⁾. Arimond *et al.*⁽²⁷⁾ found that the consumption of monotonous diets, similarly to those described by participants in the current study, was associated with micronutrient deficiencies in women living in resource poor settings. Interestingly, in contrast to the findings of this study, no barriers to healthy eating were reportedly perceived among rural children in South India⁽²⁸⁾. These authors, however, reported that rural adolescents were generally less vocal than urban adolescents and that their responses to questions raised were limited in content. To address the potential for limited discussion among adolescents in this study, the researchers were trained by experienced qualitative researchers in how to facilitate discussions with adolescents. Despite this, the researchers of this study reported similar observations in their field notes. Specifically, that many of the adolescents were shy and quiet, which may reflect the participants' socio-cultural context.

Influences on food habits

Peer influences are commonly found to have significant impact on adolescents' behaviour in general and food choices⁽²⁰⁾. The study reported here suggests that, in this community, the influence of family members was a more important determinant of adolescents' diet than peers. A previous study has shown that parental role modelling of healthy eating was a positive influence on the food behaviour of secondary schoolchildren in urban Kolkata, India and increased their consumption of fruits and vegetables⁽²¹⁾. In contrast, urban Indian adolescents residing in South India and in Canada resorted to unhealthy eating in the company of friends and siblings⁽²⁸⁾. It seems reasonable to conclude that both parents and friends are important influences on young people's diets. What was striking in the data reported in this paper was that even in a situation like rural Konkan where choices are so constrained, adolescents still chose to spend the small amount of money and exercise what limited autonomy they had by buying cheap sweets and drinks from vendors outside school. Ironically, the junk food was more affordable than healthy alternatives like fruits. This behaviour may of course be influenced by the media to which they are



exposed since the influence of television on food habits of adolescents is well-documented⁽²⁹⁾.

Constraints on physical activity

The contribution of physical activity to the health and well-being of adolescents is widely recognised^(30,31). The Indian National Policy on education recommends 60 min of moderate to vigorous intensity physical activity for young adolescents, per day⁽³²⁾. However only 8 % of Indian adolescents are reported to meet this requirement⁽³³⁾. Challenges to increasing physical activity among the rural adolescents who took part in this study include lack of facilities for formal sports, lack of encouragement, lack of school sports activity and above all academic burden. These findings are consistent with other studies conducted in both rural and urban settings^(34,35). Physical activity for rural adolescents in this study took the form of household chores and walking to school. All housework in rural areas is done manually which is both time and energy consuming. In this setting, adolescents perceived routine schooling and household activities to be adequate physical activity and did not feel it necessary to engage in any additional exercise. Gender differences in relation to physical activity were reported with boys being more physically active than girls⁽³⁵⁾. It is not clear from the discussions, however, whether girls' physical activity in performing household chores was thereby discounted. In rural parts, the barriers to physical activity outweigh the opportunities which are limited. Moreover, with early signs of transition detectable, the physical activity quotient may be expected to dip further unless timely steps are taken to provide more opportunity for young people to engage in physical activity.

Implications of the findings

In many developing countries, more than 50 % adolescents have poor quality diets, receive inadequate nutrition and hence fail to achieve their growth potential⁽³⁶⁾. The study reported here highlights some important needs to be met if adolescents are to maximise their growth. The data presented identify some significant challenges faced by this group which may be used to design and develop intervention strategies at local and national level. At the local level, policymakers can take cognisance of these constraints and recommendations can be made to improve the infrastructure of rural areas to address the health of adolescents.

The data presented here support clear recommendations for programmes to improve the availability and accessibility of foods, to make healthy foods like fruits and vegetables affordable, create more opportunities for adolescents to engage in physical activity and encourage the young people to engage positively in the development of their community. Some interventions to improve lifestyle behaviour among adolescents have been tried in urban India^(37,38) and have shown improvement in behavioural as well as anthropometric and metabolic parameters⁽³⁸⁾.

Another intervention using food system-based approach to address nutrition deficiencies is in progress in India⁽³⁹⁾. It should also be noted that adolescents displayed excitement about spending rare pocket money on 'junk' foods from street vendors. Therefore, behavioural interventions alongside those to improve food availability and accessibility are needed to engage adolescents in healthy choices.

Strengths and limitations of the study

A major strength of this study was that it was well conceived, with the participating researchers having received qualitative research training. There was also excellent cooperation from the participating schools. Using FGD as the method of data collection gave adolescents the opportunity to express themselves which led to the evolution of rich data. Finally, while the focus of previous research on adolescent nutrition has been on girls, this study has engaged both older and younger boys and girls, and their parents in the study, providing a contextualised picture of the issues determining adolescent nutritional status.

However, there were some limitations. All but one FGD was conducted in a school setting where the students were attending classes but we attempted to mitigate this by allotting time specifically for the FGD, away from their classes. The FGD observers also noted that fear of being ridiculed by classmates might have been a factor that inhibited free discussion and honest responses. Introductory ice-breakers were carried out to build rapport and encourage adolescents to feel comfortable. Participants shared a similar cultural and environmental background producing limited variation in their responses. Therefore, semi-structured interviews in addition to FGD may be helpful in the future to gain individual experiences and perspectives. Finally, some misinterpretation of participant's statements was a possibility, as the analysis was not conducted in the original language. However, the transcripts were checked thoroughly against the audio data and original translations.

Conclusion

The objective of the current study was to explore the influences on diet and physical activity among rural Indian adolescents. Several significant constraints to healthy diet and physical activity were identified in this population. As the situation currently stands, these adolescents have little choice in relation to their diet and physical activity. The findings reflect the need for comprehensive intervention strategies targeted to improve availability and accessibility of diverse foods and create opportunities for physical activity for adolescents. This study underlines the need for developmental policies to implement improvements in rural infrastructure in order to fulfill the ambition to have healthy, fit and disease-free future generations of Indians.



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Supplementary material

For supplementary material accompanying this paper visit <https://doi.org/10.1017/S1368980020001731>

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How do we improve adolescent diet and physical activity in India and sub-Saharan Africa? Findings from the Transforming Adolescent Lives through Nutrition (TALENT) consortium

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Abstract

Objective: Adolescent diet, physical activity and nutritional status are generally known to be sub-optimal. This is an introduction to a special issue of papers devoted to exploring factors affecting diet and physical activity in adolescents, including food insecure and vulnerable groups.

Setting: Eight settings including urban, peri-urban and rural across sites from five different low- and middle-income countries.

Design: Focus groups with adolescents and caregivers carried out by trained researchers.

Results: Our results show that adolescents, even in poor settings, know about healthy diet and lifestyles. They want to have energy, feel happy, look good and live longer, but their desire for autonomy, a need to 'belong' in their peer group, plus vulnerability to marketing exploiting their aspirations, leads them to make unhealthy choices. They describe significant gender, culture and context-specific barriers. For example, urban adolescents had easy access to energy dense, unhealthy foods bought outside the home, whereas junk foods were only beginning to permeate rural sites. Among adolescents in Indian sites, pressure to excel in exams meant that academic studies were squeezing out physical activity time.

Conclusions: Interventions to improve adolescents' diets and physical activity levels must therefore address structural and environmental issues and influences in their homes and schools, since it is clear that their food and activity choices are the product of an interacting complex of factors. In the next phase of work, the Transforming Adolescent Lives through Nutrition consortium will employ groups of adolescents, caregivers and local stakeholders in each site to develop interventions to improve adolescent nutritional status.

Keywords

Adolescent
Health
Nutrition
Physical activity
Low- and middle-income countries

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Measured against any global standard, adolescent diet, physical activity and nutritional status are often sub-optimal. This special issue is devoted to exploring factors affecting diet and physical activity in adolescent boys and girls, including those from food insecure and vulnerable groups and in urban, peri-urban and rural settings from a range of low- and middle-income countries (LMIC). Specifically, the questions addressed in this collection of papers are: What are adolescents eating, what types of physical activity are they engaged with and what influence these behaviours? Bringing these papers together as a special issue foregrounds the factors that are common in influencing adolescent diet and physical activity while also making clear the challenges unique to each context.

Adolescence is the stage of life (10–19 years) in which a child transitions into an adulthood. It is characterised by accelerated growth, sexual maturation, substantial brain re-modelling and an increase in the complexity of social interactions. The age of onset of puberty has fallen globally over the last century, while social changes such as longer schooling and later marriage have postponed the transition to independent adulthood, prolonging adolescence⁽¹⁾. There are more than a billion adolescents in the world, the largest number in human history and a doubling since 1970. Half live in sub-Saharan Africa and South Asia, where they form 20–35% of the population^(2,3).

Adolescent nutrition and long-term health

Adolescence has a special importance for long-term health because it is a critical period of development, in which the physical, psychological, behavioural, social and economic foundations of adult health are consolidated. Adolescence is a key time for acquiring muscle and bone mass, and peak and cardio-respiratory fitness, which are nutritionally sensitive, are achieved. Adiposity, which is also influenced by nutrition, is related to later health^(4,5). Widespread brain re-modelling during adolescence leads to a large increase in cognitive ability⁽⁶⁾. It is a key time for the development of executive function and ‘agency’, the capacity to make independent choices and achieve goals, and the ability to form healthy social networks and sexual relationships. Lifelong adaptive or maladaptive behaviour patterns are established, such as choices about diet, physical activity, tobacco and alcohol shaped by adolescents decreasing reward sensitivity and increasing ability to consider the future and to delay gratification^(7–10). It has been suggested that adolescence is also a critical period in which optimal nutrition could mitigate the effects of poor fetal and infant nutrition^(11,12). However, the potential for good adolescent nutrition to remedy stunting or adverse early life cardiovascular and metabolic programming remains largely unknown. There is a need for better understanding of the impact of nutrition in adolescence on pubertal growth, body composition and later health. Adolescents are also

future parents. Parents’ knowledge of and attitudes to nutrition has a significant impact on the way they feed their children and their children’s dietary preferences^(13,14). In addition, maternal nutrition is known to influence metabolism throughout life through effects on fetal development; both maternal undernutrition and obesity adversely ‘programme’ the fetus, leading to an increased risk of adult non-communicable disease^(15–18). Research in animals suggests that there are paternal and maternal effects on offspring epigenetic characteristics^(19,20), highlighting the significance of nutrition among young men for inter-generational health effects. Optimising adolescent diet and nutrition therefore has the potential to deliver triple benefits: to (i) increase physical, psychological and cognitive capital; (ii) protect against future disease and (iii) improve the development and health of the next generation.

Adolescent nutrition research

Despite this potential, and the recognition that adolescents have increased nutritional requirements for growth and maturation, nutrition at this age has been relatively neglected⁽²¹⁾. Research has tended to focus on ‘problem behaviours’ (accidents, sexually transmitted disease and addictions) including nutritional ‘problem behaviours’ (eating disorders) with little focus on communicable or chronic diseases or on environmental impact on growth. In LMIC, adolescence is seen as a relatively healthy age, coming after the high infectious disease mortality of infancy and childhood, approaching the attainment of peak physical and cognitive capacity, and before the onset of degenerative and non-communicable diseases⁽⁶⁾. Adolescents are often seen as difficult to engage in thinking about their health, prioritising the immediate over the long term^(7,22). In the context of food choice and this stage of cognitive development, adolescent impulsivity and reward sensitivity may manifest as choosing foods that are both more available and pleasurable, at the expense of planning, preparing and eating healthier alternatives⁽²³⁾. Adolescents are also socially and educationally busy and less likely to comply with interventions than younger children⁽¹²⁾.

Notwithstanding the resulting knowledge gap, it is clear there is a ‘dual burden of malnutrition’ among young people in LMIC⁽²¹⁾. Under-nutrition, food insecurity and poor-quality monotonous diets remain common, especially in vulnerable populations in sub-Saharan Africa and South Asia, resulting in continuing high rates of underweight, stunting and anaemia which impair growth and development. Gender gaps in nutrition are often small in childhood, but girls tend to become disadvantaged in adolescence^(2,24). Adolescent marriage and childbearing are common in some countries, presenting major nutritional challenges and leading to poor maternal, newborn and child outcomes^(25–27). Alongside persisting under-nutrition, growing access to energy-dense micronutrient-poor



processed foods and insufficient physical activity are leading to obesity in some settings, with concomitant metabolic disorders that predict a high future burden of diabetes and CVD^(21,28). Adolescents are vulnerable to marketing and social pressures that can lead to unhealthy food choices⁽²⁹⁾. They are acutely sensitive to the opinions of peers, and a desire for new experiences goes hand-in-hand with a need to 'belong'. What foods they eat, and share with their friends, has 'social currency'⁽³⁰⁾. Physical activity varies between settings but is increasingly inadequate. Although many rural adolescents help with farming and domestic work and may walk long distances to school, few engage in high-intensity physical activity that meets the WHO recommendations⁽³¹⁾. The built environment, transport infrastructure in towns and cities and academic pressures limit opportunities for activity⁽³²⁾ and, in girls, cultural barriers to physical activity tend to emerge in adolescence⁽³³⁾.

Action to address this 'broad' picture is hampered by a lack of detail. A recent report highlighted a lack of rigorous, comprehensive, longitudinal and context-specific information about adolescent nutrition in LMIC⁽²¹⁾. Existing data are often limited to weight, height and anaemia prevalence, and usually cross-sectional. Small surveys and indirect estimates from intakes have identified common deficiencies in Fe, Zn, Ca and vitamins A, B₁, B₂, B₁₂, D and folate, but recent data from different settings and on other micronutrients are lacking^(34,35). There are few, if any, longitudinal studies to understand how diet, activity and nutritional status change through adolescence, what determines these changes and how they relate to health outcomes^(4,36-38). Few studies have evaluated the effectiveness, optimal timing and beneficial *v.* adverse effects of nutritional interventions in adolescents^(39,40). We do not know how to change unhealthy food choices among adolescents in LMIC, and they are rarely invited to contribute to the design of interventions⁽⁴¹⁾. Epigenetic changes in adolescence have been linked to brain development, but little is known about their sensitivity to nutrition and relationship to health and disease⁽⁴²⁾. Thus, while recent reports have highlighted the importance of adolescent nutrition and called for its greater prioritisation at policy level^(2,21,41,43-45), we argue that insufficient data hinder the formulation of specific policies. This may explain why few LMIC have specific nutritional policies for adolescents, and why those that exist are limited in scope (e.g., Fe/folate supplementation) and rarely integrated⁽⁴⁶⁾. Biomedical research tends to be purely nutritional and has neglected psychological, environmental and social influences, with adolescents' voices usually absent from such research and intervention design. Adolescents are increasingly seen as driving forces in global health and international development^(47,48). The WHO Global Accelerated Action for the Health of Adolescents guidance promotes the philosophy 'nothing about us without us', emphasising that young people are passionate and effective advocates for adolescent health but are rarely given a place in discussions⁽⁴⁹⁾.

The Transforming Adolescent Lives through Nutrition or TALENT consortium

A key purpose of TALENT was, therefore, to give adolescents a voice and to learn about their experiences and how they viewed diet and physical activity as part of their lives. The TALENT consortium comprises research teams in eight LMIC sites: in sub-Saharan Africa, Abidjan, Cote D'Ivoire; Jimma, Ethiopia; Keneba, The Gambia; and Soweto, South Africa; in India, Dervan, Mumbai, Mysore, Pune. It is overseen by a team from the University of Southampton, UK. All LMIC sites have strong links to their communities, and the consortium has expertise spanning adolescent health and youth studies, behavioural science, nutrition, intervention development, education, health economics and adolescent and policymaker engagement. Although TALENT also aimed to fill knowledge gaps about adolescent nutritional status, an early decision was made initially to focus on developing a qualitative understanding of the evidence base for interventions to improve adolescent nutrition in LMIC. This special issue is therefore devoted to reporting findings from an analysis of qualitative data collected in eight LMIC sites. These data are from focus group discussions held to explore adolescents' and their caregivers' attitudes to, and their suggestions as to how to improve, diet and physical activity. This activity was supported by a capacity-building programme for biomedical scientists in qualitative youth research. Box 1 describes the programme of capacity-building workshops.

The training in qualitative research methods provided by the University of Southampton team was based on beliefs about the importance of involving adolescents in the research process. Youth-centred qualitative research in the social sciences has flourished in the last 20 years⁽⁵⁰⁻⁵²⁾. Many proponents have been critical of biological framings of adolescence, and much of this work is framed conceptually by understandings of childhood and youth as socially constructed^(53,54); that experiences and definitions of childhood and youth are not universal but rather determined by the culture, society and period of history in which young people live. From this perspective, young people are viewed as competent social actors and experts in their own lives. New knowledge is generated using qualitative and often participatory and creative methods to access young people's voices; their experiences and perspectives are central to interpretations of the phenomenon under study. This approach was common to the qualitative research carried out by TALENT researchers and is reflected in the qualitative research papers in this special issue; they exemplify the centrality of the adolescent voice and locate findings with the specific social and environmental context.

TALENT data collection and analysis

Qualitative data were collected in order to understand adolescents' perspectives on issues of diet and physical

Box 1 Description of TALENT capacity-building workshops

TALENT capacity-building workshops

A series of three training workshops was held for early career researchers from the participating sites. The workshops were intended to prepare research teams in each site to conduct a qualitative study of adolescent and caregivers' experience of diet and physical activity and to engage stakeholders in issues relating to adolescent nutrition. The workshops also enabled interactions between researchers from the sites. The opportunity to share experiences and build relationships across the consortium was an important feature of TALENT; the workshops were therefore designed and led collaboratively and were highly interactive. The development of research skills initiated in the workshops was sustained between workshops through regular online interaction between the site teams and the Southampton hub.

Workshop One: Establishing the network; designing the survey instrument; training in principles of qualitative research and methods of data collection

Held at BLK Walawalkar Hospital, Dervan, India, 5th–9th February 2018.

Sessions were organised to facilitate the network and agree principles and practice in running the TALENT consortium. Early career research staff were trained in qualitative research methods by experienced qualitative researchers (E.B., M.B., P.H.J., S.S. and S.W.) in order to be able to answer these research questions for each site:

1. What do adolescents and parents/caregivers think about diet, nutrition and physical activity and their influence on health?
2. How important are these to adolescents and their parents/caregivers?
3. What and who decide and shape their eating and activity habits? and
4. What might engage them in changing their diet and physical activity?

Researchers were trained to conduct interviews and focus group discussions and introduced to the use of creative methods in qualitative research. They designed studies to be carried out in each site using focus group methods and a common interview schedule, with adaptations to each context. Basic instruction in transcription of the focus group discussion data was given. Plans were made for both survey and qualitative data collection to be completed by the time of Workshop Two 6 months later.

Workshop Two: Reporting progress; analysis and interpretation of qualitative data

Held at the University of Witwatersrand, Johannesburg, South Africa, 6th–10th August 2018.

Between Workshops One and Two, the Southampton team offered the teams support by Skype, Google Hangout and WhatsApp for qualitative data collection, data management and transcription. This involved P.H.J. and S.W. in reading and providing feedback on the transcripts of focus groups from each site. At Workshop Two, early career researchers presented the qualitative data they had collected and were then introduced to methods of thematic analysis by P.H.J., S.W. and M.B. Researchers were provided with, and trained in using, NVivo, software commonly used for qualitative data analysis and proceeded to code their data with assistance from the Southampton team. As part of this process, a common coding frame was developed to form the basis for both individual and cross-site data analysis. Researchers returned to their sites at the end of the workshop able to complete the coding and analysis of their qualitative datasets in order to address the research questions.

Workshop Three: Writing up qualitative research findings (for early career researchers only)

Held at the Medical Research Council Lifecourse Epidemiology Unit, University of Southampton, Southampton, UK, 11th–15th March 2019.

Early career researchers from the TALENT collaboration brought their coded qualitative data to a workshop where they were supported by the Southampton team to translate their coded focus group data into themes and to interpret and identify the main messages. Researchers were then trained in how to write a qualitative manuscript for publication, which adhered to journal guidelines and accurately represented study participants' perspectives in a clear and understandable way. The target journal chosen was Public Health Nutrition. To achieve this, researchers were trained in using the Journal Article Structured Template (JAST) which was developed by the Southampton team and which breaks down a manuscript into component parts, a paragraph at a time, enabling a paper to be written a step at a time. By the end of the workshop, researchers had all completed a full first draft of a manuscript describing adolescents' and caregivers' views of the influences on their diet and physical activity in their TALENT site. In addition, researchers had learnt how to draw up a thematic map representing their findings and how to use software to help manage references when producing a manuscript. They all reported that they felt confident about completing qualitative research in the future and to write up qualitative data for publication.



activity with the aim of supporting the development of adolescent-centred interventions and policies. A small-scale quantitative survey of about forty boys and forty girls providing data on adolescent diet, body composition and socio-economic status was also carried out in each site. Following the first workshop, researchers in each site recruited participants from among those adolescents and caregivers who had been involved in the quantitative survey. Focus group discussions were conducted with adolescents separated by age group and gender in each of the eight sites. Two age groups were chosen for the current study. The first, aged between 10 and 12 years, was chosen to represent a pre- or early pubertal stage of development, when adolescents are still largely under parental control for most aspects of their lives. The older group, aged 15–17 years, represents late or completed pubertal development greater independence from parents in relation to diet and activity. Discussions were designed to explore what adolescents and caregivers think about diet, nutrition and activity and their influence on health; how important these are to them; what and who decide and shape their eating and activity habits; and what might engage them in changing their diet and activity. Where appropriate during the discussions, probing questions were also asked about household food insecurity, eating outside the family, food-sharing with friends and gender differences and what the adolescents think about participating in research. Verbatim transcriptions of the focus group discussions were translated into English and subject to thematic analysis by members of the research team in each site, supported

by researchers from the Southampton hub. A common coding frame was developed at Workshop Two (see Box 1) based on themes arising from the analyses of the first two transcripts from each site. Coding was largely inductive and developed using a constant comparative approach^(55,56). The coding frame was refined by each site as necessary. Regular virtual meetings were held by the Southampton team with researchers in each site to raise and discuss any queries with the coding process. Themes and subthemes were compiled, and the data are presented in each site paper, illustrated with verbatim quotations.

TALENT findings

As part of Workshop One (Dervan, India, February 2018), Principal Investigators (PI), early career researchers and members of the TALENT advisory board synthesised ideas and expertise to develop a conceptual map (see Figs 1 and 2) detailing potential influences on adolescent nutritional status. This conceptual map represents the views of many stakeholders in the field of adolescent nutrition and as such, reflects the consortium’s philosophy which is to recognise and credit site-specific expertise. For this reason, the conceptual map was used to organise the group’s thinking about adolescent nutrition rather than pre-existing theory. Three main areas of influence were identified plus a small number of factors which were specific to adolescence as a developmental stage. At the individual level, psychological factors such as self-efficacy and body image were seen as combining with biological factors such as growth in early

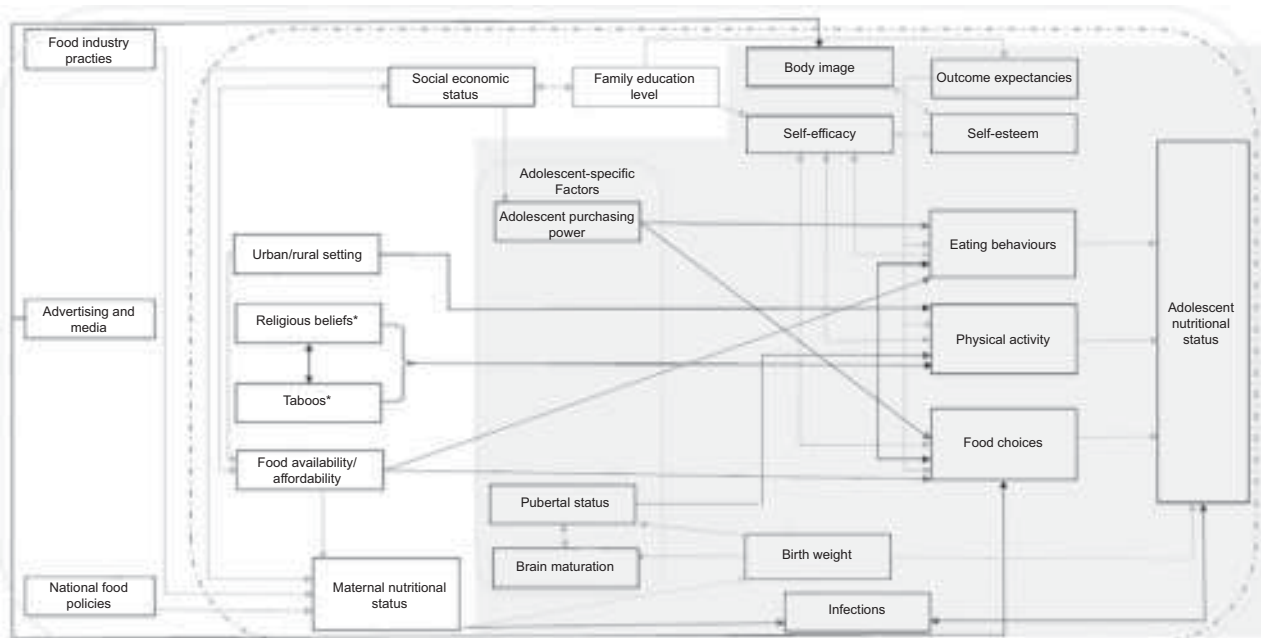


Fig. 1 A conceptual map of potential influences on adolescent nutritional status. Relationships: →, positive; ⇨, negative; ⇩, either; □, factors specific to adolescence. Levels: □, individual level; ▭, familial/environmental; ▭, national. *Religious beliefs and taboos may influence the physical activity of boys and girls in different ways. Hence, this influence is potentially both positive and negative

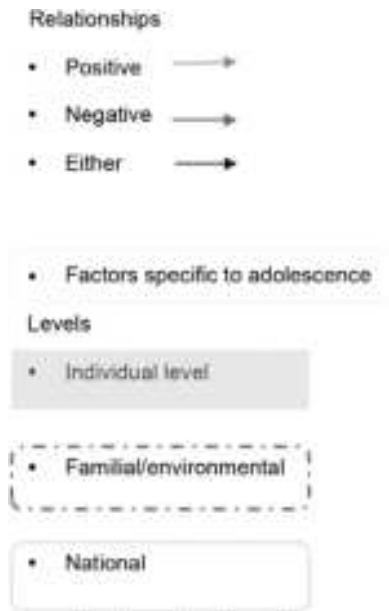


Fig. 2 Key for conceptual map

life and experience of infections to influence adolescent nutritional status either directly or via diet, physical activity and food choices. Familial and socio-cultural influences included diverse factors such as maternal nutritional status and family level of education, religious beliefs and taboos in combination with the impact of living in an urban or rural setting. Most of these factors were believed to influence adolescent nutritional status through their capacity to affect diet and physical activity. Three influences were identified as operating at a national/international level, two of which were national food policies and food industry practices and the third identified the impact of advertising and media, including social media. Food policies and the food industry were described as shaping adolescent nutritional status through their impact on maternal nutritional status and food choices, where advertising and media were seen to shape both food choices and psychological factors. Socio-cultural (adolescent purchasing power) and biological (brain maturation, pubertal status) factors specific to adolescence were seen as having an effect on adolescent nutritional status, the former affecting food choice and diet and the latter affecting physical activity.

What are adolescents eating, what physical activity are they doing, what influence these behaviours and how can we intervene to improve their diets and increase their physical activity levels?

The data collected in the TALENT sites reflected many of the factors identified in the conceptual map above and revealed the way individual, familial and socio-cultural and national/international factors shape adolescent

nutrition in these sites. Findings from a small, quantitative pilot survey conducted in each site are described by Fall and colleagues in this special issue. They report diversity in all indicators of adolescent nutritional status, with more overweight and obesity tending to be seen in urban rather than rural settings. As is common in high-income settings, adolescents in these low- and middle-income sites describe eating little fruit and few vegetables and substantial quantities of salty and sugary snack foods. Three papers in this special issue offer qualitative insights into influences on diet and physical activity habits of adolescents in India. Data from the urban setting, Mumbai, suggest that diet and physical activity during adolescence are determined by a combination of adult caregivers' desires for the children to eat healthily and be active but primarily to do well at school, and adolescents' desire for autonomy in their food choices and wish to spend time being active with their friends.

There is dramatic contrast with the experience of adolescents in rural villages in the Konkan Region of Maharashtra, an area barely touched by the economic and social transition taking place in many parts of India. Banavali and colleagues describe a situation where adolescents report only rarely having their dietary needs met or being given sufficient opportunities for physical activity other than through carrying out household and agricultural chores. Fundamentally, participants in this region felt that for adolescent nutritional status to improve, local infrastructure including that necessary to increase access to fresh food needed substantial investment. In a number of semi-rural villages outside the city of Pune, Maharashtra, Joshi-Reddy and colleagues identify the impact of India's social and economic transition on adolescents' dietary behaviour and physical activity. The food environment in the home, availability of food outside the home, household food security and exposure to television and digital media were all key influences and all reflect the dramatic increase in prosperity in these villages following irrigation and small-scale industrialisation. In Africa, in TALENT's most economically transitioned community, Wrottesley and colleagues report that adolescent girls and boys living in Soweto demonstrate a good understanding of health and of the relationships between diet and physical activity and health, but their eating and activity behaviours, however, seems to reflect little of this understanding. Adolescents from Soweto explain their regular consumption of high-fat, high-sugar street food on the basis that it is tasty and convenient, perhaps reflecting the heightened reward sensitivity that is a feature of adolescence, but also because sharing these foods with friends has a social currency. Resistance to physical activity is apparent among older girls who want to preserve the fuller figures which signify beauty and health in this culture. Interventions to improve diet and physical activity in Soweto therefore have to contend with both an obesogenic environment and culturally defined expectations of female beauty. The papers focusing on adolescent diet



and physical activity in The Gambia, Ethiopia and Côte d'Ivoire are believed to be among the first accounts of qualitative work on adolescent nutrition in these parts of sub-Saharan Africa. Drawing on their research in rural Gambian villages, Janha and colleagues explore key influences on adolescent diet and physical activity in an area mainly comprising subsistence farming. Their paper highlights important influences on diet diversity including food security and the economic resources available to households; seasonal availability of vegetables and fruit; cultural and religious practices and familial norms around domestic decision-making. Land use and seasonality, poor local infrastructure and expectations about the role of adolescents meant that regular physical work was an essential part of their lives and key to transportation and farming. Abera and colleagues report that an ethnically diverse group of adolescents from low- and lower-middle-income families in an urban Ethiopian setting talked eloquently about psychological health and well-being and their relationship with diet and physical activity. They and their carers felt that social and cultural factors were the main drivers of adolescent health behaviours. Within this culture, gender roles dictate that older boys have opportunity to purchase food outside the home and to be physically active in a way that girls had none. In a similarly urban but different geographical context, Jesson, Kouakou and colleagues' contribution explores adolescents' and carers' perceptions and knowledge of nutrition and physical activity in two low-income suburbs of the capital of Côte d'Ivoire, Abidjan. Despite their understanding of good nutritional practices, the adolescents and carers in the current study were aware that their food choices were limited by the resources available to them and, for many, the lack of diet diversity was a source of conflict between adolescents and carers. Furthermore, issues of safety, pollution and hygiene in the locality restricted adolescents' opportunities to engage in regular sport and exercise. A secondary analysis of pooled data from all eight TALENT sites (Weller and colleagues) comments on generational differences in nutrition education and knowledge between adolescents and their caregivers, on carer-adolescent power relations and on the salience of wider societal transitions in shaping adolescent diet and physical activity habits. There is a contrast between the urban, more transitioned environments where street and junk food are widely available and accessed by adolescents and the rural settings where diets are conditioned much more by seasonality and tradition but point out that this is changing even in the most rural sites. Other features of urban environments such as crime and over-crowding impinge on adolescents' capacity to be physically active as do parental desires for academic success and more traditional gender norms. The authors call not only for recognition of broad (national/international/socio-cultural) as well as specific (familial/individual) context in the design of interventions to improve adolescent nutritional status but also for attention to gender

inequalities which continue to exist in even the most economically transitioned sites.

The future for adolescent nutrition research

Most importantly, papers in this special issue demonstrate the insights and enthusiasm that adolescents and their families can offer to the process of devising strategies to improve their nutritional status. Qualitative research conducted by local, trained research staff has captured rich and nuanced data on adolescents' everyday lived experiences, highlighted the complexity of diet and physical activity influences and demonstrated salience of the broader contexts and processes that shape their health in transitioning societies. All of this demonstrates the value of listening to the adolescent voice and significance of these insights for the design of future interventions. The Lancet commission on adolescent health contends that the health and prosperity of the next generation depend upon finding ways of supporting young people to develop skills to become effective advocates and partners⁽⁵⁷⁾. Notable examples of recent attempts to address this call include new toolkits produced by Save the Children for facilitating adolescent contributions to nutrition improvement and from the WHO to support adolescent advocacy for health improvement^(41,58).

The next step for the TALENT consortium is to work with communities using the capacity built in each site and harness the adolescent voice to co-produce and test strategies to improve adolescent diet and physical activity. Stakeholder groups in each community will be engaged in developing interventions to address the issues preventing optimal adolescent nutrition identified in the site-specific papers in this special issue. With support from the UK intervention development team, they will adapt feasibility test interventions to improve diet and physical activity levels based on a range of educational, interpersonal, digital and structural platforms already in use to support improvements in adolescent health. Interventions will have to address structural and environmental issues, as well as influences in homes and schools, since TALENT data have made clear that adolescents' food and activity choices are the product of an interacting complex of factors. An additional long-term aim is to fill knowledge gaps by collecting data on the nutritional status of adolescents and change as adolescence progresses, and how it relates to adolescent growth and development. The next phase of TALENT therefore involves bringing together adolescents, their caregivers and local stakeholders in each site to co-create solutions to improving adolescent nutritional status.

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'I should be disease free, healthy and be happy in whatever I do': a cross-country analysis of drivers of adolescent diet and physical activity in different low- and middle-income contexts

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Abstract

Objective: To explore perceptions of how context shapes adolescent diet and physical activity in eight low- and middle-income (LMIC) sites at different stages of societal and economic transition.

Design: Novel qualitative secondary analysis of eight data sets generated as part of the international Transforming Adolescent Lives through Nutrition (TALENT) collaboration.

Setting: Diverse sites in India and Sub-Saharan Africa.

Participants: Fifty-two focus group discussions with 491 participants (303 adolescents aged 10–17 years; 188 caregivers).

Results: Analysis of pooled qualitative data identified three themes: (1) transitions in generational nutrition education and knowledge; (2) transition in caregiver-adolescent power balance and (3) the implications of societal and economic transition for diet and physical activity. Adolescents in urban and peri-urban areas could readily access 'junk' food. Diets in rural settings were determined by tradition, seasonality and affordability. Physical activity was inhibited by site-specific factors including lack of space and crime in urban settings, and the prioritisation of academic performance. Gender influenced physical activity across all sites, with girls afforded fewer opportunities.

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Conclusions: Interventions to improve adolescent diet and physical activity in LMIC need to be complex, context-specific and responsive to transitions at the individual, economic and societal levels. Moreover, solutions need to acknowledge gender inequalities in different contexts, as well as structural and cultural influences on diet and physical activity in resource-limited settings. Programmes need to be effective in engaging and reconciling adolescents' and caregivers' perspectives. Consequently, there is a need for action at both the community-household level and also through policy.

Adolescence is a unique stage of development when young people's bodies, hormones and social environments are rapidly changing, brains are developing and cognitive capabilities are becoming more sophisticated⁽¹⁾. Nutritional requirements increase to achieve physical growth, sexual maturation and brain remodelling. Implicated in such development are the cultural, economic and social contexts of adolescents' lives⁽²⁾. Furthermore, preferences and behaviours adopted in adolescence can influence lifelong diet and physical activity habits. Developmental plasticity means that improving health during adolescence has the potential to reduce the trajectory of non-communicable diseases⁽³⁾.

Little is known about how the nutrition transition in low- and middle-income countries (LMIC), including the double burden of malnutrition (undernutrition alongside obesity), affect adolescents^(4,5). Research has shown that persisting food insecurity and lack of dietary diversity lead to macro- and micronutrient deficiencies, which impair growth and cognitive development⁽⁶⁾. Also, transition-driven exposure to fatty, sugary, salty and micronutrient-poor foods, along with reduced physical activity, can result in obesity, hypertension, diabetes and CVD in later life⁽⁷⁾. Limited qualitative research has explored adolescents' experiences of diet and physical activity in LMIC or how these vary with the transition from rural subsistence to market-based urban economies.

Studies of adolescent nutrition and physical activity tend to focus on particular groups, for example, girls⁽⁸⁾ and/or those living in higher-income settings⁽⁹⁾. Engaging adolescents with the consequences of health behaviours can be challenging⁽¹⁾. However, motivated adolescents can improve their health behaviours^(10,11). Little is known about how adolescents in LMIC think about health, diet and physical activity, or how best to engage them in improving their health. Exploring this requires social science-derived youth-centred approaches to empower adolescents to share their views on what matters in relation to health⁽¹²⁻¹⁴⁾. This approach values listening to, and working with, adolescents directly, regarding them as experts in their own lives. Understanding the role of caregivers in shaping adolescents' health behaviours is also essential^(15,16). Engaging adolescents and caregivers in this way is necessary to understand their priorities, needs and values.

With the aim of informing the development of adolescent nutrition interventions, this paper draws on

adolescents' and caregivers' views to understand how the context in which they live shapes their diet and physical activity. To achieve a synthesis of both perspectives, qualitative secondary analysis (QSA) was conducted across eight data sets comprising focus group discussions (FGD) with 303 adolescents and 188 caregivers. The data were generated as part of Transforming Adolescent Lives through Nutrition (TALENT), an international collaboration that aimed to understand adolescents' dietary behaviour and opportunities for physical activity (Barker *et al.*, this issue). The programme included qualitative and quantitative work, systematic reviews and a capacity-building programme for nutrition scientists in qualitative youth research.

Methods

Study setting

This paper draws on data collected in eight diverse sites in India (Dervan, Mumbai, Mysore and Pune) and sub-Saharan Africa (Abidjan, Cote D'Ivoire; Jimma, Ethiopia; Kiang West, The Gambia and Soweto, South Africa) at different stages of economic and societal transition (Table 1):

Data collection

TALENT was developed to engage adolescents and caregivers and to understand their priorities and values in relation to adolescent diet and physical activity. To facilitate this, a qualitative study was designed drawing on methods of youth engagement⁽¹⁷⁾. These approaches place importance on listening to adolescents' voices. The QSA team (P.H.-J., S.W. and M.B.) designed and delivered three 5-d workshops (India, South Africa and UK), training nutrition scientists (hereafter, site researchers) from each TALENT site in qualitative research (see Barker *et al.*, this issue). Online support was provided throughout. Quantitative survey data, reported in Fall *et al.* (this issue), were also collected. Using convenience sampling, a subset of survey respondents were invited to participate in a FGD. Data collection took a relational approach capturing adolescent and caregiver views separately, enabling comparison across generations and between contexts at differing stages of economic and societal transition.

FGD were selected to obtain insights into individuals' experiences and perceptions as well as the social norms

Keywords

Adolescent
Health

Focus groups
Nutrition

Physical activity

Low- and middle-income countries
Qualitative study

**Table 1** Description of the data collection sites

| Site | Setting | Description |
|------------------------|--|---|
| Jimma, Ethiopia | Low-income urban | Jimma is situated 352 km southwest of the capital Addis Ababa. Ethiopia is a LIC, with nearly a quarter of its population living below the national poverty line. |
| Abidjan, Côte d'Ivoire | Low-income urban | Rural-urban migration and successive geopolitical crises have resulted in rapidly increasing uncontrolled urbanisation in the capital, Abidjan. Data were generated in two districts, comprising mainly low-income households/poor quality housing. Food is purchased from market stalls alongside main roads, near public amenities. |
| Kiang West, The Gambia | Rural villages | Data were generated in six rural villages in the Kiang West district, 160 km from the capital. The population largely comprises subsistence farmers who live in extended family compounds with few amenities. |
| Soweto, South Africa | Poor urban townships | Soweto is one of the most well-known historically disadvantaged townships in South Africa as it was linked to the anti-apartheid struggle and political riots. Economic transformation during the past decade has led to the rapid emergence of shopping malls, fast-food chains and transport networks. |
| Mumbai, India | Urban slums | 42% of the population of Mumbai live in crowded urban slums. The population of these slums are diverse, including those living in poverty, as well as middle class and professional residents. |
| Pune, India | Rural and peri-urban villages 40–60 km from the city of Pune | Located in the state of Maharashtra, India, the villages around Pune are transitioning in terms of expansion of city limits and economic growth. The population is a mix of farmers, skilled professionals, unskilled labourers and entrepreneurs. |
| Dervan, India | Rural and tribal villages | Access roads are poorly lit, and the power supply to villages is erratic. Farming is the main occupation of inhabitants, yet many men go to the cities in pursuit of jobs. Basic commodities such as groceries are available in the local weekly market, shared by 10–12 villages. |
| Mysore, India | Urban low and middle income | Located in the Karnataka region, Mysore is a relatively large, densely populated city comprising a generally middle-class population of both skilled and unskilled labourers. |

Table 2 Numbers of adolescents and caregivers that participated in focus group discussions (FGD) in each site

| Site | Number of FGD participants | | | | | | | | | |
|------------------------|----------------------------|---------|-----------------------|---------|---------------------|---------|------------|---------|--------------|---------|
| | Adolescents | | Younger (10–12 years) | | Older (15–17 years) | | Caregivers | | Total number | |
| | Total (n) | FGD (n) | Total (n) | FGD (n) | Total (n) | FGD (n) | Total (n) | FGD (n) | Total (n) | FGD (n) |
| Jimma, Ethiopia | 41 | 5 | 16 | 2 | 25 | 3 | 22 | 3 | 63 | 7 |
| Abidjan, Cote d'Ivoire | 46 | 4 | 24 | 2 | 22 | 2 | 26 | 2 | 72 | 6 |
| Kiang West, The Gambia | 40 | 4 | 20 | 2 | 20 | 2 | 20 | 2 | 60 | 6 |
| Soweto, South Africa | 38 | 4 | 19 | 2 | 19 | 2 | 37 | 2 | 75 | 6 |
| Mumbai, India | 36 | 4 | 17 | 2 | 19 | 2 | 23 | 2 | 59 | 6 |
| Pune, India | 38 | 4 | 20 | 2 | 18 | 2 | 38 | 4 | 76 | 8 |
| Dervan, India | 40 | 4 | 20 | 2 | 20 | 2 | 16 | 2 | 56 | 6 |
| Mysore, India | 24 | 4 | 12 | 2 | 12 | 2 | 6 | 2 | 30 | 6 |
| Total | 303 | 33 | 148 | 16 | 155 | 17 | 188 | 19 | 491 | 52 |

arising from discussions⁽¹⁸⁾. Semi-structured FGD guides were developed collectively during workshop 1, and adapted, where appropriate, to suit each site. The FGD were piloted, facilitated and observed by site researchers in participants' local languages. FGD questions explored the perceived influences on adolescent diet and physical activity (see e.g. FGD questions in supplementary material). Creative methods were incorporated to build rapport, for example, the categorisation of food pictures (Kiang West), singing (Abidjan), rhythmic clapping games (Dervan) and communication activities (Mumbai). Separate FGD were

conducted with girls and boys, and with younger (10–12 years) and older adolescents (15–17 years). Caregivers comprised mothers, fathers and other relatives. Each site conducted between 6 and 9 FGD, with a total of 30–80 participants (Table 2).

Audio recordings from each FGD were transcribed verbatim and translated into English to enable cross-site collaborative work. This process varied by site. For instance, in Mysore, half of the FGD were conducted in English, whilst in Kiang West, the material was directly translated/transcribed into English as Mandinka is not a written language. Site

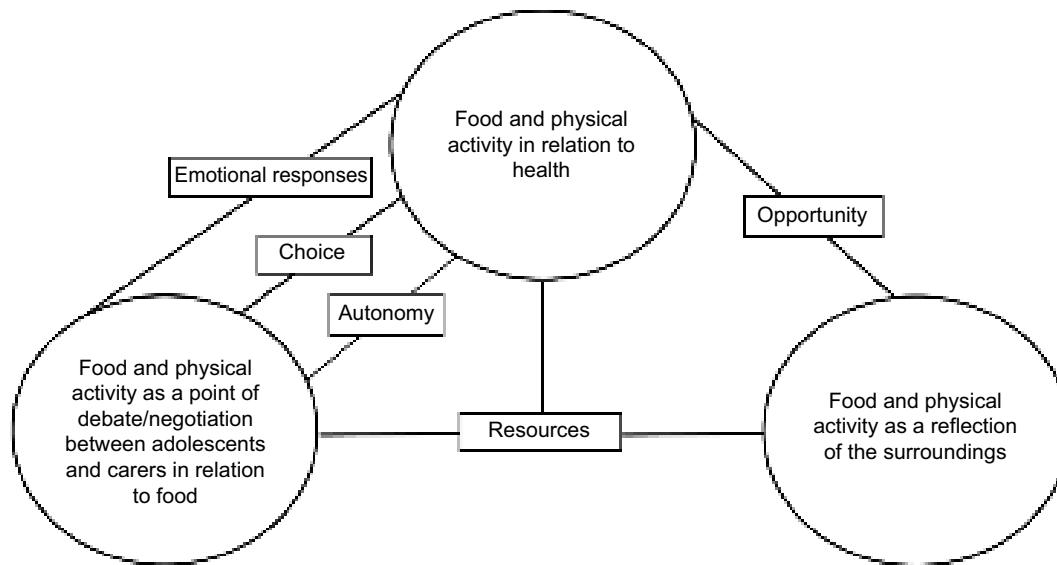


Fig. 1 Diagram depicting the three broad themes and how they relate to adolescent diet and physical activity across the eight Transforming Adolescent Lives through Nutrition (TALENT) sites

researchers, fluent in all relevant languages, either conducted and/or checked the transcription/translation against the original recordings themselves, or supervised the process.

Data analysis

This paper focuses on the QSA of data from all eight sites. Unlike many other secondary analysts, the team was actively involved in shaping the production and interpretation of the original data. An iterative process of consulting and working with site researchers was used to aid interpretation and enhance understanding of the context. The QSA team studied the transcripts prior to analysis and provided feedback on pilot FGD and site researchers' own analysis. During workshop 2, site researchers and the QSA team collaboratively developed a common coding frame which was adapted for use in each site. The team also provided training in thematic analysis, including the use of software (NVivo v12) (site findings are reported in Abera *et al.*, Banavali *et al.*, Chopra *et al.*, Janha *et al.*, Jesson and Kouakou *et al.*, Joseph *et al.*, Reddy *et al.* and Wrottesley *et al.* this issue). At the end of the workshop, and based on this site-level analysis, a preliminary cross-site thematic map was generated (Fig. 1).

In order to conduct QSA, the data sets were pooled. A framework approach, appropriate for managing large data sets and working in multi-disciplinary teams⁽¹⁹⁾, was used. A key advantage of framework analysis is the robust audit trail produced which enhances the credibility of the work⁽²⁰⁾. With the aid of NVivo (v12), and using the preliminary cross-site thematic map (Fig. 1), data matrices for each of the main themes were generated (see example in supplementary material) to allow identification and comparison of key issues across sites. FGD with adolescents and

caregivers were analysed separately to gain an understanding of the perspectives of each group. The matrices were populated with summaries of each theme and illustrative extracts. The wider economic and social context remained central to the interpretation of the material, insights into which were partly provided by site researchers and the QSA team's experience of those contexts. Finally, the key issues common to all sites were categorised, revisited, refined and consolidated into three themes described below and presented visually in Fig. 2. A final thematic map (Fig. 2) was drawn-up based on the underlying themes identified in Fig. 1. The QSA offered a nuanced and context-sensitive interpretation of the way that Fig. 1 themes – Food and physical activity as health, Food and physical activity as negotiation, and Food and physical activity as reflection of the environment – influenced adolescent diet and physical activity in each site. Figure 2 represents a summary of findings from this analysis and reflects the salience of transitions in the lives of adolescents and caregivers. These transitions referred both to young people's growing autonomy and knowledge, and to the changing economic and societal landscape in each site.

Results

Transcripts from fifty-two FGD with 491 participants (303 adolescents; 188 caregivers) were analysed. Three themes were identified that described perceived influences on diet and physical activity: (1) transitions in generational nutrition education and knowledge; (2) transition in caregiver–adolescent power balance and (3) the implications of societal and economic transition for diet and physical activity.

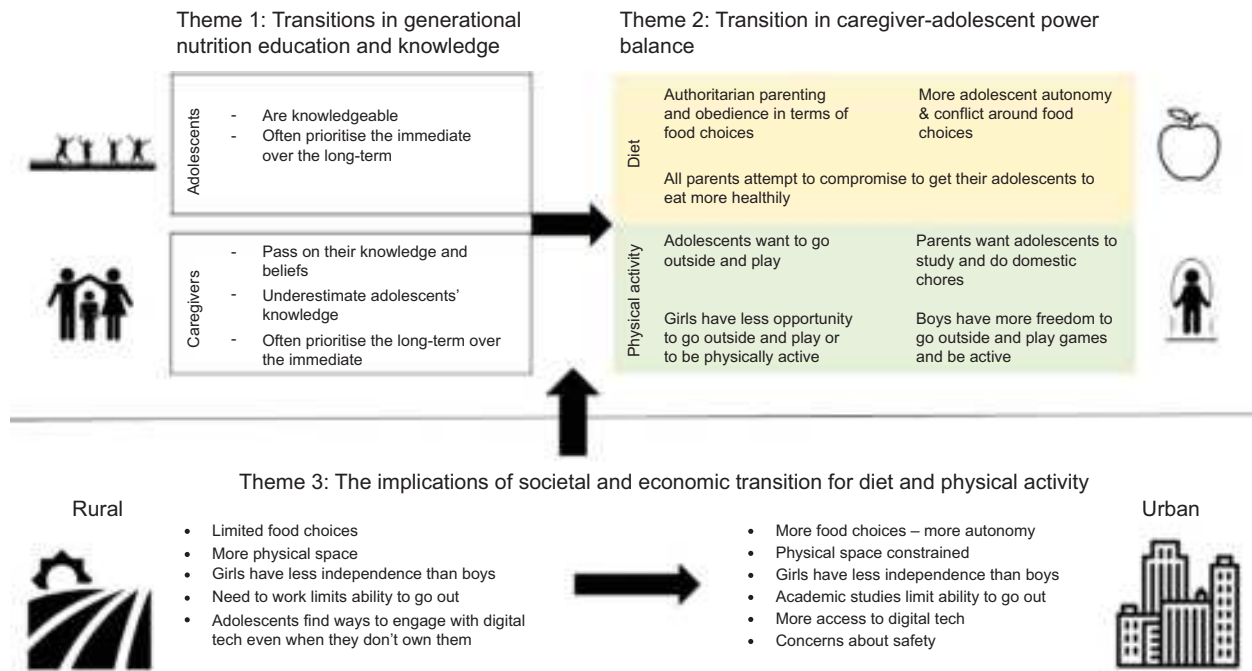


Fig. 2 (colour online) Diagram depicting the three broad themes and how they relate to adolescent diet and physical activity across the eight sites

Theme 1: Transitions in generational nutrition education and knowledge

Adolescents are knowledgeable

Across sites, adolescents demonstrated awareness of the impact of different food items on their health. Some spoke of specific nutritional elements, including the importance of proteins, carbohydrates and vitamins for health/growth, or described how nutritional deficiency could lead to ill health:

Vitamin C is good in the body... if you lack one of them you see, you have [a] disease. (Boy, aged 15–17 years, Kiang West).

All adolescents understood that ‘junk’ food was unhealthy, yet were not deterred from eating it. Social aspects of consuming food away from home (e.g. street food), its taste and appearance were more influential than potential health consequences in shaping their choices.

Despite the study’s focus on diet and physical activity, many adolescents held a holistic view of ‘good health’, taking a biopsychosocial approach to well-being:

I feel that my body should be fit. I don't think I am either fat or slim... But I should be disease free, healthy and be happy in whatever I do. (Girl, aged 15–17 years, Dervan).

Making your body active and ensuring that you are healthy both inside and out. (Boy, aged 15–17 years, Soweto).

Many adolescents had learnt about the benefits of good nutrition and regular exercise from school and their parents. Digital media was also a source of information,

particularly in those sites with readily accessible digital technologies:

We had a lesson in fifth [grade]. It contained information on proteins, sugars, cereals, vitamins A, B, fibrous substances and leafy vegetables. (Boy, aged 10–12 years, Pune).

Since we watch TV shows and documentaries a lot, we were told that eating too many sweets is not good. (Boy, aged 15–17 years, Abidjan).

Adults impart knowledge and/or beliefs

Caregivers often underestimated adolescents’ health-related knowledge. They attributed adolescent preferences for unhealthy, outside food to a lack of understanding and felt it was their responsibility to guide their children:

Children don't know how important it [health] is so if you do not guide them they will not know. (Man caregiver, Kiang West).

In some urbanised settings, such as Mysore, caregivers sought advice from dietitians and nutritionists, which they then passed onto their children. By contrast, in some rural settings, parents did not have access to such information and more examples of culturally constructed beliefs were evident. Caregivers would share local knowledge with each other and impart food-related beliefs to their children:

Eating a lot [of] sweets all the time is what makes children wet the bed. (Woman caregiver, Kiang West).

Health priorities and concerns are context-dependent

The transitional contexts of participants’ lives shaped their health priorities and concerns. One example, common



across sites, was the avoidance of sickness. In Kiang West, located in proximity to a medical research facility, both adolescents and caregivers were well-versed in the long-term health consequences of diet behaviours (e.g. joint pain, diabetes and blood pressure):

F: *If you eat a lot of sugary things, what do they do?*

P: *It causes diabetes* (Boy, aged 15–17 years, Kiang West)

In areas undergoing transition, such as Pune, discussion revolved around hygiene and the importance of being disease-free:

[A healthy person is] One who does not have any disease (Boy, aged 15–17 years, Pune).

Those in more urbanised locales, such as Mysore, tended to focus on issues associated with the dietary consequences of economic and social transitions, for example, weight change:

Now my children are thin or whatever, later I'm worried about them getting obese also . . . junk is introduced in their system they'll get used to it and they want it. (Woman caregiver, Mysore).

In both Mysore and Mumbai, health, academic achievement and future prospects were highlighted:

If health is good then, their brain will function well and then they will study well. They will get a good job or do good in their work and progress in life. (Woman caregiver, Mumbai).

In each site, there were often parallels between the priorities reported by adolescents and caregivers. There were also some divergences, particularly in terms of adolescents' immediate health issues. In Jimma, substance misuse was only mentioned once by caregivers, but frequently by adolescents:

Those who protect themselves from different addiction and who have close and normal relation with the community are healthy and those who spend their time on drugs are unhealthy. (Boy, aged 15–17 years, Jimma).

Similarly, in Soweto, caregivers were concerned about alcohol misuse:

You will find young boys always holding alcohol in his hand and when you ask them, even we are afraid to ask them, 'where do you get that?' you are afraid to get hurt or afraid to get shot. (Man caregiver, Soweto).

Theme 2: Transition in caregiver–adolescent power balance

Caregiver–adolescent power balance related to diet

In urbanised sites such as Mumbai and Mysore, there was evidence of negotiation/conflict between caregivers and

adolescents about food and physical activity. In these sites, dietary choice was more abundant and adolescents had more autonomy over food purchasing, using this as a means to express growing independence. Home-cooked food was considered 'healthy but boring', whilst eating out was an important social activity. Adolescents spoke of pooling money to buy and share 'junk' food. Conflicts arose when caregivers felt unable to enforce healthy behaviours. Concurrently, adolescents felt constrained:

EVERYDAY we do so many things but they won't listen [Exasperation/laughs]. (Woman caregiver, Mysore).

Till they are in 10th standard, they listen to us and they are under control. Once they complete 10th and go to college they become independent . . . (Woman caregiver, Mumbai).

Conversely, in Soweto, adolescents spoke of availability, affordability and convenience driving the acquisition of unhealthy foods by caregivers at home:

When they [our parents] come back home from work, they always bring you chocolate, ice cream. (Girl, aged 15–17 years, Soweto).

In some of the rural and peri-urban settings, adolescents alluded to an acceptance of a more authoritarian parenting style and lack of dietary choice. In these areas, there was little indication of conflict around food:

My mom and dad make me eat fruits every day and do not allow me [to] eat bakery products and outside food. (Girl, aged 10–12 years, Pune)

Affordability and availability of foods in these sites dictated what caregivers could cook, leaving little opportunity for adolescents to exercise choice:

So the child should not choose. What I have is what you eat! (Woman caregiver, Abidjan).

Parental attempts to compromise in relation to adolescent diet

Where conflict was apparent, the dialogue often revolved around achieving compromise:

I'll say . . . I agreed for your choice, so now in the night you have to agree for my choice. (Woman caregiver, Mysore).

Some caregivers occasionally let their children eat 'junk' food:

Sometimes they crave the food on TV because they're not used to them. You need to appease them once in a while. (Caregiver [unknown gender], Soweto).

Even in settings where resources were limited, adolescents used food choices to demonstrate growing autonomy. In response, caregivers would make small changes to recipes to make sure vegetables were consumed:



F: *You said, they don't like tomatoes then what do you do?*

P: *Cut them into very small, mix with onions and cook. Then they will eat.* (Woman caregiver, Dervan).

Many caregivers reported frustration over their adolescents' dietary choices, comparing their own generation with contemporary youth, suggestive of a transition in the acceptability of adolescent autonomy:

Comparing to our adolescence period... we never refuse or never used to ask the questions... Nowadays whatever we give they don't want THAT. According to THEIR will and wish we have to prepare and give. (Woman caregiver, Mysore).

Caregiver-adolescent power balance and physical activity

In many of the rural settings, opportunities for physical activity were constrained. Adolescents were busy either attending school or assisting with domestic/farm work. In sites such as Kiang West, there was little free time for recreational exercise:

Whenever they are at home and there is no work you need them for, they will always go back to school until evening. (Man caregiver, Kiang West).

One common way in which adolescents demonstrated autonomy over physical activity was in discussions about domestic work, negotiating to do less where possible:

Children want to be ordered systematically. But if we try to order them by force it is not enjoyable for them and even they might ignore the order. (Woman caregiver, Jimma).

Across all sites, adolescents had to seek parental/caregiver permission to engage in outdoor activities. Fear about adolescents' safety and/or concerns about distractions from academic work led to caregivers preventing outside play:

We will be wanting to go out and play but Mother will tell us to stay in and study. (Girl, aged 10–12 years, Mysore).

Children... go to school/college then to classes and then they come home so no time at all (Woman caregiver, Mumbai).

Gender differences and physical activity

Across all sites, girls had less freedom to use outside spaces than boys for religious, cultural and safety reasons. There was a sense of anxiety among some girls and caregivers about safety:

We don't allow our female children to go out. We fear that they might go elsewhere. It is not pressure for them not to exercise, we just fear for them. We hear that a child of seven year is raped so we fear for our female children. (Woman caregiver, Jimma).

Sometimes it's the environment you live in, maybe you want to jog in the morning but it's too dark and you're scared of being kidnapped. (Girl, aged 10–12 years, Soweto).

In some sites, this was not explicitly articulated. Rather, caregivers spoke of their daughters not having other girls with whom to play as a barrier to physical activity:

My daughter does not have any friends here as we don't have many daughters here. (Woman caregiver, Dervan).

Many of the girls needed permission to engage in any activity that might interfere with their domestic or academic work. Boys were expected to achieve academically, but were afforded more freedom to engage in leisure activities:

They (parents) want us to spend our time in-doors and focus on housework and studying. (Girl, aged 15–17 years, Jimma).

F: *When you finish school and you go to the football field, what do you do there?*

P: *We play football.* (Boy, aged 15–17 years, Kiang West).

Theme 3: Implications of economic and societal transitions for diet and physical activity

How rural to urban transition influences food availability and choice

Food choices were a clear indicator of the sites' transition from rural subsistence economies (Dervan, Kiang West) to urban contexts (Soweto, Mumbai). Many barriers to healthy diets were context-specific. For example, in sites of increasing urbanisation such as Abidjan, the food available to school-going adolescents was considered 'dirty' and unsafe:

At school, there is lack of cleanliness on the markets where we buy food. (Boy, aged 15–17 years, Abidjan).

Generally, diversity of choice was associated with increased urbanisation and adolescent autonomy. Within urban settings, 'junk' food was commonplace, cheap and easily accessible:

I think what makes it difficult for us to eat healthy in Soweto is that there is a lot of tuck shops but they sell junk food. (Girl, aged 15–17 years, Soweto).

Despite knowing the health consequences, adolescents talked excitedly about its taste, appearance and the social aspects of eating with friends. Eating out meant they could access a variety of foods with different tastes not available at home:

[We] get bored eating the same food at home so, to break the monotony, we eat out. (Boy, aged 15–17 years, Mumbai).



In overcrowded urban areas, such as in Mumbai, adolescents were physically constrained by their surroundings. Purchasing and sharing ‘junk’ food with friends enabled them to demonstrate growing autonomy and carve out time/space away from their families.

In rural areas, although adolescent diet was generally dictated by caregivers, ‘junk’ food began to permeate areas such as Dervan and Kiang West. In Dervan, adolescents reported that they were sometimes given money, which they spent on cheap ‘junk’ foods from roadside vendors. The taste and packaging of these foods was appealing:

I like the taste and if it is more spicy, then I like it better. (Boy, aged 15–17 years, Dervan).

How rural to urban transition influences physical activity

The availability of physical space where adolescents could exercise also indicated societal transition. In urban settings and sites of increasing urbanisation, adolescents lacked open spaces that were available to adolescents in rural areas. In some sites, including Mumbai and Mysore, the emphasis placed on the importance of academic achievement in securing adolescents’ futures meant that many spent much of their day in school and extra tuition classes leaving little opportunity to engage in physical activity.

There also appeared to be a relationship between stage of societal and economic transition, space and use of digital technology. Caregivers reported that smartphone use was consuming adolescents’ free time:

They return from school or college. They are tired so they sleep and then 2–4 hours they use mobile. (Woman caregiver, Mumbai).

Mobile phone use was also emerging in remote rural areas with screen time starting to displace physical activity:

Those who have [laptops or smartphones] would be on them but those who do not have would go to their peers to watch for some time. (Woman caregiver, Kiang West).

Use of digital technology also seemed to be influencing adolescents’ autonomy. The more access to technology they had, the more independent they were. They used digital technology to play games, as a source of nutrition information and, particularly for girls, to socialise. Across the sites, level of independence was gendered, with girls more restricted in terms of accessing outside spaces:

P: *Boys play in the ground so for the girls have no place to play because the boys are playing. . . .*

F: *What do girls do at home?*

P: *Mobile or T.V*

(Woman caregivers, Mumbai).

A perceived lack of safe outside spaces inhibited physical activity in some settings, due to crime and gang culture, and the vandalisation of exercise equipment. This was most

apparent in Abidjan and Soweto where adolescents feared violent street gangs:

I don't like the neighbourhood because the neighbourhood is full of "microbes" [violent gangs; comprising young boys previously involved in armed political conflict] . . . in conflict with the law. (Girl, aged 10–12 years, Abidjan).

We do have a [netball] court, we used to have but the druggies they stole things. (Girl, aged 15–17 years, Soweto).

Discussion

QSA of the pooled data set comprising fifty-two FGD across eight different sites in India and sub-Saharan Africa highlighted three broad themes that described influences on diet and physical activity. These related to transitions in nutrition knowledge, caregiver–adolescence power balance, and in the local social and economic context. FGD captured rich data on adolescents’ everyday experiences, highlighted the complexity of diet and physical activity influences, and demonstrated the salience of the broader contexts that shape their health within transitioning societies.

It was apparent that parents often underestimated adolescents’ nutrition knowledge. In many sites, adolescents had a greater understanding of the connection between health, diet and physical activity than previous generations, through formal education and via digital technologies. Caregivers played a key role in imparting knowledge. For those in urbanised settings, seeking advice from healthcare professionals was a possibility, whilst in areas with fewer resources, long-standing, culturally constructed beliefs often shaped the information imparted. In the less transitioned settings, freedom from disease was seen as the main outcome from eating well and hygienically. Participants from the more transitioned areas discussed the need to maintain a healthy weight and academic performance. This may reflect the difference between those who struggle to meet basic needs and those who have greater access to food. Despite many adolescents’ nutrition knowledge, wherever it was available, ‘junk’ food was consumed, often as a social activity and an opportunity to carve out free time/space. This suggests that the primary motive for food and physical activity choices amongst these adolescents was to fulfil social and other needs. Interventions focusing on increasing adolescents’ knowledge of nutrition and its health benefits may not, therefore, result in behaviour change.

The balance of power between caregivers and adolescents appeared to be expressed through negotiations over diet and physical activity. Increasing independence, a desire for autonomy, along with vulnerability to marketing,



leads adolescents to make unhealthy food choices⁽²¹⁾. Additionally, desire for peer group belonging influenced 'junk' food consumption. This resonates with previous research highlighting the importance of peer social norms in adolescent food choice^(22,23). Food has social significance for adolescents well beyond its health-giving properties⁽⁸⁾. Caregivers were frustrated that, despite their efforts, adolescents preferred 'junk' food with their friends than home-cooked food, resonating with findings from other studies^(23,24).

Adolescents have high nutritional requirements to support physical growth, sexual development and brain remodelling⁽¹⁾, making them vulnerable to under-nutrition when diets are inadequate due to poverty and food insecurity. Malnutrition during adolescence leaves individuals vulnerable to infections⁽²⁵⁾. Urban transition has increased access to cheap and unhealthy, but tasty and desirable, obesogenic foods that are energy-dense but micronutrient-poor^(26,27), as highlighted in the current study. This is consistent with literature showing that economic and social transitions are associated with a shift from traditional diets to those high in salt, sugar and fat^(28,29). This may have a significant long-term effect on population health since data suggest that adolescents, particularly boys, who eat 'junk' food go on to be young adults who eat increasing amounts⁽³⁰⁾.

Physical activity was inhibited by many site-specific factors such as lack of space and prevalent crime in more urban settings, and prioritisation of academic performance in Indian settings. Gender largely determined opportunities for physical activity across the sites, with girls afforded less freedom to engage in physical activity due to safety concerns. Studies in both high- and low-resource settings have identified a significant fall-off in rates of physical activity as girls enter puberty⁽³¹⁾. This appears to be the result of the cultural restrictions placed on girls and/or increased self-consciousness. Physical activity for rural adolescents largely comprised household chores, though data from adolescents in rural South Africa suggest that this varies even in highly resource-constrained settings, where the poorest and younger adolescents spend most time on household chores⁽³²⁾. Digital media use with increased ownership of smartphones in peri-urban/urban settings was also a key barrier to physical activity. In keeping with data from high-income countries, caregivers in Mysore and Mumbai complained about their children sitting for long periods in front of screens.

We explored the salience of gender in different contexts. Previous research and micronutrient interventions have targeted adolescent girls, with emphasis placed on their role as future mothers⁽³³⁾. As a result, girls are at particular risk of the 'dual burden', creating additional nutrient demands, and emerging gender roles may restrict their access to good nutrition and physical activity^(34,35). The current findings expand on previous research by highlighting gender

differences in opportunities for recreational physical activity. Cultural customs encouraged a more sheltering approach to parenting girls, as well as a fear for their safety.

Strengths and limitations

QSA of FGD with a uniquely large sample of participants across diverse LMIC settings enabled a nuanced exploration of how the (shifting) economic and societal contexts in which adolescents live shape their diet and physical activity behaviours. The QSA team was involved in data collection, primary analysis and write-up of each site's research. This involvement permitted immersion in the data in a manner not usually afforded to secondary analysts. Little qualitative adolescent nutrition research exists in LMIC. This is the first known study of this kind in Abidjan and Kiang West. The inclusion of caregivers' as well as adolescents' perspectives allowed a relational approach highlighting commonalities/differences in the negotiations/conflict arising around diet and physical activity.

We acknowledge some limitations, including the challenge of working with translated data where there is a possibility that some meaning may have been lost in translation/analysis. However, the collaborative nature of TALENT and the iterative approach with which the wider team worked helped mitigate this. All site researchers were consulted throughout the QSA process, providing guidance on issues of context and interpretation.

Implications for public health and adolescent nutrition

An intergenerational perspective shows changes in adolescent diet and physical activity with economic and societal transition. Even in remote, rural areas of sub-Saharan Africa and India, participants talked of emerging transition-driven exposure to obesogenic foods and sedentary activity. Interventions need to be flexible, evolving within the context in which they are implemented to be effective, including capitalising on increasing availability of digital technology in transitioning sites. Moreover, as gender was a key driver of physical activity, the allocation of separate spaces or activities for girls is recommended.

Adolescents and their caregivers need to be meaningfully involved in designing interventions to improve diet and physical activity. This will ensure the effective engagement of adolescents and supports previous recommendations for the co-creation of interventions to improve diet and physical activity behaviours⁽³⁶⁾. Adolescents in this study were already knowledgeable about the connection between diet and health that lead them to eat unhealthily or be physically inactive. Unsurprisingly, their values are similar to those of adolescents in high-income countries, where eating unhealthy food is part of socialising with friends⁽²⁵⁾. Furthermore, the context-dependent nature of

power balance between adolescents and caregivers suggests that interventions should consider the influence of familial dynamics, supporting adolescents' need for autonomy while involving caregivers. This scaffolds previous suggestions that targeting psychosocial determinants of diet behaviours might be an effective strategy⁽³⁷⁾. Previous nutrition interventions in LMIC have often focused on micronutrient supplementation^(29,38); however, the findings from this analysis suggest that interventions need to address social and contextual factors that influence diet and physical activity.

Conclusions

Interventions to improve adolescent diet and physical activity in LMIC need to be complex, context-specific and effective in engaging adolescents and caregivers. Solutions need to acknowledge the structural barriers in resource-limited settings where choices for healthier living are restricted. Consequently, there is a need for action on both the community-household level and also through policy.

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Supplementary material

For supplementary material accompanying this paper visit <https://doi.org/10.1017/S1368980020001810>

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**Global Challenges Research Fund – Network for
Adolescent Nutrition**

Programme for Workshop 1

**Venue: BKL Walawalkar Hospital, Dervan, near Chiplun,
India**

February 5th-9th 2018

14.00-14.45 **Invited talk: AA-HA! and the leading global adolescent health issues** Speaker: David Ross, Adolescent Health Research and Guideline Development, WHO, Geneva.

14.45-15.45 **Theme 2: Engaging with adolescents** How do you reach adolescents? How do you create and sustain engagement? What existing avenues, systems and platforms can be exploited? Facilitator: Susie Weller
Speakers: 1) Brooke Bocast
2) Pallavi Yajnik
3) Polly Langdon
4) Liz Kimani
Recorder: Krishnaveni

15.45-16.15 **TEA**

16.15-17.00 **Theme 3: What are the special biological needs, health needs, and vulnerabilities of adolescents in our populations?** Special nutritional requirements, special groups of adolescents (eg gender, pregnancy, HIV). Facilitator: Sophie Moore
Speakers: 1) Kate Ward
2) Krishnaveni
3) Julie Jesson
4) Abraham Mitike
Recorder: Mubarak Mengistie

17.15-18.15 **Social programme:** Outing to a nearby place of interest: Shivsamarth Gadh or "SHIVASRUSHTI", a memorial to Shri Chhatrapati Shivaji (1627-1680) an iconic warrior king, who was known for fighting back against the Mughal and British empires and for his enlightened governance. The memorial depicts scenes from his life in painting and sculpture.

19.30-21.00 **DINNER**

Day 2: Tuesday 6th February

Whole group together N~30

09.00-09.45 **Invited talk: School Based Interventions: lessons from SYM-KEM study** Speaker: Dr Sheila Bhave, Paediatrician, KEM Hospital, Pune

Themed discussions (continued)

09.45-10.45 **Theme 4: Nutritional interventions** What do we know about successful nutritional interventions? Are there interventions to 'borrow' from outside nutrition? Facilitator: Kumaran
Speakers: 1) Shane Norris
2) Mary Barker
3) Ranjan Yajnik
4) Caroline Fall
Recorder: Edna Bosire

10.45-11.15 COFFEE

| | | |
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| 11.15-12.15 | Theme 5: Ethical considerations What are the special ethical issues we need to consider in this type of research and in this age group? Gender issues. | Facilitator: Sirazul Sahariah Speakers: 1) Brooke Bocast 2) Kumaran 3) Julie Jesson 4) Abraham Mitike Recorder: Liz Kimani |
|-------------|--|---|

Moving on to firm up the components of the pump-priming research

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|-------------|--|---------------------------|
| 12.15-12.45 | The purpose of the qualitative research , what the training will include, and what needs to be achieved by the end of this workshop | Mary Barker, Susie Weller |
|-------------|--|---------------------------|

12.45 **Group photograph**

13.00-13.30 **LUNCH**

13.30-14.15 **Introduction to specially Indian forms of physical activity by local children and adolescents (including 'Malla Khamb' using ropes and poles)**

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| 14.15-15.00 | Nutritional data: What is feasible and most important during the pump-priming phase? | Discussion led by Caroline Fall |
|-------------|---|---------------------------------|

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| 15.00-15.45 | Literature reviews: What do we want to achieve during the pump-priming phase, what is our scope, and what support will be needed? | Discussion led by Shane Norris and Kumaran |
|-------------|--|--|

15.45-16.00 **TEA**

| | | |
|-------------|--|--|
| 16.00-17.00 | Secondary analyses: short presentations about the four key cohorts, followed by discussion in the whole group and suggestions for our 'top 3 research questions' in each cohort | Chair: Sophie Moore Presenters: Sophie Moore/Kate Ward (Gambia cohorts); Shane Norris (Johannesburg Bt20 cohort); Ranjan Yajnik (Pune Maternal nutrition Study) Krishnaveni (Mysore Parthenon Cohort) |
|-------------|--|--|

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|-------------|--|--------------------------------|
| 17.00-17.30 | Stakeholder/policy maker engagement: Discussion, including what we can achieve in the pump-priming phase and future | Discussion led by: Mary Barker |
|-------------|--|--------------------------------|

study.

19.30-21.00 Free evening and DINNER

Day 3: Wednesday 7th February

Separate into two groups: 1) the Principal Investigator(s) from each centre and 2) the nutritionists who will take part in the qualitative training programme. **PIs are invited to join the sessions shaded in blue.**

The training programme has the following objectives and aims: Objectives: By the end of the workshop, members will have a) decided on the aims and objectives of the interviews/focus groups, b) chosen which methods will be used to collect and analyse data (data analysis will be covered in detail in workshop two), c) produced a finalised interview schedule, and d) know how to use the interactive online forum. Aims: To focus on the following research questions: 1) what are adolescents eating, what physical activity are they doing, and what influences these behaviours? and 2) What context-specific interventions will improve adolescent nutrition? The PIs will continue to firm up the other components of the research, future plans, how the network will function, and ethical issues. We all come together again on the final afternoon.

Principal Investigator group

- 09.00-10.00** Literature reviews: firm up plans including who will do what and timelines
Led by Kumaran and Shane Norris
- 10.00-11.00** Secondary analyses: Firm up plans including research questions, who will do what, and timelines
Led by Kate Ward

Nutritionists/Qualitative researchers

- 09.15-09.30** Introduction
Led by: Mary Barker
- 09.30-11.00** Needs Analysis: What do we know and what do we want to learn?
Led by Mary Barker, Susie Weller, Brooke Bocast, Edna Bosire and Polly Langdon

11.00-11.30 COFFEE

11.00-11.15 COFFEE

11.30-12.30 The shape of the future research project and grant application. Led by Mary Barker, Chittaranjan Yajnik and Sophie Moore

11.15-12.15 What is qualitative research?
Led by Susie Weller

12.15-12.30 Interactive forum
Led by Polly Langdon

12.30-13.15 LUNCH

12.30-13.15 LUNCH

13.15-16.00 Join qualitative training programme

13.15-14.30 Youth-centred methods
Led by Susie Weller and Brook Bocast

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|--------------------|--|
| 14.30-15.30 | Focus groups: Practice and reflection Led by Mary Barker, Susie Weller, Brooke Bocast, Edna Bosire and Polly Langdon |
| 15.30-16.00 | How to write a focus group guide Mary Barker and Polly Langdon |

16.00-19.30 **Social programme:** Evening outing to 300-year old Parshuram Temple, dedicated to Lord Parshuram, who is the 6th incarnation of Vishnu and is believed to have created the Konkan (this coastal region of western India). Followed by snacks at river view resort (at the top of River Vashisthi)

Day 4: Thursday 8th February

Principal Investigator group

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|--------------------|---|
| 09.00-10.00 | Further discussion about the shape of the future project and grant . |
| 10.00-11.00 | How the consortium will function , meeting frequencies, policies for publications, data sharing, website etc. Led by Caroline. |

Nutritionists/Qualitative researchers

| | |
|--------------------|--|
| 09.00-09.30 | How to write a focus group guide (contd.) Mary Barker and Polly Langdon |
| 09.30-11.00 | Confidentiality and divulging information Led by Mary Barker and Polly Langdon |

| | | | |
|--------------------|---------------|--------------------|---------------|
| 11.00-11.30 | COFFEE | 11.00-11.15 | COFFEE |
|--------------------|---------------|--------------------|---------------|

11.30-12.30 Firm up plans for **policy maker engagement**, set lists of target policymakers, who will do what, agree timelines. Led by Kumaran and Julie.

11.15-12.30 **Interviewing: Practice and reflection**
Led by Mary Barker, Susie Weller, Brooke Bocast, Edna Bosire and Polly Langdon

| | | | |
|--------------------|--------------|--------------------|--------------|
| 12.30-13.30 | LUNCH | 12.30-13.30 | LUNCH |
|--------------------|--------------|--------------------|--------------|

13.30-15.15 Join qualitative training programme

13.30-15.15 **Using interviews and focus group methods**
Led by Susie Weller

15.15-15.30 **TEA**

15.15-16.15 Epigenetic changes during

15.30-16.30 **Practicalities of qualitative research**

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| | adolescence and their relevance to health and development, including skype with Giriraj Chandak, CSI Centre for Cellular and Molecular Biology, Hyderabad. | | Led by Polly Langdon |
| 16.15-17.00 | Any other business not covered yet | 16.30-17.00 | Reflection of progress so far Led by Mary Barker, Susie Weller and Polly Langdon |
| 19.30-21.00 | Free evening and DINNER | | |

Day 5: Friday 9th February

Principal Investigator group

09.00-11.00 Join qualitative training programme

14.00-14.45 Discussion about socio-economic characterisation among adolescents

14.45-15.00 TEA

15.00-17.00 Wrap-up session with whole group together - finalise interview guides, summaries from Mary and Caroline, support available, final queries and discussions

WORKSHOP ENDS

Nutritionists/Qualitative researchers

09.00-10.30 **Planning your research: What do you need to get started?**
Led by Mary Barker, Susie Weller and Polly Langdon

10.30-11.00 COFFEE

11.00-11.45 **Writing the interview or focus group guide**
Led by Mary Barker, Susie Weller, Brooke Bocast, Edna Bosire and Polly Langdon

11.45-12.45 **Evaluate and modify interview or focus group guide**
Led by Mary Barker, Susie Weller, Brooke Bocast, Edna Bosire and Polly Langdon

12.45-14.00 LUNCH

14.00-14.45 **Any questions:**
Led by Mary Barker, Susie Weller, Brooke Bocast, Edna Bosire and Polly Langdon

14.45-15.00 TEA



Collaborative network for adolescent nutrition & health in sub-Saharan Africa and India



On context to 'Beti Bachao, Beti Padhao' campaign being spread over the country in recent years, the world has taken into account the programme 'Adolescent girls Health and Empowerment' which is running for last 22 years in this rural part of Maharashtra. Shri Vithalrao Joshi Charities Trust's B.K.L. Walawalkar Hospital is successfully running this project to improve the health of malnourished girls. It is praised by doctors and researchers from all over the world and this 'Dervan pattern' is going to be implemented in 9 centers across the world.

An international workshop on 'Collaborative Network for Adolescent Nutrition & Health in sub-Saharan Africa and India' was organised by Medical Research Council, U.K. at B.K.L. Walawalkar Rural Medical College. The council was attended by Researchers, Doctors, and Nutritionists from England, South Africa, Kenya, Ethiopia, Jiniva and many more research

centers. Dr. David Ross, Adolescent Health Researcher and Guideline Development, WHO, Geneva, and Dr. Caroline Fall, (Southampton, UK) were special guests on this event.

All these doctors, researchers had a thorough discussion on Health, Nutrition and Psychology of adolescent girls and decided to start such research at 9 centers all over the world and B.K.L. Walawalkar Hospital is one of them.

A programme 'TALENT', Transforming Adolescence Life Through Nutrition, have been initiated and will work for 18 months at B.K.L. Walawalkar Hospital and latter on it will be implemented in different countries from all over the world. This project will be started at University of Southampton, Medical Research Council, UK, Jimma Ethiopia, Johannesburg, France, Gambia etc.



Adolescent girls are educated through special workshops so that they can be good mothers of our future citizens. Improving the hemoglobin level of preschool age children could yield substantial benefits in cognitive and psychosocial development and overall health.





Adolescent girls residential camp



Activities

Physical & psychological assessment

The camp was guided by clinical specialties and various experts from different part of world to evaluate adolescent health.



Objectives of adolescent girls residential camp –

- Clinical examination of girls
- Anthropometry (height, weight and other parameters by using Tanita machine)

- Blood collection for assessment of micronutrients, hemogram.
- Detection and correction of deficiencies of vitamins
- Physical & Health Education
- Psychological counseling and Self Empowerment



Collaborative network for adolescent nutrition & health in sub-Saharan Africa and India 5th to 9th February 2018





DERVAN cohort



Adolescent Food, Physique and Future

Better growth for better Konkan

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Contents

| | |
|--|----|
| Why was DERVAN cohort of adolescent girls established? | 2 |
| KEY FINDINGS | 3 |
| The background and impetus for designing this study..... | 7 |
| What is 'DERVAN' Cohort: Hypothesis, Objectives and Methodologies | 9 |
| Recruitment plan and implementation status..... | 13 |
| Snapshots of some interventional activities carried out during the camps | 14 |
| How is the research setting? What is the topographical coverage? | 15 |
| RESEARCH FINDINGS AND OBSERVATIONS | 17 |
| Nutritional status of Adolescent girls from Konkan benchmarked with National Data. | 17 |
| Specific under-nutrition parameters observed in the Dervan cohort girls..... | 19 |
| A preview of the Socio-economic status of adolescents and their families | 20 |
| What is the life-style and status of physical activity in Dervan cohort girls? | 22 |
| Overall fitness & wellbeing | 24 |
| A glimpse into their diet and nutritional intake | 25 |
| Biological findings (N=1336) | 27 |
| How many adolescents are Anemic? And hidden anemia?..... | 31 |
| What is the status of their Bone health..... | 32 |
| 1-Carbon metabolism and homocysteine | 33 |
| How many girls were identified with genetic polymorphisms? | 35 |
| How many girls have Hormonal imbalance? | 37 |
| Status of trace elements..... | 40 |
| Are their organs also small? Small body size with smaller organs | 40 |
| How does under nutrition impact the "behavioral aspects" amongst adolescent girls? | 41 |
| What is the status of menstrual health of these girls?..... | 43 |
| RISKS OF NCDs IN DERVAN COHORT GIRLS | 45 |
| 1.Early-onset hyperglycemia and the risk of diabetes..... | 46 |
| 2. Risk for hypertension (Systolic > 120 & Diastolic >80 mmHg) | 53 |
| 3. Risk for hyperlipidemia | 54 |
| 4. How many girls are identified with multiple risk factors for NCDs? | 55 |
| Do they have conventional metabolic syndrome? | 55 |
| HOPE FOR FUTURE..... | 57 |
| Are rural Indian famished adolescent girls' harbingers of NCDs? | 59 |
| What is the story behind "Konkan Diabetes" in ostensibly healthy looking people? | 60 |
| BIBLIOGRAPHY | 63 |

Why was DERVAN cohort of adolescent girls established?

Adolescents are a fundamental segment of Indian population, yet the prevalence of malnutrition among adolescents remains quite high. In the case of girls, malnutrition distresses her health throughout life, but its emergence during critical windows of puberty and pregnancy causes severe long-term impacts. Many physiological mechanisms such as organ development, setting of hormonal set points, epigenetic changeability and microbiome mellowing takes place during these windows. (1)

This study is positioned in the remote rural areas of Konkan, Maharashtra; a region with very minimal economic development. A common story that unfolds in many households in this region of Konkan, is described here. *'A 21 year old teenager, a first girl child amongst 5 girl siblings from a poor family gets married at 19, becomes pregnant, and delivers a frail daughter. Second chance is given to her in hope of a male child by in-laws but in vain as she delivers another girl child by cesarean section. Alcoholic husband flings her out of home. She comes to her father's house and suffers from tuberculosis. Father is struggling to earn livelihood for 4 girls of his own and three new family members added to it.'* These girls face intense opposition- religious, caste-based, patriarchal, and have to endure harassment through their lives. We intend to allow society a glimpse into the unconventional lives of neglected girls from villages and bring these shadowy girls into limelight. Our main objective is to make the eccentric lives of these rural adolescent girls better.

Dervan cohort is an adolescent cohort designed with an evolutionary outlook to unfold interactions with biological parameters in developing adult NCD. Our frame work is exceptional and it might help to identify effective strategies for addressing dual burden of low metabolic capacity* with low metabolic load* manifesting as adult NCDs.

Note: * Here metabolic capacity refers to pancreatic insulin production & muscle glucose clearance and metabolic load is high body fat, high dietary glycemic load with sedentary life style.



KEY FINDINGS

Nutritional status of Adolescent girls from Konkan in comparison with national data.

- The prevalence of thinness is higher in “Dervan Cohort” compared to the rest of India.
- Other parameters such as stunting, obesity, micronutrient deficiency like Vitamin D and B12 are comparable with the other states in India.
- Folate and zinc deficiency was negligible whereas Iron deficiency was higher than in other states, except Punjab.
- Prevalence of pre-diabetes was quite high (3 out of 10 girls!) when compared to other Indian states, despite complete absence of overweight/obesity.

What is the Socio-economic status of Adolescents and their families?

- Only ‘1 in 50’ household is financially sound. Rests of them are economically poor. 7 out of 10 girls use public tap for drinking water and one fourth of households do not have their own toilets and use wood as a fuel for cooking

A few obvious under-nutrition parameters

- More than half of the girls are in thin category and half of them have a short stature.
- Three girls out of 10 are severely emaciated.
- Contrastingly waist hip ratio was normal in most of the girls
- Total energy intake was barely 1388 kcal /day

What is the relation between body size & organ size observed in the cohort girls?

- Liver and kidney are smaller if body size is small.
- Liver size is positively associated with fasting glucose, insulin, HOMA IR and β cell function but negatively associated with HOMA sensitivity.
- There is no significant change in size of pancreas with change in body size.
- Almost one girl out of 10 has abnormal ovaries.
- Only 2 out of 10 girls have fatty liver.

What is the status of menstrual health of these girls?

- 7 out of 10 girls are forced to follow menstrual restrictions.
- Almost half of the girls face premenstrual syndrome with irregular menses in 1-2 girls out of 10.
- Age at menarche was significantly delayed due to underweight status but tribal girls are more severely impacted due to under-nutrition.
- Late onset of menarche was associated with more stunting, more thinness, and reduced obesity, low waist hip ratio and poor insulin production among undernourished adolescent girls of KONKAN

How does under nutrition impact the “behavioral aspects” amongst adolescent girls?

- 2 out of 10 girls are psychologically impaired and 3 out of 100 made an attempt of suicide.
- Though there was no noteworthy association of psychological impairment with underweight status but it was observed to be slightly higher in stunted girls. (Chronic under nutrition)

A glimpse into their diet and nutritional intake

- Average calorie intake per day of these girls is almost half the recommended requirement (1400 Kcal/day versus the 2500Kcal as per NIN).
- The dietary diversity here is appallingly poor. Adequate dietary diversity was observed, only in 3.8% of the cohort girls.
- Consumption of milk/milk products was very poor and that of bakery items and fizzy drinks was very high.
- Most of the girls have negative energy balance.

Overall fitness & wellbeing

- General examination found substantial weakness, fatigue, hair loss, tingling etc. which could be attributed to micronutrient deficiencies and general poor hygiene.

Some hidden, underlying health concerns

Anaemia

- One third of the evaluated girls are anemic, as per their hemogram profile.
- Surprisingly, almost half of the enrolled girls have low ferritin levels. Also, the levels of serum iron are low in almost 50% of the girls, indicating hidden anemic status.

Bone health

- The indicators of bone health, Vitamin D and calcium are significantly lacking in the overall population.
- Vitamin D deficiency is observed in 8 out of 10 girls.
- The inadequate consumption of dietary calcium (<140 mg/day) is indirectly reflected in elevated intact parathyroid hormone in 7 out of 10 girls.

Micronutrients and vitamins

- One third of the cohort girls have Vitamin B12 deficiency, however, the folate deficiency numbers are quite low.
- HoloTc levels are low in almost 7 out of 10 girls
- More than half of the girls have very high homocysteine.

How many girls have imbalance of Hormones?

- 1 out of 20 girls have hypothyroidism but hyperthyroidism is negligible.
- Severely undernourished (below -2SD of BMI) girls have reduced leptin levels. They have higher growth hormone levels indicating growth hormone resistance. This could be due to an adaptive response to low energy intake.

Do they have risks for non-communicable diseases (NCDs)?

1. Risk for diabetes

- Virtually 3 out of 10 girls were found to be Pre-diabetic. (Pre diabetes was labelled as Fasting sugar \geq 100 mg/dl).
- Out of 10, nearly 1-2 girls have elevated HBA1C.

2. Risk for Hypertension (systolic > 120 & Diastolic >80 mmHg)

- Nearly 6 out of 50 girls had elevated blood pressure
- 12 out of 100 girls have systolic hypertension and 18 girls out of 100 have diastolic elevation of blood pressure.

3. Risk for hyperlipidaemia

- 2 out of 10 girls have high LDL, total cholesterol and 1 out of 10 has low HDL.
- Surprisingly, high TG (>150 mg/dl) was found in only 1 out of 100 girls.

Starvation induced metabolic changes and endocrinal repercussions

- Diabetes resulting due to over nutrition is a classical spectrum found mostly in urban settings but we have found another spectrum of diabetes due to under nutrition manifesting as pre-diabetes in adolescents.

Status of trace elements

1 out of 10 girls has zinc deficiency and almost half of the girls have excess lead and one third of them have excess Manganese.

How many adolescents were identified with genetic polymorphisms?

- Almost 2 out of 10 girls were identified with MTHFR C677T (Methyl tetrahydro folate reductase) polymorphism.
- A subset of them, almost 14.5% have Hyperhomocysteinemia with polymorphism, making them high risk candidates for NCDs, especially coronary artery disease.

Profiling of micro RNAs

- Micro RNA profiling was done on serum samples from diabetic women and pre-diabetic adolescent girls and was compared with that of healthy control women. Levels of several micro RNAs were found to be over expressed in both pre-diabetic and diabetic women. These include miR-454, miR-215 known to be up regulated in diabetes

How many girls are identified with multiple risk factors for NCDs?

- NCD risk factors include anthropometric under nutrition, pre-diabetes, hypertension, high LDL, low HDL and hyper homocysteinemia.
- 9 out of ten girls have one risk minimally, and nearly 4 out of ten girls have two risk factors for NCDs

Do they have conventional metabolic syndrome?

- Occurrence of metabolic syndrome is 1-2% based on conventional definitions of IDF, ATP III. The main reason is absence of central obesity yet it is noteworthy that 28.2% girls have pre-DM and 12% have elevated blood pressure.

What is the novelty of this cohort?

We have witnessed two diverse ends of the spectrums of pre-diabetes, one presenting as under nutrition with poor insulin secretion and other end with over nutrition resulting in insulin resistance.

Pre-diabetes due to insulin resistance in overweight girls can be reversed with dietary modifications but to avert pre diabetes due to poor insulin secretion in undernourished girls will be challenging. Poor insulin secretion could be due to altered fetal programming which could be non-modifiable in one generation. But an appropriate intervention before conception might reduce the risk for diabetes in the next generation. Dervan cohort is more concentrated with under nourished girls at one end of pre-diabetic spectrum having inadequate insulin production than the conventional obesity related diabetes. Therefore it will qualify us to reveal the hidden pathway of NCD through under nutrition

Hope for future? A new opening for second inning.

Data from the first stage of the DERVAN cohort funded by RGSTC has uncovered some astonishing and shocking facts. Under nutrition is widespread, yet prevalence of pre-diabetes in these ostensibly healthy-looking adolescent girls (no-obesity) is very high

Adolescent period offers a wider window for interventions to break the vicious multigenerational cycle of under nutrition thus offering a new opening for their second inning of life.

Our data is comparable to data from other states of India so findings and policy decisions resulting from our cohort will be generalizable for the entire rural undernourished adolescent population of our nation.



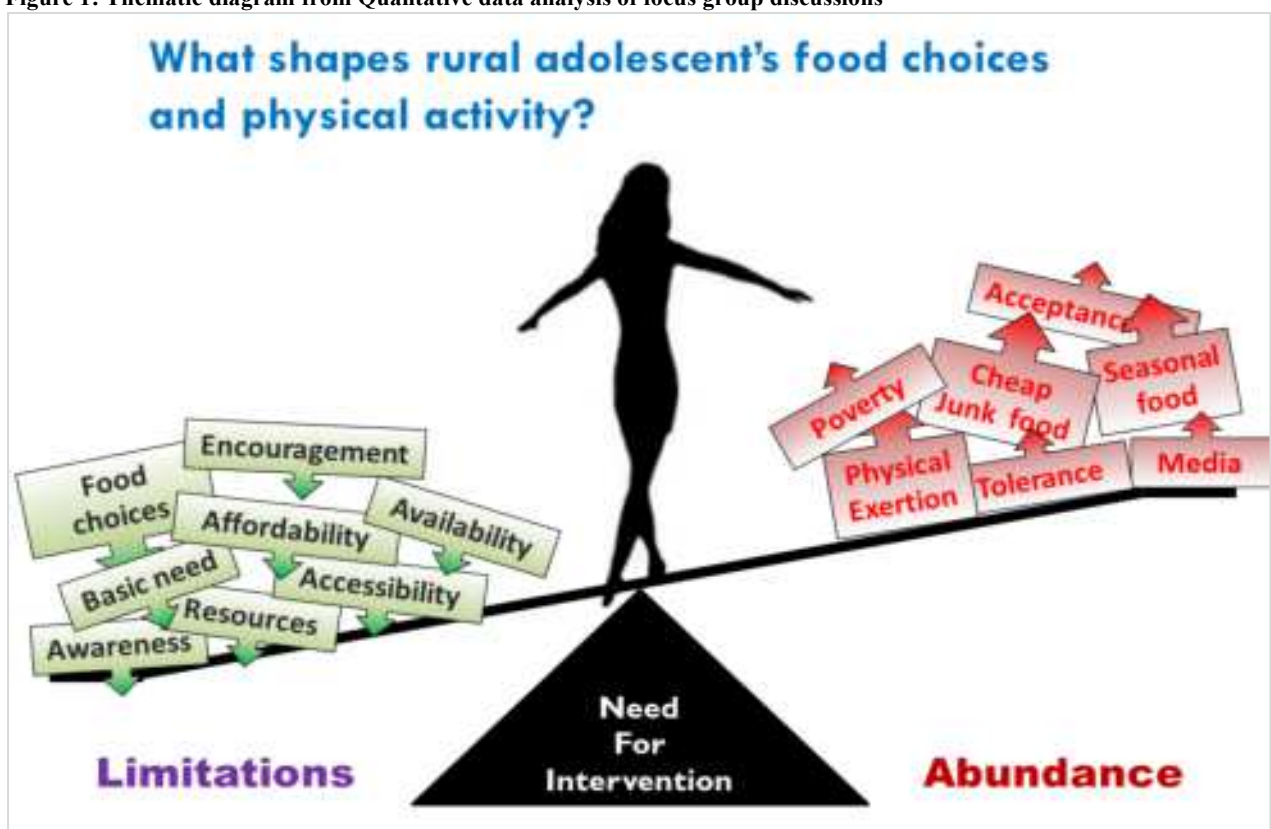
The background and impetus for designing this study

India is witnessing a rapid rise in prevalence of non-communicable diseases (NCDs) like diabetes, coronary heart disease, and hypertension over last decade (2-4). In a developing country like India, where there is a lack of basic needs of life with lowest per capita income, spending money on health is beyond reach for most people. The best way to challenge the epidemic of NCDs is to avert its onset.

British epidemiologist David Barker laid down the hypothesis in the 90's which says that intrauterine growth retardation, low birth weight, and premature birth have a causal relationship to the origins of hypertension, coronary heart disease, and non-insulin dependent diabetes in the middle age (5). Thus, if the risk of NCDs in adulthood in our communities is largely determined before birth, then the critical factor to be addressed is the extent to which these risks can be minimized either pre-conception or during pregnancy.

In order to uncover these risks methodically, we planned a detailed assessment of adolescent girls. To begin with, a brief study exploring adolescents' and caregivers' perspectives on their diet and physical activity habits was undertaken. This was a multicentric study sponsored by **Medical Research Council, UK**. Five focus group discussions (FGD) were conducted with adolescents and two FGDs with caregivers. Data were analyzed using thematic analysis. The results are provided in the Thematic diagram, given in Figure 1. Scarcity of basic resources limited adolescent diet and opportunities for physical activity were noticed. Study emphasized that, to achieve current nutritional and physical activity recommendations for adolescents requires improved infrastructure in these settings, changes which may accompany the current Indian social and economic transition. (6, 7)

Figure 1: Thematic diagram from Qualitative data analysis of focus group discussions



As can be observed in Figure 1, there is a considerable imbalance between limitations and abundance faced by adolescent girls.

The girls have limited food choices and there is a seasonality of vegetable and fruits. Healthier food items are unavailable. Many villages are situated in remote areas. Vegetable markets are situated far away. Though 28% of the population of the study villages does farming, there is hardly any variety in farm products. All farmers preferred rice for farming. Half of them do cultivate seasonal fruits (predominantly mango or cashew) in their farms. Almost 90% farmers use chemical fertilizers. Twenty-seven per cent of the population works as labourers. More than 30% of the villages have Chinese fast-food centres within 3km of range. Cheap and junk food is easily available near schools. Girls are burdened with more physical activity than their dietary calorie intake. They walk at least 4 to 5 kilometres to go to school. This necessitates the need for intervention so we can generate awareness about health and nutrition by counselling sessions. We also promote the development of Kitchen Garden.

These observations created a stronger impetus to deep-dive and understand their biological status better. Hence, a longitudinal study was planned with an objective to meticulously collect data on their biological, nutritional, dietary and economic status and design appropriate interventional solutions.



What is ‘DERVAN’ Cohort: Hypothesis, Objectives and Methodologies

Our study tests the following hypothesis:

Poor physical growth and poor nutrition in adolescent girls increases the risk of NCDs, in particular the risk of diabetes in their adulthood and in their offspring. Our objective was to set up a cohort of adolescent girls (16-18 years). Cohort will be followed for next 20 years (8)

Objectives

- 1) To provide health education to adolescent girls, parents, teachers, nurses, paramedical workers in the study area.
- 2) To assess the physical growth, nutrition, cognitive functions in adolescent girls.
- 3) Measure the micronutrients in the blood sample
- 4) Create our own high risk group.
- 5) Follow them every year to assess physical growth and nutrition.
- 6) To establish Bio repository for genomic study in future

Methodologies

During enrollment, the girls are brought for a residential camp for various investigations which comprises general clinical assessment by a physician including oral (dental), gynecological, ophthalmic and cognitive functions. Physical examination for anthropometric parameters, a complete health parameter profiling through blood investigations including liver, renal and thyroid function tests; nutritional assessments and physical activity records, blood and urine tests, sonography etc were then conducted. Some genetic analysis such as polymorphism in MTHFR gene is carried out too. The detailed list is presented in Table 1 below.

If during the investigations any clinical or biochemical abnormalities were detected, the girls were referred for a specialist opinion and provided the necessary treatment including medicines and counselling. All the collected samples have been barcoded and a biorepository generated for future reference and analysis (if any). Each sample is barcoded for easy access. Interventional activities such as diet counselling, overall health and hygiene awareness, career guidance, team games, yoga & motivational sessions, skillset development programs etc. were carried out during the camps.

Table 1: Investigations at the time of enrollment and follow ups:

| Investigations for all participants at the time of enrollment | Annual Follow up | Additional tests if diagnosed with risks for NCDs | Other investigations for all participants at enrollment |
|---|------------------|---|---|
| Hemogram | Yes | | General examination |
| CRP, serum iron, ferritin, vitamins-B12, D3, Folate, homocysteine, Holo TC, lipid profile, urine analysis | - | | |
| Fasting sugar, insulin, HBA1C (HOMA IR, beta cell function & sensitivity) | Yes | Islet cell antibody, insulin antibody, GAD antibody | Body composition using bio-impedance for all |
| Liver function, Renal function, Thyroid function | - | TPO antibodies, Thyroxin - binding globulin (TBG) | Ultrasonography abdomen for all |
| Trace elements (Zn, Pd, Mn, Mg, Cu etc.) | - | | YPSC scale for all Wechsler test for cognition |
| Genetics, Epigenetics Polymorphism in MTHFR gene, micro RNA | | | |
| Hormones (FSH,LH), PTH, GH, IGF-1 Leptin, Adiponectin | - | Progesterone Testosterone | Dietary recall and dairy recall, Food diary |
| Water analysis | - | | Physical activity scale |
| If pregnant-OGTT If delivered-Cord blood for glycemic parameters | | | |

Table 2: Samples available in bio-repository

| Sample Type | Components | Adolescent girl aliquots | Parents aliquots |
|----------------------|--------------|--------------------------|------------------|
| Fasting Blood | | | |
| EDTA (10ml) | Whole blood | Two | - |
| | Plasma | Six | Three |
| | Packed cells | Two | Two |
| PLAIN (20ml) | Serum | Ten | Three |
| TRACE ELEMENT (6ml) | Serum | Three | - |
| Other | | | |
| Fasting urine | | Two | Two |
| Fasting saliva | | Two | Two |

The vision of this cohort is to follow-up and monitor the biological parameters of these girls during their reproductive milestones after marriage. This includes her pre-conception and ante-natal stages, during the trimesters of her pregnancy, during her delivery and then continue for a period of upto 20 years specially to monitor potential NCD progression in them. The entire study plan and vision of DERVAN cohort has been presented graphically in flow-charts, in Figure 2 and Figure 3 given below.

The immediate set of investigations intended to be carried out for unmarried girls and for married girls, during pre-conception, pregnancy, delivery and post-delivery are listed below.

1. **Cohort maintenance (following investigations for all participants annually)**
 - a. Physical growth (anthropometry, body composition by bio-impedance and nutrition).
 - b. Glycemic parameters (glucose, insulin, HbA1C) and hemogram.
 - c. Measure organ sizes (pancreas, liver, kidney and ovaries) using abdomen/pelvis ultrasonography.
2. **Preconception stage**
 - a. Physical growth (anthropometry, body composition by bio-impedance and nutrition).
 - b. Measure hematological parameters, glycemic parameters by OGTT, micronutrients, hormones and cardiovascular risk factors.
 - c. Measure organ sizes (pancreas, liver, kidney and ovaries) using abdomen/pelvis ultrasonography.
3. **Pregnancy**
 - a. Physical growth (anthropometry and body composition), nutrition.
 - b. Measure hematological parameters, glycemic parameters by OGTT
 - c. Fetal growth by ultrasound.
4. **At delivery**
 - a. Measure mothers as well as neonates by anthropometry, collect cord blood for glucose and insulin and study morphology of placenta.
5. **Further development of research Centre**
 - a. Set up Molecular biology techniques (for genetics and epigenetics).
 - b. Expansion of bio-repository.



Figure 2: DERVAN cohort schedule

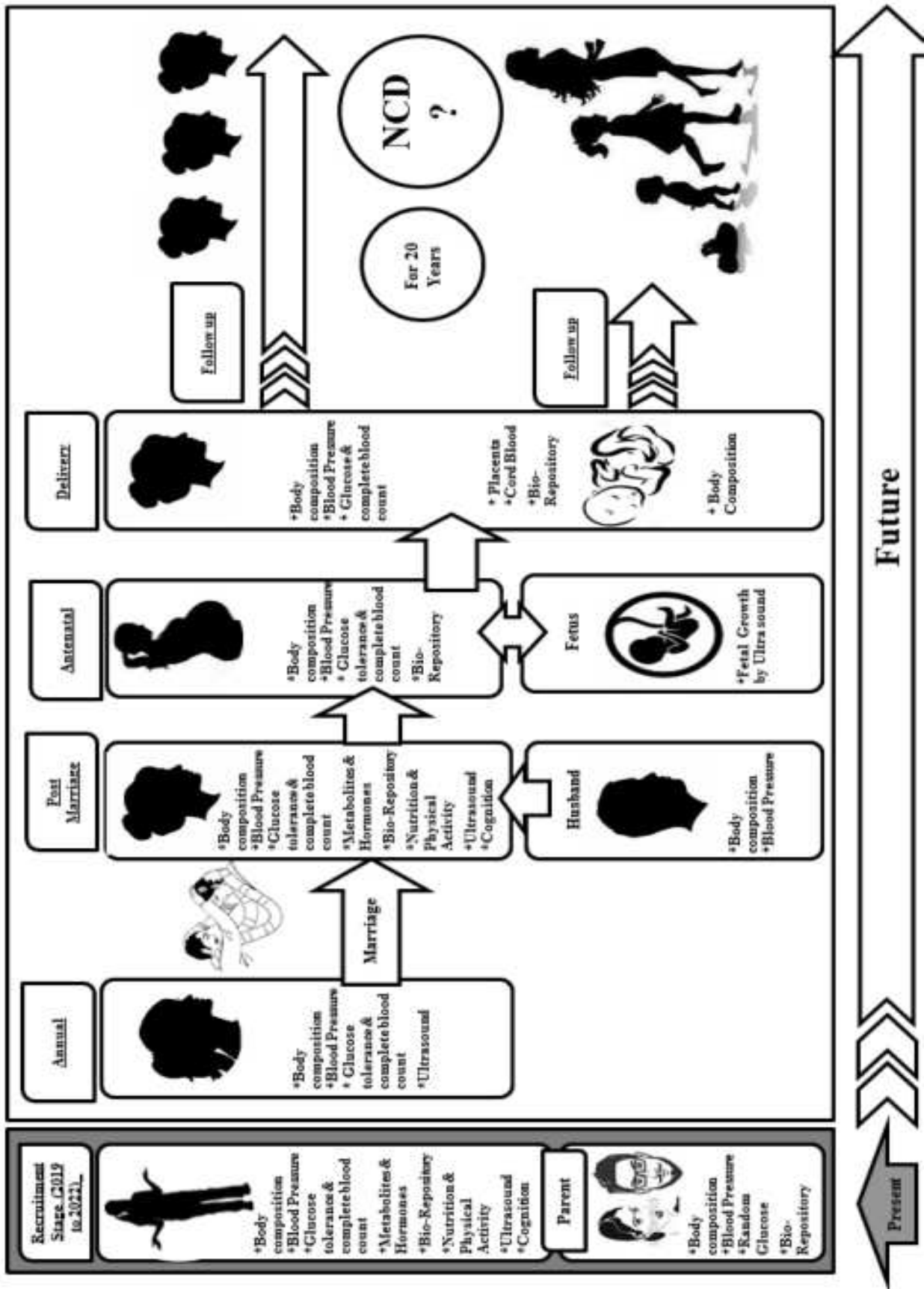
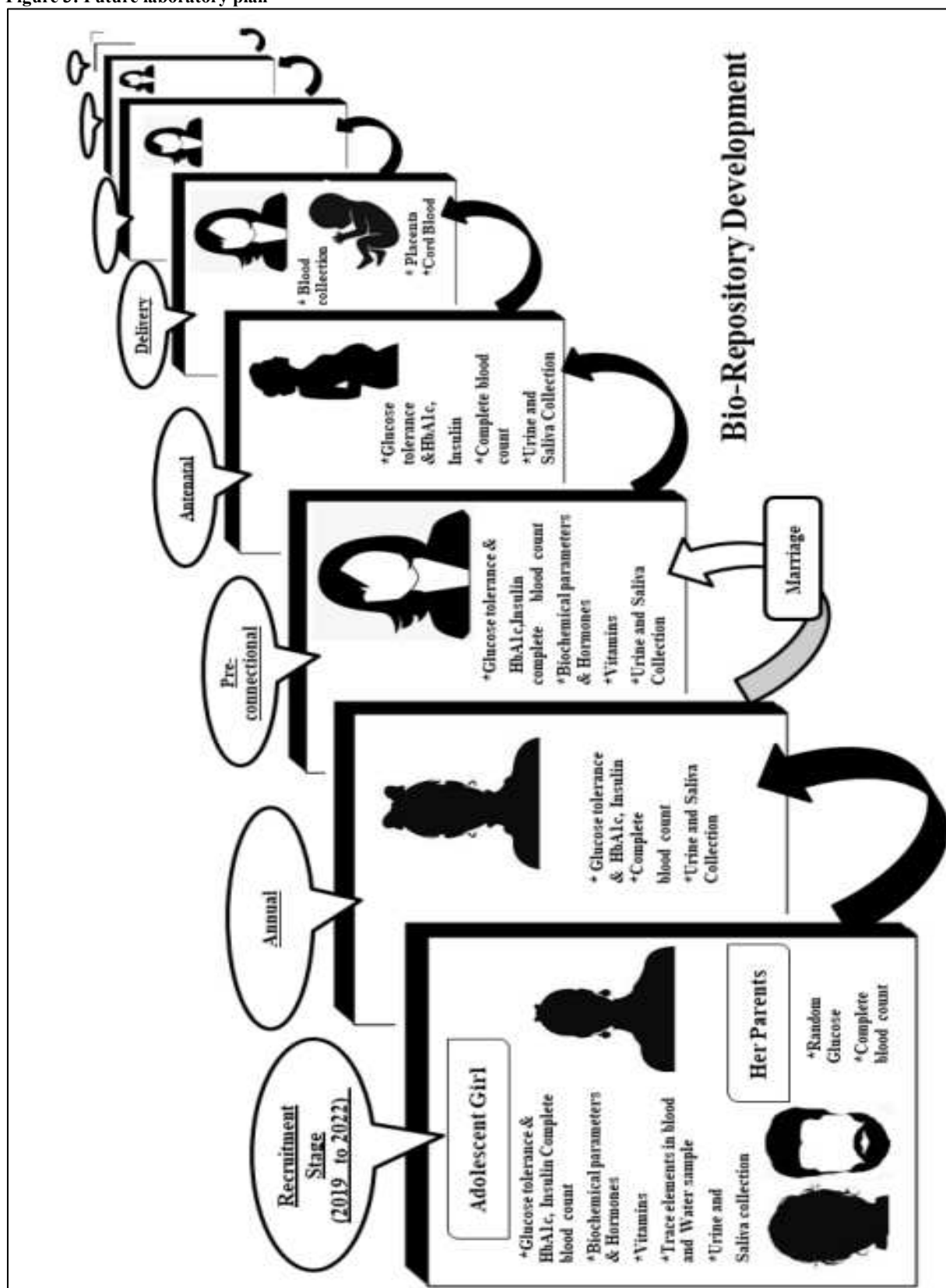


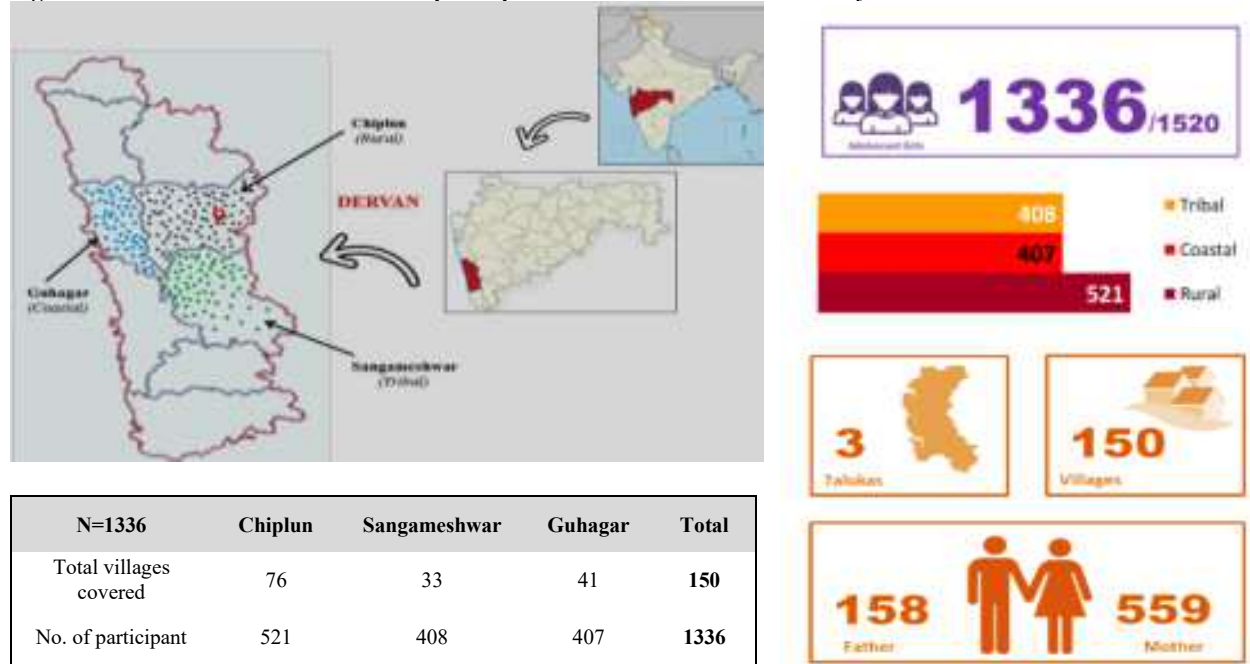
Figure 3: Future laboratory plan



Recruitment plan and implementation status

We planned to recruit 1520 adolescent girls (age 16-18 years) in this cohort study from geographically different areas of Ratnagiri district. Thus-far, we have completed enrollment 1336 girls from 3 tehsils; Sangameshwar (tribal), Guhagar (coastal) and Chiplun (rural). The rest of girls are being enrolled.

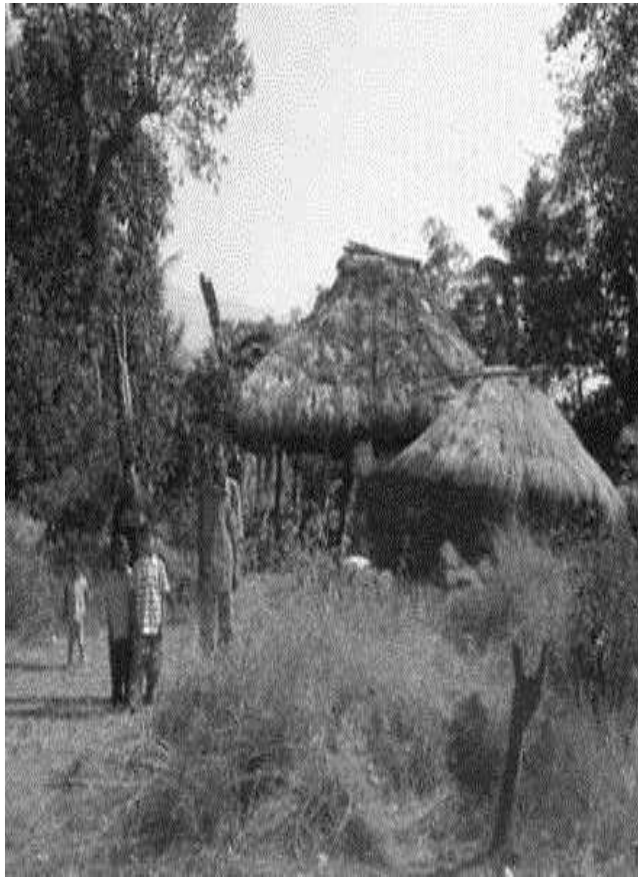
Figure 4: Area covered for enrollment of participants under DERVAN cohort study



Snapshots of some interventional activities carried out during the camps



How is the research setting? What is the topographical coverage?



The location of this study are villages in the Ratnagiri district of Konkan region, a highly hilly terrain in the western ghats of rural Maharashtra. This region is dotted with many small hills and has minimal ‘tar’ road access. This study was carried out in 150 villages within three tehsils of the Ratnagiri district.

Each village has ~20 *wadis* or hamlets. The *wadi* is an aggregation of houses belonging to a particular community and would be located some distance apart from each other.

Although the villages and *wadis* have electricity, access roads are poorly lit with limited power supply. Farming is the main occupation of the village inhabitants; with the main crop of Ratnagiri district being rice. Vegetables and fruits are typically sourced from other districts in the plains as the hilly terrain has fragmented holdings making cultivation difficult. Basic commodities such as groceries are available in the local weekly market shared by 10–12 villages.

In general, the population here belongs to lower socio-economic strata. Government-run schools are generally located close to the highways meaning that children living in remote areas must walk long distances to school. This study was conducted by the BKL Walawalkar Hospital and Research Centre. This is the only multispecialty hospital with state-of-the-art medical facilities along the Konkan belt. The trust which runs the hospital has initiated several local welfare schemes and, as a result, staff has good rapport with surrounding communities.

Figure 5: Sample map of a village



Name of village:
Palshet

Taluka:
Guhagar

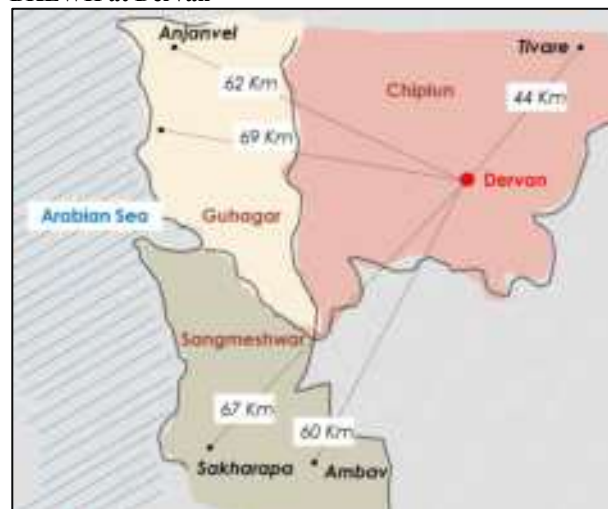
Population: 3000

No of girls enrolled from
this village: **80**

Figure 6: Map and outline of Ratnagiri district in Konkan



Figure 7: Locations of villages covered in relation to BKLWH at Dervan



Longest distance from study site
 Guhagar 69 Km (village veldur)
 Sangameshwar 67km (village Sakharapa)
 Chiplun 44km (village Tivare)



RESEARCH FINDINGS AND OBSERVATIONS

The research findings and observations from our study have been summarized in these sections below. The report and data published by Comprehensive National Nutrition Survey (CNNS) (9) was referred, to benchmark the findings from Dervan cohort. The CNNS is a nationally representative and comprehensive nutritional survey profiling children and adolescents (ages 0–19) in India to better understand the magnitude of micronutrient deficiencies and correlate risk factors associated with them

Nutritional status of Adolescent girls from Konkan benchmarked with National Data.

Key findings

- The prevalence of thinness is higher in “Dervan cohort” compared to the rest of India.
- Other parameters such as stunting, obesity, micronutrient deficiency like vitamin D and B12 are comparable with the other states in India.
- Folate and zinc deficiency was negligible whereas Iron deficiency was higher than in other states, except Punjab.
- Prevalence of pre-diabetes was quite high (*3 out of 10 girls!*) when compared to other Indian states, despite complete absence of overweight/obesity.












Table 3: Anthropometric and Micronutrient parameters in comparison with National data (9)

| | India (Girls 10-19 years) | Maharashtra (Boys/girls 10-19 years) | DERVAN Cohort (Girls 16-19 years) |
|--|---------------------------------|--|--------------------------------------|
| Anthropometry | | | |
| Severely thin (BMI for age) <i>z score</i> < -3 SD | 4.3 | 2.6 | 6.7 |
| Moderate or severely thin (BMI for age) <i>z score</i> < -2 SD | 18.9 | 12.1 | 22.5 |
| Overweight or obese (BMI for age) <i>z score</i> > +1 SD | 4.7 | 6.1 | 4.6 |
| Obese (BMI for age) <i>z score</i> > +2 SD | 1.1 | 1.7 | 0.0 |
| Other deficiencies | | | |
| Anemia (<i>Hemoglobin</i> < 12 gm%) | 39.6 | All: 28.3 For girls: 38.4 | 33.6 |
| Iron deficiency (<i>serum ferritin</i> <15 µg/l) | 31.3 | 31.2 | 44.2 |
| Vitamin B12 deficiency (<i>Vitamin B12</i> < 203 pg/ml) | 26.8 | 37.7 | 32.9 |
| Folate deficiency (<i>Serum erythrocyte folate level</i> < 151 ng/ml) | 34.1 | 71.7 | 6.9 Serum folate ≤ 3.5 ng/ml |
| Vitamin D deficiency (<i>Serum 25(OH)D concentration</i> < 12ng/ml) | 34.3 | 22.1 | 31.3 |
| Zinc deficiency (<i>Serum zinc concentration</i> < 70 µg/dl) | 28.4 | 25.1 | 10.4 |
| Urinary iodine concentration (µ g/L) | Median = 167 µ g/L | Median = 120 µ g/L | Median = 142 µ g/L |

Prevalence of thinness is high in Dervan cohort than state and national data. Other micronutrient levels are comparable with national figures.

Table 4: Nutritional Status of adolescent girls aged 15-19 years in % in comparison with other Indian states (9)

| States | Thin | Short | Overweight/Obese | Anemia | Iron deficiency | Vitamin D deficiency | Vitamin B12 deficiency | Folate deficiency | Zinc | Pre-DM |
|-------------------|-------------|-------------|------------------|--------|-----------------|----------------------|------------------------|------------------------------------|------|-------------|
| DERVAN | 57.8 | 31.1 | 4.3 | 33.6 | 44.2 | 31.3 | 32.9 | 6.9 Serum folate ≤ 3.5 ng/ml | 10.4 | 28.2 |
| India | 14.2 | 30.2 | 4.1 | 28.4 | 21.5 | 23.9 | 30.9 | 36.7 | 31.7 | 10.4 |
| Andhra Pradesh | 9.4 | 30.7 | 9.9 | 21.7 | 15.2 | 15.9 | 20.7 | 82.6 | 20.6 | 4 |
| Arunachal Pradesh | 1.9 | 39.3 | 10.8 | 26.4 | 18.3 | 21.9 | 12.5 | 47.9 | 20.1 | 9.7 |
| Assam | 9.1 | 30.0 | 2.6 | 36.9 | 11.5 | 7.1 | 10 | 73.3 | 33.9 | 8.9 |
| Bihar | 17.3 | 35.0 | 2.3 | 28.1 | 12.7 | 35.7 | 24.7 | 11.6 | 23.7 | 6.2 |
| Chhattisgarh | 11.0 | 29.3 | 3.7 | 31.2 | 31.3 | 21.6 | 47.1 | 68.2 | 36.2 | 12.2 |
| Delhi | 14.1 | 30.7 | 6.7 | 29.2 | 18.4 | 47.1 | 31.2 | 3.7 | 42.6 | 5.3 |
| Goa | 22.7 | 22.0 | 9.3 | 13.6 | 13.6 | 21.5 | 14 | 48.4 | 25.8 | 9.4 |
| Gujarat | 22.3 | 29.2 | 6.2 | 33.4 | 35 | 35.5 | 47.7 | 59.3 | 55.1 | 20.9 |
| Haryana | 13.4 | 17.9 | 3.9 | 29.9 | 28.7 | 53.8 | 34.3 | 33.5 | 19.4 | 6.4 |
| Himachal Pradesh | 21.7 | 22.4 | 2.2 | 16.2 | 22 | 17.6 | 32.7 | 5.6 | 51.6 | 1.4 |
| Jammu & Kashmir | 4.6 | 17.7 | 9.3 | 15.8 | 30.7 | 52.8 | 25.5 | 8.8 | 38.6 | 9.7 |
| Jharkhand | 17.2 | 46.7 | 1.4 | 34 | 10.1 | 29.6 | 22 | 23.8 | 49.8 | 8.8 |
| Karnataka | 15.5 | 27.8 | 10.7 | 17.2 | 30.5 | 15.6 | 45.5 | 70.4 | 46.8 | 7.1 |
| Kerala | 9.5 | 14.7 | 9.2 | 9.1 | 25.3 | 31.6 | 2.3 | 53.2 | 17.2 | 32.2 |
| Madhya Pradesh | 21.2 | 26.5 | 1.7 | 21.2 | 22.1 | 23 | 42 | 74.5 | 19.9 | 10.8 |
| Maharashtra | 12.1 | 27.0 | 6.0 | 28.3 | 31.2 | 22.1 | 37.7 | 71.7 | 25.1 | 13.9 |
| Manipur | 4.2 | 23.5 | 7.1 | 10.5 | 12.6 | 59.8 | 11 | 6.7 | 52.8 | 21.3 |
| Meghalaya | 1.1 | 52.0 | 4.3 | 31.8 | 13.7 | 6.6 | 9.7 | 61.5 | 49.3 | 2.6 |
| Mizoram | 2.9 | 22.5 | 6.5 | 17.9 | 9.4 | 13.4 | 10.6 | 22.2 | 6.8 | 23.7 |
| Nagaland | 2.7 | 20.3 | 4.1 | 8.4 | – | 7.4 | 2.3 | 88.9 | 4.3 | 0.7 |
| Odisha | 11.8 | 29.3 | 4.9 | 29.5 | 20.4 | 18.4 | 15.6 | 68.5 | 42.4 | 18.9 |
| Punjab | 17.3 | 8.7 | 6.3 | 25.9 | 45.3 | 68 | 46.4 | 18.8 | 51.8 | 9.7 |
| Rajasthan | 15.2 | 16.7 | 1.5 | 26 | 35.1 | 25.8 | 47.4 | 52.7 | 22.6 | 13.6 |
| Sikkim | 1.0 | 25.9 | 13.2 | 25.8 | 21.2 | 18.8 | 16 | 0.8 | 36.8 | 25.8 |
| Tamil Nadu | 13.4 | 19.9 | 9.4 | 16.4 | 26.1 | 9.8 | 18.9 | 63 | 46.3 | 9.2 |
| Telangana | 21.8 | 29.7 | 7.0 | 32.1 | 26 | 8.8 | 29.1 | 63.7 | 27.9 | 8.6 |
| Tripura | 10.5 | 36.7 | 6.0 | 41.4 | 11.8 | 28.8 | 9.7 | 3.8 | 39.3 | 16.5 |
| Uttar Pradesh | 10.9 | 34.9 | 2.7 | 31.6 | 17.2 | 19.4 | 42.1 | 5.2 | 26.3 | 3.2 |
| Uttarakhand | 8.1 | 19.8 | 4.4 | 15.7 | 19.6 | 62.9 | 27.4 | 19.5 | 29.2 | 12.3 |
| West Bengal | 11.9 | 43.8 | 3.6 | 45.5 | 16.9 | 19.5 | 3.7 | 0 | 26.6 | 22.1 |

| | | | | |
|--------------------------|---|--|--|--|
| Thin |  < 20% |  20-39.9% |  >40% | |
| Short |  < 10% |  10-20% |  20-30% |  >30% |
| Overweight/ obese |  < 5% |  5-9% |  9-14% |  >14% |

Classifications : (Given for Table 4)

Anemia (Haemoglobin < 12 gm%), Iron deficiency (serum ferritin <15 µg/l), Vitamin B12 deficiency (Vitamin B12 < 203 pg/ml), Folate deficiency (Serum erythrocyte folate level < 151 ng/ml), Vitamin D deficiency (Serum 25(OH)D concentration < 12ng/ml), Zinc deficiency (Serum zinc concentration < 70 µg/dl)

Astonishingly, prevalence of girls in the thin category of BMI is very high in Dervan Cohort as against other Indian states. Anemia, vitamin D, Zinc, folate, B12 deficiencies are similar to other states but prevalence of pre diabetes is very high.

Table 5: NCDs risk (comparison with national statistics)

| Region | Obesity | Thin | Risk of DM | High LDL | Low HDL | High TG | High Homocysteine | Cholesterol |
|--------|---------------------|-------|------------|-------------------------------|----------|----------|-------------------|-------------|
| | Using IOTF category | | HBA1C>5.7% | >130 (India) >100 (Dervan) | <40 mgdl | >130mgdl | >=15 µmol/l | >=170 mg/dl |
| Dervan | 4.3% | 57.8% | 14.3% | 21.9% | 13.2% | 1.5% | 51.0% | 20.9% |
| India | 4.1% | 14.2% | 8% | 4% | 25% | 16% | - | - |

The same results can be observed from Table 5, though >50% girls of Dervan cohort are thin; the potential risk for Diabetes Mellitus and dyslipidemia (high LDL) is higher when compared to the national data.

Specific under-nutrition parameters observed in the Dervan cohort girls

Key findings

- More than half of the girls are in thin category and half of them have a short stature.
- Three girls out of 10 are severely emaciated.
- Contrastingly waist hip ratio was normal in most of the girls

The mean age of subjects was 16.5 years. According to the International Obesity Task Force (IOTF) classification, more than half of the girls 772 (57.8 %) were thin, 507 (37.9 %) were normal and only 57 (4.3 %) were obese. 29.3 % adolescent girls were underweight and 31.1 % were stunted (insufficient height for age). The mean and median body fat percent is 23% and 22% respectively, however about 36% girls have body fat percent $\geq 25\%$.

Figure 8: Thin, normal, overweight (in %)

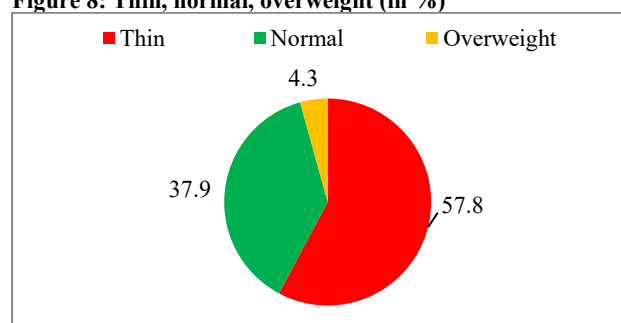


Figure 9: Underweight and stunted (in %)

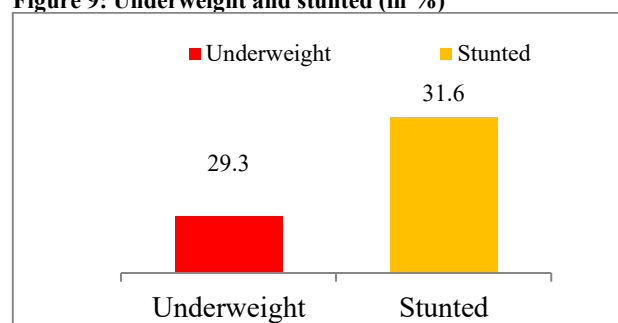


Table 6: Anthropometric morbidities

| BMI | n | % |
|--------------------------------|------|-------|
| Thin | 772 | 57.8 |
| Normal | 507 | 37.9 |
| Overweight | 57 | 4.3 |
| Total | 1336 | 100.0 |
| Very poor weight (Underweight) | 391 | 29.3 |
| Poor height for age (Stunting) | 416 | 31.6 |

A preview of the Socio-economic status of adolescents and their families

Key findings

- Only '1 in 50' household is financially sound. Rest of them are economically poor. 7 out of 10 girls use public tap for drinking water and one fourth of households do not have their own toilets and use wood as a fuel for cooking

We carried out socio-economic evaluation using standard of living index (SLI) used by National Family Health Survey (NFHS) India (10). 30% girls are still living in joint families. About 67 % families still use public tap for drinking water, one fourth of the households still do not have their own toilet facility and use wood as a fuel for cooking. The cultivation of fruits and vegetables is negligible.



Table 7: Ration card distribution amongst the Dervan cohort girls

| Ration card | Category | % |
|-------------|---|------|
| Yellow | Families having annual income up to Rs.15,000/- | 30.8 |
| Orange | Families having annual income of Rs.15,001 to 1 lakh | 67.2 |
| White | The Families having annual income of Rs.1 Lakh or above | 2.0 |

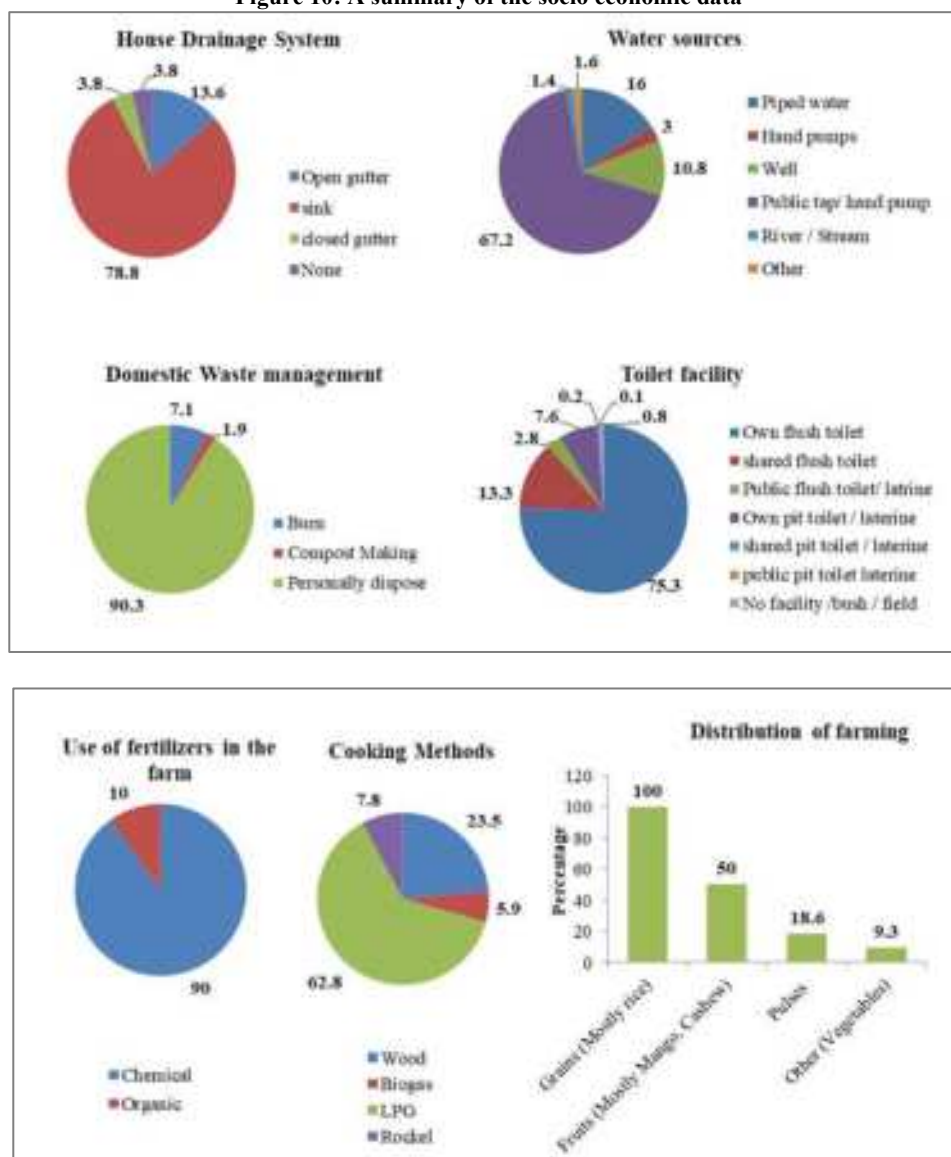
67% come from families having annual income between 15k to 1lac and 30% below poverty level (income less than 15k).

Table 8: SLI score of the Dervan cohort participants

| Parameter | Pearson's correlation | p- value |
|---------------------------------------|-----------------------|--------------|
| Fasting glucose (mg/dl) | -0.050 | 0.086 |
| Weight (Kg) | 0.088 | 0.001 |
| BMI (Kg/sq.m) | 0.078 | 0.004 |
| Fat % | 0.111 | 0.000 |
| Fat mass (Kg) | 0.100 | 0.000 |
| Vitamin B12 (pg/ml) | -0.088 | 0.001 |
| Vitamin d (ng/ml) | -0.061 | 0.027 |
| Homocysteine (micromol/l) | 0.059 | 0.038 |
| Calories (Kcal) intake (24 hr recall) | 0.012 | 0.671 |

The SLI score is positively associated with weight, BMI, fat % and homocysteine but inversely associated with vitamin D & vitamin B12. This can be observed in Table 8.

Figure 10: A summary of the socio economic data



What is the life-style and status of physical activity in Dervan cohort girls?

Key findings

- More than 8 out of 10 girls have negative energy balance. Their energy expenditure exceeds their daily calorie intake.

The lifestyle and physical activity assessment was carried out based on a questionnaire designed with specific and pertinent questions to gather relevant information on these topics. The participants in Dervan cohort study have limited access to TV and no access to personal computers. Mobile is the major screen-time gadget for them. However, with limited internet connectivity in villages, the only time they access mobiles is when they are in the vicinity of their college, during travel etc.

Similarly, data on vigorous exercise across India, includes outdoor sports & exercise. In the Dervan cohort girls, physical activities mainly consist of household chores, washing clothes on riverside, fetching water from well, long distance walking, farm activities etc. Most of these activities do not fall under the category of regular physical activities in non-rural areas.

Table 9: Categories of physical activities in Dervan cohort participants

| Sr No | Physical activity category |
|-------|--|
| 1 | Study/Time spent in college/ Leisure activities |
| 2 | Walking/Shopping |
| 3 | Running/ Washing clothes or utensils/Gardening/Cleaning cow shed |
| 4 | Outdoor games |
| 5 | Farm activities (Perani, Lavani, Kapani, Malani) |
| 6 | Digging/ Swimming |
| 7 | Rest/sleep |
| 8 | Sedentary activities or games |

As can be observed from the energy balance calculations below, the amount of time spent by Dervan cohort girls in house-hold chores is quite high. Energy cost as per the Schofield equation (11) indicates the remnant energy balance based on the consumption, expenditure and BMR. If energy cost exceeds total energy intake it is classified as negative energy balance. On other hand if total energy intake exceeds the energy cost then it is classified as positive energy balance. We measured Basal Metabolic Rate-BMR on the bio-impedance machine (TANITA). Total energy intake is calculated by using 24hr dietary recall. The average total energy intake was barely 1388 kcal /day. Thus, more than 80% girls have negative energy balance. (Table 10).

Negative energy balance at this stage, can have an impact on their productivity and future negative endocrinal consequences. Additionally, she is very close to her reproductive stage that demands a higher energy for a healthy ante-natal and post-natal period.

Table 10: Energy cost calculated for the Dervan Cohort participants

| | |
|---|---|
| Energy Cost (Kcal) =(MET*BMR (kcal)* Total min)/1440 | |
| Total Energy Intake (kcal) | |
| Negative energy balance (Calorie intake is low, energy cost is high) | Positive energy balance (Calorie intake is high, energy cost is low) |
| 80.3% | 19.7% |

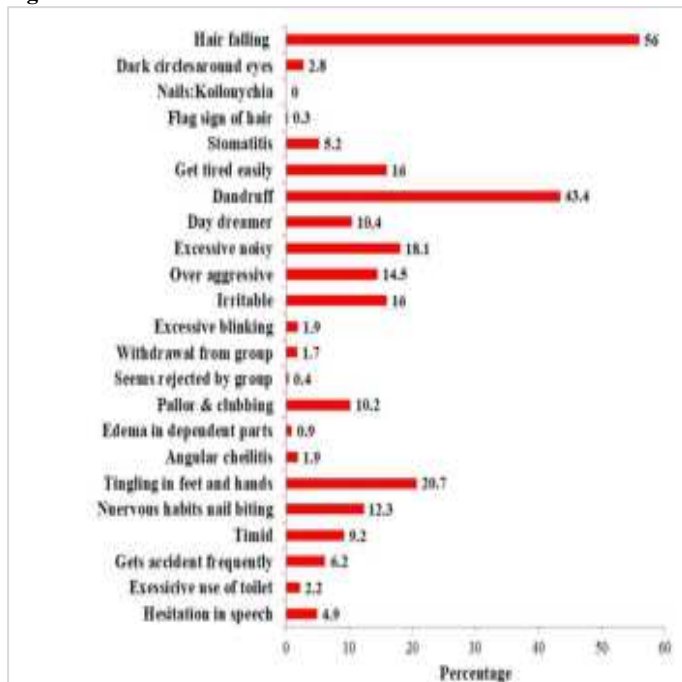


Overall fitness & wellbeing

Key findings

- General examination found substantial weakness, fatigue, hair loss, tingling etc. which could be attributed to micronutrient deficiencies and general poor hygiene.

Figure 11: Clinical examinations



Girls undergo various clinical examinations during camp.

Girls have major complaints about hair loss and dandruff.

Tingling in feet and hands were common symptom in 20% girls.

Dry conjunctiva observed in 13 (1%) girls.

These signs and symptoms can be attributed to micronutrient deficiency and general poor hygiene.



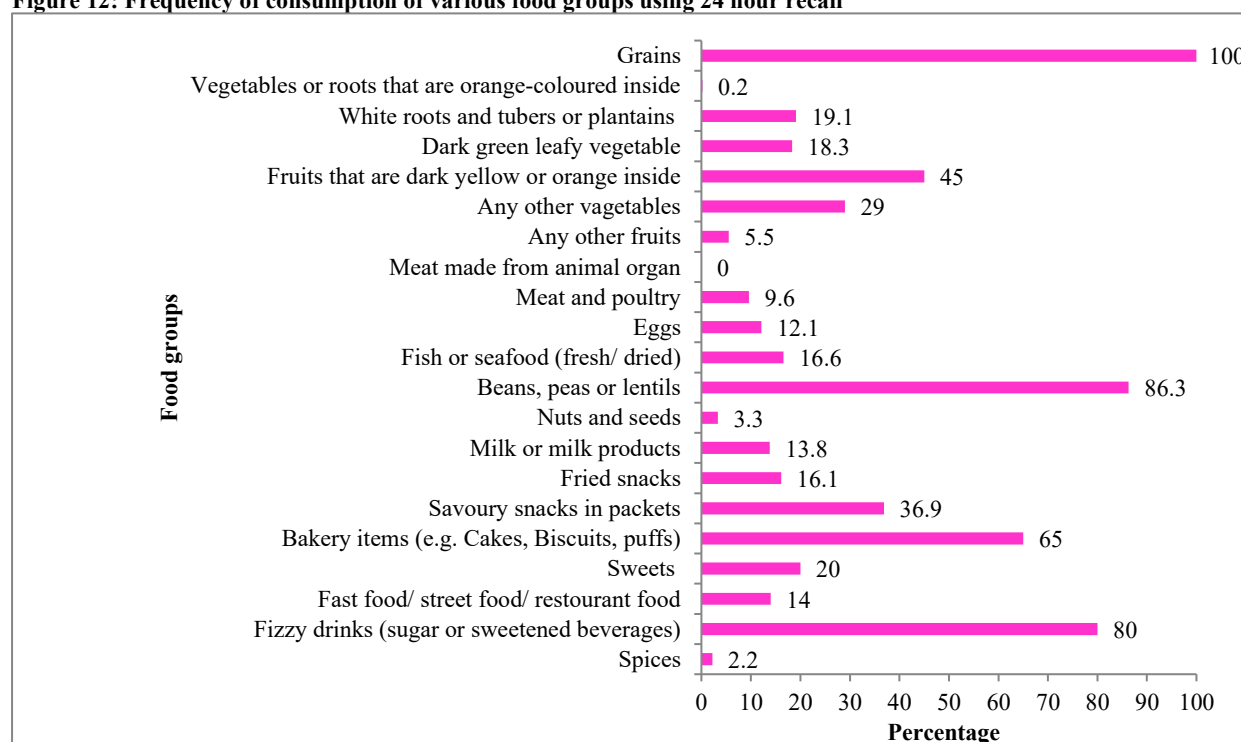
A glimpse into their diet and nutritional intake

Key findings

- Average calorie intake per day of these girls is almost half the recommended requirement (1400 Kcal/day versus the 2500Kcal as per NIN).
- The dietary diversity here is appallingly poor. Adequate dietary diversity was observed, only in 3.8% of the cohort girls.
- Consumption of milk/milk products was very poor and that of bakery items and fizzy drinks was very high.
Most of the girls have negative energy balance.

Macronutrient intake estimation was based on 24-hour recall. Grains and beans, peas or lentils are the main ingredients in the diet of adolescents in Dervan cohort. About 67% girls reported bakery items consumption and 80% have reported fizzy drinks consumption in their 24 hr dietary recall. There is negligible consumption of vegetables, orange-colored veg or roots, nuts, and seeds. Fruit intake is seasonal only. Minimal consumption of eggs, meat and poultry, milk and milk products.

Figure 12: Frequency of consumption of various food groups using 24 hour recall



According to NIN recommendations estimated average requirement of calories per day is 2500Kcal for girls (age 16-18 years) for the reference body weight is 55.7 Kg. But cohort girls have median weight only 40.4 kg and mean 41.9 kg and they are consuming hardly 1400 kcal per day against heavy physical exertion. Pearson correlation adjusted for their age shows that all macro nutrient were positively associated with their anthropometric and body composition parameters except fat%.

We calculated dietary diversity score (DDS) designed by the Food and Agricultural Organization and USAID's FANTA project for women reproductive age (15-49 years). (12) The main contribution to DDS comes either from grains or beans, peas or lentils. Consumption of milk products was very low and

bakery items and fizzy drinks were very high. Adequate DDS was observed in only 3.8% girls. Better dietary diversity score was associated with increased height. ($p < 0.05$).

Table 11: Anthropometric morbidities and dietary diversity Outcome.

| Anthropometry | DDS<3 (n=211) | DDS≥3 (n=375) | Odds ratio with 95% CI |
|----------------------|------------------|------------------|---------------------------|
| Thinness (Yes/No) | 112/94 | 213/157 | 0.88 (0.62-1.24) |
| Stunting (Yes/No) | 77/129 | 100/270 | 1.61 (1.122.32) |
| Underweight (Yes/No) | 60/146 | 106/264 | 1.02 (0.70-1.49) |

We divided our sample into two groups of those with DDS below 3 and $DDS \geq 3$ (Table 11). Those stunted were 1.61 times likely to have $DDS < 3$ than non-stunted. The odds ratios for underweight and thinness were not significant. To improve stunting dietary diversity needs to be improved (13)

We used principal component analysis (PCA) on 10 food groups used in dietary diversity calculation as defined by USAID-FAO. These components were able to explain total **60%** variation.

Table 12: Food group components using PCA

| Food groups | Components | | | | |
|---|---------------|--------------|--------------|---------------|--------------|
| | 1 | 2 | 3 | 4 | 5 |
| Either meat/poultry or fish/seafood or animal organs | 0.744 | | | | |
| Bans/peas/lentils | -0.704 | | | | |
| Eggs | 0.533 | | | | |
| Nuts/seeds | | 0.710 | | | |
| Other fruits | | 0.508 | | | |
| Either grains or white roots/tubers | | | 0.920 | | |
| Green leafy vegetables | | | | 0.603 | |
| Milk/milk products | | 0.517 | | 0.593 | |
| Other vegetables | | | | -0.554 | |
| Either orange-coloured vegetables/roots or orange-coloured fruits | | | | | 0.991 |

Component 1 (Either meat/poultry or fish/seafood or animal organs **AND** Beans/peas/lentils **AND** Eggs) is positively associated only with β cell function, vitamin D, vitamin B12, holotc but negatively associated with homocysteine and Triglycerides (TG).

Component 2 (Nuts/seeds **AND** Other fruits) is positively associated with all anthropometric and body composition parameters but negatively associated with vitamin B12 and low density lipoproteins (LDL)

Component 3 (Either grains or white roots/tubers) is positively associated only with glucose.

Component 4 (Green leafy vegetables **AND** Milk/milk products **AND** Other vegetables) is positively associated with insulin, HOMA IR and β cell function but negatively associated with HOMA sensitivity.

Component 5 (Either orange-coloured vegetables/roots or orange-coloured fruits) is positively associated only with folate but negatively associated with high density lipoproteins (HDL) and LDL

Biological findings (N=1336)

The Table 13 given below summarizes all the biological findings of the study including anthropometric, dietary, anemic, glyceic, 1-carbon metabolism and genetic polymorphism, bone-health, lipid-profile, hormones, trace-elements, blood pressure and organ-size data by sonography measurement. Discussion on the data is provided in further sections.

Table 13: Median and mean parameters.

| Parameters | Median (25 th – 75 th percentile) or n (%) | Mean (SD) |
|--|---|---------------------|
| Anthropometry & body composition | | |
| Age (years) | 16.5 (15.8 - 17.2) | 16.5 (0.92) |
| Standing height (cm) | 151.5 (148.1 - 155.3) | 151.6 (5.4) |
| | Stunted * | 416 (31.1 %) |
| Weight (Kg) | 40.4 (36.6 - 45.8) | 41.9 (8.0) |
| | Underweight * | 391 (29.3 %) |
| BMI (Kg/m ²) | 17.5 (15.9 - 19.7) | 18.2 (3.2) |
| | Thin | 772 (57.8 %) |
| | Normal | 507 (37.9 %) |
| | Overweight | 57 (4.3 %) |
| Waist Circ. (cm) | 62.1 (58.6 - 67.1) | 63.5 (7.3) |
| Hip Circ. (cm) | 83.1 (79.5 - 87.8) | 84.0 (6.9) |
| Waist-Hip ratio | 0.75 (0.72 - 0.78) | 0.75 (0.05) |
| Fat mass (Kg) | 8.8 (6.7 – 12.3) | 10.0 (5.1) |
| Fat (%) | 22.5 (18.6 – 27.6) | 23.3 (6.8) |
| | Fat %≥25 | 449 (36.8 %) |
| Lean mass (%) | 29.3 (27.3 – 31.5) | 29.5 (3.1) |
| BMR (Kcal) | 4276 (4425 - 5061) | 4761 (506) |
| *Stunting and underweight refer to those below -2 SD score for height (gender, age), weight (gender, age) respectively using the World Health Organization (WHO) criteria. Thinness was defined by the criteria laid out by International Obesity Task Force (IOTF). | | |

Diet (24-hour recall)

| | | |
|---|-----------------------|--------------|
| Energy (Kcal) | 1388 (1138 - 4513) | 1477 (468) |
| Protein (g) | 40.2 (32.2 - 49.3) | 42.0 (14.9) |
| Fat (g) | 31.5 (22.6 - 42.3) | 35.0 (19.1) |
| Carbohydrate (g) | 231.2 (187.2 - 286.6) | 241.0 (78.2) |
| Excess physical activity (Negative energy) | 80.3% | |
| BMR (Kcal) | 4720 (4425 - 5061) | 4761 (506) |
| Girls have Poor calorie intake as compared to recommended intake suggested by NIN. | | |

Anaemia

| | | |
|--|---------------------|-------------|
| Haemoglobin (gm%) (n=1320) | 12.6 (11.7 – 13.3) | 12.3 (1.5) |
| Anemic (Hb ≤12 mg/dl) | 444 (33.6 %) | |
| Ferritin (ng/ml) (n=1098) | 18.0 (7.9 – 35.5) | 25.2 (24.2) |
| Low (< 15 ng/ml) | 485 (44.2 %) | |
| Serum iron | 52.7 (29.8 – 78.5) | 56.5 (34.0) |
| Low (<60 mcg/dl) | 57.8 % | |
| Anemia prevalence was lower compared to Maharashtra state report NFHS5 (57.2 %). | | |

Glycaemia

| | | |
|--|---------------------|-------------|
| Fasting glucose (mg/dl) (n=1318) | 94.3 (86.9 - 100.9) | 93.8 (10.9) |
| Pre-diabetic (≥ 100 mg/dl) | 372 (28.2 %) | |
| Fasting Insulin (μU/ml) (n=1317) | 8.60 (6.90 - 11.10) | 9.4 (4.0) |
| HBA1C (%) (n=1305) | 5.30 (5.00- 5.50) | 5.2 (0.4) |
| HBA1C (>5.7 %) | 186 (14.3 %) | |
| <i>All the insulin resistance indices (HOMA insulin resistance, β cell function, sensitivity) have been calculated using Oxford model.</i> | | |

1-Carbon metabolism

| | | |
|---------------------------------|-----------------------|---------------|
| Vitamin B12 (pg/ml) | 250.0 (183.0 – 341.0) | 286.9 (152.4) |
| Deficient < 200 pg ml | 417 (31.8 %) | |
| Folate (ng/ml) | 6.10 (4.70 – 7.80) | 6.56 (2.69) |
| Deficient ≤ 3.5 ng/ml | 91 (6.9 %) | |
| Homocysteine (μmol/L) | 15.2 (11.39 – 21.75) | 18.6 (10.8) |
| Hyper (≥ 15 μmol/l) | 636 (51.0 %) | |
| Holotc (pmol/l) | 22.7 (15.4 – 34.3) | 28.4 (20.5) |
| Low (≤ 35 pmol/l) | 909 (76.1 %) | |

GENETICS Polymorphism

| | |
|--|--------------|
| MTHFR C677T polymorphism (mutation) | 20.4% |
|--|--------------|

Bone health

| | | |
|---|------------------------------|---------------|
| Bone mass** (Kg) (n=1220) | 1.60 (1.40 – 1.80) | 1.61 (0.29) |
| Vitamin D (ng/ml) (n=1318) | 14.3 (11.0 – 17.5) | 14.7 (5.3) |
| Deficient (<20 ng/ml) | 1133 (86 %) | |
| i-PTH (n=1100) | 83.3 (61.9 – 107.9) | 89.0 (39.2) |
| Elevated (> 65 pg/ml) | 783 (71.2 %) | |
| Alkaline phosphatase (n=1292) | 78.0 (62.0 – 98.0) | 83.9 (35.2) |
| Elevated (>98 U/L) | 312 (24.1 %) | |
| Phosphorus (mg/dl) (n=1317) | 4.02 (3.64 – 4.44) | 4.04 (0.58) |
| Elevated (>4.5 mg/dl) | 285 (21.6 %) | |
| Sr. Calcium (mg/dl) (n=1319) | 9.35 (8.89 – 9.80) | 9.35 (0.72) |
| Low (< 8.5 mg/dl) | 125 (9.5 %) | |
| Dietary Calcium (mg/day) (n=1320) | 140.4 (101.7 – 236.9) | 203.3 (180.2) |
| **: Bone mass is measured by Bio-impedance i-PTH: Intact parathyroid hormone Sr: Serum Daily dietary calcium requirement is 850 mg/day as per ICMR guidelines. | | |

Lipids

| | | |
|---|-----------------------|--------------|
| Total cholesterol (mg/dl) (n=1319) | 147.0 (130.0 - 165.0) | 149.1 (27.2) |
| High (≥ 170 mg/dl) | 276 (20.9 %) | |
| HDL (mg/dl) (n=1308) | 50.8 (44.0 - 58.3) | 51.7 (11.0) |
| Low (≤ 40 mg/dl) | 173 (13.2 %) | |
| LDL (mg/dl) (n=1307) | 80.3 (66.8 - 97.2) | 83.3 (23.4) |
| High (> 100 mg/dl) | 286 (21.9 %) | |
| VLDL | 12.6 (9.5 - 17.2) | 14.0 (6.1) |
| Triglyceride (mg/dl) (n=1318) | 63.3 (47.7 - 86.4) | 70.4 (30.6) |
| Low (≤ 35 mg/dl) | 90 (6.8 %) | |
| High (> 150 mg/dl) | 20 (1.5 %) | |
| TG-HDL ratio | 1.25 (0.91 - 1.77) | 1.4 (0.7) |

Hormones

| | | |
|--|-----------------------|--------------|
| Growth hormone (ng/ml) | 1.39 (0.52 – 3.41) | 2.83 (4.13) |
| Insulin like growth factor-1 (ng/ml) | 197.6 (149.3 – 246.6) | 205.5 (75.7) |
| Thyroid stimulating hormone (μ IU/ml) | 1.83 (1.35 – 2.49) | 2.36 (4.99) |
| Hyper (< 0.269 μIU/ml) | 7 (0.5) | |
| Hypo (> 4.02 μIU/ml) | 74 (5.6) | |
| Luteinizing hormone (μ IU/ml) | 5.47 (3.00 – 10.19) | 7.97 (7.97) |
| Follicle stimulating hormone (μ IU/ml) | 4.97 (3.39 – 6.37) | 5.18 (3.22) |
| Adiponectin (μ g/ml) | 1.57 (0.97 – 2.31) | 17.8 (16.0) |
| Leptin (ng/ml) | 12.9 (7.2 – 22.9) | 1.69 (1.00) |

Blood pressure

| | | |
|---|---------------------|---------|
| Systolic (mmHg) | 110 (100 - 117) | 109 (9) |
| ≥ 120 mmHg | 325 (24.5 %) | |
| Diastolic (mmHg) | 70 (65 - 74) | 69 (7) |
| ≥ 80 mmHg | 241 (18.1%) | |
| Systolic ≥ 120 OR Diastolic ≥ 80 (n=1336) | 437 (32.8 %) | |
| Systolic ≥ 120 AND Diastolic ≥ 80 (n=1025) | 130 (12.5 %) | |
| Pulse rate (per min) | 77 (71 - 82) | 77 (9) |

Organ sizes by ultrasonography

| | | |
|---------------------------------|--------------------|------------|
| Liver size (cm) | 12.4 (11.5 - 13.1) | 12.2 (1.2) |
| Fatty liver (%) | 2 (1.6 %) | |
| Gallbladder wall thickness (cm) | 0.2 (0.2 - 0.3) | 0.4 (0.8) |
| Spleen (cm) | 8.6 (7.9 - 9.4) | 8.5 (1.4) |
| Abnormal U bladder | 116 (9.7 %) | |
| Abnormal ovaries | 104 (8.7 %) | |

Trace elements

| | | |
|--|----------------------|--------------|
| Copper (ppm) (n=1293) | 0.96 (0.82 - 1.12) | 0.98 (0.24) |
| Normal (0.75 -1.45 ppm) | 1037 (80.2 %) | |
| Excess (>1.45 ppm) | 49 (3.8 %) | |
| Zinc (ppm) (n=1294) | 0.91 (0.77 - 1.03) | 15.35 (0.91) |
| Deficient (< 0.65 ppm) | 135 (10.4 %) | |
| Normal (0.65 -1.05 ppm) | 870 (67.2 %) | |
| Lead (ppb) (n=1316) | 34.5 (23.5 - 53.4) | 44.7 (38.5) |
| Normal (0 - 40 ppb) | 767 (58.3 %) | |
| Excess (> 40 ppb) | 549 (41.7 %) | |
| Manganese (ppb) (n=1288) | 3.08 (2.05 - 4.90) | 4.25 (6.05) |
| Normal (0.6 -4.3 ppb) | 866 (67.2 %) | |
| Excess (>4.3 ppb) | 402 (31.2 %) | |
| We observed 10.4% zinc deficiency, 16% copper deficiency and excess lead concentrations in 41% of the girls. | | |



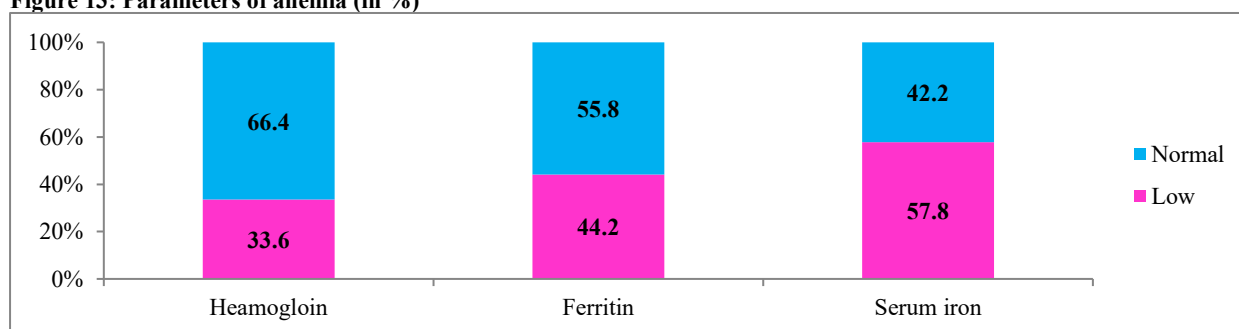
How many adolescents are Anemic? And hidden anemia?

Key findings

- One third of the evaluated girls are anemic, as per their hemogram profile.
- Surprisingly, almost half of the enrolled girls have low ferritin levels. Also, the levels of serum iron are low in almost 50% of the girls, indicating hidden anemic status.

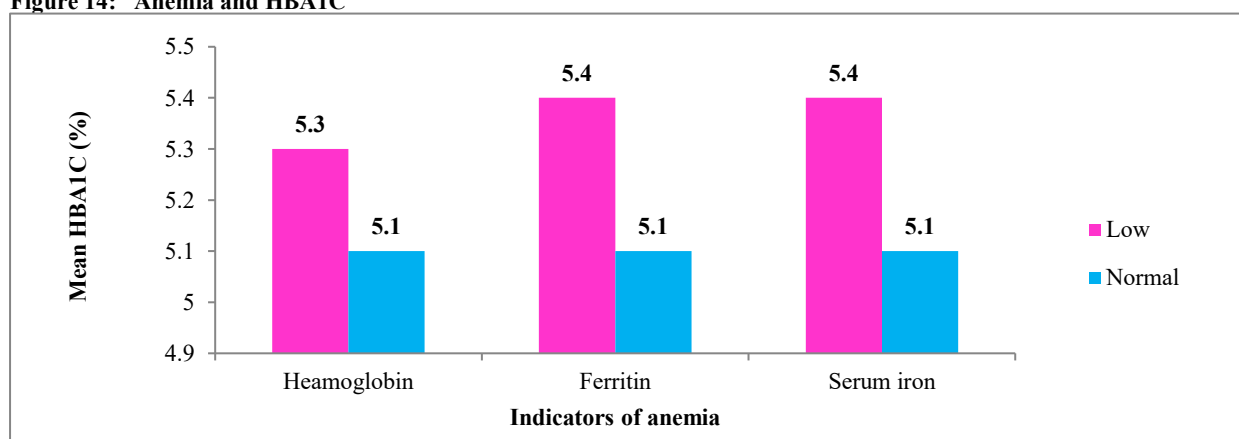
The overall anemic status amongst the girls is quite poor. Low hemoglobin (< 12 gm%) levels were observed in 33.6 % girls and 44.1 %, 57.8% have low ferritin (< 15 ng/ml) and serum iron (<60 mcg/dl) levels respectively. (Table 12) Overall 20% girls have low ferritin with normal hemoglobin levels (iron deficiency) showing hidden anemia. As is well established, anemia results in fatigue, poor productivity and predisposition to infections. Girls who enter pregnancy with anaemia are high risk during pregnancy; babies may be low birth weight or premature.

Figure 13: Parameters of anemia (in %)



Anemic girls have significantly high HBA1C levels than those with normal. The levels of HBA1C are proportional to both RBC lifespan and mean glucose concentration during the life span of 120 days. High HBA1C levels in anemic girls can be a false diagnosis of pre-diabetes.

Figure 14: Anemia and HBA1C



What is the status of their Bone health

Key findings

- The indicators of bone health, Vitamin D and calcium are significantly lacking in the overall population.
- Vitamin D deficiency is observed in 8 out of 10 girls.
- Inadequate consumption of dietary calcium (<140 mg/day) is indirectly reflected in elevated intact parathyroid hormone in 7 out of 10 girls.

Median concentrations of Vitamin D and dietary calcium were 14.3 ng/ml and 140.4 mg/day respectively. Vitamin D deficiency was observed in 86% and 9.5% girls were deficient in serum calcium. Elevated phosphorus and alkaline phosphatase (ALP) were observed in 21.6% and 24.1% with median concentrations of 4.02 mg/dl and 78.0 U/L respectively. More than 70% girls had elevated i-PTH concentration with median 83.3 pg/ml. The median dietary calcium intake was 140.4 mg/day (Table 13).

Intact PTH was inversely associated with age ($p < 0.0001$) after adjusting for age, i-PTH was inversely associated with vitamin D ($p < 0.001$) and directly associated with alkaline phosphatase ($p < 0.001$). Vitamin D was directly associated with sr. calcium ($p < 0.05$) and inversely associated with alkaline phosphatase ($p < 0.001$). Serum calcium directly associated with alkaline phosphatase ($p < 0.05$). (Table 13)

Table 14: Partial correlations between bone health parameters.

| | Age (years) | i-PTH (pg/ml) | Vitamin D (ng/ml) | Sr. calcium (mg/dl) | Phosphorus (mg/dl) | ALP (U/L) |
|---------------------|-------------|---------------|-------------------|---------------------|--------------------|-----------|
| Age (years) | 1 | | | | | |
| i-PTH (pg/ml) | -0.132*** | 1 | | | | |
| Vitamin D (ng/ml) | 0.048 | -0.256*** | 1 | | | |
| Sr. calcium (mg/dl) | 0.019 | -0.051 | 0.070* | 1 | | |
| Phosphorus (mg/dl) | -0.157*** | 0.009 | -0.001 | -0.004 | 1 | |
| ALP (U/L) | -0.287*** | 0.302*** | -0.131*** | 0.063* | 0.024 | 1 |

*indicates p value < 0.05 , *** indicates p value < 0.001 and is considered significant. All correlations adjusted for age except age,

Odds for elevated i-PTH was significantly lower [OR: 0.64, 95% CI (0.46 – 0.89), $p = 0.008$] in older girls. Elevated i-PTH was also predicated by those who are vitamin D deficient [OR: 2.32, 95% CI (1.63 – 2.59), $p = 0.000$], elevated alkaline phosphatase [OR: 2.16, 95% CI (1.53 – 3.05), $p = 0.000$]. (Table 15)

Table 15: Risks for elevated i-PTH (Univariate)

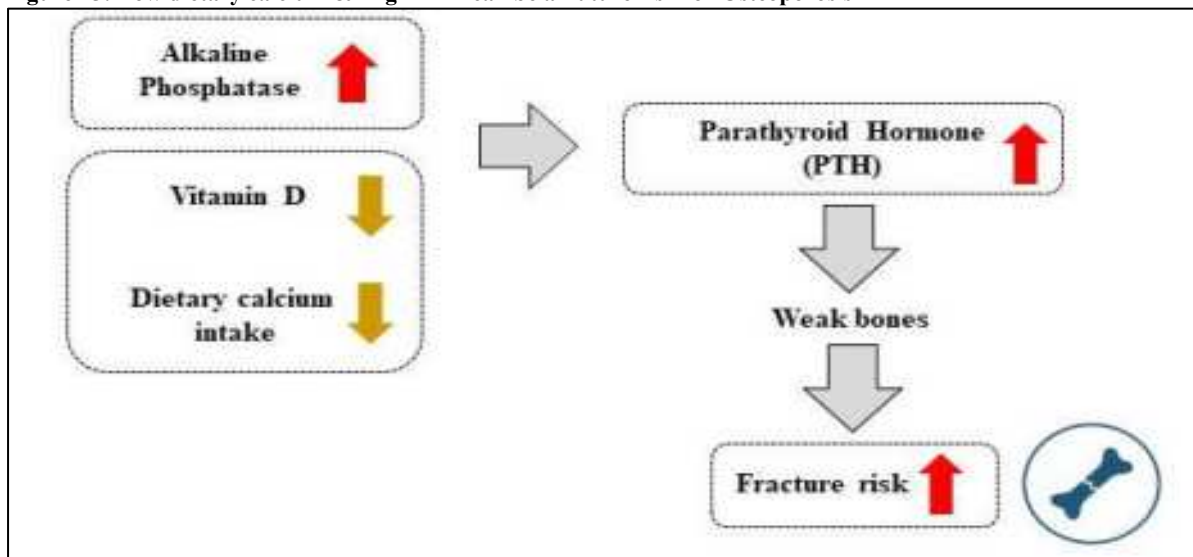
| Exposures | Categories | Odds with 95% confidence interval | p-value |
|------------------------------|-------------------|-----------------------------------|--------------|
| Age (years) | 15-16 (ref) | 1 | |
| | 16-17 | 0.77 (0.54 – 1.07) | 0.125 |
| | 17-18 | 0.64 (0.46 – 0.89) | 0.008 |
| Vitamin D (ng/ml) | >20 (ref) | 1 | |
| | ≤ 20 | 2.32 (1.63 – 2.59) | 0.00 |
| Calcium (mg/dl) | <8.5 (ref) | 1 | |
| | 8.5-10.2 | 1.04 (0.68 – 1.60) | 0.842 |
| | >10.2 | 1.44 (0.80 – 2.59) | 0.214 |
| Phosphorus (mg/dl) | ≤ 4.5 mg/dl (ref) | 1 | |
| | > 4.5 mg/dl | 0.87 (0.64 – 1.18) | 0.370 |
| Calcium – phosphorus Product | ≤ 40 (ref) | 1 | |
| | > 40 | 0.96 (0.73 – 1.26) | |
| Alkaline phosphatase (U/L) | ≤98 (ref) | 1 | |
| | >98 | 2.16 (1.53 – 3.05) | 0.000 |

Ref: Reference category. P-values in bold are statistically significant

All the girls had normal Liver function test. We also found significant positive association between ALP and iPTH ($r=0.324$, $p<0.001$).

We have used bio-impedance for measurement of bone mass. We could not find any association of bone mass to iPTH. D. Intact PTH levels in the Dervan cohort girls are very high. This could be due to triple burden of adolescence, poor dietary calcium intake and vitamin D deficiency (Table 12). This can have adverse effect on bone health in adulthood. Hence, adequate calcium and vitamin D intake should be provided at this stage, as good nutritional intake during first two decades of life contributes to attainment of maximum peak bone mass.

Figure 15: Low dietary calcium & High PTH can be a Future risk for Osteoporosis



1-Carbon metabolism and homocysteine

Key findings

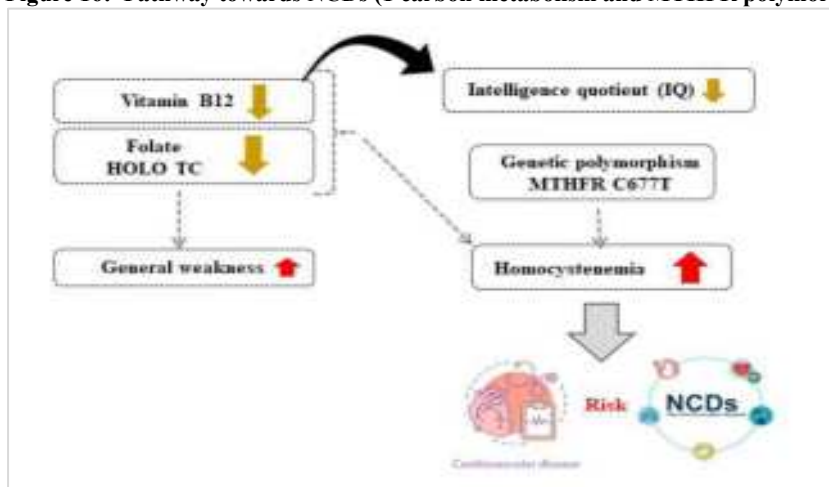
- One third of the cohort girls have vitamin B12 deficiency, however, the folate deficiency numbers are quite low.
- HoloTc levels are low in almost 7 out of 10 girls
- More than half of the girls have very high homocysteine.

Homocysteine is a non-protein amino acid formed between the trans-sulfuration and remethylation pathways of methionine metabolism. Hyperhomocysteinemia (HCY) is defined by high circulating levels of homocysteine (>15 micro mol/lit). The causes of hyper homocysteinemia are nutritional (poor vitamin B12, folate and Vitamin B6 status) and genetic. Hyper HCY can be attributed to either major genetic mutation of enzymes or environmental factors superadded with genetics associated with CBS (cystathionine β -synthase) or MTHFR methylenetetrahydrofolate reductase. The most common cause of genetic mutation is single nucleotide polymorphism of 5 -MTHFR which is associated with hyper HCY. Usually, moderate hyper HCY is credited to mutation wherein C is substituted by T at 677 gene for MTHFR thus reducing the enzyme activity to half.

Elevated homocysteine or Hyperhomocysteinemia is a known risk for cardiovascular disease, heart attacks, stroke, venous thrombosis and pregnancy complications due to endothelial damage, reduction in

elasticity of blood vessels with altered hemostasis. Therefore, the results observed in Dervan cohort are alarming as 51% of girls are showing Hyper homocystenemia during adolescence (Table 12).

Figure 16: Pathway towards NCDs (1 carbon metabolism and MTHFR polymorphism)



In this study, it was observed that a significant number of girls with hyper-homocysteniemia were deficient in Vitamin B12 (46.8%), almost 91% were observed to have low levels of holo TC. (Table 16)

Table 16: Vitamin B12, holo TC and folate within homocysteine groups

| Parameters | Homocysteine <15 µmol/L | Homocysteine ≥ 15 µmol/L | p value |
|--|-------------------------|--------------------------|--------------|
| Vitamin B12 deficient (<200 pg/ml) n=393 | 15.5 % | 46.8 % | 0.000 |
| Low holo TC (pmol/l) n=899 | 60.5 % | 90.9% | 0.000 |
| Low folate (<= 3.5 ng/ml) n=84 | 4.4 % | 9.0 % | 0.001 |

The trend and association of Vitamin B12- level based quartiles with homocysteine and holoTC was observed to be significant. Homocysteine decreased while holo TC increased with increasing levels of Vitamin B12 (Table 17)

Table 17: Vitamin B12 quartiles with glycaemic and 1 carbon parameters (N=1214)

| Parameters | Q1 (n=305) (2.90-182.0) | Q2 (n=301) (182.4-247.0) | Q3 (n=304) (248.0-338.6) | Q4 (n=304) (339.0-1312.0) | p value |
|-------------------------|----------------------------|-----------------------------|-----------------------------|------------------------------|--------------|
| Fasting glucose (mg/dl) | 94.4 (86.7-100.9) | 93.2 (86.1-99.8) | 93.5 (85.9-99.8) | 94.7 (86.9-101.5) | 0.196 |
| Insulin (uU/Ml) | 8.5 (6.7-11.2) | 8.6 (6.9-11.2) | 8.7 (6.8-11.0) | 8.3 (6.9-11.1) | 0.871 |
| HBA1C (%) | 5.2 (4.9-5.4) | 5.3 (5.0-5.5) | 5.3 (5.1-5.5) | 5.3 (5.0-5.6) | 0.000 |
| HOMA IR | 1.1 (0.9-7.5) | 1.1 (0.9-1.5) | 1.2 (0.9-1.5) | 1.1 (0.9-1.5) | 0.872 |
| HOMA β cell function | 94.9 (81.3-121.4) | 100.4 (83.1-117.1) | 99.5 (83.3-122.1) | 95.2 (79.3-117.7) | 0.344 |
| HOMA sensitivity | 8.72 (66.6-111.1) | 87.4 (66.1-106.7) | 85.2 (66.8-109.7) | 89.1 (66.4-108.2) | 0.962 |
| Folate (ng/ml) | 6.20 (4.97 – 7.82) | 6.25 (4.90 – 8.20) | 6.05 (4.70 – 7.40) | 5.70 (4.40 – 7.85) | 0.174 |
| Homocysteine | 22.32 (15.60 – 36.31) | 16.8 (12.4 – 22.5) | 13.2 (10.8 – 17.6) | 11.7 (9.2 – 15.6) | 0.000 |
| Holo TC (pmol/l) | 15.4 (10.7 – 20.5) | 20.8 (14.3 – 29.4) | 24.6 (18.0 – 33.4) | 36.1 (23.8 – 59.4) | 0.000 |

How many girls were identified with genetic polymorphisms?

Key findings

- Almost 2 out of 10 girls were identified with MTHFR C677T (Methyl tetrahydro folate reductase) polymorphism.
- A subset of them, almost 14.5% have Hyperhomocysteinemia with polymorphism, making them high risk candidates for NCDs, especially coronary artery disease.

Total 372 subjects were analyzed for polymorphism in MTHFR gene. Out of these 76 (20.4 %) have C677T polymorphism. Out of 372 these subjects 184 (49%) have hyper homocystenemia. In those who have hyper homocystenemia 54 (29.3%) have mutation.

Table 18: MTHFR C677T gene and homocystenemia

| Type | N (%) | Mean (SD) (μmol/L) | Median (Range) (μmol/L) | Hyper Homocysteinemia N (%) |
|-------------------|--------------|-------------------------------|-------------------------|-----------------------------|
| CC (Normal) | 296 (79.6 %) | 17.2 (10.1) | 13.6 (3.4 - 50.0) | 130 (43.9 %) |
| CT (heterozygous) | 74 (19.9 %) | 24.2 (13.4) | 20.8 (5.3 - 50.0) | 52 (70.2 %) |
| TT (homozygous) | 2 (0.5 %) | Value1: 30.0 Value 2: 44.2 | | 2 (100.0 %) |

Figure 17: MTHFR C677T and homocysteine.

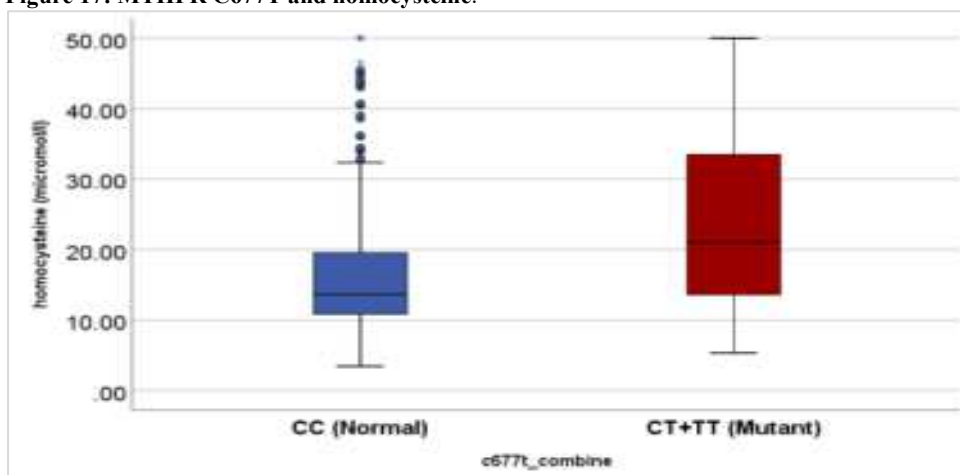


Table 19: Homocysteine, vitamin B12 and Holo TC with MTHFR C677T polymorphism

| Parameters | CC Homozygotes (n=296) | CT heterozygotes +TT Homozygotes (n=76) | p-value |
|--|------------------------|---|--------------|
| Homocysteine | 13.9 (10.9 – 19.7) | 21.1 (13.7 – 34.3) | 0.001 |
| Hyper homocystenemia (> 15 μmol/l) | 130 (43.9 %) | 52 (68.4 %) | 0.000 |
| Vitamin B12 (pg/ml) | 270.0 (213.0 – 374.7) | 253.8 (180.5 – 374.4) | 0.700 |
| Vitamin B12<200 pg/ml | 63.0 (21.3 %) | 23.0 (30.3 %) | 0.098 |
| Holo TC (pmol/l) | 24.1 (14.6 – 37.4) | 25.3 (14.5 – 41.8) | 0.898 |
| Low holo TC (<35 pmol/l) | 210 (70.9 %) | 49 (64.5 %) | 0.274 |

Median (25th – 75th percentile) n (%)

Homocysteine levels are significantly higher in those with CT heterozygotes or TT homozygotes polymorphism.

Table 20: Population Attributable Risk (Reduction in Incidence of Hyperhomocystenemia) if we get rid of risk exposures

| | | Homocysteine | | Total |
|-------------|-----------|--------------|--------|-------|
| | | Hyper | Normal | |
| Vitamin B12 | Deficient | 67 | 19 | 86 |
| | Normal | 115 | 171 | 286 |
| Total | | 182 | 190 | 372 |

Population Attributable Risk = 17.8%

| | | Homocysteine | | Total |
|-------------|-------|--------------|--------|-------|
| | | Hyper | Normal | |
| MTHFR C677T | CC/TT | 52 | 24 | 76 |
| | CC | 130 | 166 | 296 |
| Total | | 182 | 190 | 372 |

Population Attributable Risk = 10.0%

| | | Homocysteine | | Total |
|---------|--------|--------------|--------|-------|
| | | Hyper | Normal | |
| Holo TC | Low | 144 | 115 | 259 |
| | Normal | 38 | 75 | 113 |
| Total | | 182 | 190 | 372 |

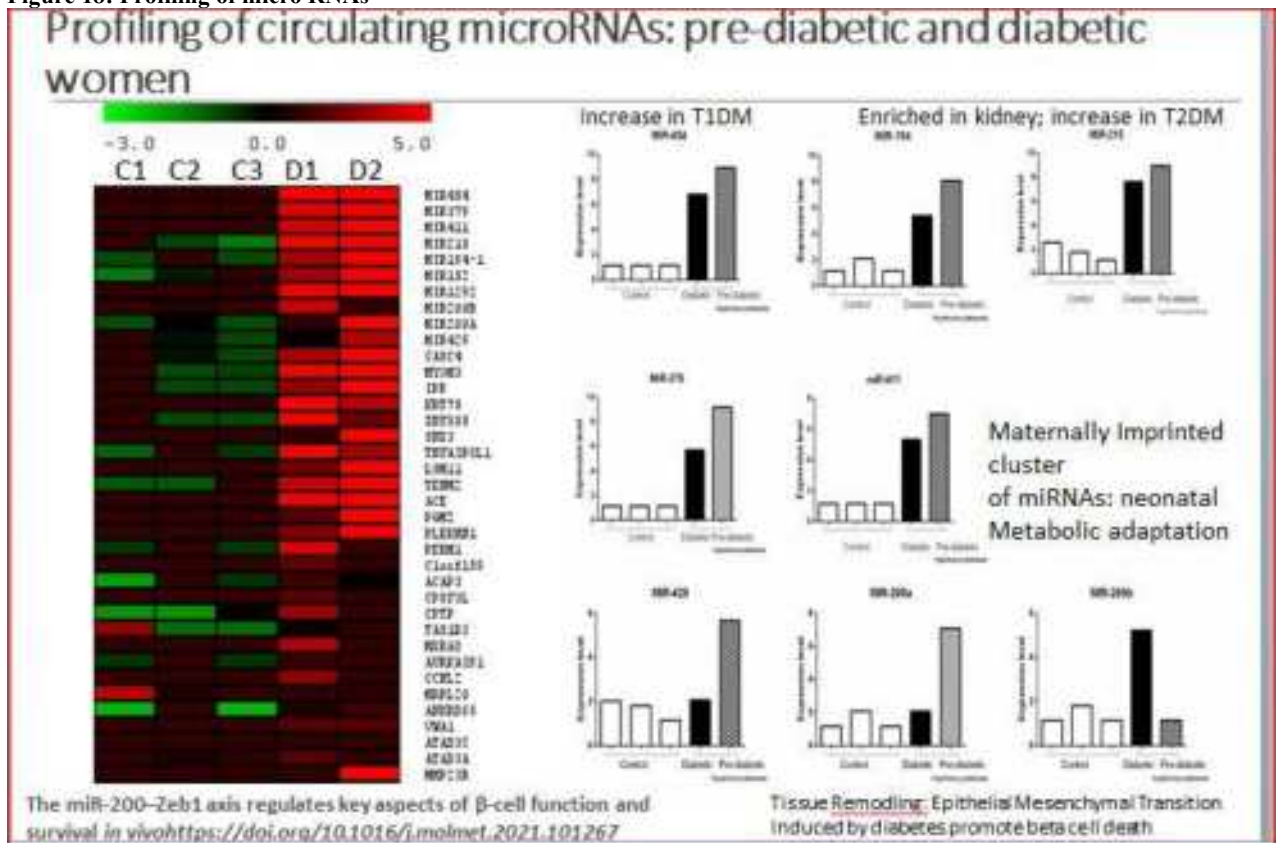
Population Attributable Risk = 31.2%

Genetic exposure is not modifiable
But environmental exposure (vitamin B12, holo tc) are modifiable hence adequate vitamin B12 will reduce hyper homocystenemia.

To deep-dive and investigate this further using micro-RNA profiling was done on representative serum samples from diabetic women and pre diabetic adolescent girls and was compared with that of healthy control women. Samples from 5 women with diabetes and 5 adolescent pre-diabetic girls with hyperhomocystenemia and 5 healthy girls were collected for evaluation of micro-RNA profiling.

Levels of several micro-RNAs was found to be elevated in both pre-diabetic and diabetic women. These include mir-454, mir -215 known to be upregulated in diabetes.

Figure 18: Profiling of micro RNAs



How many girls have Hormonal imbalance?

Key findings

- 1 out of 20 girls have hypothyroidism but hyperthyroidism is negligible.
- Severely undernourished (below -2SD of BMI) girls have reduced leptin levels. They have higher growth hormone levels indicating growth hormone resistance. This could be due to an adaptive response to low energy intake.

Leptin and adiponectin are well-known biomarkers correlated with growth. Body composition is regulated by the interplay amongst growth hormone/IGF1 and leptin. However, these hormones are also regulated by insulin but the physiological interactions between all these hormones is less studied during adolescence. Thus, in this study, we examined the link amongst circulating insulin, leptin and GH/IGF.

After adjusting for age, leptin was positively associated with all above anthropometric and body composition parameters ($p < 0.001$). Similarly, when adjusted to age, adiponectin was inversely associated with all above anthropometric and body composition parameters ($p < 0.005$). (Table 21)

Table 21: Partial correlations of Leptin and adiponectin with Body composition parameters

| Parameters | Leptin | | Adiponectin | |
|------------------|-------------|---------|-------------|--------|
| | correlation | P value | Correlation | pvalue |
| Weight (Kg) | 0.738 | 0.000 | -0.175 | 0.001 |
| Fat % | 0.758 | 0.000 | -0.160 | 0.003 |
| Fat mass (Kg) | 0.794 | 0.000 | -0.181 | 0.001 |
| Muscle mass (Kg) | 0.515 | 0.000 | -0.152 | 0.005 |

IGF-1 levels were positively associated with BMI while growth hormone levels were negatively associated with it.

Table 22: Association between hormones and BMI (N=1002)

| | Thin (N=571) | Normal (N=384) | Obese (N=47) | P value |
|------------------------------|-----------------------|-----------------------|-----------------------|--------------|
| Growth hormone | 1.6 (0.62-4.01) | 1.31 (0.46 – 3.11) | 0.88 (0.29 – 1.83) | 0.003 |
| Insulin like growth factor-1 | 191.0 (148.3 – 244.3) | 207.6 (155.5 – 251.5) | 173.9 (140.7 – 212.9) | 0.019 |
| TSH | 1.83 (1.34 – 2.50) | 1.86 (1.36 – 2.51) | 2.28 (1.59 – 3.42) | 0.915 |

Leptin levels were significantly increasing with BMI ($p < 0.001$). Adiponectin levels were significantly decreasing with BMI ($p < 0.001$). (Figure 19, 20)

Figure 19: Leptin levels within BMI categories

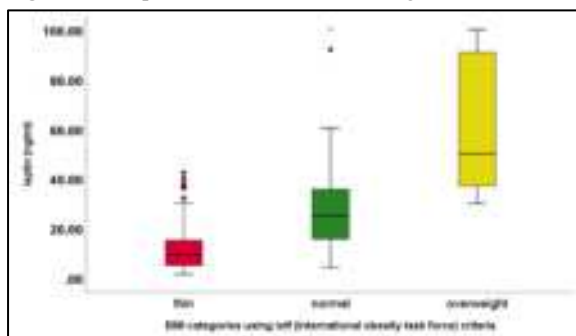
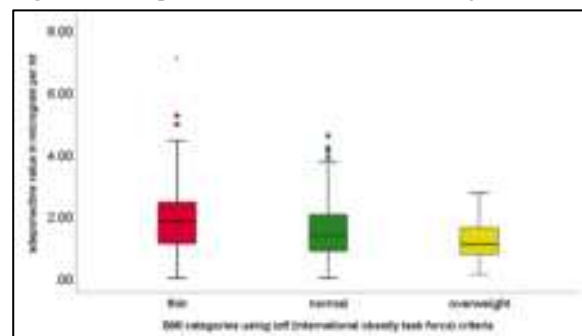


Figure 20: Adiponectin levels within BMI categories



To assess the interaction of Leptin with other parameters, the data was divided into quartiles of leptin levels. As can be observed from Table no 22 weight, BMI, Insulin and IGF1 were significantly increasing with increase in Leptin levels. Whereas growth Hormone was found to be significantly decreasing with increase in Leptin levels.

Table 22: Association between Leptin with other parameters

| Parameter | Q1 | Q2 | Q3 | Q4 | p value |
|-------------------------|-----------------------|-----------------------|-----------------------|----------------------|--------------|
| Weight (cm) | 35.8 (33.5 – 38.5) | 39.1 (36.0 – 42.1) | 42.0 (38.0 – 42.1) | 49.6 (44.4 – 54.8) | 0.000 |
| BMI (Kg/sq m) | 15.6 (14.8 – 16.5) | 16.8 (15.8 – 18.1) | 18.5 (16.9 – 19.3) | 21.4 (19.7 – 23.3) | 0.000 |
| Fasting glucose (mg/dl) | 91.5 (84.5 – 98.7) | 92.4 (85.9 – 99.3) | 93 (85.9 – 99.2) | 94.3(85.7 – 100.7) | 0.114 |
| Fasting insulin (μU/ml) | 7.10 (5.60 – 8.90) | 7.85 (6.40 – 10.10) | 8.9 (7.30 – 11.30) | 10.6 (8.60 – 14.35) | 0.000 |
| GH | 1.84 (0.72 – 4.51) | 1.62 (0.51 – 3.85) | 1.34 (0.46 – 3.04) | 1.06 (0.43 – 2.26) | 0.000 |
| IGF1 | 183.3 (146.0 – 243.8) | 185.2 (149.3 – 231.0) | 213.4 (158.7 – 255.6) | 206.7 (150.5 -251.0) | 0.001 |
| TSH | 1.8 (1.29 – 2.38) | 1.74 (1.31 – 2.45) | 1.88 (1.38 – 2.54) | 1.97 (1.47 – 2.79) | 0.816 |
| PTH | 83.7 (59.7 – 111.6) | 80.5 (61.9 – 106.1) | 83.7 (62.6 – 105.7) | 81.1 (59.8 – 103.0) | 0.177 |

We observed positive association of leptin levels with positive energy balance. Theoretically, these circulating leptin levels reveal the amount of energy deposited in fat and secondarily acute fluctuations in caloric consumption

Leptin is also known to perform a role in bone metabolism and it has been related to reduced bone mass in both obese with high leptin level with leptin resistance and in severely thin individuals with low leptin levels. However, in this study we did not measure bone mass but constitutionally very thin girls with low BMI had low leptin levels along with high alkaline phosphates' and high PTH thus indirectly indicating poor bone mineralization



Figure 21: Diagrammatic representation of leptins and adiponectin's role in body composition

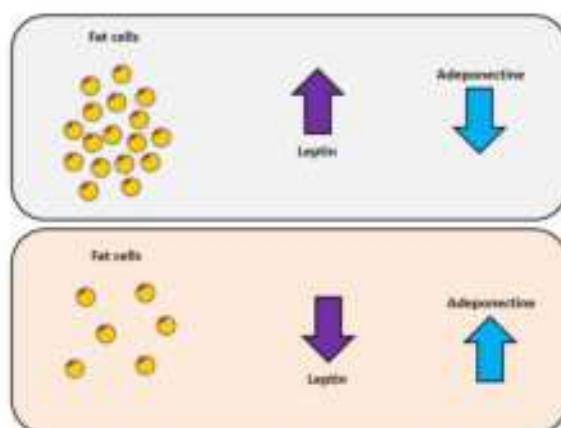
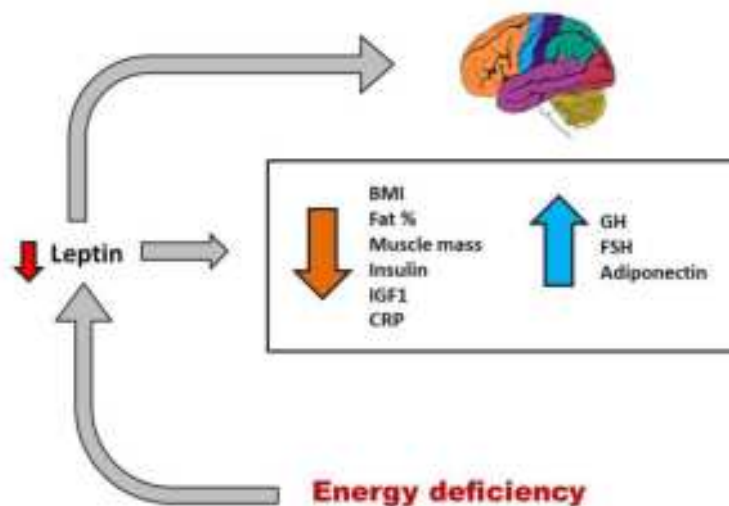


Figure 22: The link of leptin with energy deficiency



Status of trace elements

Key findings

1 out of 10 girls has Zinc deficiency and almost half of the girls have excess lead and one third of them have excess Manganese.

Age adjusted serum copper was positively associated with fasting glucose, insulin and HOMA IR but negatively associated with HOMA sensitivity. Sr. Lead was negatively associated with HBA1C and HOMA IR. Sr. Manganese was positively associated with HOMA IR and negatively associated with HOMA sensitivity. There were no association between sr. zinc and any glycaemic parameter. Serum copper levels are significantly higher in those with pre-diabetes.

Table 23: Trace element comparison between normal and pre-diabetics

| Parameters | Normal (n=929) | Pre diabetes (n=362) | p-value |
|---------------------|---------------------------|---------------------------|--------------|
| Copper (ppm) | 0.94 (0.79 - 1.10) | 1.02 (0.87 - 1.16) | 0.000 |
| Zinc (ppm) | 0.89 (0.75 - 1.10) | 0.94 (0.81 - 1.07) | 0.507 |
| Lead (ppb) | 35.5 (23.3 - 55.1) | 33.3 (24.7 - 50.0) | 0.035 |
| Manganese (ppb) | 3.02 (1.89 - 4.72) | 3.22 (2.37 - 5.25) | 0.434 |

Are their organs also small? Small body size with smaller organs

Key findings

- Liver and kidney are smaller if body size is small.
- Liver size is positively associated with fasting glucose, insulin, HOMA IR and β cell function but negatively associated with HOMA sensitivity.
- There is no significant change in size of pancreas with change in body size.
- Almost one girl out of 10 has abnormal ovaries.
- Only 2 out of 10 girls have fatty liver.

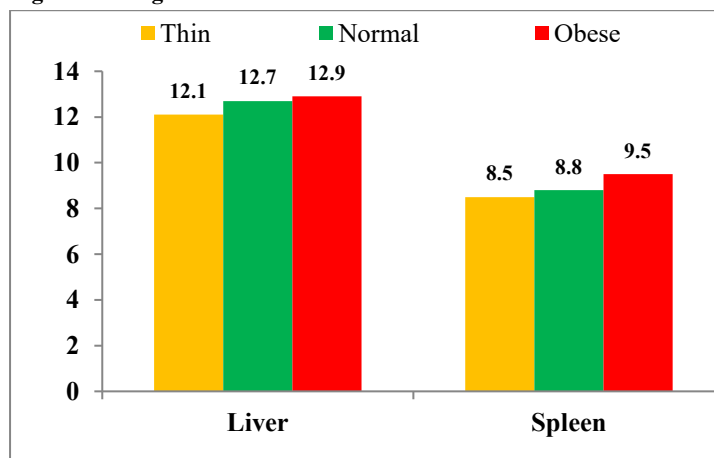
All age adjusted anthropometric and body composition parameters are positively associated with liver size and spleen size. Weight is positively associated with kidney size. Liver size is positively associated with fasting glucose, insulin, HOMA IR and beta cell function but negatively associated with HOMA sensitivity. This could be potentially attributed to physiological insulin resistance in puberty which will be explained in subsequent sections. Gallbladder wall thickness negatively associated with fasting glucose and positively associated with beta cell function. (Table 24)

Table 24: Associations between integral organ size and anthropometric parameters.

| Parameters | Thin (n=679) | Normal (n=447) | Obese (n=45) | p-value |
|-------------------------|--------------------|---------------------|---------------------|--------------|
| Liver (cm) | 12.1 (11.3 – 13.0) | 12.7 (11.8 – 13.3) | 12.9 (12.0 – 14.1) | 0.000 |
| Spleen (cm) | 8.50 (7.80 – 9.20) | 8.80 (8.00 – 9.60) | 9.50 (8.65 – 10.20) | 0.000 |
| Pancreas | | | | |
| Head (cm) | 1.30 (1.10 – 1.70) | 1.40 (1.10 – 1.80) | 1.60 (1.35 – 1.90) | 0.110 |
| Body (cm) | 1.00 (0.80 – 1.10) | 1.00 (0.90 – 1.20) | 1.00 (0.90 – 1.30) | 0.743 |
| Tail (cm) | 1.00 (0.80 – 1.30) | 1.10 (0.80 – 1.30) | 1.10 (0.90 – 1.50) | 0.972 |
| Kidney Left | | | | |
| Length (cm) | 9.30 (8.70 – 9.90) | 9.50 (9.00 – 10.10) | 9.80 (9.27 – 10.45) | 0.642 |
| Breadth (cm) | 4.30 (4.00 – 4.70) | 4.50 (4.20 – 4.90) | 4.60 (4.30 – 5.00) | 0.010 |
| Depth (cm) | 4.10 (3.60 – 4.50) | 4.30 (3.90 – 4.70) | 4.50 (4.00 – 4.80) | 0.130 |
| Cortical thickness (cm) | 1.40 (1.20 – 1.70) | 1.40 (1.20 – 1.70) | 1.50 (1.30 – 1.80) | 0.848 |
| Kidney Right | | | | |
| Length (cm) | 9.10 (8.60 – 9.60) | 9.30 (8.80 – 9.80) | 9.75 (9.20 – 10.50) | 0.292 |
| Breadth (cm) | 3.70 (3.40 – 4.00) | 3.90 (3.70 – 4.30) | 4.20 (3.90 – 4.60) | 0.003 |
| Depth (cm) | 4.10 (3.60 – 4.50) | 4.30 (3.80 – 4.80) | 4.40 (4.00 – 4.80) | 0.020 |
| Cortical thickness (cm) | 1.20 (1.00 – 1.40) | 1.30 (1.10 – 1.50) | 1.45 (1.20 – 1.70) | 0.007 |

Liver, spleen, kidney size significantly larger in those girls with higher BMI.

Figure 23: Organize and BMI.



At this juncture we did not find any association of pancreatic measurements with anthropometric parameters. Developmental Origins of Health and Disease (DoHAD) hypothesis by Barker has proposed the role of intrauterine exposures as possible determinants of later disease risk (5). To attain adequate body size and birth weight during fetal life, balanced nutrition and healthy anthropometric parameters is the key for future mothers.

How does under nutrition impact the “behavioral aspects” amongst adolescent girls?

Key findings

- 2 out of 10 girls are psychologically impaired and 3 out of 100 made an attempt of suicide.
- Though there was no noteworthy association of psychological impairment with underweight status but it was observed to be slightly higher in stunted girls. (Chronic under nutrition)

Mental health problems and disorders have been found be linked with nutritional deficiencies. (14) Assessment of psychological health was carried out using Y-PSC (Y-Youth Pediatric Symptom Checklist) (15, 16). Y-PSC comprises of 35 items that are graded as “Never,” “Sometimes,” or “Often” present and scored 0, 1, and 2, respectively. The total score was calculated by adding together the scores

for each of the 35 items, with a possible range of scores from 0 to 70. For the interviewed girls, the cut-off was considered as a score of 30 (30 or above = impaired; below 30 = not impaired)

Table 25: Y-PSC score.

| Psychological status | Frequency | Percent |
|----------------------|-----------|---------|
| Impaired (>=30) | 266 | 19.3 |
| Not impaired (<30) | 1063 | 77.2 |

We found that 19.5% girls were psychologically impaired. Y-PSC data shows that 3 out of 10 girls have internalizing problem. Though there was no noteworthy association of psychological impairment with underweight status but association was observed slightly more in stunted and short-statured girls. (*Chronic under nutrition*). Vitamin deficiency and high homocysteine did not show any additional disadvantage for their psychological health.

Figure 24: Youth pediatric symptoms checklist (YPSC) findings

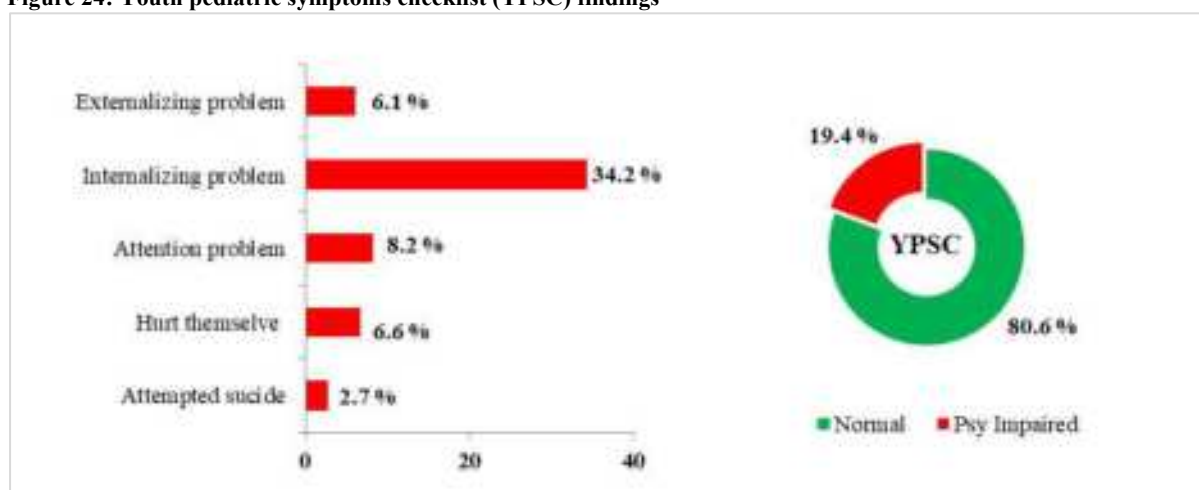


Table 26: Association between under nutrition and psycho-social dysfunction

| Classification | Psychological health status | | r | P value |
|----------------------------------|-----------------------------|--------------|--------|--------------|
| | Impaired | Not impaired | | |
| Percentile classification | | | | |
| Underweight (n=387) | 68 (17.6) | 319 (82.4) | -0.039 | 0.153 |
| Normal (942) | 198 (21.0) | 744 (79.0) | | |
| z score classification | | | | |
| Stunted (n=413) | 100 (24.2) | 313 (75.8) | 0.070 | 0.010 |
| Normal (916) | 166 (18.1) | 750 (81.9) | | |
| Vit. D deficiency | 228 (20.2) | 899 (79.8) | 0.020 | 0.470 |
| Vit. B12 deficiency | 90 (21.7) | 324 (78.3) | 0.030 | 0.284 |
| Homocysteine | 126 (20.0) | 505 (80.0) | 0.010 | 0.737 |
| Hemoglobin | 91 (20.6) | 351 (79.4) | 0.010 | 0.719 |

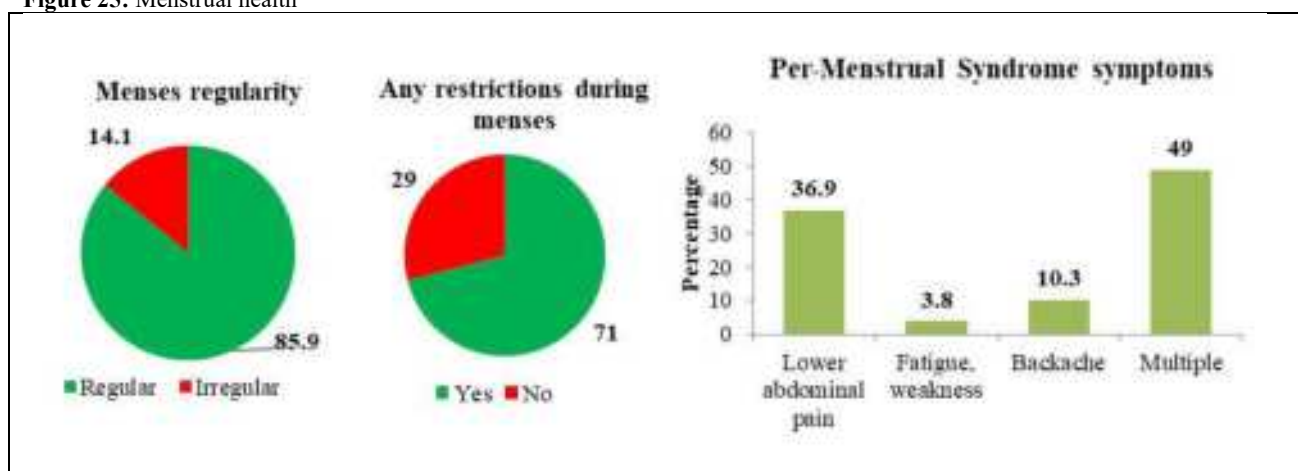
What is the status of menstrual health of these girls?

Key findings

- 7 out of 10 girls are forced to follow menstrual restrictions.
- Almost half of the girls face premenstrual syndrome with irregular menses in 1-2 girls out of 10.
- Age at menarche was significantly delayed due to underweight status but tribal girls are more severely impacted due to under-nutrition.
- Late onset of menarche was associated with more stunting, more thinness, and reduced obesity, low waist hip ratio and poor insulin production among undernourished adolescent girls of KONKAN

Mean age at menarche was 13.0 ± 1.1 years. Menses irregularity found in 14% girls and 49% girls have multiple pre-menstrual syndrome symptoms. 71 % girls are facing menstrual restrictions.

Figure 25: Menstrual health



Age at menarche was significantly delayed due to underweight status but tribal girls were more severely impacted due to under-nutrition. Table (13) shows univariate association between age at menarche and anthropometric morbidity using logistic regression. Increasing age at menarche is associated with increasing trend of odds ratios for thinness and underweight.

Table 27: Univariate association between age at menarche and anthropometric morbidity

| Age at menarche (years) | n | Stunting | | | Thin | | | Under weight | | |
|-------------------------|-----|----------|-------------|-------|-------|-------------|--------|--------------|-------------|--------------|
| | | OR | 95% CI | P | OR | 95% CI | p | OR | 95% CI | P |
| <12 (ref) | 106 | 1 | - | - | 1 | - | - | 1 | - | - |
| <13 | 303 | 0.751 | 0.475-1.185 | 0.219 | 1.038 | 0.666-1.618 | 0.870 | 1.151 | 0.658-2.014 | 0.621 |
| <14 | 493 | 0.647 | 0.419-1.000 | 0.050 | 1.770 | 1.160-2.701 | 0.008 | 1.655 | 0.979-2.797 | 0.606 |
| <15 | 321 | 0.690 | 0.437-1.087 | 0.109 | 2.383 | 1.524-3.726 | 0.000 | 2.567 | 1.501-4.390 | 0.001 |
| ≥ 15 | 97 | 0.474 | 0.258-0.870 | 0.016 | 2.699 | 1.517-4.800 | 0.0001 | 3.570 | 1.902-6.701 | 0.000 |

OR: odds ratios, CI: confidence interval, p: p-value

Late onset of menarche was associated with more stunting, more thinness, and reduced obesity, waist hip ratio and insulin production among undernourished adolescent girls of KONKAN. Menarche is a critical milestone in the development of female adolescents. The late menarche is a physiological adaptation in a severely undernourished girls in order to postpone her pregnancy as the body is not capable of taking the additional burden. Thus, our results point to the need for balanced nutrition for good menstrual health.

Table 28: Association between age at menarche and anthropometric parameters.

| Parameters | Age at menarche (years) | | | | | p-value |
|----------------------------------|-------------------------|--------------|--------------|--------------|--------------|--------------|
| | < 12 (106) | <13 (303) | < 14 (493) | < 15 (321) | >=15 (97) | |
| Age (years) | 16.4 (0.8) | 16.5 (0.8) | 16.5 (0.9) | 16.7 (0.9) | 16.7 (0.90) | 0.015 |
| Height (cm) | 150.5 (5.6) | 151.4 (5.0) | 151.7 (5.3) | 151.8 (6.0) | 152.5 (4.9) | 0.095 |
| Weight (Kg) | 44.2 (9.7) | 43.5 (8.5) | 41.8 (7.6) | 40.5 (7.5) | 40.1 (6.7) | 0.000 |
| BMI (kg/Sq.m.) | 19.4 (3.9) | 18.9 (3.5) | 18.1 (3.0) | 17.5 (2.9) | 17.2 (2.7) | 0.000 |
| Waist circumference (cm) | 65.7 (8.3) | 64.9 (7.8) | 63.3 (7.0) | 65.4 (7.0) | 61.6 (6.0) | 0.000 |
| Hip circumference (cm) | 86.2 (8.4) | 85.7 (6.9) | 83.9 (6.6) | 82.6 (6.5) | 82.0 (5.9) | 0.000 |
| Waist-Hip ratio | 0.76 (0.04) | 0.75 (0.04) | 0.75 (0.05) | 0.75 (0.06) | 0.75 (0.05) | 0.609 |
| Mid upper arm circumference (cm) | 22.7 (3.4) | 22.3 (2.9) | 21.7 (2.9) | 21.3 (2.5) | 20.9 (2.4) | 0.000 |
| Glucose (mg/dl) | 94.9 (11.4) | 94.1 (11.2) | 94.3 (10.2) | 93.3 (11.5) | 92.5 (10.5) | 0.398 |
| Insulin (µU/ml) | 9.5 (3.6) | 9.9 (4.2) | 9.5 (3.7) | 8.9 (4.1) | 9.1 (4.5) | 0.015 |
| Cholesterol (mg/dl) | 153.6 (26.3) | 151.0 (27.2) | 148.5 (27.0) | 147.4 (27.6) | 148.0 (28.0) | 0.214 |
| Triglycerides (mg/dl) | 69.8 (27.2) | 76.0 (74.9) | 68.3 (30.6) | 69.4 (27.8) | 65.1 (26.0) | 0.004 |
| Stunting (%) | 39.6 | 33.0 | 29.8 | 31.2 | 23.7 | 0.139 |
| Thin (%) | 45.3 | 46.2 | 59.4 | 66.4 | 69.1 | 0.000 |
| Underweight (%) | 18.9 | 21.1 | 27.8 | 37.4 | 45.4 | 0.000 |



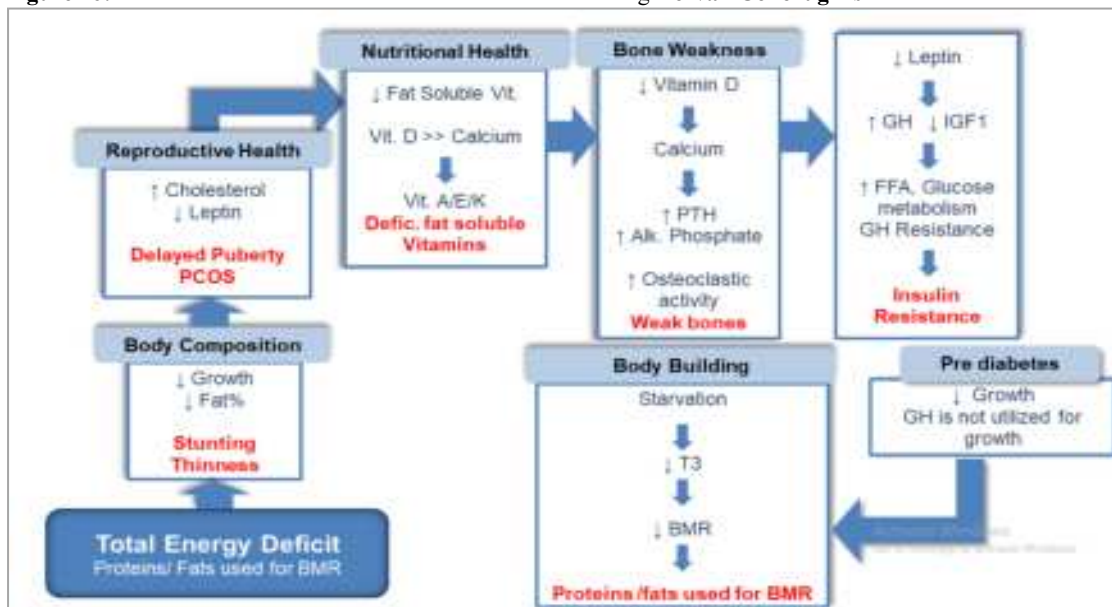
RISKS OF NCDs IN DERVAN COHORT GIRLS

Risks caused by starvation induced metabolic changes and endocrinal repercussions

Diabetes resulting due to over nutrition is a classical spectrum found mostly in urban settings but we have found another spectrum of diabetes due to under nutrition manifesting as pre-diabetes in adolescents.

8 out of 10 girls are having energy deficit due to starvation superadded by excessive physical exertion. Amount of ketones present in urine are the markers of starvation ketosis. Few girls in our study had ketonuria thus emphasizing intensity of starvation in them.

Figure 26: Plausible mechanism of NCDs due to starvation among Dervan Cohort girls



Growth Hormone (GH) Resistance

Growth hormone (GH) resistance observed in under nourished girls may be an adaptive response. Energy deficit due to starvation and hunger has resulted in reduced production of Leptin leading to stimulation of PTH, GH, suppression of T3 and insulin like growth factor 1(IGF-1) that indicates growth hormone resistance. This causes release of free fatty acid and diabetogenic effect of growth hormone triggering insulin resistance and pre-diabetic stage. It may be considered physiological at adolescent age.

GH resistance and insulin resistance was observed in very thin girls (Pre diabetic stage where GH is used for glucose production and not for growth). Almost 25% of the girls are having insulin resistance at this age but they need regular follow up till adulthood to confirm onset of diabetes in future. LH/FSH ratio is more than 1 (62%) posing them for risk of PCOD (Polycystic Ovarian Disease) in future. Due to hypo caloric state in severely undernourished girls, Triiodothyronine (T3) levels are low which could be physiological thus reducing BMR. This may be a compensatory mechanism to conserve energy which otherwise would have hindered body building.

1. Early-onset hyperglycemia and the risk of diabetes

Key findings

- 3 out of 10 girls were found to be Pre-diabetic (Pre diabetes was labelled as Fasting sugar ≥ 100 mg/dl).
- Out of 10, nearly 1-2 girls have elevated HBA1C.

The key discriminating factor in the Dervan cohort is widespread under-nourishment as reflected by their low BMI, yet the high prevalence of pre-diabetes. In most of the other studies about pre-diabetes in adolescents, the subjects were either overweight/obese.

Pre-DM in these girls can be explained by the concept of Developmental Origins of Health and Disease (DOHAD) by David Barker where children who have been exposed to under nutrition during fetal life and in early post natal period also develop risk of developing type 2 diabetes in adulthood (5). This could be due to poor insulin secretion, small β cell mass in under nourished girls.

Adolescent period is a time for growth, development and sexual maturation. Physiological insulin resistance plays a key role in physical modifications in body composition during this period. We found higher insulin levels in pre-diabetic group (*Pre-DM: 9.9 μ U/ml, Normal : 8.2 9.9 μ U/ml, $p < 0.001$). This could be because of decreased insulin sensitivity resulting in increased insulin secretion. Cross-sectional studies have shown increase in IR at onset of puberty, reaching maximum at Tanner stage 3, and returning to normal by the end of puberty, regardless of the presence of obesity. (17, 18) The rise in IR during puberty puts stress on pancreatic beta cells, making pubertal period at risk for development of metabolic Syndrome and/or Type 2 Diabetes (19).*

HOMA or Homeostasis Model Assessment is a method for assessing insulin resistance, sensitivity and β -cell function. It has been widely used as a clinical and epidemiological tool in descriptions of the pathophysiology of diabetes. This method has been applied across all ethnic groups. It is calculated from fasting glucose and fasting insulin levels. Insulin resistance is one of the symptoms of metabolic syndrome and an early stage in developing type 2 diabetes. In this study, we found significant correlations of HOMA-IR, HOMA β cell function and HOMA sensitivity with anthropometric and body composition as is explained below.

Age adjusted height was not associated with any of the glycaemic parameters. Other anthropometric parameters were positively associated with glucose, insulin, HOMA-IR, beta cell function but inversely with HOMA sensitivity. Only hip circumference was associated with HBA1C. Muscle mass and BMR were associated with all the glycaemic parameters positively except HOMA sensitivity which was inversely associated. Fat mass and fat % was positively associated with insulin, HOMA-IR and beta cell function and inversely with HOMA sensitivity. There was positive association of fat (mass as well as %) with glucose and HBA1C. (Table 29)

Table 29: Correlations between body composition & glycaemic parameters (N=1213)

| Parameters | Fasting Glucose | Fasting insulin | HBA1C | HOMA IR | HOMA β cell function | HOMA sensitivity |
|------------------|-----------------|-----------------|-------|---------|----------------------------|------------------|
| Weight (Kg) | NS | 0.440 | NS | 0.428 | 0.349 | -0.343 |
| p-value | | 0.000 | | 0.000 | 0.000 | 0.000 |
| BMI (Kg/sq. m) | NS | 0.457 | NS | 0.443 | 0.385 | -0.357 |
| p-value | | 0.000 | | 0.000 | 0.000 | 0.000 |
| Waist Circ. (cm) | NS | 0.445 | NS | 0.434 | 0.345 | -0.357 |
| p-value | | 0.000 | | 0.000 | 0.000 | 0.000 |
| Hip Circ. (cm) | NS | 0.402 | 0.061 | 0.391 | 0.331 | -0.325 |
| p-value | | 0.000 | 0.027 | 0.000 | 0.000 | 0.000 |

| Parameters | Fasting Glucose | Fasting insulin | HBA1C | HOMA IR | HOMA β cell function | HOMA sensitivity |
|-----------------|-----------------|-----------------|-------|---------|----------------------------|------------------|
| Waist-Hip ratio | NS | 0.235 | NS | 0.232 | 0.160 | -0.198 |
| p-value | | 0.000 | | 0.000 | 0.000 | 0.000 |
| Fat mass (Kg) | NS | 0.453 | NS | 0.443 | 0.350 | -0.340 |
| p-value | | 0.000 | | 0.000 | 0.000 | 0.000 |
| Fat (%) | NS | 0.398 | NS | 0.389 | 0.331 | -0.325 |
| p-value | | 0.000 | | 0.000 | 0.000 | 0.000 |
| Muscle mass (%) | 0.059 | 0.328 | 0.065 | 0.327 | 0.218 | -0.275 |
| p-value | 0.044 | 0.000 | 0.025 | 0.000 | 0.000 | 0.000 |
| BMR (Kcal) | 0.061 | 0.383 | 0.053 | 0.379 | 0.258 | -0.310 |
| p-value | 0.036 | 0.000 | 0.038 | 0.000 | 0.000 | 0.000 |

IR: Insulin resistance, Circ.: Circumference NS: Non significant

There were significant trends for all glycaemic parameters except HBA1C across BMI. The trend was increasing except HOMA sensitivity. (Table 30)

Table 30: BMI (IOTF classification) and glycaemia (N=1303)

| Parameters | Thin (n=751) | Normal (n=495) | Overweight (n=57) | p-value |
|---|---------------------|----------------------|-----------------------|--------------|
| Fasting glucose (mg/dl) | 94.2 (86.8 - 100.4) | 94.5 (87.7 - 101.4) | 91.7 (81.3 - 100.9) | 0.007 |
| Fasting insulin (μ U/ml) | 7.9 (6.3 - 10.2) | 9.6 (7.7 - 11.9) | 14.1 (10.7 - 18.1) | 0.000 |
| HBA1C (%) | 5.30 (5.00 - 5.50) | 5.30 (5.00 - 5.50) | 5.40 (5.10 - 5.60) | 0.075 |
| HOMA IR | 1.10 (0.90 - 1.40) | 1.30 (1.00 - 1.60) | 1.80 (1.40 - 2.40) | 0.000 |
| HOMA β cell function | 91.1 (77.6 - 110.1) | 101.4 (85.4 - 125.5) | 144.1 (114.4 - 180.2) | 0.000 |
| HOMA sensitivity | 93.7 (72.0 - 111.0) | 77.0 (62.3 - 96.2) | 56.4 (40.9 - 72.5) | 0.000 |
| Fasting glucose (≥ 100 mg/dl) (n=372) | 204 (26.8 %) | 152 (30.5 %) | 16 (28.1 %) | 0.363 |
| HBA1C ($>5.7\%$) (n=186) | 110 (14.6 %) | 65 (13.1 %) | 11 (19.3 %) | 0.398 |

Median (25th – 75th percentile) or n (%), IR: Insulin resistance, P-values in bold are statistically significant

Subjects were divided into quartiles according to the BMI. Fasting insulin, HOMA IR and beta cell function were increasing across BMI quartiles whereas HOMA sensitivity was decreasing and the trend was significant. (Table 31)

Table 31: Associations between BMI quartiles and glycaemia (N=1317)

| Parameters | Q1 (n=327) | Q2 (n=331) | Q3 (n=330) | Q4 (n=329) | p-value |
|---|----------------------|---------------------|---------------------|----------------------|--------------|
| Minimum – Maximum | (12.5 - 15.9) | (15.9 - 17.5) | (17.5 - 19.7) | (19.8 - 38.9) | |
| Fasting glucose (mg/dl) | 94.0 (87.1 - 100.2) | 95.0 (86.1 - 100.8) | 94.4 (86.9 - 101.1) | 94.4 (86.9 - 101.1) | 0.968 |
| Fasting insulin (μ U/ml) | 7.70 (6.00 - 9.70) | 8.10 (7.10 - 10.9) | 8.80 (7.10 - 10.90) | 10.70 (8.45 - 14.10) | 0.000 |
| HBA1C (%) | 5.30 (5.00 - 5.50) | 5.20 (5.00 - 5.50) | 5.20 (5.00 - 5.50) | 5.30 (5.30 - 5.50) | 0.766 |
| HOMA IR | 1.00 (0.80 - 1.30) | 1.10 (0.90 - 1.40) | 1.20 (0.97 - 1.50) | 1.40 (1.10 - 1.90) | 0.000 |
| HOMA β cell function | 89.30 (74.8 - 107.4) | 95.5 (79.6 - 113.2) | 95.8 (81.6 - 116.5) | 110.0 (92.6 - 138.4) | 0.000 |
| HOMA sensitivity | 96.0 (77.0 - 124.9) | 95.5 (71.3 - 115.5) | 83.8 (67.9 - 105.2) | 70.7 (53.5 - 88.6) | 0.000 |
| Fasting glucose (≥ 100 mg/dl) (n=372) | 84 (25.7 %) | 95 (28.7 %) | 92 (27.9 %) | 101 (30.6 %) | 0.568 |
| HBA1C ($>5.7\%$) (n=186) | 49 (15.3 %) | 46 (14.6 %) | 47 (14.3 %) | 42 (12.8 %) | 0.832 |

Median (25th – 75th percentile) or n(%), Q: Quartile, IR: Insulin resistance, P-values in bold are statistically significant

There was significant positive trend for all glycaemic parameters except HBA1C across fat per cent quartiles. The trend was increasing except HOMA sensitivity which was decreasing. (Table 32)

Table 32: Associations between Fat% quartiles and glycaemia (N=1220)

| Parameters | Q1 (n=302) | Q2 (n=311) | Q3 (n=302) | Q4 (n=305) | p-value |
|---|---------------------|---------------------|---------------------|----------------------|--------------|
| Minimum – Maximum | (6.1 – 18.5) | (18.6 – 22.5) | (22.6 – 27.6) | (27.7 – 51.0) | |
| Fasting glucose (mg/dl) | 95.5 (88.8 – 101.6) | 94.3 (87.9 – 100.4) | 94.5 (88.1 – 100.8) | 95.9 (87.6 – 102.1) | 0.576 |
| Fasting insulin (μ U/ml) | 7.80 (6.25 – 9.85) | 8.00 (6.40 – 10.30) | 8.60 (6.90 – 11.00) | 10.30 (8.30 – 13.40) | 0.000 |
| HBA1C (%) | 5.30 (5.00 – 5.50) | 5.30 (5.00 – 5.60) | 5.20 (5.00 – 5.50) | 5.30 (5.10 – 5.50) | 0.534 |
| HOMA IR | 1.10 (0.90 – 1.30) | 1.10 (0.90 – 1.40) | 1.10 (0.90 – 1.50) | 1.40 (1.10 – 1.80) | 0.000 |
| HOMA β cell function | 85.9 (72.8 – 104.7) | 91.2 (79.3 – 108.4) | 95.7 (81.6 – 114.9) | 107.1 (90.5 – 131.4) | 0.000 |
| HOMA sensitivity | 93.8 (75.5 – 116.9) | 92.7 (71.6 – 115.2) | 87.2 (67.7 – 108.2) | 72.2 (55.8 – 89.3) | 0.000 |
| Fasting glucose (≥ 100 mg/dl) (n=362) | 98 (33.1 %) | 83 (26.8 %) | 81 (27.4 %) | 100 (33.3 %) | 0.142 |

| Parameters | Q1 (n=302) | Q2 (n=311) | Q3 (n=302) | Q4 (n=305) | p- |
|--|-------------|-------------|-------------|------------|--------------|
| HBA1C ($>5.7\%$) _(n=167) | 43 (14.7 %) | 51 (16.8 %) | 43 (15.7 %) | 27 (9.0 %) | 0.031 |

Median (25th – 75th percentile) or n(%), Q: Quartile, IR: Insulin resistance, P-values in bold are statistically significant

There were significant positive trends for all glycaemic parameters except fasting glucose & HBA1C across waist circumference quartiles. The trend was increasing except HOMA sensitivity which was decreasing. (Table 33)

Table 33: Central obesity (waist circumference) and glycaemia (N=1297)

| Parameters | Q1 (n=319) (48.4 – 58.5) | Q2 (n=327) (58.5 – 62.1) | Q3 (n=324) (62.2 – 67.0) | Q4 (n=327) (67.1 – 106.1) | p-value |
|---|-----------------------------|-----------------------------|-----------------------------|------------------------------|--------------|
| Minimum – Maximum | | | | | |
| Fasting glucose (mg/dl) | 93.7 (85.9 – 100.3) | 94.0 (87.0 – 100.0) | 94.4 (87.4 – 101.2) | 96.0 (87.0 – 102.1) | 0.439 |
| Fasting insulin (μ U/ml) | 7.60 (5.90 – 9.70) | 8.10 (6.50 – 10.20) | 8.55 (7.00 – 11.17) | 10.70 (8.50 – 13.50) | 0.000 |
| HBA1C (%) | 5.30 (5.10 – 5.50) | 5.20 (5.00 – 5.50) | 5.30 (5.00 – 5.50) | 5.30 (5.10 – 5.50) | 0.288 |
| HOMA IR | 1.00 (0.80 – 1.30) | 1.10 (0.90 – 1.40) | 1.20 (0.90 – 1.50) | 1.40 (1.10 – 1.80) | 0.000 |
| HOMA β cell function | 89.6 (76.0 – 107.8) | 92.5 (78.4 – 110.1) | 98.4 (81.2 – 118.3) | 109.0 (91.8 – 135.6) | 0.000 |
| HOMA sensitivity | 97.9 (77.9 – 125.5) | 91.5 (72.0 – 114.3) | 86.4 (66.6 – 105.4) | 70.7 (54.9 – 88.2) | 0.000 |
| Fasting glucose (≥ 100 mg/dl) _(n=372) | 87 (26.7 %) | 84 (25.4 %) | 89 (27.4 %) | 111 (33.6 %) | 0.087 |
| HBA1C ($>5.7\%$) _(n=186) | 49 (15.4 %) | 47 (14.3 %) | 51 (15.7 %) | 39 (11.9 %) | 0.511 |

Median (25th – 75th percentile) or n(%), P-values in bold are statistically significant ,Q: Quartile, IR: Insulin resistance

There was no association of height and weight with glucose levels (Figure 27). However, when adjusted to weight, height shows negative association with insulin levels and independent of height, insulin is positively associated with weight (Figure 28).

Figure 27: Association between fasting glucose levels with height adjusted for weight and weight adjusted for height.

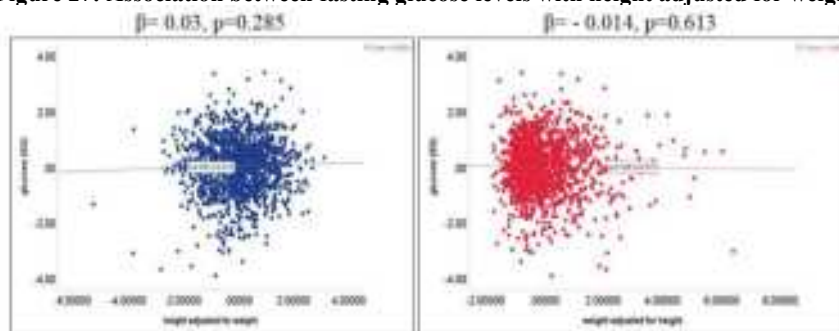
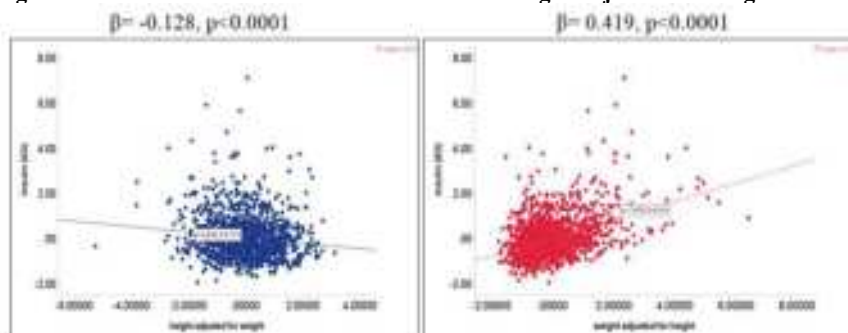


Figure 28: Association between insulin levels with height adjusted for weight and weight adjusted for height.



Also, there was no association between age and lean mass index within pre-diabetic and normal girls. (Figure 29)

Figure 29: Lean mass index (lean mass divided by height squared) against age in normal and pre-diabetic girls.

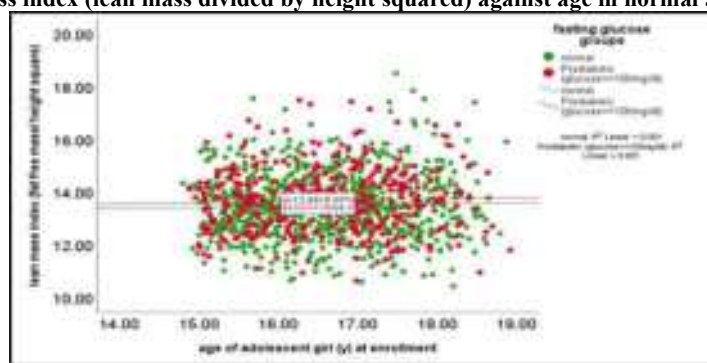


Figure 30: Pre-diabetes in adolescent increases the risk of diabetes in pregnancy (GDM) and future risk of T2DM in mothers and in her offspring.



Figure 31: Risk of NCDs (Fasting glucose & HbA1c)

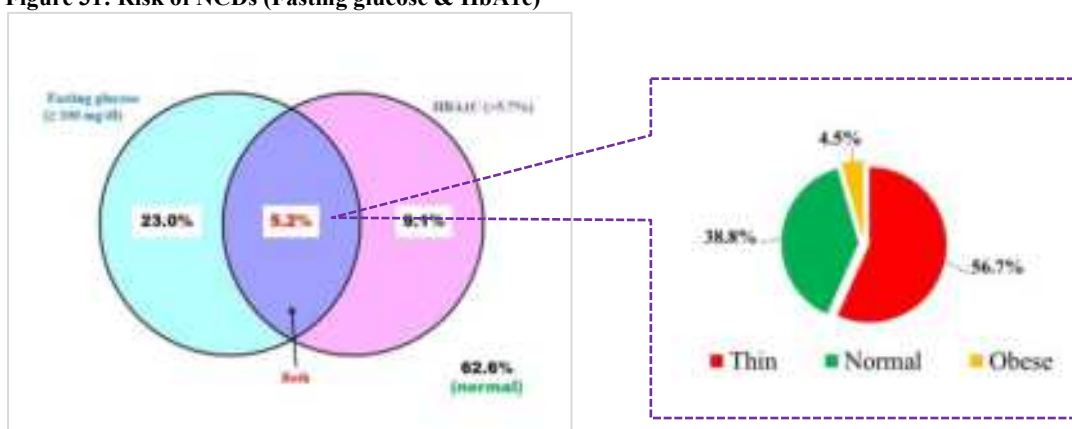
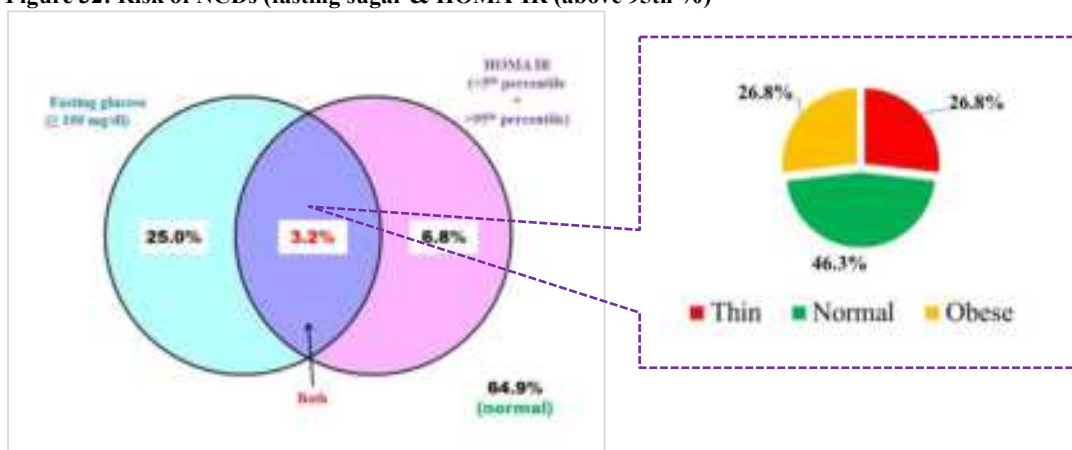


Figure 32: Risk of NCDs (fasting sugar & HOMA-IR (above 95th %))



We observed two contrasting types of trends amongst the participants. In one of the types, we observed that as weight increases insulin secretion, β Cell function, HOMA IR increases and HOMA sensitivity decreases. This can be potentially attributed to insulin resistance. The same can be observed in the data shared for this participant in Table 34.

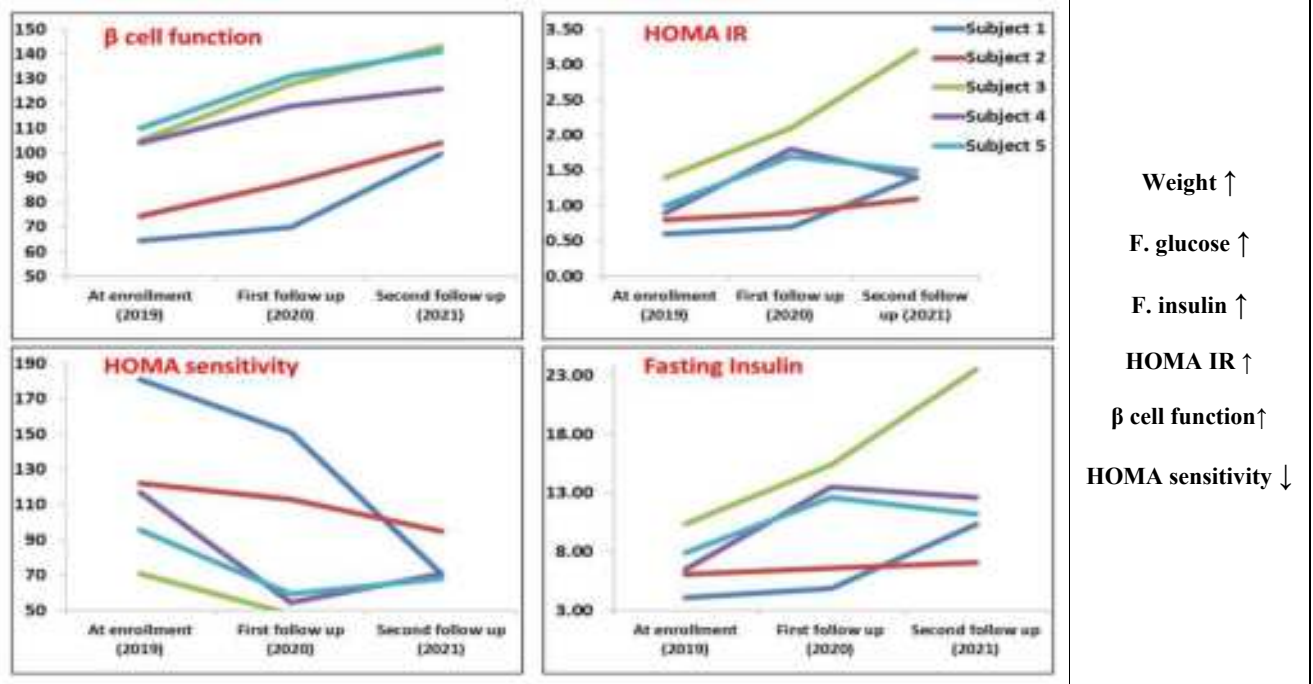
Table 34: Case study 1-Glycemic parameters of a girl having under nutrition at enrolment and weight gain in the form of fat on follow up visits

| Parameters | At enrolment (2019) | First follow up (2020) | Second follow up (2021) |
|-----------------------|---------------------|---------------------------|-------------------------|
| Weight | 32 Kg | 39.2 Kg | 42.9 Kg |
| BMI | 16.5 Kg/sq.m | 20.0 Kg/sq.m | 21.9 Kg/sq.m |
| Fat % | 17.9 % | 25.1 % | 27.9 % |
| Muscle mass % | 24.6 % | 27.5 % | 28.9% |
| Glucose | 96 mg/dl | 99.4 mg/dl | 109.4 mg/dl |
| Insulin | 10.4 μ U/ml | 15.4 μ U/ml | 23.5 μ U/ml |
| Homa IR | 1.37 | 2.02 | 3.11 |
| β cell function | 102.8 % | 125.7 % | 141.4 % |
| Homa sensitivity | 73.2 % | 49.5 % | 32.2 % |
| Vitamin D | 11.5 ng/ml | Insulin resistance | |
| Calorie intake | 1577 Kcal | | |
| PTH | 133 pg/ml | | |
| Vitamin B12 | 122 pg/ml | | |
| Homocysteine | 46.5 μ mol/l | | |
| Holotc | 9.80 pmol/l | | |



Similarly, presented below (Figure 33) are the glycemic parameters of five more girls who gained weight at subsequent visits. This is based on the preliminary observation during follow-ups

Figure 33: Increasing beta cell function (n=5)



The other trend observed was, as weight decreased insulin secretion, β Cell function, HOMA IR decreased and HOMA sensitivity increased indicating poor insulin secretion. (Table 35)

Table 35: Case study 2- Glycemic parameters of a girl having under nutrition at enrolment and no weight gain on follow up visits in fact remained undernourished

| | At enrolment (2020) | First follow up (2021) | Second follow up (2022) |
|-----------------------|---------------------|-------------------------------|-------------------------|
| Weight | 36.2 Kg | 35.1 Kg | 33.1 Kg |
| BMI | 16.1 Kg/sq.m | 15.7 Kg/sq.m | 14.7 Kg/sq.m |
| Fat % | 19.9 % | 19.3 % | 18.6 % |
| Muscle mass % | 26.9 % | 25.1 % | 25.3 % |
| Glucose | 106.8 mg/dl | 105.1 mg/dl | 97.9 mg/dl |
| Insulin | 7.7 μ U/ml | 5.5 μ U/ml | 4.7 μ U/ml |
| Homa IR | 1.04 | 0.75 | 0.60 |
| β cell function | 68.9 % | 55.8 % | 56.1 % |
| Homa sensitivity | 96.0 % | 134.2 % | 166.5 % |
| Vitamin D | 26.89 ng/ml | Poor insulin secretion | |
| Calorie intake | 613 Kcal | | |
| PTH | 72.0 pg/ml | | |
| Vitamin B12 | 239.2 pg/ml | | |
| Homocysteine | 16.44 μ mol/l | | |
| Holotc | 11.9 pmol/l | | |

At enrolment (2020)

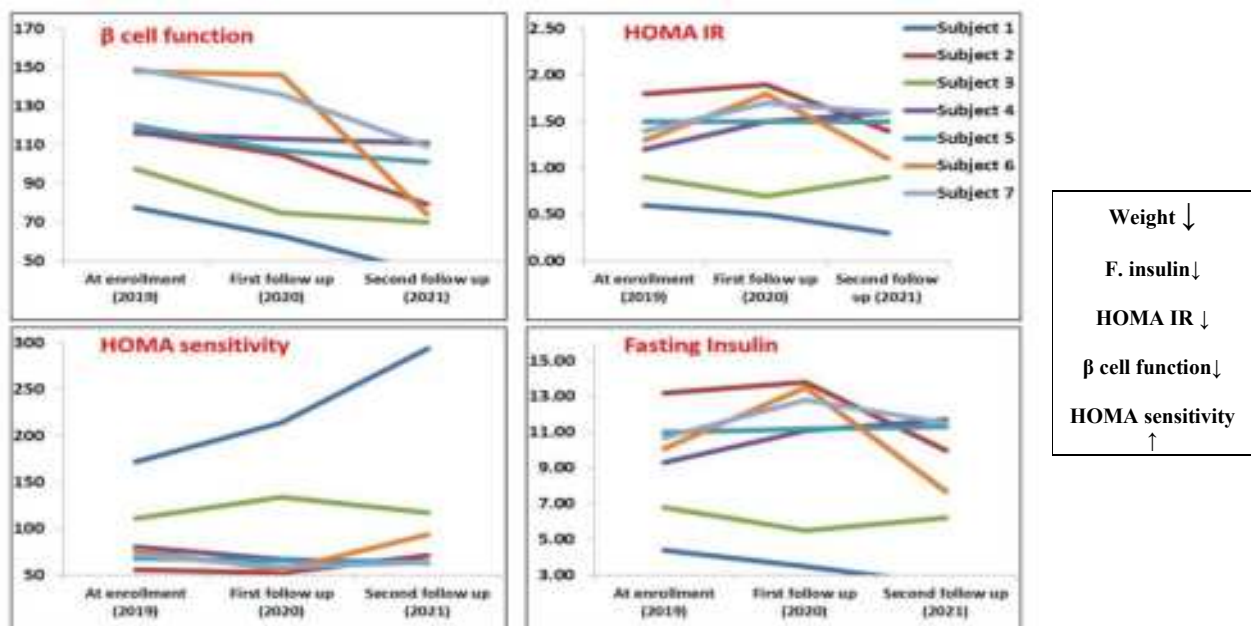


Second follow up (2021)



Similarly, in Figure 34 below are the glycemic parameters of 7 more girls who lost weight at subsequent visits as found in the preliminary follow-up observations.

Figure 34: Decreasing beta cell function (n=7)



To summarize we have described pre-diabetes in undernourished non obese adolescent girls of KONKAN region. Insulin resistance is known to be physiological in early puberty. Despite lack of data on tanner staging in our girls, all of the girls in their age window (16-18y) are very likely to be post pubertal. Only systematic follow up of our cohort will tell us about the causality of pre diabetes in undernourished

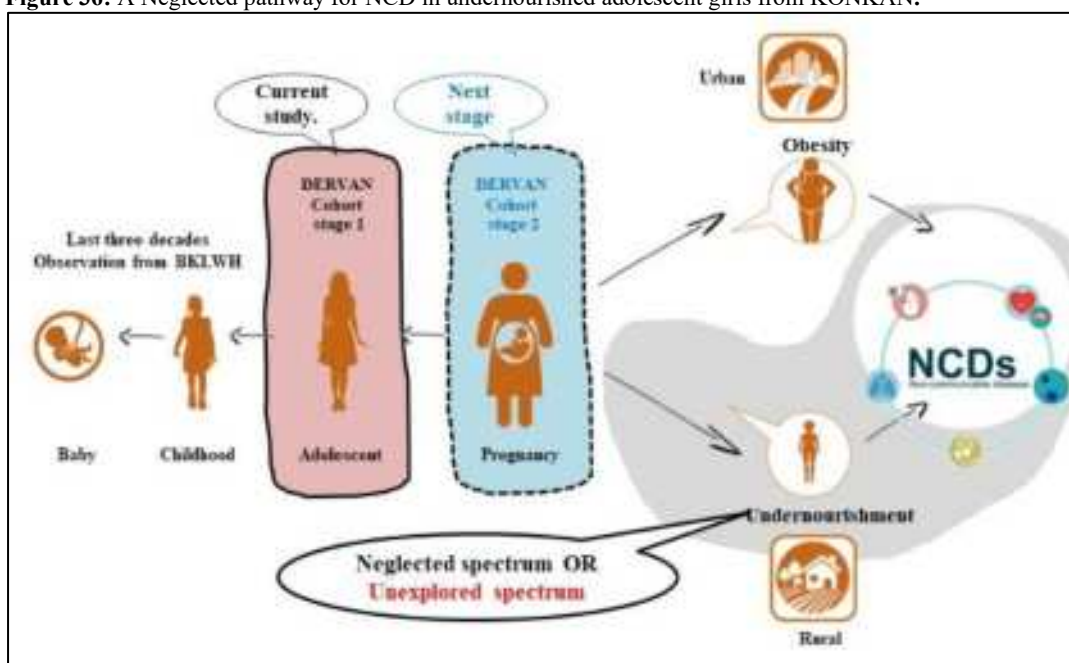
Our inference on the glycemic status from the overall observations

We have observed two diverse exposures of pre-diabetes which constitute girls with under nutrition with poor insulin secretion and other with over nutrition resulting in insulin resistance both presenting as pre diabetes. Insulin resistance amongst overweight girls can possibly be reversed to normal on weight reduction but it will be challenging to increase insulin secretion in under nourished girls. Reduced Insulin production can be attributed to altered fetal programming as described in **Barkers Hypothesis**. This region and therefore the Dervan cohort is a hot spot of such undernourished girls hence it will be interesting to follow these girls to study their glycemic parameters during their reproductive life events.

Figure 35: Double burden of disease.



Figure 36: A Neglected pathway for NCD in undernourished adolescent girls from KONKAN.



2. Risk for hypertension (Systolic > 120 & Diastolic >80 mmHg)

Key findings

- Nearly 6 out of 50 girls had elevated blood pressure
- 12 out of 100 girls have systolic hypertension and 18 girls out of 100 have diastolic elevation of blood pressure.

High blood pressure in adolescents is always discounted but has turned out to be an emerging problem which cannot be ignored. They need to be screened for elevated blood pressure since childhood. (20). In adolescents systolic blood pressure of >120 mmHg and diastolic > 80 mmHg is considered to be elevated blood pressure as per the guidelines of Indian academy of paediatrics [IAP].

When adjusted to age all the anthropometric and body composition parameters were positively associated with systolic as well as diastolic blood pressure. Blood pressure is positively associated with fasting glucose, insulin, HOMA IR but inversely with HOMA sensitivity. Blood pressure was positively associated with fasting glucose.

Subjects were divided into two groups elevated BP (systolic >120 mmHg and diastolic >80 mmHg) and normal (systolic <120 mmHg and diastolic <80 mmHg). All measured anthropometric and body composition parameters except standing height and lean mass (muscle mass) were significantly higher in those with elevated blood pressure levels. Fasting insulin and HOMA IR were significantly higher in those with elevated blood pressure. But HOMA sensitivity and HDL cholesterol is significantly lower.

Table 36: Comparison between normal and elevated blood pressure

| Parameters | Normal (n=895) | Elevated BP (n=130) | p-value |
|----------------------------|-----------------------|-----------------------|--------------|
| Standing height (cm) | 151.3 (147.7 - 155.0) | 153.7 (149.3 - 156.5) | 0.227 |
| Weight (Kg) | 39.7 (35.7 - 44.2) | 44.2 (39.4 - 51.4) | 0.003 |
| BMI (Kg/sq. m) | 17.1 (15.7 - 19.2) | 19.0 (16.9 - 22.0) | 0.005 |
| Mid upper arm (cm) | 21.0 (19.4 -22.6) | 22.7 (21.0 - 25.0) | 0.006 |
| Fat mass (Kg) | 8.4 (6.5 - 11.2) | 11.5 (7.6 - 16.2) | 0.000 |
| Fat (%) | 21.8 (18.2 - 26.5) | 25.6 (19.1 - 31.7) | 0.000 |
| Lean mass (%) | 28.8 (27.0 - 31.1) | 31.6 (28.8 - 33.4) | 0.063 |
| BMR (Kcal) | 4680 (4312 - 49) | 5020 (4588 - 5394) | 0.000 |
| Fasting Glucose (mg/dl) | 93.3 (85.6 - 100.1) | 96.8 (91.4 - 103.5) | 0.604 |
| Fasting Insulin (uU/ml) | 8.20 (6.60 - 10.70) | 10.6 (7.70 - 13.62) | 0.004 |
| HBA1C (%) | 5.30 (5.00 - 5.50) | 5.30 (5.10 - 5.50) | 0.356 |
| HOMA IR | 1.10 (0.90 - 1.40) | 1.40 (1.10 - 1.82) | 0.004 |
| HOMA β cell function | 95.2 (80.7 - 118.2) | 102.8 (83.8 - 128.6) | 0.154 |
| HOMA sensitivity | 90.2 (69.3 - 111.9) | 70.4 (54.1 - 94.2) | 0.020 |
| Total cholesterol (mg/dl) | 146.0 (128.0 - 164.0) | 149.0 (133.0 - 170.0) | 0.143 |
| HDL cholesterol (mg/dl) | 51.3 (44.0 - 58.4) | 49.3 (43.0 - 57.8) | 0.008 |
| LDL cholesterol (mg/dl) | 78.9 (66.6 - 96.2) | 83.6 (70.9 - 99.3) | 0.591 |
| VLDL cholesterol (mg/dl) | 12.3 (9.3 - 16.7) | 13.2 (10.0 - 19.2) | 0.500 |
| Triglycerides (mg/dl) | 161.5 (46.8 - 83.5) | 66.3 (50.3 - 96.0) | 0.416 |

Median (25th – 75th percentile) or n (%), values in bold are statistically significant , HDL: High density lipoprotein, LDL: Low density lipoprotein, VLDL: Very low density lipoprotein.

3. Risk for hyperlipidemia

Key findings

- 2 out of 10 girls have high LDL, total cholesterol and 1 out of 10 has low HDL.
- Surprisingly, high TG (>150 mg/dl) was found in only 1 out of 100 girls.

Dyslipidemia is defined as low levels of HDL, high levels of LDL and triglycerides which has arisen as a noteworthy factor of coronary heart disease (CHD). These are two primary components of metabolic syndrome.

Adolescents presenting with hypercholesterolemia are likely to be at risk for adult CHDs as well as diabetes. Adolescents of 14 to 18 age group from Indian sub-urbans have reported notable low HDL levels along with obesity. Micronutrient and mineral deficiencies with minimum dietary diversity are attributed to this dyslipidemia. (21) There is a gap between the facts of lipid anomalies among adolescents in India. As a result, the current study highlights the factual levels of lipids in adolescents from Konkan.

Table 37: Comparison of lipids with national data.

| | High LDL | Low HDL | High TG | High Cholesterol >170 mg/dl |
|------------------|----------------------|---------|---------|---|
| Dervan | 21.9% (>100mg/dl) | 13.2 % | 1.5% | 20.9% (Out of these 6.5% girls have high TSH) |
| Indian states | 4% (>130 mg/dl) | 25 % | 16% | - |

There is significant positive correlation between triglycerides and liver size when adjusted to age. ($r=0.189$, $p=0.000$). Cholesterol is not associated with liver size. All lipid parameters are positively associated with BMI except HDL.

Table 38: Association between lipids and BMI categories.

| Parameters | Thin (n=704) | Normal (n=458) | Overweight (n=51) | p-value |
|--|---------------------|---------------------|---------------------|--------------|
| Cholesterol (mg/dl) | 145.0 (129.0-163.0) | 149.0 (131.6-169.0) | 157.0 (138.0-174.8) | 0.004 |
| Triglyceride (mg/dl) | 58.2 (44.2-79.4) | 69.7 (53.0-95.7) | 98.8 (65.5-119.6) | 0.000 |
| LDL (mg/dl) | 78.6(65.1-95.6) | 81.2 (68.1-100.4) | 92.1 (75.9-110.1) | 0.001 |
| HDL (mg/dl) | 51.9 (45.0-59.6) | 50.8 (43.5-57.6) | 44.5 (35.9-52.0) | 0.000 |
| VLDL (mg/dl) | 11.6 (8.8-15.8) | 13.9 (10.6-19.1) | 19.7 (13.1-23.9) | 0.000 |
| TG HDL ratio | 1.14 (0.82-1.60) | 1.40 (1.01-1.96) | 2.06 (1.55-3.03) | 0.000 |
| Cholesterol (≥ 170 mg/dl) $n=1214$ | 130 (18.4 %) | 110 (24.0 %) | 22 (43.1 %) | 0.000 |
| Triglyceride (≥ 150 mg/dl) $n=1213$ | 5 (0.7 %) | 9 (2.0 %) | 5 (9.8 %) | 0.000 |
| LDL (>100 mg/dl) $n=1213$ | 136 (19.3 %) | 117 (25.6 %) | 19 (37.3 %) | 0.000 |
| HDL (≤ 40 mg/dl) $n=1214$ | 83 (11.8 %) | 60 (13.1 %) | 19 (37.3 %) | 0.000 |

4. How many girls are identified with multiple risk factors for NCDs?

Key findings

- NCD risk factors include anthropometric under nutrition, pre-diabetes, hypertension, high LDL, low HDL and hyper homocystenemia.
- 9 out of ten girls have one risk minimally, and nearly 4 out of ten girls have two risk factors for NCDs

Considered NCD risk factors include

- Anthropometric under nutrition,
- Pre-diabetes,
- Hypertension,
- High LDL,
- Low HDL and
- Hyper homocystenemia.

Table 39: High risk girls in cohort (N=1240)

| | n (%) |
|-------------|-------------|
| No any risk | 107 (8.6 %) |
| Single risk | 415 (33.1) |
| Two risks | 485 (39.5) |
| Three risks | 194 (15.6) |
| Four risks | 38 (3.1) |
| Five risks | 1 (0.1) |

Do they have conventional metabolic syndrome?

Key findings

- Occurrence of metabolic syndrome is 1-2% based on conventional definitions of IDF, ATP III. The main reason is absence of central obesity yet it is noteworthy that 28.2% girls have pre-DM and 12% have elevated blood pressure.

IDF definition

According to the new IDF definition, for a person to be defined as having the metabolic syndrome they must have: Central obesity (defined as waist circumference with ethnicity specific values) plus any two of the following four factors:

- Triglycerides ≥ 1.7 mmol/L OR (≥ 150 mg/dL)
- HDL < 1.03 mmol/L OR (< 40 mg/dL)
- Blood Pressure (Systolic ≥ 130 mm Hg / Diastolic ≥ 85 mm Hg)
- Fasting Plasma Glucose ≥ 5.6 mmol/L OR (≥ 100 mg/dL)

Out of 1296 (*only those girls were selected for analysis whose all five measurements are done*) girls only 13 (**1%**) girls have metabolic syndrome as per IDF criteria (Table 40)

Table 40: Metabolic syndrome using International Diabetes Federation (IDF) definition

| Parameters | Criteria | n (%) |
|---------------------------------|---|-----------------|
| Waist Circumference (cm) | ≥ 80cm | 47 (3.6) |
| Triglycerides (mg/dl) | ≥1.7 mmol/L OR (≥150 mg/dL) | 21 (1.6) |
| HDL (mg/dl) | <1.03 mmol/L OR (<40 mg/dL) | 171 (13.2) |
| Blood Pressure | Systolic ≥130 mm Hg / Diastolic ≥85 mm Hg | 85 (6.6) |
| Fasting Plasma Glucose (mg/dl) | ≥5.6 mmol/L OR (≥100 mg/dL) | 367 (28.3) |

National Cholesterol Education Program Adult Treatment Panel (NCEP ATP) III criteria

According to the modified National Cholesterol Education Program Adult Treatment Panel (NCEP ATP) III, for a person to be defined as having the metabolic syndrome they must have any three of the following factors:

- Waist Circumference (cm) ≥ 90th Percentile = 73.2 cm
- Fasting Plasma Glucose (mg/dl) ≥110 mg/dL
- Blood Pressure Systolic ≥130 / diastolic ≥85 mm Hg
- Triglycerides (mg/dl) ≥ 110 mg/dL
- HDL (mg/dl) ≤ 40 mg/dL

Out of 1296 girls (*only those girls were selected for analysis whose all five measurements are done*) only 26 (**2%**) girls have metabolic syndrome according to NCEP ATP III criteria. (Table 41)

Table 41: Metabolic syndrome using National Cholesterol Education Program Adult Treatment Panel (NCEP ATP) III definition

| Parameters | Criteria | n (%) |
|--------------------------------|---|------------|
| Waist Circumference (cm) | ≥ 90 th Percentile = 73.2 cm | 130 (10.0) |
| Fasting Plasma Glucose (mg/dl) | ≥110 mg/dL | 158 (12.2) |
| Blood Pressure | Systolic ≥130 / diastolic ≥85 mm Hg | 171 (13.2) |
| Triglycerides (mg/dl) | ≥ 110 mg/dL | 85 (6.6) |
| HDL (mg/dl) | ≤ 40 mg/dL | 74 (5.7) |

HOPE FOR FUTURE

A new Opening for Second Inning

Data from the first stage of DERVAN cohort funded by RGSTC has uncovered some astonishing and shocking facts. Under nutrition is widespread, yet prevalence of pre-diabetes in these ostensibly healthy-looking adolescent girls (no-obesity) is very high. Poor nutritional quality and quantity is reflected in low level of vitamins, trace elements, muscle mass, average intelligence and weakened bones. There is poor reproductive performance with high homocysteine, cholesterol, and a genetic variation. These are potential NCDs risk factors. Combination of these multiple risk factors increases their chances of developing NCDs in adulthood and also pre-disposes their newborns at risk of NCDs in their future. The adolescent period has given us second window of opportunity to reduce these risks. We are planning an intervention in this cohort. The question, ‘Whether a nutritional intervention will be able to reduce these risks?’ can only be answered by continuous follow up longitudinal manner.

What is the scope of the project? What end results are expected?

The prevalence of NCDs in India is very high and we also have the infamy of being world’s NCDs capital. Our adolescent population (~250 million) will soon be impacted if this concern is left unattended. Identification of the biological risk-factors and identifying the causes and effects will offer a solution for curtailment of NCDs. ‘RGSTC’s DERVAN cohort’ explores biological risk factors for NCDs in undernourished and adolescent girls from Konkan. The scope of this study is to establish a link between under nutrition in adolescence with risk of NCDs in adulthood. A favorable outcome is likely to see the reduction in likelihood of NCD development in current generation and reduction in risk of NCD development in subsequent generations. Risk reduction strategies have been proposed in over nourished population. Ours is the first study in India towards understanding the risk-factors for NCDs in undernourished girls, and proposing sustainable as well as lasting solution strategies. Second decade of life offers a bonus opportunity to recover from under nutrition in early life (fetal as well as first decade). Adolescent period offers a wider window for interventions to break the vicious multigenerational cycle of under nutrition. Our data is comparable to data from other states of India so findings and policy decisions resulting from our cohort will be generalizable for the entire rural undernourished adolescent population of our nation.



Figure 37: Proposed Development of ecosystem for future opportunities for adolescent empowerment

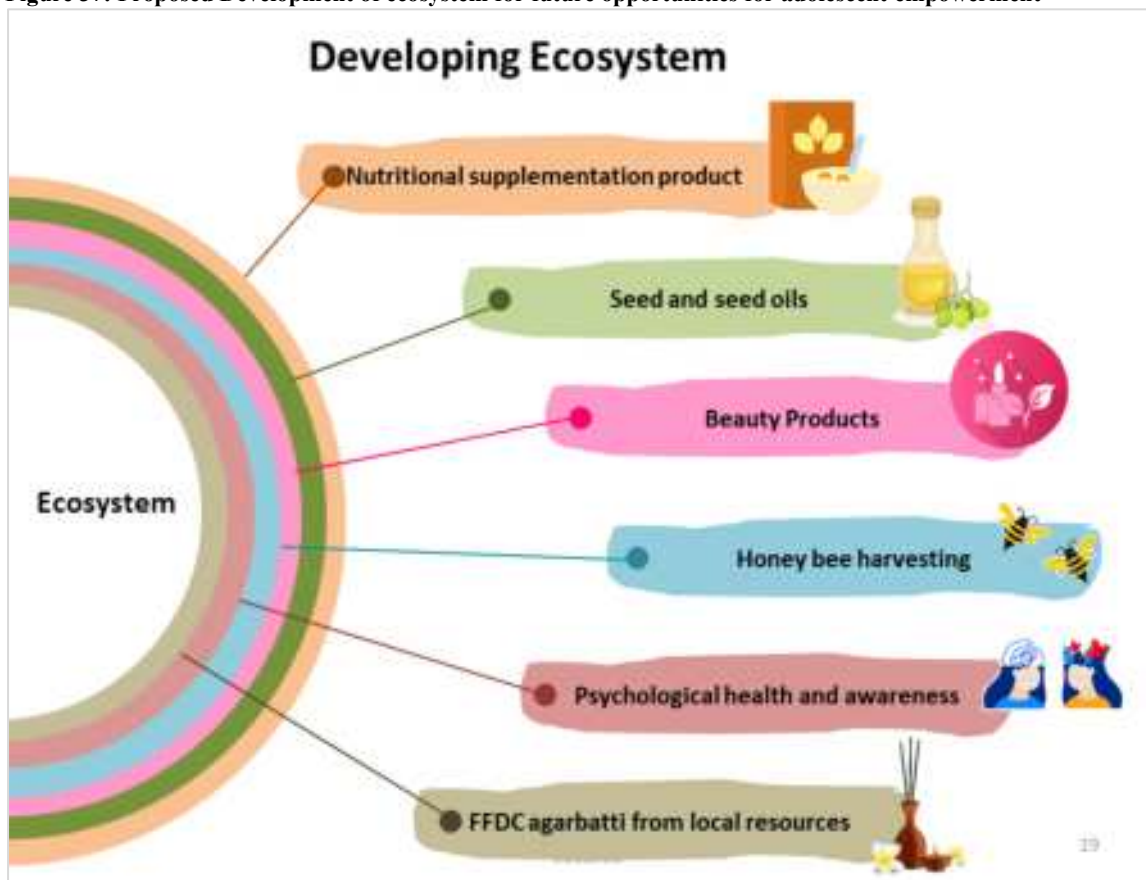
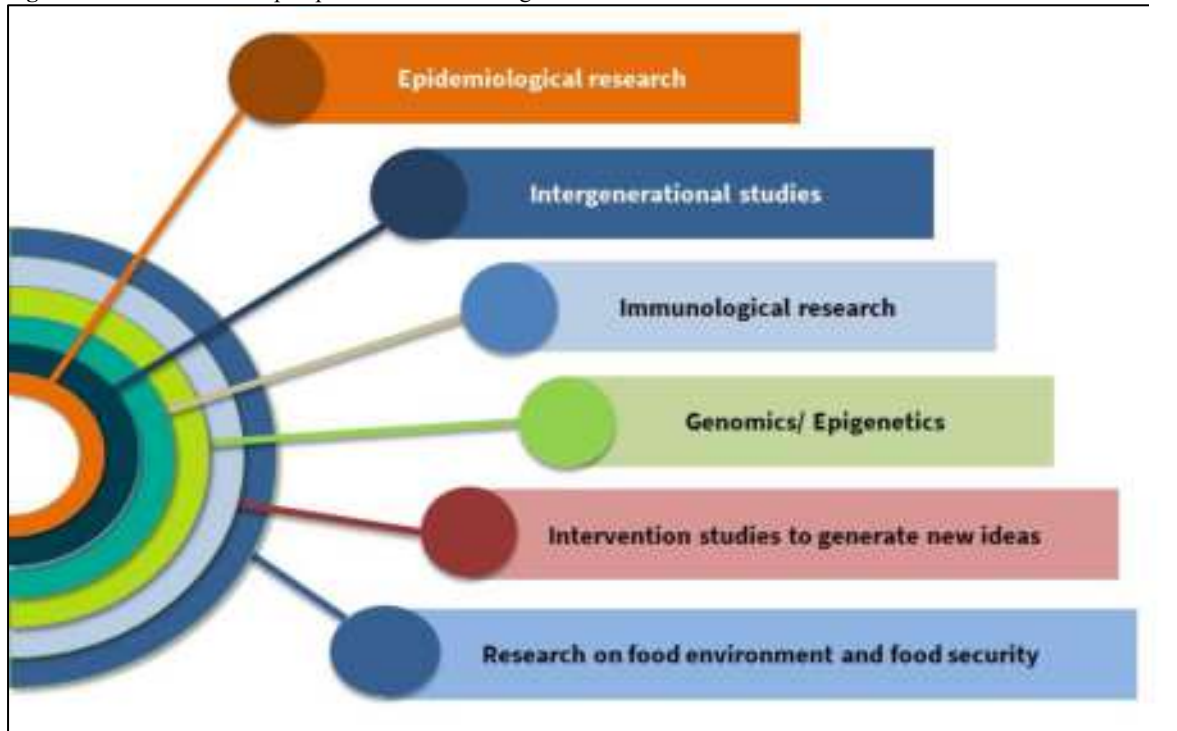


Figure 36: future scientific prospect for Cohort in stage-2



Are rural Indian famished adolescent girls' harbingers of NCDs?

How is the prospect of DM in India and body composition of rural inhabitants?

India has speedily emerged as a “hot spot” for diabetes. This is presented as impaired metabolic capability such as exhaustion of pancreatic insulin secretion and peripheral glucose utilization. It is credited to low birth weight, less lean mass, short stature which is ascribed to abundant environmental pressures leading to Indians developing diabetes at younger age and low body weight than other population. (1)

What's new about BMI in Asian population?

Body mass index associated morbidity, mortality and non-communicable diseases risk is concluded from data of white Caucasians. Conversely, many studies have endorsed high body fat with surplus metabolic agitations in Asian at low BMI. Early interventions with balanced nutrition and physical activity in Asian ethnicity for deterrence and treatment of Asian obesity related NCDs is emphasized. (22)

What is the scenario in Konkan?

Konkan is a narrow strip of land extending from Panvel to Goa on a western coast of Maharashtra has a curse of being deprived of fertile land, poor quality crops, transport facilities with poverty and illiteracy having widespread under nutrition with distinct body composition manifested as low BMI. Two decades ago Tata Memorial Hospital Rural out Reach Program-TMCROP was implemented by us in all 2200 villages in Konkan where all villagers were screened for cancer and diabetes by house hold survey along with anthropometry. Lot of socio epidemiological information of Konkan population was collected through this program. In our analysis 51.75% were found having very low BMI ($< 18.5 \text{ kg/m}^2$) and only 4.48% villagers were obese ($\text{BMI} > 25\text{-}30 \text{ kg/m}^2$) [Figure-38]. When we analyzed BMI data of 8841 patients attending our outpatient department for treatment, 34.39% patients had low BMI and only 12.86% were obese [Figure 39]. We also analyzed BMIs of 988 patients with history of NCDs. Only 24.29% patients were obese and 69.22% patients had either low or normal BMI.

Figure 38: BMI in rural population

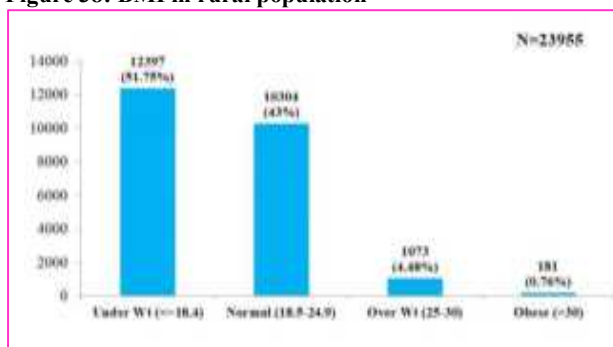
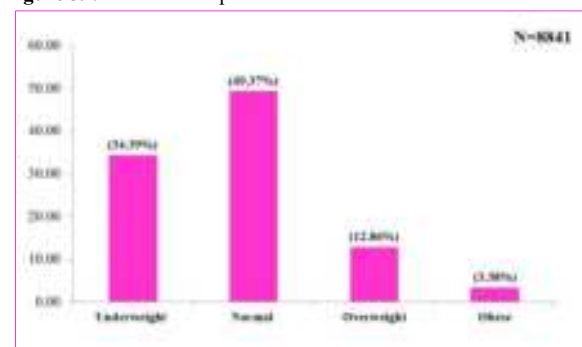


Figure 39: BMI in OPD patients



This made us investigate more about body composition of diabetic people of KOKAN. We surveyed diabetic patients and equal number of age and gender matched non diabetic controls attending our clinic and measured their body composition by bio impedance technology (TANITA Corporation, Japan). We observed low or normal BMI in (57.71 %) patients. The diabetic population in Kokan has near normal body composition. Leanness is an inherent characteristic of this population and its metabolic significance needs further investigations with a larger sample size. We have also observed that there is a high incidence of CVD in normal and underweight patients. (23) This highlights the fact that people in Konkan are not spared of having NCDs even if they lack conventional risk factors such as central obesity and sedentary life. This conclusion was derived on perceiving this population for almost two and the half decades by us.

What is the story behind “Konkan Diabetes” in ostensibly healthy looking people?

Walawalkar hospital established in 1996 is located in a remote, rural village. Our institutes existence in Konkan for three decades have witnessed wide spread under nutrition in the entire life course from birth to adulthood of the rural population (24). According to DOHaD hypothesis under nutrition increases the risk of adult Non-Communicable Diseases (NCD). (5)

Our Forte is our community network

Our hospital has a well-developed network with all nearby and distant villages and government schools for various community programs. It was noticed that in spite of this extensive under nutrition which presents as lean body composition, there is high incidence of diabetes and hypertension which is comparable to urban areas (25).

This made us to review our own data of last 25 years to explore the roots of diabetes and hypertension despite having leanness. We analyzed data of children, adolescent girls, pregnant women, neonates, adults attending hospital and outdoor screening camps in villages covering the entire life cycle milestones.

While in theory increased nutritional investments by mother during pregnancy may protect against diabetes in the offspring. Furthermore, shorter mothers are much greater risk of gestational diabetes than taller mothers. This highlights how reduced metabolic capacity in one generation increases diabetic risk in the next generation (1).

Our Institute is located in a remote village named DERVAN in Chiplun taluka from Ratnagiri District. Konkan is a narrow strip of land ranging from Panvel to Goa.

Findings from pregnancy studies

We have also generated evidence across life course using data from hospital and community clinics (Figure 39). Our unpublished data on more than 8000 pregnant women registered in our antenatal clinics had shown low BMI in pregnancy reflecting poor fetal growth. We decided to move beyond pregnancy and analyzed fetal growth of 1597 pregnant women and found increased IUGR as well as growth faltering in late trimester. (26) Implications of poor fetal growth were confirmed when we studied more than 800 mothers and their placentas at the time of delivery. Low birth weight (LBW) was observed in more than 40%. Mothers with low placental weight had increased likelihood of delivering low birth weight, stunted baby. Shorter mothers had high likelihood of producing a stunted baby. This reinforced the need to improve nutritional status of women in Konkan region. (27)

Our two studies among pregnant women found poor iodine status at delivery as well as high prevalence of gestational diabetes mellitus (GDM). There was low median UIC at delivery among pregnant women in our region which may adversely affect fetal neurodevelopment. (28) About 20% of pregnant women with low BMI are having Gestational diabetes and half of them are diagnosed in second trimester. (29)

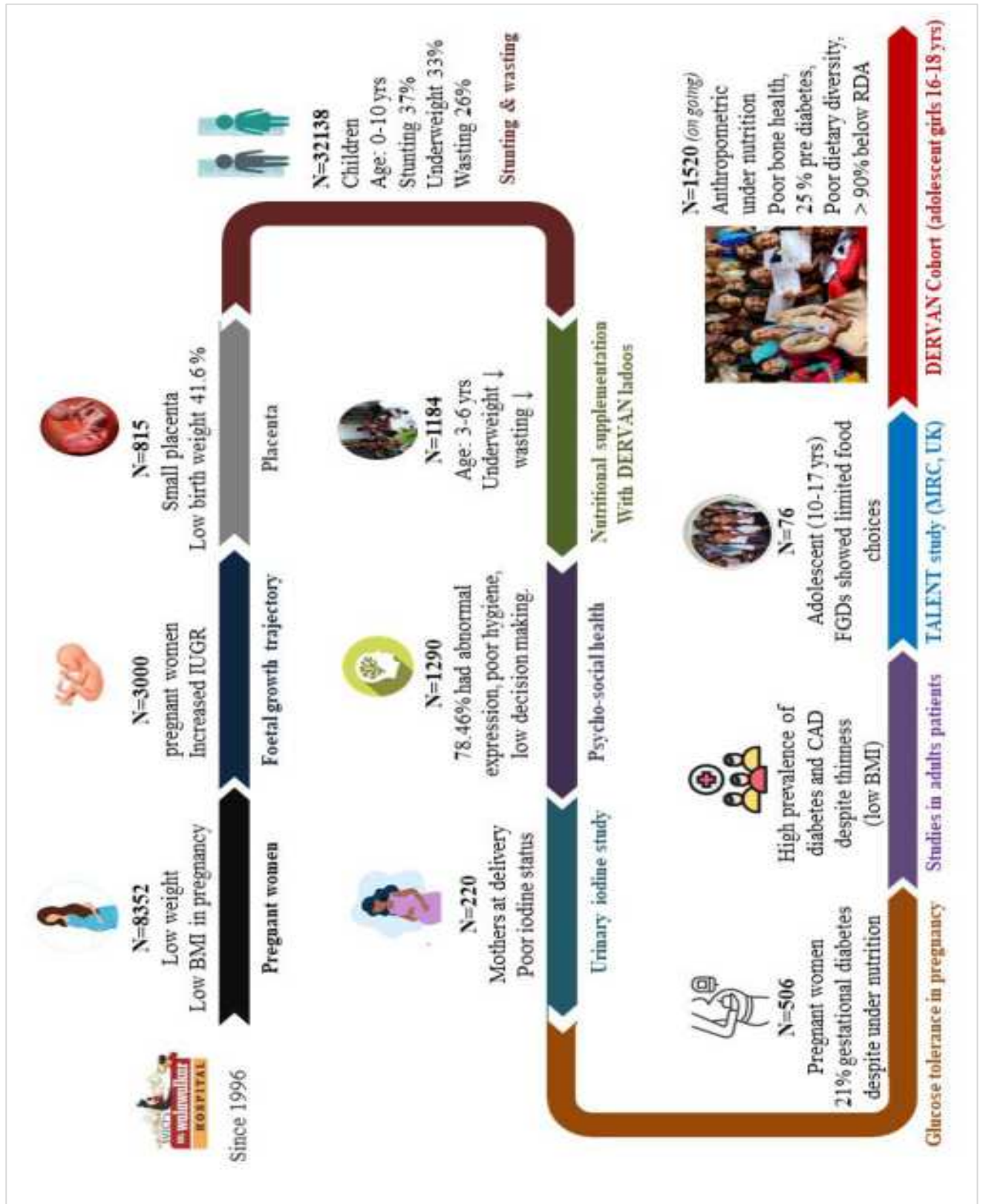
Data generated through Anganwadi clinics showed high prevalence of stunting, wasting and underweight among 0-10 years old children (25) again underlining poor nutritional status in young children. Hence we decided to improve nutritional status of Anganwadi children. We designed nutritious ladoos and using



local ingredients and supplemented them for 5 months. We were able to observe improvement in weight and wasting but there was no improvement observed in stunting which indicates long term under nourishment. (30) A study on more than 1200 adolescent girls found poor hygiene and low decision making and abnormal expression. (31). another study on small number of adolescent girls showed strong association between poor nutritional status (deficiencies of calcium, zinc and folate) and psychological impairment. (32) Adolescent girls also had micronutrient intake below RDA. (33)



Figure 40: Published evidences since last 26 years



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The Team of DERVAN cohort

| | |
|------------------------|---|
| Principal Investigator | Dr Suvarna Patil MD Medicine Professor, BKL Walawalkar Rural Medical College &Hospital, Dervan |
| Co-investigator | Dr Netaji Patil , Radiologist Radiology Dept, BKL Walawalkar Rural Medical College &Hospital, Dervan |

Experts in DERVAN cohort

| | |
|---|---|
| Dr Arvind Yadav Dr Anup Nilawar | Professor M.Sc. PhD, Biochemistry. Professor MD Biochemistry HOD, Biochemistry |
| Dr.Gajanan Velhal | M.D. Professor and HOD community medicine |
| Dr Vinod Choudhari Dr Sadanand Shetye | MD. Professor, Pediatrics DNB. Assistant Professor, Pediatrics |
| Dr Anagha Modak | MD. Professor and HOD, Obstetrics and Gynecology |
| Dr Vijay Dombale | MD. Professor and HOD, Pathology |
| Dr Asavari Modak | BDS. Dentist |
| Dr.Padma | M.D. Psy. Assistant professor |
| Dr Rohit Bhat | Senior Scientist PhD Medicinal Chemistry Medicinal Biochemistry |
| Mr Charudatta Joglekar | M.Sc, MS Statistics |
| Dr. Smita Ajgaonkar | D.M. Endocrinology New Jersey, USA |
| Dr Ulka Banawali Mrs. Rachana Mohite | Nutritionist Nirmala Niketan, Mumbai B Sc, dietetics |
| Miss Rupali Chavan Miss Swati Sonawane | M.A. Clinical Psychology M. A. Clinical Psychology |
| Mr Ajit Nandoskar | B. Sc. DMLT, Lab Technician |

Cohort staff

| | |
|-------------------|--|
| Project In charge | Dr Asmita Jadhav, BHMS |
| Statistician | Mr Omkar Dervankar, MSc Mathematics |
| Dietician | Miss Pralobhana, Deorukhkar PG Dietetics |
| Dietician | Miss Ravina Bare, PG Dietetics |
| Psychologist | Ms Shivani Takale , MA Psychology |
| Lab Technician | Mrs Pallavi Bhat, BSc |
| Lab Technician | Mr Ankit Kud, MSc Chemistry |

| | |
|---------------------|------------------------------------|
| Lab Technician | Mrs Rutuja Mohire, BSc MLT, DMLT |
| Lab Technician | Miss Kirti Kumbhar, BSc ADMLT |
| Nurse | Mrs Sanavi Yadav, RGNM |
| Nurse | Miss Dhanashree Sutar, BSc Nursing |
| MSW | Miss Shraddha Kharade, MSW |
| MSW | Ms Jae Sawant, MSW |
| Data Entry Operator | Mr Tushar Humbare BSc IT |

External review committee

| | |
|-------------------------------|--|
| Chairman | Dr.Rita Mulherkar, Scientist, Chairman & Retd. Professor, Mulherkar Lab, ACTREC, Navi Mumbai |
| Anthropologist | Dr. R.K.Mutatkar |
| Pathologist | Dr. Anand Deshpande |
| Gastroenterologist | Dr.Anand Joshi |
| Nutritionist | Dr.Veena Yardi |
| Community Gynecologist | Dr. K.R.Mutatkar |

Scientific Advisory Committee (SAC)

Padmavibhushan Dr. Anil Kakodkar (Chairman)

Member, Atomic Energy Centre & INAE Satish Dhawan Chair of Engineering Eminence

Padmabhushan Dr. T. Ramasami,

Scientist, Researcher, Social Activist, Administrator

Former Secretary to Govt. of India; Ministry of Science & Technology

Dr. Rita Mulherkar

Scientist, Researcher, Administrator

Ex. Chairman & Professor, Mulherkar Lab, ACTREC, Navi Mumbai

Dr. Shripad Banavali

Director of Academics, Tata Memorial Centre

Professor & Head, Dept. of Medical Oncology,

Tata Memorial Centre, Mumbai

Prof. B. Ravi

Engineer, Researcher, Educationist

Institute Chair Professor,

Mechanical Engineering Department, IIT, Powai

Shri Chandrashekhar S. Garde

Engineer, Researcher

Professor, LMISTE

Dept. of Engineering & Applied Sciences

Vishwakarma Institute of Information Technology, Pune

Dr. Arvind Natu

Senior Scientist in National Chemical Laboratory

Indian Institute for Science Education and Research (IISER)

Shri Jayantkumar Banthia

Medical Administrator, Social Activist

Chairman, SICOM & Ex-Chief Secretary, Govt. of Maharashtra

Vikas Walawalkar (Permanent Member)

Managing Trustee, Shri Vithalrao Joshi Charities Trust

Advisors & mentors

| | | |
|------------------------|---|---|
| Dr. Sunil Nadkarni | Senior Orthopaedic and Spine Surgeon for Back and Neck Pain | Researcher and clinical advisor |
| Dr. Jagadish Pai. | Exec. Director, Protein Foods & Nutrition Development Association of India (PFNDIAI) | Food technologists and mentor for nutritional aspects |
| Dr. Neelam Shirsat | Ph.D. Scientific Officer H <i>Tata Memorial Centre, Kharghar</i> | Geneticist |
| Dr. Phulrenu Chauhan | Endocrinologist <i>Hinduja Hospital, Mumbai</i> | Endocrinologist |
| Dr. Jyoti Iyer | Ex-Vice-president Biocon Research, Limited, Bangalore | Biotechnologist with industrial experience |
| Dr. Jyoti Kode | Scientific Officer G, <i>Tata Memorial Centre, Kharghar</i> | Immunologist |
| Dr. Laxmi Rao, | Assistant director, <i>Central Bee Research and Training Institute (CBRTI)</i> | Expert in Honey bee harvesting |
| Mr Amit Salvi | Senior Scientist, TCS | Aerospace engineer |
| Dr. Anagha Sant | MD (Homeopathy), Pune | Cosmetologist and consultant for cosmetic products |
| Dr. Vaishali Deshmukh | DNB (Paediatrics) Child and Adolescent Physician, Deenanath Mangeshkar Hospital and research centre | Adolescent psychologists and counselor |
| Dr Anajali Ganpule-Rao | PhD Nutrition, Health Science, IMMANA Post-Doctoral Fellow Senior Research Associate, Centre for chronic disease control, New Delhi | Food security and food environment |
| Mrs Vaishali Deshpande | Consultant Body composition and Clinical Research Member Secretary of Ethical Research Initiative Pune | Anthropologist and ethics expert |

Acknowledgement

This project has been funded by Rajiv Gandhi Science & Technology Commission (RGSTC), Mumbai. We acknowledge and thank RGSTC, for their generous funding, support, mentorship and guidance. The infrastructure, lab facilities, guidance and mentorship has been provided by SVJCT's BKL Walawalkar Rural Medical college, Ratnagiri, Maharashtra. The cohort team acknowledges the support and thanks BKL Walawalkar Rural Medical College.



DERVAN location

PLEASE CONTACT US AT

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B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



At Kasarwadi, Post Sawarda, Taluka Chiplun,
Dist. Ratnagiri - 415606, Maharashtra State, INDIA
Tel. : +91 02355 264636 / 264637
Fax : +91 02355 264693 Email : info@bklwrmc.com
Website : www.walawalkarmedicalcollege.com
www.bklwrmc.com

Date: 31/12/2020

SUMMARY REPORT OF CLEFT LIP AND PALATE SURGERIES

- **NAME OF COLLABORATIVE/PARTNER AGENCIES**

Akila Bharatha Mahila Seva Samaja (ABMSS) , PERSISTENT FOUNDATION,
Deutsche Cleft German cleft children's Aids society

- **NAME OF SURGEON: DR. NISHEET AGNI (Oral And MaxilloFacial Surgeon)**

| SR NO | Year | Number of surgeries carried out |
|-------|-----------|---------------------------------|
| 1 | 2017-2018 | 51 |
| 2 | 2018-2019 | 22 |
| 3 | 2019-2020 | 05 |

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



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Dist. Ratnagiri - 415606, Maharashtra State, INDIA
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Website : www.walawalkarmedicalcollege.com
www.bklwrmc.com

SAMPLE OF PHOTOS “CLEFT LIP AND PALATE SURGERIES”





Shri Vithalrao Joshi Charities Trust's
**B. K. L. WALAWALKAR HOSPITAL,
DIAGNOSTIC & RESEARCH CENTRE**

ISO 9001: 2008 Certified

Kasarwadi, At Post-Sawarde Taluka-Chiplun, Dist. Ratnagiri - 415606.

Tel: +91 02355 264137 / 264149 Fax : +91 02355 264181

Email: info@walawalkarhospital.com Website: www.walawalkarhospital.com

Outward No. SVJCT/BKLWH/ 414/2018

Date: 18.09.2018

Fees Memo No.: 2017-18-MDL-01

To,

General Secretary

Akila Bharatha Mahila Seva Samaja (ABMSS)

C4, Metro Business Centre

#756, 80 Feet Road, Koramangala 4th Block

Bangalore 560034, Karnataka, India

Sub: Fees Memo 2017-18

Payment received for the financial year 2017-18.

| Sr. No. | Amount (INR) | Date | Cheque No. / UTR No. | Month | Towards | No of Surgeries |
|---------|--------------|------------|------------------------|------------------------|------------------------------------|-----------------|
| 1 | 34,300 | 18.08.2017 | YES / N230170041343562 | April, May and June 17 | Hospital charges for Cleft Surgery | 09 |
| 2 | 53,900 | 13.09.2017 | YES / N256170047250262 | July and August 17 | Hospital charges for Cleft Surgery | 08 |
| 3 | 13,720 | 18.09.2017 | SBI / 738209 | April, May and June 17 | Hospital charges for Cleft Surgery | 09 |
| 4 | 15,680 | 04.11.2017 | YES / N308170059321631 | September 17 | Hospital charges for Cleft Surgery | 04 |
| 6 | 14,259 | 14.11.2017 | SBI / 738283 | September 17 | Hospital charges for Cleft Surgery | 04 |
| 7 | 47,040 | 09.01.2018 | YES / N009180076489461 | Oct and Nov 17 | Hospital charges for Cleft Surgery | 09 |
| 8 | 31,360 | 27.03.2018 | YES / N086180098272275 | January and Feb 18 | Hospital charges for Cleft Surgery | 08 |

For Shri Vithalrao Joshi Charities Trust's B K L Walawalkar Hospital Diagnostic & Research Centre

Name: Dr. Suvarna N. Patil
Designation: Medical Director

S.V.J.C.T.S.B.K.L.Walawalkar
Hospital, Diagnostic & Research Centre
Shreeksheeta Darvan
Tal. Chiplun, Dist. Ratnagiri

Seal:





Shri Vithalrao Joshi Charities Trust's
B. K. L. WALAWALKAR HOSPITAL,
DIAGNOSTIC & RESEARCH CENTRE

ISO 9001: 2008 Certified

Kasarwadi, At Post-Sawarde Taluka-Chiplun, Dist. Ratnagiri, Maharashtra - 415606.

Tel.: +91 02355 264137 / 264149 Fax : +91 02355 264181

Email: info@walawalkarhospital.com Webiste:www.walawalkarhospital.com

Outward No. SVJCT/BKLWH/267/2019

Date: 12.07.2019

Fees Memo No: 2018-19-SVJCT-01

To,

General Secretary

Akila Bharatha Mahila Seva Samaja (ABMSS)

Ground Floor, Indiqube Penta

No 51, Richmond Road

Opposite Light Square

Bangalore-560 025

Karnataka- India

SUB: Fees Memo 2018-19

Payment received for the financial year 2018-19

| SL No | Amount(INR) | Cheque/UTR No | Date | Month | Towards | No of Surgery |
|-------|-------------|------------------|------------|-----------|---|---------------|
| 1 | 15,150 | SBIN618226916438 | 14.08.2018 | April/May | Anaesthetist & Hospital Charges for Cleft surgery | 1 |
| 2 | 60,200 | N226180139601046 | 14.08.2018 | April/May | Anaesthetist & Hospital Charges for Cleft surgery | 7 |
| 3 | 15,150 | SBIN719031590144 | 31.01.2019 | November | Anaesthetist & Hospital Charges for Cleft surgery | 1 |
| 4 | 34,400 | N031190194230208 | 09.01.2019 | November | Anaesthetist & Hospital Charges for Cleft surgery | 4 |
| 5 | 15,150 | SBIN419072913017 | 13.03.2019 | September | Anaesthetist & Hospital Charges for Cleft surgery | 1 |
| 6 | 17,200 | N073190211183047 | 14.03.2019 | September | Anaesthetist & Hospital Charges for Cleft surgery | 2 |

For Shri Vithalrao Joshi Charitable Trust

B K L Walwalker Hospital Diagnostic & Research Centre

Name: Dr. Sovarna N. Patil

Designation: : Medical Director

S.V.J.C.T.S.B.K.L.Walawalkar

Hospital, Diagnostic & Research Centre

Shreekshetra Dervan

Tal. Chiplun, Dist. Ratnagiri

Seal:





Shri Vithalrao Joshi Charities Trust's
B. K. L. WALAWALKAR HOSPITAL,
DIAGNOSTIC & RESEARCH CENTRE

ISO 9001: 2008 Certified

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Tel.: +91 02355 264137 / 264149 Fax : +91 02355 264181

Email: info@walawalkarhospital.com Website: www.walawalkarhospital.com

Outward No. SVJCT/BKLWH/268/2019

Date: 12.07.2019

Fees Memo No: 2018-19-SVJCT-02

To,

General Secretary

Akila Bharatha Mahila SevaSamaja (ABMSS)

Ground Floor, Indiquebe Penta

No 51, Richmond Road

Opposite Light Square

Bangalore-560 025


Karnataka- India

SUB: Fees Memo 2018-19

Payment received for the financial year 2018-19

| SL NO | MONTH | NO OF CASES | AMOUNT | TDS | NET AMOUNT | UTR NO | DATE | TOWARDS |
|-------|-------|-------------|--------|-------|------------|------------------|------------|---|
| 1 | FEB | 6 | 51,600 | 1,032 | 50,568 | N089190217533729 | 30.03.2019 | Anaesthetist & Hospital Charges for Cleft surgery |

For ShriVithalrao Joshi Charitable Trus
B K L Walwalker Hospital Diagnostic & Research Centre

Name: Dr.  Suvarna N. Patil
Designation: Medical Director

S.V.J.C.T.S.B.K.L.Walawalkar
Hospital, Diagnostic & Research Centre
Shreekshetra Dervan
Tal. Chiplun, Dist. Ratnagiri





Shri Vithalrao Joshi Charities Trust's
B. K. L. WALAWALKAR HOSPITAL,
DIAGNOSTIC & RESEARCH CENTRE

ISO 9001: 2008 Certified

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Tel.: +91 02355 264137 / 264149 Fax : +91 02355 264181

Email: info@walawalkarhospital.com Website:www.walawalkarhospital.com

Outward No. SVJCT/BKLWH /492/2019

Fees Memo No: 2019-20-SVJCT-01

Date: 16.09.2019

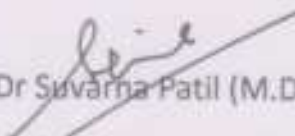
To,
General Secretary
Akila Bharatha Mahila SevaSamaja (ABMSS)
Ground Floor, Indiqube Penta
No 51, Richmond Road
Opposite Light Square
Bangalore-560 025
Karnataka- India

SUB: Fees Memo 2019-20

Payment received for the financial year 2019-20

| SL NO | MONTH | NO OF CASES | AMOUNT | TDS | NET AMOUNT | UTR NO | DATE | TOWARDS |
|-------|-------|-------------|--------|-----|------------|------------------|------------|---|
| 1 | July | 5 | 43,000 | 860 | 42,140 | N255190286308934 | 13.09.2019 | Anaesthetist & Hospital Charges for Cleft surgery |

For ShriVithalrao Joshi Charitable Trust
B K L Walwalker Hospital Diagnostic & Research Centre

Name: Dr  Patil (M.D.)

Designation: Medical Director

,B.K.L.Walawalkar Rural Medical College.

Seal
Director
B.K.L.Walawalkar Rural Medical College,
Sawarde, Kasarwadi, Pin - 415606

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



Kasarwadi, At-Post Sawarda, Taluka Chiplun,
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Website : www.walawalkarmedicalcollege.com

THE FINAL PROGRAM FOR THE SKILL TRAINING WORKSHOP 13th & 14th AUGUST 2021

To,
All Dept. HOD's,

Please note that the skill training workshop is compulsory as per the new norms of NAAC.

Please note that you give your attendance at 10 am sharp for the Inauguration, the workshop will be in Skill Lab.

All Department HOD's are requested to attend it.

13 August Friday

10.00 -10.30 Inauguration
10.30 – 01.00 pm General Surgery & Orthopedics
02.00 – 04.00 Obstetrics & Gynaecology
04.00- 05.00 Opthal & ENT

14 August Saturday

10.00 -1.00 General Medicine
11-1.00 pm Pediatrics
2.00-5.00 Forensic Medicine

Thanks & Regards,


Dr. Suvama Patil
Medical Director


Dr. Suvama Patil
Medical Director

Basic Surgical Skill Workshop 13-14 August 2021



[Signature]
DEAN




DEAN

B.K.L.Walawalkar Rural Medical College
ALKasarwadi, Post.Sawarde
Tal.Chiplun,Dist.Ratnagiri

Shri Vitthalrao Joshi Charities Trust's
B.K.L.Walawalkar Rural Medical College
Shreekshetra Dervan, Taluka-Chiplun, dist. Ratnagiri - 415606

II MBBS 2019 – 20 Batch


Skill lab Training (Johnson & Johnson)


The skill training programme is organized for 2nd MBBS Students
PG Residents by Johnson & Johnson on 18th, 19th & 20th March 2021.

So all the concerned departments are requested to allow the
student to attend the workshop on their respective batch time schedule .

| Sr No | Date | Time | Batch | Roll No | Total Students |
|----------|------------|------------|---------|---|-------------------|
| 1 | 18.03.2021 | 9am - 11am | Batch A | M19001 - M19022 | 15 |
| | | 11am - 1pm | Batch B | M19023 - M19040 | 15 |
| | | 2pm - 4 pm | Batch C | M19042 - M19061 | 15 |
| 2 | 19.03.2021 | 9am - 11am | Batch D | M19062 - M19082 | 15 |
| | | 11am - 1pm | Batch E | M19085 - M19098 | 11 |
| 3 | 20.03.2021 | 9am - 6 pm | Batch F | PG2014 - PG2020 & PG2030 - PG2037 | 15 |


Academic Chairman


Principal


Medical Director

II MBBS 2019 - 20 Batch

Skill lab Training (Johnson & Johnson)

18,19 & 20 March 2021

| Sr No | Date | Time | Batch | Batch.No | Students Name |
|-------|-----------|-------------|----------------------|----------|-----------------------------|
| 1 | 18-Mar-21 | 09am - 11am | Batch A (A1 to A15) | A1 | AGAVEKAR AARUSHI SHRIPAD |
| 2 | | | | A2 | APTE PRATIK TUSHAR |
| 3 | | | | A3 | BAHIR UDHAV DATTATRAY |
| 4 | | | | A4 | BENIWAL NEHA DEVENDRA |
| 5 | | | | A5 | BHALODI VATSAL PRAMODBHAI |
| 6 | | | | A6 | BHISE SAURABH MADHUKAR |
| 7 | | | | A7 | CHANDA AALIYAH MD SADIQUE |
| 8 | | | | A8 | DEODHAR JYOTIRJAY ABHIJIT |
| 9 | | | | A9 | DESHPANDE VAIDEHI GIRISH |
| 10 | | | | A10 | DHILE ANKITA VILAS |
| 11 | | | | A11 | DHOLE BHAWINI ONKAR |
| 12 | | | | A12 | EKMALLI SANKET HIRALAL |
| 13 | | | | A13 | GAIKWAD ANIKET SANJAY |
| 14 | | | | A14 | GAIKWAD MAITREYEE MACHINDRA |
| 15 | | | | A15 | GANGIKAR TANMAY CHANDRAKANT |

II MBBS 2019 - 20 Batch
Skill lab Training (Johnson & Johnson)
18,19 & 20 March 2021

| Sr No | Date | Time | Batch | Batch.No | Students Name |
|-------|-----------|------------------|---------------------|----------|---------------------------------|
| 16 | 18-Mar-21 | 11.00am - 1.00pm | Batch B(B1 to B15) | B1 | GAWDE VIRAJ UMESH |
| 17 | | | | B2 | GOGATE SONALI SUNIL |
| 18 | | | | B3 | GONDHALEKAR INDRANEEL AJIT |
| 19 | | | | B4 | GULIG SUJIT TANAJI |
| 20 | | | | B5 | GUPTA ARUSH ANSHUL |
| 21 | | | | B6 | GUTTE AADITYA NAGNATH |
| 22 | | | | B7 | HULAGE SURAJ MOHAN |
| 23 | | | | B8 | JADHAV MAYURI DATTATRAYA |
| 24 | | | | B9 | JADHAV SUJIT SANJAYRAO |
| 25 | | | | B10 | JETE SANDIP MADHAVRAO |
| 26 | | | | B11 | KAMDI VAISHNAVI ANILRAO |
| 27 | | | | B12 | KAPSE GITANJALI BHIMASHANKAR |
| 28 | | | | B13 | KAZI SADYA AJMUDDIN |
| 29 | | | | B14 | KESARWANI ANKUSH ANIL |
| 30 | | | | B15 | KEVARI VISHAL ANANTA |

II MBBS 2019 - 20 Batch

Skill lab Training (Johnson & Johnson)

18,19 & 20 March 2021

| Sr No | Date | Time | Batch | Batch.No | Students Name |
|-------|-----------|------------|----------------------|----------|--------------------------|
| 31 | 18-Mar-21 | 02pm - 4pm | Batch C (C1 to C15) | C1 | KILLE GAURAV SUNIL |
| 32 | | | | C2 | KORDE MRUNAL MANISH |
| 33 | | | | C3 | KOSABE CHINMAY AMOL |
| 34 | | | | C4 | KULKARNI SATYEN ATUL |
| 35 | | | | C5 | LAKADE ASHUTOSH ANANDRAO |
| 36 | | | | C6 | LOKARE AJINKYA VINESH |
| 37 | | | | C7 | MADDEWAD PRAVIN RAJKUMAR |
| 38 | | | | C8 | MALAKOTI VINAY MACHINDRA |
| 39 | | | | C9 | MANDWAL TUSHAR TUKARAM |
| 40 | | | | C10 | MOKALE VAIDEHI PRADEEP |
| 41 | | | | C11 | MOREWAR SHRIPAD NAGORAO |
| 42 | | | | C12 | MUNDADA DIVYA PANKAJ |
| 43 | | | | C13 | MURUKATE PRERNA MOHAN |
| 44 | | | | C14 | NAGVEKAR MANSI MANOJ |
| 45 | | | | C15 | NANDOSKAR DNYANAL NILESH |

| Sr No | Date | Time | Batch | Batch.No | Students Name |
|-------|-----------|-------------|----------------------|----------|--|
| 46 | 19-Mar-21 | 09am - 11am | Batch D (D1 to D15) | D1 | ORPE ASHWINI AVINASH |
| 47 | | | | D2 | PADAVALA KOTA NAGA DEEPIKA KOTESHWARA RAO |
| 48 | | | | D3 | PARAKH BHAVESH DINESH |
| 49 | | | | D4 | PATANGE RUTUJA SONAJI |
| 50 | | | | D5 | PATIL GAURAV VASUDEV |
| 51 | | | | D6 | PATIL JAHNAVI NETAJI |
| 52 | | | | D7 | PATIL TEJASWINI TANAJI |
| 53 | | | | D8 | PAWAR NUPUR SUKHDEV |
| 54 | | | | D9 | PAWAR RUCHIR SHRIRAM |
| 55 | | | | D10 | POTE SAKSHI SUDHAKAR |
| 56 | | | | D11 | POWALE ASHLESHA SAMEER |
| 57 | | | | D12 | PUJARI YOGITA MAHADEV |
| 58 | | | | D13 | QADRI MUHAMMED ISRAULHAQ |
| 59 | | | | D14 | RAJWADE AISHWARY VAIBHAV |
| 60 | | | | D15 | SAKATE CHETAN DHANPAL |

II MBBS 2019 - 20 Batch

Skill lab Training (Johnson & Johnson)

18,19 & 20 March 2021

| Sr No | Date | Time | Batch | Batch.No | Students Name |
|-------|-----------|------------------|----------------------|----------|--------------------------------|
| 61 | 19-Mar-21 | 11.00am - 1.00pm | Batch E (E1 to E11) | E1 | SAWANT ATHARV SARDAR |
| 62 | | | | E2 | SAYYED KANEEZ FATIMA RAZZAK |
| 63 | | | | E3 | SHAIKH AZHAR SHAIKH AMEERUDDIN |
| 64 | | | | E4 | SHARMA SRUSHTI VISHAL |
| 65 | | | | E5 | SHELKE SHRADDHA PRALHAD |
| 66 | | | | E6 | SHIRSATH AAKANKSHA RANJAK |
| 67 | | | | E7 | TAWADE NISHANT VIJAY |
| 68 | | | | E8 | THOTANGE VAISHNAVI SUNIL |
| 69 | | | | E9 | VETCHA JYOTSNA SRIVATSA |
| 70 | | | | E10 | WAGH VAIBHAV RAOSAHEB |
| 71 | | | | E11 | WALNUSKAR SMARNIKA SANTOSH |

PG Residents

Skill lab Training (Johnson & Johnson)

20 March 2021

| Sr No | Date | Time | Batch | Batch.No | Students Name |
|-------|-----------|------------|----------------------|----------|---|
| 72 | 20-Mar-21 | 09am - 6pm | Batch F (F1 to F15) | F1 | BAPAT SUPRIYA JITENDRA |
| 73 | | | | F2 | BHOYAR KANCHAN |
| 74 | | | | F3 | KESARKODI PRAJAKTA SUHAS |
| 75 | | | | F4 | BONDAR AKSHAY BABAN |
| 76 | | | | F5 | GAIKWAD PIYUSH VISHWANATH |
| 77 | | | | F6 | INGLE SUYASH YASHWANT |
| 78 | | | | F7 | NAGARE ROHAN RAJENDRA |
| 79 | | | | F8 | BOTHRA RUSHABH VISHWAS |
| 80 | | | | F9 | HARNALE SURAJ RAJESHWAR |
| 81 | | | | F10 | NIKAM SWAPNIL VYANKAT |
| 82 | | | | F11 | PEDDAPALLI RATAN RAJ VANSH RAVI PEDDAPALLI |
| 83 | | | | F12 | SAGADE OMKAR SHIVAJI |
| 84 | | | | F13 | SHAH SAIYAM |
| 85 | | | | F14 | SHINDE DIPAK MAHADEO |
| 86 | | | | F15 | VOTAVAT KHUSHBOO PRAKASH |

Basic Surgical Skill Johnson and Johnson 18-20 March 2021



[Signature]
DEAN




DEAN

B.K.L.Walawalkar Rural Medical College
At.Kasarwadi, Post.Sawarde
Tal.Chiplun,Dist.Ratnagiri

Basic surgical skill Course 27 to 30 Jan 2020



Dr. Sanjiv Patankar (RCE,UK) & Elanor Freeman





DEAN

Sri Lanka Medical Council
Allan Jayasinghe, Registrar
101, Galle Road, Colombo 10





Dr. Shlok Balupuri (surgeon ,UK) training BSS to medical students




DEAN

B.K.L.Walawalkar Rural Medical College
At,Kasarwadi, Post,Sawarde
Tal.Chiplun,Dist.Ratnagiri

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



At Kasarwadi, Post Sawarda, Taluka Chiplun,
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Website : www.walawalkarmedicalcollege.com
www.bklwrmc.com

Date: 31/12/2020

INDEX

Photos of collaborative activities of Gram-Mangal

| SR NO | TITLE |
|-------|--|
| 1 | Summary |
| 2 | Case record format of project |
| 3 | Photos of Training and filed work during project |
| 4 | Publication of project |

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



At Kasarwadi, Post Sawarda, Taluka Chiplun,
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Website : www.walawalkarmedicalcollege.com
www.bklwrmc.com

Date: 31/12/2020

SUMMARY REPORT OF GRAM-MANGAL

| | |
|--------------------------------------|---|
| NAME COLLABORATIVE/ PARTNER AGENCIES | GRAM MANGAL Contact Info: Tejashree, Plot No 2, Manmohan Society, Lane No 6, Karvenagar, Pune 411052 |
| PROJECT NAME | BKLGRAM |
| AIMS AND OBJECTIVES | Nutritional Assessment ,anthropometry in preschool children's |
| Involve faculties | Dr Suvarna Patil |
| Other staff of BKLWRMC | <i>Joglekar Charudatta ,Sonavane Swati, Chavan Rupali Bhat Pallavi R3, Mohite Rachana3, Deorukhakar Pralobhana P, Jadhav Dnyaneshwar A, Dervankar Omkar A</i> |
| Publication from Project | Relationship Between AnthropometricParameters and Intelligence in Preschool Children from Rural Konkan |


Medical Director
B. K. L. Walawalkar
Rural Medical College

1. Ref No

BKLGRAM
Joint pilot study by

BKL Walawalkar Hospital, Dervan, Dist-Ratnagiri

Grammangal, Aina, Dist-Palghar

2. Enrolled at 1. Dervan 2. Palghar

3. Date of Enrollment / /
DD MM YYYY

4. Name of Child:
First name Middle name Surname

5. Sex of child 1. Male 2. Female

6. Date of Birth / / Age
Years Months

7. Name of Mother:
First name Middle name Surname

CHECK LIST

| Form Name | Page no. | √ If complete |
|--------------------------|----------|------------------|
| Consent | 8 | |
| Cover page | 1 | |
| General Information | 2 | |
| Standard of Living Index | 3-4 | |
| Nutrition | 5-7 | |

General information

8.Contact details

Address:

9.Phone: **Mobile:** _____

10. Birth weight of the child _____ gm **11.** Birth order _____

12. Place of Delivery 1. Hospital 2. Home 3. PHC 4. Other

13. Type of delivery 1. Normal 2. LSCS 3. Forcep

14. Occupation father _____ **15.** Occupation of mother _____

Go to check list on page 2

.....

Standard of Living Index (SLI)

16. Family type 1. Nuclear 2. Joint 3. Extended
17. Number of persons (specify): _____
18. What is the main source of drinking water for members of your household?
- 1) Piped water 2) Hand pump 3) Well 4) Public tap/p.hand pump/ p. well
5) River/ Stream 6) Tanker 7) Other
19. What kind of toilet facility does your household have?
- 1) Own flush toilet 2) Shared flush toilet 3) Public flush toilet
4) Own toilet/Latrine 5) Shared pit toilet/Latrine 6) Public pit toilet/Latrine
7) No facility/Bush/Field 8) others (Specify) _____
20. What is the main source of lighting for your household?
- 1) Electricity 2) Kerosene 3) Oil 4) Gas 5) Other (Specify) _____
21. How many rooms are there in your household?
22. Do you have a separate room that is used as a kitchen? 1. Yes 2. No
23. What type of fuel does your household mainly use for cooking?
- 1) Electricity 2) Wood 3) Crop residues 4) Liquid petroleum gas
5) Biogas 6) Coal/Charcoal/Coke 7) Kerosene 8) Other _____ Specify
24. Does this household own this house or any other house? 1. Yes 2. No
25. Type of house (record observation)
- | | |
|-------------|---------------|
| Roof _____ | 1) Pucca |
| Walls _____ | 2) Semi-pucca |
| Floor _____ | 3) Kachha |
26. Does this household own any agriculture land?
1. Yes. 2. No If Yes How many acres? _____
27. Out of this how much is irrigated land? _____ Acres.
28. Does this household own any livestock? 1. Yes 2. No If Yes number ____
29. Does the household own any of the following?
Please circle 1. Yes 2. No for each item.

| | | | |
|-----------------------------|--------------|-------------------------------|--------------|
| (1) Mattress | 1) Yes 2) No | (2) Pressure cooker | 1) Yes 2) No |
| (3) Chair | 1) Yes 2) No | (4) Cot/Bed | 1) Yes 2) No |
| (5) Table | 1) Yes 2) No | (6) Clock/Watch | 1) Yes 2) No |
| (7) Electric fan | 1) Yes 2) No | (8) Bicycle | 1) Yes 2) No |
| (9) Radio/Transistor | 1) Yes 2) No | (10) Television (B&W) | 1) Yes 2) No |
| (11) Television (colour) | 1) Yes 2) No | (12) Moped/Scooter/Motorcycle | 1) Yes 2) No |
| (13) Big Car/Small Car/Jeep | 1) Yes 2) No | (14) Water pump | 1) Yes 2) No |
| (15) Bullock cart | 1) Yes 2) No | (16) Thresher | 1) Yes 2) No |
| (17) Tractor | 1) Yes 2) No | (18) Refrigerator | 1) Yes 2) No |
| (19) Telephone | 1) Yes 2) No | (20) Sewing machine | 1) Yes 2) No |
| (21) Mobile | 1) Yes 2) No | (22) MP ₃ Player | 1) Yes 2) No |
| (23) Computer | 1) Yes 2) No | (24) Laptop | 1) Yes 2) No |

Go to checklist on page 2

30. Anthropometry (Child)

Enter 1 if measured on right hand

| | | Set 1 | Set 2 |
|-----------------|------|-------|-------|
| Weight | (Kg) | | |
| Standing height | (cm) | | |
| Head circ | (cm) | | |
| Mid arm circ | (cm) | | |

Go to checklist on page 2

Nutritional Assessment for 3-5 years Children

१. बाळाच्या जन्मानंतर लगेचच अंगावरचे घट्ट दुध पाजले का ? होय नाही
२. तुमच्या मुलाला फक्त अंगावरचे दुध (Exclusive Breast Feeding) किती महीने दिले ? महीने
३. तुमच्या मुलाला अंगावरचे दुध (Breast Milk) पुरेसे मिळाले का? होय नाही
४. पहिल्या सहा महीन्यात अंगावरच्या दुधाव्यतिरिक्त दुसरे कोणते दुध दिलेत का? होय नाही
दिले असल्यास कोणते?
 गायीचे म्हशीचे शेळीचे पावडरचे इतर
५. तुमच्या मुलाला लहानपणी शुटी पाजत होतात का ? होय नाही
६. तुमच्या मुलाला पुरक आहार (Weaning Food) कितव्या महिन्यापासून चालू केला ? महीने
७. तुमच्या मुलाला पुरक आहार म्हणून कोणकोणते पदार्थ दिलेत ?
.....
८. तुमचं मुल संपूर्ण जेवण केव्हापासून जेवायला लागले ? महीने
९. तुमच्या मुलाला दिवसभर कोण आवू, पिवू घालते ? आई इतर
१०. तुमचे मुल वरचेवर आजारी पडते का ? होय नाही
११. तुमच्या मुलाला कोणती Food Allergy आहे का ? होय नाही
असल्यास

१२. तुमच्या मुलाचे आवडते पदार्थ कोणते ?
.....
१३. तुमच्या मुलाला न आवडणारे पदार्थ कोणते ?
.....
१४. तुम्ही तुमच्या मुलाला कोणते टॉनिक (Food Supplement/Multivitamin) देता का? होय नाही
.....
१५. तुमचे मुल रूतुमानानुसार उपलब्ध असणारी फळे खाते का ?
 होय नाही
१६. तुमचे मुल रूतुमानानुसार उपलब्ध असणारी भाज्या खाते का ?
 होय नाही
१७. तुमचे मुल कुथ व कुथजन्य पदार्थ खाते का ? होय नाही
१८. तुमचं मुल मांसाहार खाते का ? होय नाही
१९. तुमचे मुल चिप्स, कुरकुरे, चॉकलेट्स यापैकी पदार्थ खाते का?
 होय नाही
२०. तुमच्या मुलाला भूक लागलेली तुम्हास कसे समजते ?
.....
२१. विवसभरात तुमचे मुल किती वेळा खाते ?
२२. मुलाच्या वाढीसाठी तुम्ही मुलाच्या आहारात विशिष्ट बक्ष
केलेत का ? होय नाही
.....

24 hrs. Diet Recall

| वेळ | पदार्थ |
|----------|--------|
| नस्यता | |
| मध्याह्न | |
| दुपारी | |
| सायंकाळी | |
| रात्री | |

Go to checklist on page 2

पाल्याच्या सहभागासाठी पालकांचे संमतीपत्र

दिनांक : / /

भ.क.ल.पालावलकर ग्रामीण वैद्यकीय महाविद्यालय, रुग्णालय,
रोगनिदान व संशोधन केंद्र, ठेरण व ग्राम मंगल पालघर यांच्यावतीने ३ ते ६
वर्षे वयोगटातील मुली व मुले यांच्यासाठी "....."

हा संशोधन प्रकल्प राबविण्यात येत आहे. या प्रकल्पाला रुग्णालयाच्या
नितीमत्ता समितीने मान्यता दिलेली आहे. या प्रकल्पात आपला /आपली पाल्य
पु.....
यान /हिना सहभागी करून घेण्यासाठी आम्ही आपणांस मंजुरी देण्याची विनंती
करीत आहोत. या प्रकल्पांतर्गत आपल्याला आहार, आणव्यापिण्याच्या सवयी,
राहणीमान, घरातील स्वयंपाकाची पध्दत, तसेच शारीरिक व मानसिक
आरोग्याबद्दल माहिती विचारली जाईल. या माहितीचा उपयोग अभ्यासासाठी
करण्यात येईल. तसेच आपण दिलेली माहिती संपुर्णपणे गुप्त स्वरूपात ठेवण्यात
येईल. त्याचा वापर इतर कुठेही व कुठल्याही प्रकारे केला जाणार नाही. तरी
आपण या प्रकल्पात आपल्या पाल्याच्या सहभागासाठी संमती घ्यावी हि विनंती.

आपल्या या प्रकल्पात आमच्या पाल्याला सहभागी करून घेण्यासाठी
मी/आम्ही संमती देत आहोत/ आहे. या संमती साठी आमच्यावर कोणीही व
कोणत्याही प्रकारचा दबाव टाकण्यात आलेला नाही.

आईचे नांव : सही/अंगठा

वडिलांचे नांव : सही/अंगठा

Go to checklist on page 2



Date: 31/12/2020

Photos of collaborative activities of Gram-Mangal



Training and sensitization of Project staff



Training and sensitization of Project staff



Date: 31/12/2020

Photos of collaborative activities of Gram-Mangal



Filed work of Project staff



Filed work of Project staff

Relationship Between Anthropometric Parameters and Intelligence in Preschool Children from Rural Konkan

Patil Suvarna N¹, Joglekar Charudatta², Sonavane Swati³, Chavan Rupali³, Bhat Pallavi R³, Mohite Rachana³,
Deorukhakar Pralobhana P³, Jadhav Dnyaneshwar A³, Dervankar Omkar A³

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BKL Walawalkar Hospital and Rural Medical College, Sawarde, Chiplun, Ratnagiri, Maharashtra, India.

³ Regional Centre for Adolescent Health and Nutrition,
BKL Walawalkar Hospital and Rural Medical College, Sawarde, Chiplun, Ratna giri, Maharashtra, India.

ABSTRACT

Aim: To study the association between anthropometric parameters and intelligence in preschool children from Rural KONKAN. **Method:** Children between 3 to 7 years of age were examined for anthropometry, dietary recall, and Intelligence (Intelligent Quotient-IQ) assessment from rural anganwadis. The IQ test was performed by clinical psychologists using Binet-Kamat test of intelligence (version 4). Nutritional information was collected from 24-hour dietary recall and food diversity. **Results:** Results were interpreted using Prorated IQ. We studied 159 (82 boys, 78 girls), out of which 15 (9.6%) had a higher IQ. 25 (15.8%) were born LBW. Anthropometry classification showed that 61 (38.4%) were stunted, and 25 (15.7%) were wasted. According to IOTF, 72 (46%) were thin, 83 (52%) were healthy, and 3 (2%) were overweight. We found that there is no significant difference in IQ with respect to anthropometric parameters, birth weight, and nutritional status. **Conclusion:** We could not find any association of anthropometric parameters with IQ despite the high prevalence of malnutrition.

KEYWORDS: Malnutrition; IQ; India; Rural.

INTRODUCTION

Cognitive development helps children to think about and understand the world around them. The brain plays a vital role in cognitive development. Cognitive ability is intelligence quotient (IQ), which is a detailed assessment of reason, language, and memory.

A report in 2016 on child cognitive development from South Africa identified significant risk factors as well as protective factors [1]. A review by Almond and Currie discusses the impact of intrauterine and early childhood environment on a child's health in adulthood [2].

According to a report in 2017, India's under-five mortality rate had fallen by 66% since 1990. This

is a considerable amount of progress, though it still falls short of current goals. It means many infants survive and face challenges in their future life.

Premature delivery carries a great risk for newborn infants. Besides the increased mortality rate and increased incidence of morbidities, prematurity is a significant risk factor for the future neurodevelopmental delay. Cognitive impairment had been reported in about 40% of meager birth weight (VLBW) infants at school age. In comparison with term infants, VLBW infants are more likely to have lower scores in executive functions and suboptimal attentive skills [3].

Low birth weight (LBW), a proxy for IUGR, is

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associated with poor cognitive development [4]. Poverty can have a negative impact on cognitive development, but most of the studies have been carried out in urban populations [5].

With this background, we have studied intelligence in rural children with poor socioeconomic status, and we have tried to explore the correlation of body composition with intelligence.

Our objective was to investigate anthropometry and cognition (IQ) in rural preschool children from Anganwadi in KONKAN region of Maharashtra. Anganwadi is a type of rural mother and childcare center in India.

MATERIAL AND METHODOLOGY

Study design: Descriptive study

Ethical approval: Village authorities gave the written permission to study the children in anganwadis. Informed written consent was obtained from either parent of the selected child. Ethical approval was granted by the Ethics committee of BKL Walawalkar Rural Medical College and Hospital. (Reference no: EC/755/INST/MH/2015/RR-18).

Study duration and time frame: The study was conducted between 1st Jan - 30th June 2019, i.e., six months

Study location: The study was carried out at BKL Walawalkar Hospital Dervan situated in Ratnagiri district Maharashtra, India.

Study population: Inclusion criteria: Children were enrolled from 10 different anganwadis around 50 km from the hospital. We included 3-6 years old healthy children from anganwadis.

Exclusion criteria: Those with severe physical or mental disorders were excluded.

Sample size: 159 children were studied.

Methodology: These children were examined for anthropometry, dietary recall, and cognitive assessment. The birth weight data were collected from the antenatal cards & Anganwadi records. Nutritional information was obtained from 24-hour dietary recall and food diversity. Cognitive (IQ) testing was a significant activity; hence, we selected rural anganwadis having a separate room. This created a conducive environment for the child to undergo the examination.

IQ assessment was performed by Binet-Kamat test (BKT) of intelligence (version 4) [6]. This test is an Indian adaptation, a modified version of the Stanford Binet Scale measuring the intelligence of Indian children. It is an age scale where the tests are grouped into age levels extending from 3 years to a superior adult level. Each age level consists of six tests. The analysis includes both verbal

and performance tests. It provides an estimate of Mental Age (MA) and IQ from 3-22 years. There are six main cognitive factors (Language, Memory, Conceptual Thinking, Reasoning, Visual Motor, and Social Intelligence) and five sub cognitive factors (Meaningful Memory, Non-Meaningful Memory, Non-Verbal reasoning, Verbal Reasoning, Numerical Reasoning). The reliability of the test is reportedly above 0.7, and the validity of this test for healthy children against the estimation of intelligence quotient by teachers is 0.5.

We selected BKT as it was cost-effective, easy to administer, takes less time, but it has not been updated since 1960. This issue has been discussed by Rupesh & Kumble [7], and a prorated IQ using the Flynn effect has been suggested as a solution. So the analysis was done according to the prorated IQ score. Stanford-Binet Fifth Edition (SB5) classification was used for analysis [8].

Statistical Methods: Data was presented as mean (standard deviation) and as percentages for frequencies. The chi-square test made a comparison of categorical outcomes between groups, and that of continuous outcomes was by t-test. Statistical analysis was performed using SPSS 25.0 (SPSS Inc., Chicago).

| IQ Range (deviation IQ) | IQ Classification |
|-------------------------|--------------------------------|
| 145–160 | Very gifted or highly advanced |
| 130–144 | Gifted or very advanced |
| 120–129 | Superior |
| 110–119 | High average |
| 90–109 | Average |
| 80–89 | Low average |
| 70–79 | Borderline impaired or delayed |
| 55–69 | Mildly impaired or delayed |
| 40–54 | Moderately impaired or delayed |

RESULTS

Results were interpreted using Prorated IQ. We studied 159 (82 boys, 78 girls) out of which, 15 (9.6%) had higher IQ levels. 25 (15.8%) were born LBW. Anthropometry classification showed that 61 (38.4%) were stunted and 25(15.7%) were wasted. According to the International Obesity Task Force (IOTF), 72 (46%) were thin, 83(52%) were normal, and 3 (2%) were overweight.

90% of scores fall within two standard deviations (between 80 and 129). Outliers beyond those points represent only a small portion of the population, which means that only a small percentage of children have a very high IQ (above 129).

Table 1. Analysis of IQ and calculation of Prorated IQ

| IQ | ORIGINAL (%) | PRORATED (%) |
|-------------|--------------|--------------|
| VERY GIFTED | 9 (5.6) | 2(1.37) |
| GIFTED | 15 (9.4) | 13(8.1) |
| SUPERIOR | 24 (15.0) | 19(11.9) |
| HIGH | 48 (30) | 56(35) |
| AVERAGE | 58 (36.3) | 66(41.3) |
| LOW AVERAGE | 5(3.1) | 3(1.9) |

Table 2. Association between IQ and anthropometric parameters. (%)

| IQ | Wasting 25 (15.6) | Stunted 61 (38) | Under weight 21 (13.12) | Normal 75 (47.5) | Head Circumference mean (SD) | LBW 25 (15.8) |
|-------------|-------------------|-----------------|-------------------------|------------------|------------------------------|---------------|
| Very gifted | 1 (4) | 1 (1.6) | 1 (4.8) | 1 (1.3) | 47.75 (0.35) | 0 |
| Gifted | 0 | 4 (6.6) | 0 | 5 (6.7) | 47.26 (1.68) | 1 (4) |
| Superior | 4 (21.1) | 5 (8.2) | 4 (19) | 5 (6.7) | 47.47 (1.59) | 2 (8) |
| High | 11 (44) | 24 (39.3) | 7 (33.3) | 31 (41.3) | 47.26 (1.74) | 6 (24) |
| Average | 9 (36) | 26 (42.6) | 9 (42.9) | 33 (44) | 47.45 (1.51) | 15 (60) |
| Low average | 0 | 1 (1.6) | 0 | 0 | 47.30 (1.13) | 1 (4) |

Table 2 shows n (%) of wasting, stunted, underweight, normal and LBW and mean (SD) for head circumference. Stunting refers to those below -2 SD score for height (gender, age) using the World Health Organization (WHO) criteria. Wasting refers to those below -2 SD for the weight for height (gender, age) and underweight refers to those below -2 SD score for the weight (gender, age) using WHO criteria. Usually refers to those who neither stunted nor wasted nor underweight.

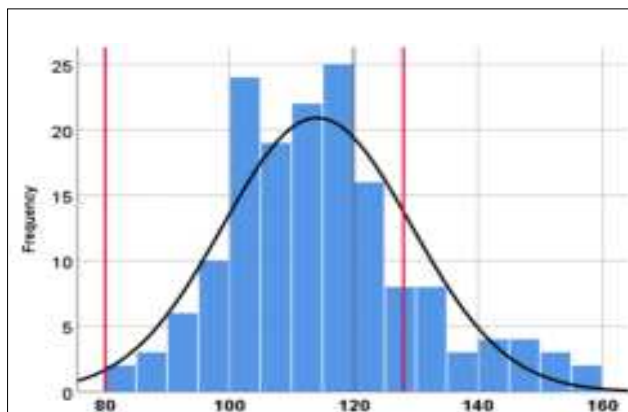


Fig 1 : Normal distribution of original IQ

We used the chi-square (χ^2) test to see the association of Prorated IQ of wasting, stunted,

underweight and LBW children, normal children. So we found that there is no significant difference in IQ concerning anthropometric parameters and birth weight. We have nutritional data in the form of 24 hr recall and food diversity, and we found no association of IQ with food diversity ($p > 0.05$ for all).

The number of children in normal range according to original IQ was 135(85%), and in prorated, it changes to 144 (91%).

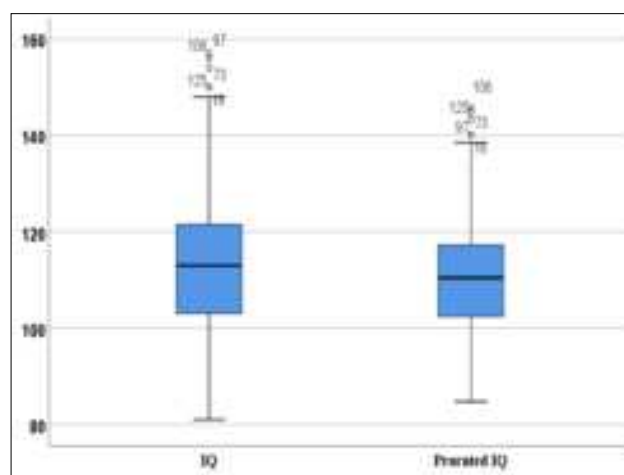


Fig 2. Normal distribution of prorated IQ

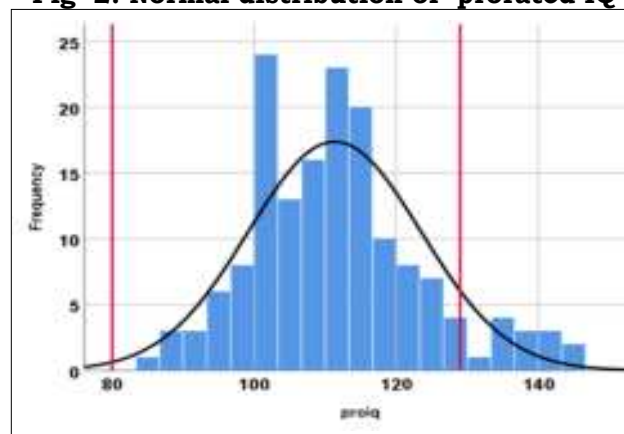


Fig 3. Median and interquartile range of IQ and prorated IQ

Strength of this study- There are no reports about the intelligence of preschool in rural KONKAN in the literature. This study was our first attempt to get clues about cognition in young children of KONKAN area.

DISCUSSION

We measured anthropometric parameters, recorded diet, and studied intelligence in a cross-section of preschool children from anganwadis in rural KONKAN. We found that there was no association in prorated IQ and birth weight as well as other anthropometric parameters. There is no significant difference between the prorated IQ of normal birth weight and LBW.

The human brain exhibits dramatic biological

development during the preschool years and roughly quadruples in weight before the age of six, when it has acquired approximately 90% of its adult volume. However, the preschool years are developmental period which leads to growth, expansion, “construction”, and “blossoming” [9]. As per a study conducted in Africa (1), risk factors for developmental delay are inter-related, and the accumulation of risk has a long-term impact on child development. A systematic review by Linsell et al. [10] showed that male gender, lower birth weight, black race, lower education level of parents, and lower gestational age had been shown to be predictive of global cognitive dysfunction among young children.

The KONKAN region is characterized by mountainous terrain with poor soil quality, hot, humid weather, poverty, and fearful thoughts which have led to widespread malnutrition in the people. Our hospital is located in a remote rural area, so the study population is from the same rural area. One of our studies shows that 72% of adolescent were underweight. In another study, more than 65% of adolescent girls were zinc, calcium, and folate deficient. Hospital data shows that 41.9% of babies were LBW. A survey of cancer research from 2200 villages in KONKAN shows 51.7% population had low BMI, and only 4.5% were obese. So, we decided to evaluate IQ for the same community. These findings highlighted the leanness of the community of KONKAN. So, to trace it back we decided to assess intelligence and its association with body composition in preschool children [11].

We couldn't find any association of anthropometric parameters with IQ in children from rural villages in KONKAN in spite of a high prevalence of wasting and stunting and LBW. A possible explanation could be that the human fetus can adapt to undernutrition. Its responses include metabolic changes, redistribution of blood flow and changes in the production of fetal and placental hormones which control growth as stated by David Barker [12].

While slowing its rate of growth, the fetus may protect tissues that are important for immediate survival, the brain especially. One way in which the brain can be protected is by redistribution of blood flow to favour it [13]. This adaptation is known to occur in many mammals. However, in humans, it may have inflated costs for other tissues, notably the liver and other abdominal viscera, because of the large size of the brain [14]. This protective effect for the brain may explain normal or high IQ irrespective of poor anthropometric parameters in our study.

CONCLUSION

We could not find any association of anthropometric parameters with IQ despite a

high prevalence of malnutrition.

Suggestions: There is a need to design a cost-effective, user-friendly test to evaluate cognition and intelligence for rural children from 3 to 6 age group. Western countries use the Stanford-Binet Fifth Edition (SB5) test for 3-6 years, and it has not been adapted for rural Indian children.

Acknowledgements: We thank the parents of the children who participated in the study.

Limitations: There are a few limitations to our report. Sampling was by convenience. The study was done on a small number of children. For dietary assessment, we just recorded a one-day nutritional recall. We did not quantify the food intake.

Author contribution: Dr Patil conceptualized the idea. Rupali Chavan and Swati Sonawane clinical psychologist carried out the cognitive testing. Mohite worked on the diet component of the study. Joglekar, Omkar, Dnyanshwar, Pallavi handled the statistical aspects. Patil and Joglekar also drafted the manuscript.



Conflict of interest : Nil

Source of funding : Nil

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| राष्ट्रीय आरोग्य अभियान जिल्हा एकात्मिक आरोग्य व कुटुंब कल्याण सोसायटी रत्नागिरी रजि.नं.महाराष्ट्र/३२१८/रत्नागिरी, दि.१७/१२/२००५ | | |
|  |  | पत्ता :- आरोग्य विभाग, जिल्हा परिषद, रत्नागिरी फोन नं. :- ०२३५२ - २२१४०३ / २२७६९८ फॅक्स नं. :- ०२३५२ - २२१४०३ |
| जा.क्र.-रजिप/आवि/एन.एच.एम /Monitoring of HWC/5087/2022 आरोग्य विभाग,जिल्हा परिषद,रत्नागिरी. दिनांक.२७/०६/२०२२ | | |

प्रति,

28 JUN 2022

मा.सहसंचालक(तांत्रिक),
 राष्ट्रीय आरोग्य अभियान,मुंबई.

विषय :- वैद्यकीय महाविद्यालये यांचेमार्फत सनियंत्रण करणेकरिता निवड केलेल्या
 आरोग्यवर्धिनी केंद्रांची व महाविद्यालयाची माहिती सादर करणेबाबत.....

संदर्भ:-१)राज्यकार्यालयाकडील प्राप्त दिनांक१६/०६/२०२२ रोजीचे पत्र क्र.६५६२३-७३५
 २)दिनांक २५/०६/२०२२ रोजी वी.के.एल.वालावलकर मेडिकल कॉलेज येथे
 घेण्यात आलेली बैठक.

उपरोक्त विषयानुसार,संदर्भ पत्र क्र.१ अन्वये आरोग्यवर्धिनी केंद्र यांच्याद्वारे
 देण्यात येणाऱ्या सेवा व सुविधा यांचा दर्जा उंचावणे याकरिता जिल्ह्यातील वैद्यकीय
 महाविद्यालयांच्या माध्यमातून सनियंत्रण व पर्यवेक्षण करण्यासाठी आरोग्यवर्धिनी केंद्रांची
 निवड करण्यासाठी कळवले होते.त्यानुसार संदर्भ २ नुसार दिनांक २५/०६/२०२२ रोजी वी.
 के.एल.वालावलकर मेडिकल कॉलेज येथे बैठक घेवून पर्यवेक्षणाकरिता आरोग्यवर्धिनी केंद्रांची
 निवड करण्यात आली असून त्यांची यादी व वैद्यकीय महाविद्यालय यांची माहिती
 पत्रासोबत जोडली आहे.

तरी सादर माहिती सादर करण्यात येत आहे.

PPPK

जिल्हा आरोग्य अधिकारी
 जिल्हा परिषद,रत्नागिरी



प्रत माहितीस्तव सविनय सादर,

- १) मा.संचालक,आरोग्य सेवा,मुंबई.
- २) मा.सहसंचालक (तांत्रिक), रा.आ.अ,मुंबई.
- ३) मा.उपसंचालक,आरोग्य सेवा कोल्हापूर मंडळ कोल्हापूर.
- ४) मा.मुख्य कार्यकारी अधिकारी,जिल्हा परिषद,रत्नागिरी.
- ५) मा.जिल्हा शल्य चिकित्सक,जिल्हा सामान्य रुग्णालय,रत्नागिरी.
- ६) मा.अधिष्ठाता, वी.के.एल.वालावलकर मेडिकल कॉलेज,डेरवण.

Information on Independent Monitoring of HWC by Medical College Ratnagiri District

| Sr.No | Item | Response |
|-------|--|---|
| 1 | Name of the District | Ratnagiri |
| 2 | Name of the Medical College Selected for Monitoring | B.K.L. Walawalkar Medical College, Dervan, District-Ratnagiri |
| 3 | Name of the Person from Medical College involved in Monitoring | Dr. Ravikiran |
| 4 | Contact Number of Person | 9019338686 |
| 5 | Email of the Person | hod_psm@bklwrmc.com |
| 6 | Name of the Facilities Selected for Monitoring by Medical College (Sub Center - HWC) | Nivali, Bhile, Nirvhal, Terav, Mandki |
| 7 | Name of the Facilities Selected for Monitoring by Medical College (PHC - HWC) | Dadar, Rampur, Kapare |
| 8 | Name of the Facilities Selected for Monitoring by Medical College (UPHC - HWC) | UPHC Chiplun, UPHC Kokannagar |


District Health Officer
Z.P. Ratnagiri

| | |
|---|---|
| राष्ट्रीय आरोग्य अभियान | |
| जिल्हा एकात्मिक आरोग्य व कुटुंब कल्याण सोसायटी रत्नागिरी | |
| रजि.नं.महाराष्ट्र/३२१८/रत्नागिरी, दि.१७/१२/२००५ | |
|  |  |
| पत्ता :- आरोग्य विभाग, जिल्हा परिषद, रत्नागिरी | |
| फोन नं. :- ०२३५२ - २२१४०३ / २२७६९८ | |
| फॅक्स नं. :- ०२३५२ - २२१४०३ | |
| जा.क्र.-रजिप/आवि/एन.एच.एम /Monitoring of HWC / 4987/2022 | |
| आरोग्य विभाग, जिल्हा परिषद, रत्नागिरी. | |
| दिनांक. २३/०६/२०२२ | |

प्रति,

वैद्यकीय अधिष्ठाता,
बी.के.एल बालावलकर, वैद्यकीय महाविद्यालय
डेरवण, तालूका - चिपळूण, जिल्हा - रत्नागिरी

विषय :- आरोग्यवर्धिनी कार्यक्रमांतर्गत आरोग्यवर्धिनी केंद्राचे वैद्यकीय महाविद्यालय यांचे मार्फत सनियत्रण करणेबाबत-दिनांक. २५/०६/२०२२ रोजी सभा आयोजित करणेबाबत.

- संदर्भ:- १) केंद्र शासनाचे पत्र क्र. D.O. No.Z-28016/9/20219-NHM-I दिनांक ११/०६/२०२०
२) मा.सहसंचालक, (तांत्रिक), राष्ट्रीय आरोग्य अभियान मुंबई यांचे कार्यालयीन पत्र. जा.क्र. राआसो/ आरोग्यवर्धिनी/वै.म.सपोर्ट/९२४५२-५२८/२१ दिनांक १४/०१/२०२१
३) मा.सहसंचालक, (तांत्रिक), राष्ट्रीय आरोग्य अभियान मुंबई यांचे कार्यालयीन पत्र. जा.क्र. राआसो/HWC- Independent Monitoring of HWC By -medical College / ६५६२३-७३५/ दिनांक १६/०६/२०२२

उपरोक्त संदर्भिय विषयास अनुसरून, आयुष्यमान भारत योजनेतर्गत आरोग्यवर्धिनी केंद्र हा महत्त्वकांक्षी कार्यक्रम राज्यात राबविला जात आहे. आरोग्यवर्धिनी केंद्राद्वारे १३ प्रकारचे सर्व समावेशक प्राथमिक आरोग्य सेवा जनतेला दिल्या जातात. त्यांच्या द्वारे देण्यात येणाऱ्या सेवा व सुविधा याचा दर्जा उंचाविणे याकरिता जिल्ह्यातील वैद्यकीय महाविद्यालय यांच्या माध्यमातून सनियत्रण व पर्यवेक्षण करणेबाबत संदर्भिय पत्र २ व ३ नुसार राज्यस्तरावरून कळविण्यात आले आहे.

तरी याकरिता बी.के.एल बालावलकर वैद्यकीय महाविद्यालया मध्ये दिनांक. २५/०६/२०२२ रोजी दुपारी १२.०० वाजता आपल्या कार्यालयात सभेचे आयोजन करावे. सदर सभेस वैद्यकीय महाविद्यालयाचे अधिष्ठाता व विभाग प्रमुख (प्रतिबंधात्मक व सामाजिक औषध विभाग - पी.एस.एम.) यांनी उपस्थित रहायचे आहे. सदर सभेस जिल्हा स्तरावरून जिल्हा आरोग्य अधिकारी, जि.प. रत्नागिरी उपस्थित राहणार आहेत.

तरी याबाबत आपल्या स्तरावरून सभेचे नियोजन करण्यात यावे.

सहपत्र- संदर्भिय पत्र.

PPB12

जिल्हा आरोग्य अधिकारी
जिल्हा परिषद, रत्नागिरी

प्रत माहितीस्तव सविनय सादर,

- १) मा.संचालक,आरोग्य सेवा,मुंबई.
- २) मा.सहसंचालक (तांत्रिक), रा.आ.अ,मुंबई.
- ३) मा.उपसंचालक,आरोग्य सेवा कोल्हापूर मंडळ कोल्हापूर.
- ४) मा.मुख्य कार्यकारी अधिकारी,जिल्हा परिषद,रत्नागिरी.
- ५) मा.जिल्हा शल्य चिकित्सक,जिल्हा सामान्य रुग्णालय,रत्नागिरी.



आयुक्त आरोग्य सेवा व अभियान संचालक,
राष्ट्रीय आरोग्य अभियान



सार्वजनिक आरोग्य विभाग, महाराष्ट्र शासन यांचे कार्यालय

दुरध्वनी - ०२२ - २२७ ६७५ ००
फॅक्स - ०२२ - २२७ ४२५ ५५
E-mail - mdrhm.mumbai@gmail.com 1

आरोग्य भवन, ३ रा मजला,
सिड जीजे रुग्णालय आवार, पी. डिमेली रोड,
सीएनटी जवळ, पोर्ट, मुंबई - ४०० ००१

जा.क्र. राआसो/HWC /Independent Monitoring of HWC by Medical College /...../२२

दि. १५/०६/२०२२
५६

प्रति,
जिल्हा आरोग्य अधिकारी,
जिल्हा परिषद, सर्व

विषय:- आरोग्यवर्धिनी कार्यक्रमांतर्गत आरोग्यवर्धिनी केंद्राचे वैद्यकीय महाविद्यालये यांचे मार्फत सनियंत्रण करणेबाबत. (Independent Monitoring of HWC by Medical College)

- संदर्भ:- १) केंद्र शासनाचे पत्र D.O.NO. Z-२८०९६/९/२०१९-NHM-I दि. ११/०६/२०२०.
२) या कार्यालयाचे पत्र जा.क्र.राआसो/आरोग्यवर्धिनी/वै.म.सपोर्ट /९२४५२-५२८/२१, दि. १४/०९/२०२१.
३) या कार्यालयाचे पत्र जा.क्र.राआसो/आरोग्यवर्धिनी/वै.म.सपोर्ट /स्मरण पत्र/१०६४९०-५९९/२१, दि. ०२/०३/२०२१.

आयुषान भारत योजने अंतर्गत आरोग्यवर्धिनी केंद्र हा महत्वाकांक्षी कार्यक्रम राज्यात राबविला जात आहे. आरोग्यवर्धिनी केंद्रांद्वारे १३ प्रकारच्या सर्व समावेशक प्राथमिक आरोग्य सेवा जनतेला दिल्या जातात. त्यांच्याद्वारे देण्यात येणा-या सेवा व सुविधा यांचा दर्जा उंचावणे याकरीता राज्यातील वैद्यकीय महाविद्यालयांच्या माध्यमातून सनियंत्रण व पर्यवेक्षण करणे आवश्यक आहे.

या अंतर्गत जिल्हा आरोग्य अधिकारी, जिल्हा परिषद यांनी कार्यक्षेत्रातील वैद्यकीय महाविद्यालयांच्या अधिष्ठाता व विभागे प्रमुख (प्रतिबंधात्मक व सामाजिक औषध विभाग - पीएसएम) यांना भेटून आरोग्यवर्धिनी कार्यक्रमाबद्दल सविस्तर माहिती देणे अपेक्षित आहे. तसेच त्यांचेमार्फत आपल्या जिल्हयातील आरोग्यवर्धिनी केंद्र यांचे आदर्श आरोग्यवर्धिनी केंद्रामध्ये रुपांतर करण्याच्या दृष्टीने सहकार्य घ्यावे. याबाबतची सविस्तर माहिती याआधीच संदर्भिय पत्र क्र.२ नुसार जिल्हयांना या आधीच कळविण्यात आली आहे.

उपरोक्त संदर्भिय पत्र क्र.२ व ३ अन्वये जिल्हा आरोग्य अधिकारी, जिल्हा परिषद यांनी आपल्या कार्यक्षेत्रातील एकूण १० आरोग्यवर्धिनी केंद्राची निवड करणेबाबत यात ३ प्राथमिक आरोग्य केंद्र, ५ उपकेंद्र व २ नागरी आरोग्य केंद्राची निवड करून त्याबाबतची माहिती राज्य कार्यालयास कळविण्याबाबत सूचित करण्यात आले होते.

तरी आपणास सूचित करण्यात येते की, दिनांक १७ जुन २०२२ पर्यंत आरोग्यवर्धिनी केंद्रांची व वैद्यकीय महाविद्यालय यांची माहिती जिल्हा आरोग्य अधिकारी यांच्या स्वाक्षरीने राज्य कार्यालयास सादर करण्यात यावी. यासाठी खाली दिलेल्या google link मध्ये माहिती देण्यात यावी.

Google link - <https://forms.gle/Zeh74PRmmYzGGhEg6>

सोबत - माहिती प्रारूप


(डा. विजयकंदेवाड)

सहसंचालक (तांत्रिक)

राष्ट्रीय आरोग्य अभियान, मुंबई

प्रत माहितीस्तव सविनय सादर -

मा. आयुक्त, आरोग्य सेवा तथा अभियान संचालक, राष्ट्रीय आरोग्य अभियान, मुंबई

मा. संचालक, आरोग्य सेवा, मुंबई

मा. संचालक, आरोग्य सेवा, पुणे

प्रत माहितीस्तव -

मुख्य कार्यकारी अधिकारी, जिल्हा परिषद, सर्व

उपसंचालक, आरोग्य सेवा परिमंडळ, सर्व

जिल्हा कार्यक्रम व्यवस्थापक, जिल्हा परिषद, सर्व

निरोगी गाव, निरोगी देश



Information on Independent Monitoring of HWC by Medical College in the google link

| Sr. No. | Item | Response |
|---------|--|----------|
| 1 | Name of the District | |
| 2 | Name of the Medical College selected for Monitoring | |
| 3 | Name of the Person from Medical College involved in Monitoring | |
| 4 | Contact Number of Person | |
| 5 | Email of the Person | |
| 6 | Name of the Facilities selected for Monitoring by Medical College (Sub Center - HWC) | |
| 7 | Name of the Facilities selected for Monitoring by Medical College (PHC -HWC) | |
| 8 | Name of the Facilities selected for Monitoring by Medical College (UPHC - HWC) | |
| 9 | Letter sign by DHO submitted to State regarding selection of HWC. (pdf /image file to be uploaded) | |
| 10 | Report of Monitoring by Medical College (pdf /image file to be uploaded) | |

Note – To be submitted in google link.



आयुक्त आरोग्य सेवा व अभियान संचालक,
राष्ट्रीय आरोग्य अभियान



सामंजस आरोग्य विभाग, महाराष्ट्र शासन यांचे कार्यालय

दुरध्वनी - ०२२ - २६५५ ६५५५
फॅक्स - ०२२ - २६५५२२५५
E-mail - mdrhm.mumbai@gmail.com

आरोग्य भवन, ३रा मजला,
११६ लॉक अप्पलॉक अवेन्यू, पी. टिपेकी रोड,
सीटुवडी प्रकळ, फोर्ड, मुंबई ४००००६

महत्वाचे

जा.क्र.राजासो/आरोग्यवर्धिनी/वि.म.सफोर्ड/
दिनांक १४ जानेवारी, २०२१

१२४५२-५२६

प्रति,
जिल्हा आरोग्य अधिकारी
जिल्हा परिषद (सर्व)

विषय- आरोग्यवर्धिनी कार्यक्रमांतर्गत वैद्यकीय महाविद्यालये यांच्या सहकार्याबाबत.
संदर्भ-१.सन २०२०-२१ चा मंजूर प्रकल्प अमंलबजावणी आराखडा.

२.केंद्र शासनाचे पत्र D.O.No.Z-28016/9/2019-NHM-I Dated 11th June 2020.

आपणास विदीतच आहे की, आयुष्मान भारत योजनेतील आरोग्यवर्धिनी कार्यक्रम हा केंद्र शासनाचा एक महत्वपूर्ण कार्यक्रम आहे. या कार्यक्रमांतर्गत राज्यातील प्राथमिक आरोग्य केंद्रे, उपकेंद्रे व नागरी आरोग्य केंद्रे सन २०२० पर्यंत आरोग्यवर्धिनी केंद्रामध्ये रुपांतरीत करण्यात येत आहे. आरोग्यवर्धिनी केंद्राच्या माध्यमातून जनतेला सर्वसमावेशक सेवा उपलब्ध करून देण्यात येत आहेत. आरोग्यवर्धिनी केंद्रामधील कार्यरत कर्मचारी वर्ग यांचे ज्ञान वृद्धिंगत करणे, आरोग्यवर्धिनी केंद्रामधील सेवा व सुविधांचा दर्जा उंचावणे, दर्जेदार सेवा व सुविधा यामध्ये सातत्य असणे महत्वाचे आहे.

करीता संदर्भ क्र.१ अन्वये सन २०२० -२१ च्या मंजूर प्रकल्प अमंलबजावणी आराखडा लेखाशिर्ष १६.१.२.२.४ अंतर्गत आरोग्यवर्धिनी केंद्र (उपकेंद्र, प्राथमिक आरोग्य केंद्र व नागरी आरोग्य केंद्र) यांच्या व्दारे देण्यात येत असलेल्या सेवा व सुविधा यांचा दर्जा उंचावणे करीता राज्यातील वैद्यकीय महाविद्यालय यांचे माध्यमातून आरोग्यवर्धिनी केंद्रांचे संनियंत्रण व पर्यवेक्षण करण्यासाठी निधी मंजूर करण्यात आलेला आहे.

संदर्भ क्र.२ च्या पत्रान्वये वैद्यकीय महाविद्यालये यांनी आरोग्यवर्धिनी केंद्रांचे संनियंत्रण व पर्यवेक्षण कसे करावे याबाबत सविस्तर मार्गदर्शन केंद्र शासनाकडून प्राप्त आहे. (प्रत संलग्न) तरी वैद्यकीय महाविद्यालये यांचे सहकार्य उपलब्ध करून घेण्याबाबत जिल्हा आरोग्य अधिकारी जिल्हा परिषद यांनी खालील बाबत कार्यवाही करावी.

१. जिल्हा आरोग्य अधिकारी जिल्हा परिषद यांनी कार्यक्षेत्रातील वैद्यकीय महाविद्यालयांच्या अधिष्ठाता व विभाग प्रमुख (प्रतिबंधात्मक व सामाजिक औषध विभाग- पीएसएम) यांना भेटून आरोग्यवर्धिनी कार्यक्रमा वद्दल सविस्तर माहिती दयावी. तसेच संदर्भ क्र.२ चे केंद्र शासनाचे पत्रात वैद्यकीय महाविद्यालयांनी करावयाचे सहकार्य यासंदर्भात सविस्तर माहिती नमूद करण्यात आलेली आहे. सदर पत्राची प्रत वैद्यकीय महाविद्यालये यांना देण्यात यावी. सोबत वैद्यकीय महाविद्यालयांची यादी जोडलेली आहे.

२. जिल्हा आरोग्य अधिकारी जिल्हा परिषद यांनी आपल्या कार्यक्षेत्रातील एकूण १० आरोग्यवर्धिनी केंद्राची निवड करावी. यामध्ये ३ प्राथमिक आरोग्य केंद्र, ५ उपकेंद्र व २ नागरी आरोग्य केंद्राची निवड करावी. निवड करण्यात आलेल्या आरोग्यवर्धिनी केंद्राबाबत राज्यस्तरावर कळविण्यात यावे. सदरची कार्यवाही दिनांक २१ जानेवारी, २०२१ पूर्वा पूर्ण करण्यात यावी.

सोबत- संदर्भिय पत्राची प्रत.

(डॉ.विजय कडुवाड)

सहसंचालक (तांत्रिक)

राष्ट्रीय आरोग्य अभियान, मुंबई

प्रत माहितीस्तव

१. मुख्य कार्यकारी अधिकारी, जिल्हा परिषद (सर्व)

२. उपसंचालक आरोग्य सेवा परिमंडळे (सर्व)

प्रत- मा.आयुक्त आरोग्य सेवा तथा अभियान संचालक, राष्ट्रीय आरोग्य अभियान, मुंबई माहितीस्तव सविनय सादर.



विकास शील
संयुक्त सचिव
VIKAS SHEEL
Joint Secretary

भारत सरकार
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
निर्माण भवन, नई दिल्ली - 110011
Government of India
Ministry of Health & Family Welfare
Nirman Bhavan, New Delhi - 110011
Tel. : 011-23063506
: 011-23061481 (T/F)
E-mail : sheelv@nic.in

D.O. No. Z-28016/9/2019-NHM-1
Dated 11th June 2020

Dear Madam/Sir,

As you are aware, the provision of Comprehensive Primary Health Care (CPHC) closer to the community is envisaged through setting up of 1.5 Jaldis Ayushman Bharat Health and Wellness Centres (AB-HWCs) by 2022 and I would like to complement all the States/UTs for the efforts made so far to operationalise more than 41,000 AB-HWCs across the country.

In this regard, I would like to reiterate that for further strengthening capacities of primary healthcare team at AB-HWCs and mentoring them, the States/UTs are required to ensure the adoption of at least ten AB-HWCs by the Medical Colleges, taking into consideration their capacity, expertise and existing resources. Guidance note was shared with the States/UTs on 29th July 2019 (copy enclosed). It is also to inform that Medical Education Division of the Ministry is following with the State's Medical Education Departments for ensuring the adoption by all the Medical Colleges in the States.

As this requires change management at many levels and I would like to reiterate the importance of the role that can be played by our medical colleges to build mechanism for continued mentoring of primary healthcare teams and provide guidance. States of Bihar, Chhattisgarh, Jharkhand, MP, Maharashtra, Odisha and Tripura have already provisioned for this in their annual proposals and the other states are requested to share their detailed plan.

I further would like to request all the States/UTs to share their efforts being made in this regard. These can be shared with Dr. N. Yuvaraj, (Director NHM I) at n.yuvaraj36@ias.nic.in and NHSRU team at cpchcnhsrce@gmail.com by the end of June, 2020.

Further, I also request you to provide any other innovative ideas to strengthen the functioning of AB-HWCs for improving Continuum Of Care.

Warm regards

Yours sincerely


(VikasSheel) 11/6/20

To

ACS / Principal Secretary / Secretary Health of all the States/UTs

Copy to

1. Secretary General, Board of Governors in succession of Medical Council of India, New Delhi (in pursuance of my DO Lr No.Z-28015/9/2019-NHM-I dated 3.2.2020) for favour of information
2. JS Medical Education, DoHFW requesting to furnish the action taken (in pursuance of my DO Lr No.Z-28015/9/2019-NHM-I dated 3.2.2020)
3. Mission Directors of all the States/UTs
4. EA, NHSRC
5. PPS to Secretary, HFW / DSD DoHFW / AS&MD


11/6/20

(vi) **Key features of mentorship include:**

- An assessment of training needs and capacity building of service providers,
- Development of various components of HWC
- Establish HWC as an integrated platform for delivering a range of PHC, including addressing determinants such as nutrition, school health, WASH
- Monitoring of footfalls, service availability, including establishment of referral linkages to ensure continuum of care.
- Extent of reach of the PHC team to the marginalized in the coverage area.
- Providing teleconsultation services and clinical mentoring of PHC team.
- Identify issues that need behaviour change and develop appropriate strategies to address directly or through multisectoral convergence
- Undertake Implementation Research in various areas such as financing, health promotion strategies, change management,

(vii) Location of mentoring hub in Medical college would be with the Department of Community Medicine- if a Department of Family Medicine exists, the hub should be located there.

(viii) The state NHM-would provide a list of the facilities (HWCs) to be mentored by the Medical College, approve the budgets for Mentoring Hubs, ensure that Allocated HWC have necessary infrastructure, HR, and appropriate resource allocations, support IT infrastructure requirements, Conduct review meetings with mentoring hub and with HWC teams.

Medical Colleges to support Health and Wellness Centres to deliver Comprehensive Primary Health Care

- (i) Comprehensive Primary Health Care is one of the two components of Ayushman Bharat, under which an expanded range of services is expected to be provided at Health and Wellness Centres (HWC). Services for chronic non-communicable diseases, mental health, ENT, eye care, oral health, elderly, palliative health care and basic emergency & trauma services would be provided at upgraded sub centres and primary health centres, in addition to existing services of reproductive child health and communicable diseases. This would be achieved by expanding the primary health care team as SC- HWCs- addition of a Community Health Officer and multiskilling of existing team at PHC- HWCs, capacity building of program management staff and primary health care team at HWCs, expansion of medicines and diagnostics commensurate to additional range of services and strengthening of upward and downward referral linkages to ensure continuum of care.
- (ii) Operationalizing Health and Wellness Centres to provide CPHC requires a paradigm shift at many levels. Major changes are required, for example in the organisation of services, in expansion of technical competencies, in team and individual work processes, in reporting and analysing information, financial flows, instituting performance based incentive, community based health services, action on social and environmental determinants, maintaining continuity of care, referral patterns, testing IT based venues for communication, understanding local epidemiological patterns, etc.
- (iii) In this concept note, we propose that every medical college in the country adopt and provide mentorship support to at least ten Health and Wellness Centres, which would include Sub Health Centres as well as Primary Health Centres in rural and urban areas.
- (iv) Their role would be *to mentor and support the team in every one of these ten HWC to implement the key components of CPHC in collaboration with the state health mission.*
- (v) The HWC already receive funding under the National Health Mission through the State PIP. Additional funding for the medical college would be provided in terms of a team of HWC coordinator, and about three Programme Associates. About 50% faculty time of an Assistant Professor would also need to be factored in. In addition, travel costs (depending upon the location of HWC selected by state for mentoring), communication, workshop/meeting costs would also need to be budgeted. An illustrative budget is provided.

List of Medical Colleges in Maharashtra

| Sr. No. | Name of College |
|---------|--|
| 1 | Grant Medical college, Mumbai |
| 2 | Seth GS Medical college, Mumbai |
| 3 | Topiwala Medical college, Mumbai |
| 4 | Lokmanya T. Medical college, Mumbai |
| 5 | K.J. Medical college, Mumbai |
| 6 | Terna Medical college, Navi Mumbai |
| 7 | Rajeev Gandhi Medical college, Thane |
| ✓8 | B.K.L. Medical college, Ratnagiri |
| 9 | H.B.T. Medical college, Mumbai |
| 10 | Vedanta Medical college, Palghar |
| 11 | Arm Force Medical college, Pune |
| 12 | B.J. Medical college, Pune |
| 13 | MIMER Medical college, Pune |
| ✓14 | Govt. Medical college, Miraj, Sangli |
| 15 | V.M. Govt. Medical college, Solapur |
| ✓16 | R.C.S.M. Medical college, Kolhapur |
| 17 | Smt. Nawale Medical college, Pune |
| 18 | Ashwini Medical college, Solapur |
| 19 | Govt. Medical college, Baramati, Pune |
| 20 | Prakash Medical college, Islampur |
| 21 | Dr. Vasanttrao Pawar Medical college, Nashik |
| 22 | SBH. Govt. Medical college, Dhule |
| 23 | ACPM. Medical college, Dhule |
| 24 | Dr. VVP. Medical college, A'nagar |
| 25 | Dr. Ulhas Patil, Medical college, Jalgaon |
| 26 | Govt. Medical college, Jalgaon |
| 27 | SMBT. Medical college, Igatpuri |
| 28 | Govt. Medical college, Aurangabad |
| 29 | SC Govt. Medical college, Nanded |
| 30 | SRTR. Medical college, Beed |
| 31 | MIMSR. Medical college, Latur |
| 32 | V.D. Govt. Medical college, Latur |
| 33 | JIU's Medical college, Jalna |
| 34 | Govt. Medical college, Nagpur |
| 35 | LG. Govt. Medical college, Nagpur |
| 36 | N.K.P. Salve Medical college, Nagpur |
| 37 | MGIMS Medical college, Wardha |
| 38 | PDMC. Medical college, Amravati |
| 39 | SVN. Medical college, Yavatmal |
| 40 | Govt. Medical college, Akola |
| 41 | Govt. Medical college, Chandrapur |
| 42 | Govt. Medical college, Gondia |
| ✓43 | D.Y. Patil, Medical college, Kolhapur |
| 44 | MGM's Medical college, Aurangabad |



MEDICAL FACULTY

Internship Transfer for Odd Batch Summer - 2021 Examinations
List of Internship Transfer w.e.f. 16/11/2021



1. Dean / Principal are requested to consider this List as Valid University Document.
2. This list shall be treated as NOC for Internship Transfer. Students can take printout of this list and submit it to be the Concerned College.
3. MUHS students has to complete their current Posting before joining the receiving college.

| SN | Name of Applicant | Relieving College | Receiving College | Transfer Granted / Not Granted |
|----|-----------------------------------|--|--|--------------------------------|
| 1 | Sanhalkar Charu Raghuvaran | B.K. Wazwalkar Rural Medi.Col.Chiplun,Ratnagiri | Topiwala National Medical College, Mumbai | Granted |
| 2 | Nazareth Priya Ronald | Prakash Inst.of Medical Sci.,Islampur,Sangli | HBT Medi. College (Dr.R.N.Cooper Municipal H.),Juhu, Mumbai | Granted |
| 3 | Shan Kajal Kalpesth | B.K. Wazwalkar Rural Medi.Col.Chiplun,Ratnagiri | Terna Medical College, Nerul, Navi Mumbai | Granted |
| 4 | Anirudh Gupta | Government Medical College, Nagpur | RUHS College of Medical Sciences, Jaipur, Rajasthan | Granted |
| 5 | Paikar Aditya Sayaji | Prakash Inst.of Medical Sci.,Islampur,Sangli | RCSM Government Medical College, Kolhapur | Granted |
| 6 | Palodkar Priyanka Ramdas | M.I.M.S.R. Medical College, Latur | MSR's Medical College, Aurangabad | Granted |
| 7 | Arote Thiravi Arun | SMBI Inst.of Medi.Sci.,Dhule nagar,Dhule | HBT Medi. College (Dr.R.N.Cooper Municipal H.),Juhu, Mumbai | Granted |
| 8 | Karti Sangram Rodge | M.I.M.E.R. Medi.College,Talegaon Dabhadi,Pune | Terna Medical College, Nerul, Navi Mumbai | Granted |
| 9 | Annapurva Vishwajeet Balajirao | S.R.T.R. Govt. Medical College, Ambajogai | B. J. Govt. Medical College, Pune | Granted |
| 10 | Maheshwari Sarvesh Madhusudan | M.I.M.E.R. Medi.College,Talegaon Dabhadi,Pune | HBT Medi. College (Dr.R.N.Cooper Municipal H.),Juhu, Mumbai | Granted |
| 11 | Modi Tejas Kamleshkumar | Dr.V.V.Patil Foundation's Medi.Col.,Ahmednagar | B.J.Medical College, Ahmedabad (Gujrat) | Granted |
| 12 | Goyal Shreyas Vinay | Government Medical College, Akola | HBT Medi. College (Dr.R.N.Cooper Municipal H.),Juhu, Mumbai | Granted |
| 13 | Patel Parthkumar Rakeshbhai | Dr.V.V.Patil Foundation's Medi.Col.,Ahmednagar | Medical College, Baroda, Gujrat (MS University Baroda) | Granted |
| 14 | Ashutosh Nayak | Dr.V.V.Patil Foundation's Medi.Col.,Ahmednagar | Terna Medical College, Nerul, Navi Mumbai | Granted |
| 15 | Khobragade Tejashwini Pradip | Topiwala National Medical College, Mumbai | Government Medical College, Nagpur | Granted |
| 16 | Patil Krupa Sunil | Terna Medical College, Nerul, Navi Mumbai | HBT Medi. College (Dr.R.N.Cooper Municipal H.),Juhu, Mumbai | Granted |

Note : * Indicates Transfer Not Granted as per National Medical Council, New Delhi
letter dated 31/03/2021, letter No.NMC-34 (41)/UG/Gen/2021-Med/207175.



MEDICAL FACULTY

Internship Transfer for Regular Exam, Winter - 2020
List of Internship Transfer w.e.f. 27/05/2021



1. Dean / Principal are requested to consider this List as Valid University Document.
2. This list shall be treated as **NOC** for Internship Transfer.
3. In view of the COVID-19 Pandemic, breakout, the Dean / Principal of concern colleges (Relieving/Receiving College) shall abide the decisions / orders issued time to time by the Central / State / Local authorities regarding COVID-19.
4. Students can take printout of this list and submit it to be the Concerned College / Hospital and follow the instruction given by the Dean/Principal in view of COVID-19 pandemic.
5. In case of Transfer within MUHS students has to complete the current Posting before joining the receiving college.

| SN | Name of Applicant | Relieving College | Receiving College | Transfer Granted / Not Granted |
|-----|------------------------------|---|--|--------------------------------|
| 130 | Vakragade Pratiksha Sheshel | Government Medical College, Gondia | Government Medical College, Nagpur | Granted |
| 131 | Kalyan Kshirka | Armed Forces Medical College, Pune | Maharani Laxmi Bai Medical College, (WIP) Jhansi (U.P) | Granted |
| 132 | Ashvit Joshi | M.I.M.E.R. Medi.College, Talegaon Dabhade, Pune | Lokmanya Tilak Municipal Medi.College, Sion, Mumbai | Granted |
| 133 | Yewale Rajat Kailas | S.B.H Government Medical College, Dhule | Government Medical College, Aurangabad | Granted |
| 134 | Hiran. Pawar Gurudatta | Prakash Inst. of Medical Sci., Idampur, Sangli | RCSM Government Medical College, Kolhapur | Granted |
| 135 | Sajshi Barkar | Government Medical College, Akola | General Hospital, Wardha | * Not Granted |
| 136 | Khanvilkar Rutuja Shashikant | M.I.M.E.R. Medi.College, Talegaon Dabhade, Pune | Seth G.S. Medical College, Parel, Mumbai | Granted |
| 137 | Pate. Anupabhanu Dawood | M.I.M.E.R. Medi.College, Talegaon Dabhade, Pune | Seth G.S. Medical College, Parel, Mumbai | Granted |
| 138 | Hardeep Gaikwad Bindu Kumar | Vilasrao Deshmukh Govt. Institute of Medical College, Latur | Grant Govt. Medical College, Byculla, Mumbai | Granted |
| 139 | Godavale Anubhail Hemant | Ekl Walawalkar Bhaiji Medi.Col., Dhule, Maharashtra | Rajiv Gandhi Medi.College, Kalwa, Thane | Granted |
| 140 | Sanghvi Ijesh Ashok | S.B.H Government Medical College, Dhule | Grant Govt. Medical College, Byculla, Mumbai | Granted |
| 141 | Kandre Akshay Valsikram | Smt. Kashibai Navale Medi.Col., Ambegaon, Pune | Chd Hospital, Ahmednagar | * Not Granted |
| 142 | Chare Srinham Raju | Prakash Inst. of Medical Sci., Idampur, Sangli | Dr. Shankarrao Chavan, Govt. Medi.Col., Nanded | Granted |
| 143 | Saboo Aayushi Parag | Grant Govt. Medical College, Byculla, Mumbai | Government Medical College, Nagpur | Granted |
| 144 | Mathkar Madhavi Rajesh | Smt. Kashibai Navale Medi.Col., Ambegaon, Pune | HBT Medi. College (Dr. R.N. Cooper Municipal H.), Mumbai | Granted |
| 145 | Nar Akshay Rajesh Chhagan | Smt. Kashibai Navale Medi.Col., Ambegaon, Pune | Rajiv Gandhi Medi.College, Kalwa, Thane | Granted |

Note : * Indicates Transfer Not Granted As per National Medical Council, New Delhi letter dated 31/03/2021 letter No. NMC-36(11)/UG/Gen/2021-2022/207175.



MEDICAL FACULTY

Internship Transfer for Regular Exam. Winter - 2020
List of Internship Transfer w.e.f. 27/05/2021



1. Dean / Principal are requested to consider this List as Valid University Document.
2. This list shall be treated as NCC for Internship Transfer.
3. In view of the COVID-19 Pandemic, breakout, the Dean / Principal of concern colleges (Relieving/Receiving College) shall abide the decisions / orders issued time to time by the Central / State / Local authorities regarding COVID-19.
4. Students can take printout of this list and submit it to be the Concerned College / Hospital and follow the instruction given by the Dean/Principal in view of COVID-19 pandemic.
5. In case of Transfer within MUHS students has to complete the current Posting before joining the receiving college.

| SN | Name of Applicant | Relieving College | Receiving College | Transfer Granted / Not Granted |
|----|----------------------------|--|---|--------------------------------|
| 65 | Genorkar Ashlesha Subhadra | Sethi G.S. Medical College, Parel, Mumbai | Civil Hospital, Ahmednagar | * Not Granted |
| 67 | Patil Shrutika Raviendra | S.B.H Government Medical College, Dhule | Grant Govt. Medical College, Byculla, Mumbai. | Granted |
| 59 | Jaju Omkar Gopal | S.R.T.R. Govt. Medical College, Ambegaon | Vilasrao Deshmukh Govt. Institute of Medical College, Jabur | Granted |
| 69 | Gaikwad Smit Arvind | Dr.V.M.Govt. Medical College, Solapur | Civil Hospital, Ahmednagar | * Not Granted |
| 70 | Patil Rohan Shashi | Government Medical College, Aurangabad | Dr.Shankarrao Chavan, Govt. Med. Col., Nanded | Granted |
| 71 | Bagade Vaishnav Rameshrao | Dr.Shankarrao Chavan, Govt. Med. Col., Nanded | Government Medical College, Aurangabad | Granted |
| 72 | Basappa Prayag Nagnathrao | Grant Govt. Medical College, Byculla, Mumbai | Civil Hospital, Parbhani | * Not Granted |
| 73 | Kute Smashank Babasaheb | Dr.V.M.Govt. Medical College, Solapur | B. J. Govt. Medical College, Pune | Granted |
| 74 | Kanase Sara Vijay | Dr.V.M.Govt. Medical College, Solapur | Krishna Institute of Medical Sciences, Karad | Granted |
| 75 | Shikadi Harshali Vasantrao | S.B.H Government Medical College, Dhule | B. J. Govt. Medical College, Pune | Granted |
| 76 | Gulabani Yash Vitesh | S.B.H Government Medical College, Dhule | Grant Govt. Medical College, Byculla, Mumbai | Granted |
| 77 | Raina Karan Pradipkumar | SMBT Inst. of Med. Sci., Dhambhongar, Jalgaon | Civil Hospital, Jalgaon | * Not Granted |
| 78 | Malan Raghav Lakshminaras | S.B.H Government Medical College, Dhule | Government Medical College, Miraj | Granted |
| 79 | Patil Umeshrao Pankraj | SMBT Inst. of Med. Sci., Dhambhongar, Jalgaon | Smt. Kashibai Navale Med. Col., Ambegaon, Pune | Granted |
| 80 | Ramande Tarunaji Mahesh | BKL Yajawalkar Rural Med. Col., Chiplun, Ratnagiri | Rajiv Gandhi Medical College, Kalwa, Thane | Granted |
| 81 | Jabade Jal Vivek | M.L.M.E.R. Med. College, Talegaon Dabhade, Pune | Smt. Kashibai Navale Med. Col., Ambegaon, Pune | Granted |

Note : * Indicates Transfer Not Granted As per National Medical Council, New Delhi letter dated 31/03/2021 Letter No. NMC-34(41)/UG/Gov./2021-Med/202175.

(A-5) Riya R. Thorat. (7/7/2021)



महाराष्ट्र आरोग्य विज्ञान विद्यापीठ, नाशिक
MAHARASHTRA UNIVERSITY OF HEALTH SCIENCES, NASHIK

दिंडोरी रोड, म्हासळ, नाशिक-४२२००४ Dindori Road, Mhasrul, Nashik-422004

Tel : (0253) 2539152 / 6659152

MUHS Website: www.muhs.ac.in, E-mail: student_cell_academic@muhs.ac.in

डॉ. राजीव टी. आहिर

एम.एससी., पीएच.डी.

विभागाध्यक्ष, विद्यार्थी कक्षा (शैक्षणिक)

Dr. Rafeev T. Aher

M.Sc., Ph.D.

HOD, Student's Cell (Academic)

O.No. MUHS/S.C.(Academic)-1/2021 /2021

Date 17/06/2021

To,

Riya Rajendra Thorat

Flat No.1, Rewanjali Apts. Plot no. 62,

Mitra Mandal Colony, Parvati,

Pune - 411 009.

Sub. :- Internship Transfer.

Ref. :- 1) Internship Transfer Meeting dated 27/05/2021

2) Internship Transfer List Published on the Website dated 27/05/2021.


3) University E- Mail dated 28/05/2021.

4) Student's Letter dated 02/06/2021, University received dated 03/06/2021.

With reference to your application for Internship Transfer, this is to inform you that your Internship Transfer from **B.K.L Walawalkar Rural Medical College, Chiplun, Ratnagiri** to **B. J. Govt. Medical College, Pune** has been considered by the Internship Transfer Committee. You are requested to join the receiving college at the earliest and send joining report to the University.

It may please be noted that the final evaluation of the Internship should be done by the parent college only and the student has to complete the current posting before joining the receiving College.

In View of the Covid-19 Pandemic, breakout, the Dean / Principal of concern college (Relieving / Receiving College) shall abide the decisions / orders issued time to time by the Central / State / Local authorities regarding Covid-1.


Head of Department
Student's Cell (Academic)

Copy to :

- 1) The Dean,
Shri Vitthalrao Joshi Charities Trust's
B. K. L. Walawalkar Rural Medical College,
Kasarwadi, At. Post. Sewarda, Tal. Chiplun, Dist.
Ratnagiri - 415 606
- 2) The Dean,
B. J. Govt. Medical College,
Sassoon General Hospital Compound,
Jaiprakash Narayan Road, Near Railway Station,
Pune - 411 001.



MEDICAL FACULTY

Internship Transfer for Regular Exam. Winter - 2020
List of Internship Transfer w.e.f. 27/05/2021



1. Dean / Principal are requested to consider this List as Valid University Document.
2. This list shall be treated as NDC for Internship Transfer.
3. In view of the COVID-19 Pandemic, breakout, the Dean / Principal of concern colleges (Relieving/Receiving College) shall abide the decisions / orders issued time to time by the Central / State / Local authorities regarding COVID-19.
4. Students can take printout of this list and submit it to be the Concerned College / Hospital and follow the instruction given by the Dean/Principal in view of COVID-19 pandemic.
5. In case of Transfer within MUHS students has to complete the current Posting before joining the receiving college.

| SN | Name of Applicant | Relieving College | Receiving College | Transfer Granted / Not Granted |
|-----|-----------------------------------|---|---|--------------------------------|
| 224 | Hadi Aishwarya Medhuria | Government Medical College, Aonla | Civil Hospital, Sirchana | * Not Granted |
| 225 | Talwade Aishwarya Pranav | Dr.Panjabrao Desai.MUHS Memorial Medi.College, Amravati | Government Medical College, Nagpur | Granted |
| 226 | Subhadar Sitawant Bipin | BK. Walawalkar Rural Medi.Col.Chiplun,Ratnagiri | Rajiv Gandhi Medi.College, Kalwa, Thane | Granted |
| 227 | Manoj Sahasra Sanjay | M.J.M.S.R. Medi.College, Talegaon Dakhada,Pune | Grant Govt. Medical College, Byculla, Mumbai | Granted |
| 228 | Tilke Shubham Vishwanathar | SMBT Institute Medi.Sci.,Dharmangan, Jalgaon | Civil Hospital, Beed, Maharashtra. | * Not Granted |
| 229 | Kadam Apurva Pooat | S. J. Govt. Medical College, Pune | Civil Hospital, Ahmednagar | * Not Granted |
| 230 | Tupe Chandrashekar Prabhakar | Vilasrao Deshmukh Govt.Institute of Medi College, Latur | Government Medical College, Aurangabad | Granted |
| 231 | Kole Akshay Balharanb | Grant Govt. Medical College, Byculla, Mumbai | S. J. Govt. Medical College, Pune | Granted |
| 232 | Shodke Karan Rajendra | Dr.Shankarrao Chavan, Govt. Medi.Col.,Nanded | Government Medical College, Aurangabad | Granted |
| 233 | Blure Omika Mansraj | M.J.M.S.R. Medical College, Latur | Government Medical College, Aurangabad | Granted |
| 234 | Wagham Anil Kusanekar | Grant Govt. Medical College, Byculla, Mumbai | Irwin Hospital, (General), Amravati | * Not Granted |
| 235 | Gone Parva Manojkar | Vilasrao Deshmukh Govt.Institute of Medi College, Latur | Government Medical College, Aurangabad | Granted |
| 236 | Gangwad Dhanraj Kumar Jayaram | S.R.T.R. Govt. Medical College, Ambajogai | Vilasrao Deshmukh Govt.Institute of Medi College, Latur | Granted |
| 237 | Sawale Neelam. Kailashrao | S. R. T. R. Govt. Medical College, Ambajogai | S. J. Govt. Medical College, Pune | Granted |
| 238 | Aravind Priyadarshini Vinod Kumar | BK.Walawalkar Rural Medi.Col.Chiplun,Ratnagiri | Smt. Kasturba Navale Medi.Col.,Ambajogai, Pune | Granted |
| 239 | Nardode Sandeep Sanilrao | S. R. T. R. Govt. Medical College, Ambajogai | S. J. Govt. Medical College, Pune | Granted |

Note : * Indicates Transfer Not Granted As per National Medical Council, New Delhi letter dated 31/03/2021 Letter No.NMC-34/41/UG/Gen/7071-(MC/7071)75.



MEDICAL FACULTY

Internship Transfer for Regular Exam. Winter - 2020
List of Internship Transfer w.e.d. 27/05/2021



1. Dean / Principal are requested to consider this List as Valid University Document.
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5. In case of Transfer within MUHS students has to complete the current Posting before joining the receiving college.

| SN | Name of Applicant | Relieving College | Receiving College | Transfer Granted / Not Granted |
|-----|-----------------------------------|---|---|--------------------------------|
| 240 | Rajesh Rourak Jadhav | Prakash Inst. of Medical Sci., Solapur, Sangli | Government Medical College, Akola | Granted |
| 241 | Sonawane Piyanka Margesh | E.S.L. Waglekar Rural Medi. Col. Chiplun, Ratnagiri | Baliv Gandhi Meml. College, Karwar, Raichur | Granted |
| 242 | Gawande Vinod Jitendra | Grant Govt. Medical College, Byculla, Mumbai | Civil Hospital, Buldhana | * Not Granted |
| 243 | Chavan. Madhura Mahadev | V.J.M.E.R. Medi. College, Thergaan Coahate Pune | S. J. Govt. Medical College, Pune | Granted |
| 244 | Sonreshwar Anushree Ajay | Smt. Kashibai Navale Medi. Col., Ambegaon, Pune | Bhatia Hospital, Mumbai | * Not Granted |
| 245 | Patil Saad Saifulla | SMBT Inst. of Med. Sci., Dharmangan, Igarpuri | HRT Medi. College (Dr. R. H. Cooper Municipal H.), Mumbai | Granted |
| 246 | Kapate Pratik Parasharam | Smt. Kashibai Navale Medi. Col., Ambegaon, Pune | Civil Hospital, Amnadrager | * Not Granted |
| 247 | M'li Gupta | SMDI Inst. of Med. Sci., D. Amnagar, Sangli | Sawal Mar Singh (SMS) Med. Col. & Hosp., Jalpur, (Ra.) | Granted |
| 248 | Khenkarer Jagti | Smt. Kashibai Navale Medi. Col., Ambegaon, Pune | Kaly Hall Clinic, Pune | * Not Granted |
| 249 | Goswami. Anurag. Anur Kanabharthi | Smt. Kashibai Navale Medi. Col., Ambegaon, Pune | Kundt Deendayal Upadhyay Medical College, Rajkot (Guj.) | Granted |

Note: * Indicates Transfer Not Granted As per National Medical Council, New Delhi letter dated 31/09/2021 Letter No. NW C-34(41)/UG/Gen/2021-Med/207175.

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



At Kasarwadi, Post Sawarda, Taluka Chiplun,
Dist. Ratnagiri - 415606, Maharashtra State, INDIA
Tel. : +91 02355 264636 / 264637
Fax : +91 02355 264693 Email : info@bklwrmc.com
Website : www.walawalkarmedicalcollege.com
www.bklwrmc.com

SUMMARY REPORT

Date: 31/12/2021

Memorandum of understanding done with R. P. GOGATE COLLEGE OF ARTS AND SCIENCE & R.V.JOGALEKAR COLLEGE OF COMMERCE, RATNAGIRI to carried out various activities such as Faculty & student exchange for Education, training and Research, Organization of joint activities in research, co and extra - curricular areas

Names of the participants under MoU:

| | |
|--|---|
| From BKLWRMC DERVAN | FROM R. P. GOGATE COLLEGE OF ARTS AND SCIENCE & R.V.JOGALEKAR COLLEGE OF COMMERCE, RATNAGIRI |
| Dr. Arvind Yadav(IQAC Coordinator) | Dr. P. P Kulkarni (Principal) |
| Dr Vijay Dombale(Principal) | Dr. S.C Tahkurdesai(IQAC Coordinator) |
|)Dr Suvarna Patil (MoU Coordinator, Medical Director) | Dr. Aparna Kulkarni(MoU coordinator) |

Activities under MoU

- 1) Faculty exchange : Mr Sagar Chavan appointed in RGST project
- 2) Testing of samples : Fouriers Transform infrared spectroscopy


Medical Director
B. K. L. Walawalkar
Rural Medical College

B. K. L. WALAWALKAR RURAL MEDICAL COLLEGE



At Kasarwadi, Post Sawarda, Taluka Chiplun,
Dist. Ratnagiri - 415606, Maharashtra State, INDIA
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Fax : +91 02355 264693 Email : info@bklwrmc.com
Website : www.walawalkarmedicalcollege.com
www.bklwrmc.com

Supportive documents and Photos

गोगटे-वालावलकर ; डेरवण वैद्यकीय कॉलेजात सामंजस्य करार ग्रामीण आरोग्य समस्या सोडवण्यासह संशोधनावर भर



रत्नागिरी, सा. ७ : गोगटे-जोगळेकर महाविद्यालय आणि डेरवण (सा. विषयदुग्ध) वैद्यकीय कॉलेज, चालू, वालावलकर वैद्यकीय महाविद्यालयात सामंजस्य करार झाला. या करारांतर्गत पॅज्जल्टी-स्टुडंट एक्चेंज, स्टुडंट इंटर्शिप, संशोधन सहकार्य, अशा विविध उपक्रमांचे आयोजन योगी आस्थापनांच्या संयुक्त विद्यमाने करण्यात येणार आहे. ग्रामीण भागातील आरोग्यविषयक प्रश्न सोडविण्यास आणि रोगसूचक सामग्री स्वस्त आणि सुलभ बनविण्यासाठी उद्योगाच्या संशोधनावर प्रामुख्याने भर देणार आहे.

लोकोपयोगी संशोधनास मिळणार चालना

गोगटे महाविद्यालय हे लोकणालील नामवंत महाविद्यालय असून तेक मुख्यतःकनात महाविद्यालयाचे सलग चार मुख्यकनामध्ये 'अ' वेणी प्राप्त केली आहे. कला, जीवशास्त्र, सांख्यिकी, साहित्य आणि संशोधन अशा विविध क्षेत्रात उल्लेखनीय सुचना प्राप्त केलेले आहे. महाविद्यालयाने महाराष्ट्रातील देशातील विविध आस्थापनांबरोबर सामंजस्य करार केले आहेत. या माध्यमातून विविध सामंजस्य आणि समाजाभिमुख विविध शिस्तिक, सहशैक्षणिक उपक्रमांचे आयोजन केले आहे. याच धर्तीवर महाविद्यालयाने लोकोपयोगी संशोधनास चालना मिळाली, म्हणून वालावलकर वैद्यकीय महाविद्यालय हे महाराष्ट्र युनिव्हर्सिटी हेल्थ सायन्स यांच्याशी संलग्न आहे, यांच्याशी सामंजस्य करार केला.

या करारासाठी वालावलकर महाविद्यालयातील संचालक डॉ. सुवर्णा पाटील, ज्येष्ठ मेमोरिअल सेक्टरशी संलग्न अरिष्ट संशोधक डॉ. रिता मुलेंकर, डॉ. विनाजी पाटील, डॉ. रोहित भट, डॉ. अनुप निलवार उपस्थित होते. गोगटे-जोगळेकर महाविद्यालयाचे प्रभारी प्राचार्य डॉ. पी. पी. कुलकर्णी, प्रशासकीय

उपप्राचार्य डॉ. मकरंद साखळकर, डॉ. यामिन आवटे, डॉ. विजा गोखामी, विविध विभागांचे विभागप्रमुख यांच्या उपस्थितीत कार्यक्रम झाला. हा सामंजस्य करार प्रत्यक्षात येण्यासाठी गोगटे जोगळेकर महाविद्यालयातील डॉ. सुरेंद्र जाधवरे, डॉ. अर्पणा कुलकर्णी आणि डॉ. विवेक विडे यांनी महत्त्वाची भूमिका बजावली.





Shri Vithalrao Joshi Charities Trust's
B. K. L. WALAWALKAR HOSPITAL,
DIAGNOSTIC & RESEARCH CENTRE

ISO 9001: 2008 Certified

Kasarwadi, Post Sawarde Taluka - Chiplun, Dist. Ratnagiri, Maharashtra - 415606.

Tel.: +91 02355 264137 / 264149 Fax : +91 02355 264181

Email: info@walawalkarhospital.com Webiste:www.walawalkarhospital.com

Date:18.02.2020

APPOINTMENT LETTER

To,

Mr.SAGAR S.CHAVAN

(LAB-TECHNICIAN)

Dear Sir,

You are appointed as a Lab Technician on New directions For Research in Diabetes in India, The harbinger of future Diabetes-An Adolescent & Preconception Health Perspective (Dervan Cohort) RGSTC at B.K.L.Walawalkar Hospital Savarda, Chiplun .on the following terms and conditions.

1. Your appointment is purely temporary one and subject to the continuation of the project,

Your services are liable for termination without assigning any reason or giving any notice.

2. You will be paid a consolidated remuneration @ **Rs.18770/-**per month (Rs.Eighteen Thousand Seven Hundred Seventy only.)

3.You are required to continue for the full tenure of the project subject to your work being found satisfactory. You will have to give three month notice in case you wish to resign from the post before completion of the tenure.

4.you will have to work full-time and will not be permitted to apply to apply or accept any employment/post/assistantship during the period of your tenure.

5.You will not be entitled to any leave except Casual Leave (10 Days per year prorata) Casual Leave will be permitted only with prior permission of Project Co-ordinator.

6.You will carry out the work assigned to you by the project co-ordinator or any other project personnel appointed to supervise your work.

7.You are required to sign the Muster Roll daily.

Received


8. You shall produce original documentary evidence regarding your date of birth nationality educational qualifications, experience, caste certificate etc.

9. Your appointment is specifically for this project (RGSTC) only, and you will not be entitled/incur any right whatsoever to claim continuation of service or absorption in the service to RGSTC or BKL Walawalkar Hospital on completion of the project.

If the offer of appointment on the above terms & conditions is acceptable to you, you are requested to communicate your acceptance immediately in the enclosed form.

Yours Faithfully

DR. SUVARNA N PATIL

Shri Vithalrao Joshi Charities Trust's
BKL, Walawalkar Hospital Diagnostic
& Research Centre

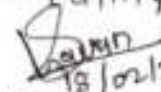
Principal/Investigator

Mr. Sagar S. Chavan
At. Post Turad Teliyadi
Tal. Sangameshwar
Dist. Ratnagiri
Date: 18/02/2020

Subject: Joining letter

Respected madam

I have honor to inform you that I am joining our hospital for RQSTC project from 18/02/2020 as a Lab Technician. I kindly request you to accept my joining letter.

Your faithfully

18/02/2020
Sagar S. Chavan

As per lab tech ↓ RQSTC project
Rs 20,000/-



RESUME

Sagar Suresh Chavan

At/post Tural, tal. Sangameshwar,

Dist. Ratnagiri, Maharashtra

Pin- 415609.

sagr.chvan@gmail.com.

Phone 8446327230; 7507073214



❖ Objective:-

seeking a position that utilize my fullest potential that will give opportunities to enhance my personality and career growth and will give benefits and salary that will commensurate with my abilities and qualification.

❖ Education details:-

| Sr. No. | Class | Subject | Passing Year | University | Percentage |
|---------|----------|----------------------|--------------|----------------------|------------|
| 1. | M. Sc. | Analytical Chemistry | 2017 | University Of Mumbai | 65.6 |
| 2. | B. Sc. | Chemistry | 2015 | University Of Mumbai | 69.83 |
| 3. | H. S. C. | - | 2012 | Konkan Board | 50.0 |
| 4. | S. S. C. | - | 2010 | Kolhapur Board | 60.0 |

❖ Work Experience:-

1. Working as lecturer from last two years for M. Sc. Analytical Chemistry and Undergraduate Chemistry at Gogate -Jogalekar College, Ratnagiri.

2. Six Research projects guided for M. Sc. Analytical Chemistry students in academic year 2018-19.

❖ Interest in:-

Research and analysis

❖ Working skill:-

Handling of analytical instruments such as Atomic Absorption Spectroscopy, FT-IR Spectrometer, Spectrofluorometer, UV/Vis. Spectrometer, pH Meter, Conductivity Meter, Flame Photometer, Water Analysis Kit.

❖ Co-Curricular Activities:-

Participation:-

1. Participated in Four Days Workshop on GC/HPLC and Hyphenated Techniques organized by Department of chemistry, in Gogate Jogalekar College, Ratnagiri associated with ROYAL SOCIETY OF CHEMISTRY (west India section) in the duration of 30th January to 2nd February 2020.
2. Participated in six days national initiative on undergraduate science-Teacher Development workshop (NIUS-TD Workshop) Organized by Department of chemistry in Gogate-Jogalekar College, Ratnagiri in association with HOMI BHABHA CENTRE FOR SCIENCE EDUCATION Tata Institute of Fundamental Research (TIFR). in the duration of 3rd to 8th November 2019.
3. Participated in two days national workshop of advance spectroscopic techniques organized by department of chemistry in Gogate-Jogalekar College, Ratnagiri associated with ROYAL SOCIETY OF CHEMISTRY west India section in the duration of 9th and 10th February 2018.
4. Participated in three days' workshop of Soil Analysis and Fertilizer Recommendation organized by REGIONAL AGRICULTURE EXTENSION MANAGEMENT TRAINING INSTITUTE, Khopoli .Dist. Raiagad in the duration of 21st February to 23rd February 2018.

❖ Personal Details:-

| | |
|----------------|---------------------------------------|
| Name | Mr. Sagar Suresh Chavan |
| Date of birth | 21 November 1994 |
| Blood group | B ^{th+} |
| Nationality | Indian |
| Religion | Hindu |
| Marital status | unmarried |
| Hobbies | reading, travelling, playing cricket. |


Sagar s. chavan

Date: 18/02/2020
Place:



Ref. No. :

Date : 14/02/2020

CERTIFICATE

This is to certify that Shri Sagar S. Chavan was working as an Assistant Professor in this College for the subject of Chemistry purely on yearly temporary basis on consolidated salary w.e.f. 01/12/2017 to 13/02/2020

To the best of my knowledge and belief he bears a good moral character.




PRINCIPAL



**HOMI BHABHA CENTRE FOR SCIENCE EDUCATION
Tata Institute of Fundamental Research**

National Initiative on Undergraduate Science -Teacher Development Workshop
(NIUS-TD Workshop)

Certificate of Participation

This is to certify that



Name : Mr. Sagar S. Chavan
College : Gogate-Jogalekar College, Ratnagiri



attended the 6-day workshop equivalent to a short term course titled '*Experimental modules for undergraduate chemistry laboratory*' at the Gogate-Jogalekar College, Ratnagiri from November 3-8, 2019. This programme was conducted by Homi Bhabha Centre for Science Education (HBCSE, TIFR), Mumbai in collaboration with Gogate-Jogalekar College, Ratnagiri and is a part of activities of Centre for Excellence in Science and Mathematics Education (CESME) at HBCSE and is supported under the Pandit Madan Mohan Malaviya National Mission for Teachers and Teaching.

As part of this workshop, teacher participants were engaged with hands-on experiences with experimental modules developed using pre/post laboratory activities and investigatory approach to understand aspects like planning/designing/standardization/assessment. The workshop covered discussion sessions with emphasis on content and pedagogy. In addition, teachers presented their own experimental work in the laboratory along with reflective commentary.

Savita Ladage
Savita Ladage
National Coordinator
NIUS Programme, HBCSE

Kishor Vasant Sukhatankar
Kishor Vasant Sukhatankar
Principal
Gogate-Jogalekar College, Ratnagiri

Sagar S. Chavan



**R.E.Society's
R. P. Gogate College of Arts & Science.
And R. V. Jogalekar College of Commerce, Ratnagiri.**

NAAC REACCREDITED 'A' GRADE CGPA-3.31

CERTIFICATE

DEPARTMENT OF CHEMISTRY

Organizing Committee of The National Seminar On
"CHALLENGES IN FOOD PRACTICES"

Has Pleasure To Certify That


Mr./Mrs./Dr. Ms. Suresh chavan

Has Participated /Worked as Resource Person During the National Seminar On
"Challenges In Food Practices" Organized by Department of Chemistry,
Gogate-Jogalekar, College Ratnagiri on 6th Feb, 2016.


Dr. P. P. Kulkarni
Secretary


Dr. M. G. Gore
Convener




Dr. K. V. Sukhtankar
Principal

**HOMI BHABHA CENTRE FOR SCIENCE EDUCATION
Tata Institute of Fundamental Research**

National Initiative on Undergraduate Science -Teacher Development Workshop
(NIUS-TD Workshop)

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Savita Ladage
Savita Ladage
National Coordinator
NIUS Programme, HBCSE

[Signature]

[Signature]
Kishor Vasant Sukhatankar
Principal
Gogate-Jogalekar College, Ratnagiri



University of Mumbai

CCF: 165: 0064

CERTIFICATE SHOWING THE RESULT OF THE CANDIDATE


NAME: CHAVAN SADAN SURESH LAXMI
 EXAMINATION: B. SC. (PART III) (SEM. IV)
 HELD IN: MAY 2017
 SEAT NUMBER: 43550

| Course Code | Course Title | Course Credits | Maximum Marks | Minimum Marks | Marks Obtained | Sub Total | Credits Earned (C) | Grade | Grade Points (G) | C X G |
|-------------|---|----------------|---------------|---------------|----------------|-----------|--------------------|-------|------------------|-------|
| PSCHA401 | 44: CHEMISTRY QUALITY IN ANALYTICAL CHEMISTRY | Theory | 60 | 24 | 36 | 51 | 4 | C | 4 | 16 |
| | | Practical | 40 | 16 | 25 | | | | | |
| PSCHA402 | ADVANCED INSTRUMENTAL TECHNIQUES | Theory | 60 | 24 | 28 | 65 | 4 | B | 5 | 20 |
| | | Practical | 40 | 16 | 27 | | | | | |
| PSCHA403 | ENVIRONMENTAL AND CERTAIN INDUSTRIALLY IMPORTANT MATERIAL | Theory | 60 | 24 | 29 | 54 | 4 | B | 5 | 20 |
| | | Practical | 40 | 16 | 27 | | | | | |
| PSCHA404 | PHARMACEUTICAL, BIOCHEMICAL AND ORGANIC ANALYSIS | Theory | 60 | 24 | 30 | 58 | 4 | B | 5 | 20 |
| | | Practical | 40 | 16 | 28 | | | | | |
| Total | | 24 | 600 | -- | -- | -- | 24 | -- | -- | 132 |

Sem. I SGPA : 5.25 Sem. II SGPA : 5.50
 Sem. III SGPA : 6.33 Sem. IV SGPA : 5.50

Remark: Successful CGPA 5.65 FINAL GRADE : B

Result Declared on: AUGUST 23, 2017


 DIRECTOR
 BOARD OF EXAMINATIONS & EVALUATION

*O.229, *O.5042/O.5043/O.5044, *O.5045, F - Head of Failure, * Marks Carried, E - Extension in the Exam - Not Applicable, A - Absent, -/ - Failed (GRA-I/CXG/ED) - - Dyslexia Benefit. P.T.O.

प्रादेशिक कृषि विस्तार व्यवस्थापन प्रशिक्षण संस्था (रामेती), खोपोली

REGIONAL AGRICULTURE EXTENSION MANAGEMENT TRAINING INSTITUTE

KHOPOLI, DISTRICT RAIGAD - 410 203, MAHARASHTRA

e-mail : rametikhopoli@gmail.com



Certificate

Certified that

Shri. / Smt. Chavhan Sagar Suresh

Designation Soil Analyst Participated in

Training Programme titled Soil Analysis & Fertilizer Recommendations.

From 21/02/2018 to 23/02/2018




Assistant Director


Principal



Place : Khopoli

Date : 23/02/2018





R. E. Society's
R. P. Gogate College of Arts & Science
And R. V. Jogalekar College of Commerce, Ratnagiri



'Best College of University of Mumbai (2007-08)' Re-accredited by NAAC, 'A' Grade 'UGC's "College with Potential for Excellence" (CPE)

DST-FIST SPONSORED DEPARTMENT OF SCIENCE (2016)

CERTIFICATE

This is to certify that Sagar Suresh Chavan
of Gogate Jogalekar College, Ratnagiri
actively participated in One Day workshop on "Revised Syllabus of M.Sc. II Analytical Chemistry (CBSGS)" organized by Department of Chemistry, Gogate-Jogalekar College, Ratnagiri, in Association with Board of Studies in Chemistry, University of Mumbai on Tuesday-7th August, 2018.

Date: 7th, August 2018

Place: Ratnagiri



Dr. M. M. V. Ramana
Chairman

Board of Studies in Chemistry
University of Mumbai

Dr. M. G. Gore
Convener

Gogate-Jogalekar College
Ratnagiri

Dr. K. V. Sukhatankar
Principal

Gogate-Jogalekar College
Ratnagiri



ROYAL SOCIETY
OF CHEMISTRY

Royal Society of Chemistry Yusuf Hamied Inspirational Chemistry Programme

Certificate of Attendance

This is to certify that

Mr. Chavan Jagar Suresh

attended the below teacher training workshops as part of
Royal Society of Chemistry Yusuf Hamied Inspirational Chemistry Programme

Workshop 1: *Moving Towards Active Learning* on 13/08/18

Workshop 2: *Chemical Reactions and Equations* on 13/08/18

Workshop 3: *The Particle Nature of Matter* on 14/08/18

Held at Gogate Jagalekar College, Ratnagiri.

Ershad

Ershad Abubaker
Royal Society of Chemistry

SHRI VITHALRAO JOSHI CHARITIES TRUST'S
**B. K. L. WALAWALKAR HOSPITAL,
DIAGNOSTIC & RESEARCH CENTRE**
ISO 9001-2008 CERTIFIED

Shreekshetra Dervan, Taluka Chiplun, Dist. Ratnagiri - 415606
Tel.: 02355-264137 / 264149 Fax: 02355-264181.



Receipt No. 51256

Date 01/12/2021

Received with thanks from M/s/ Logate Jagalekar College of Arts, Commerce,
& Science, Ratnagiri

the sum of Rupees four Hundred fifty only by Cash
Cheque

in Full Payment of FTIR testing (3 Samples)
Part

Rs. 450/-

Subject to realisation of cheque

SVJCT'S B.K.L. Walawalkar Hospital
Diag. & Research Centre,
Shreekshetra Dervan, Tal. Chiplun
Dist. Ratnagiri