

Other Health Institutions

16.1 ALL INDIA INSTITUTE OF PHYSICAL MEDICINE AND REHABILITATION (AIIPMER), MUMBAI

Introduction

AIIPMR established in 1955. This is an apex institute, well recognized for its commitment to provide comprehensive rehabilitation services to persons with severe and permanent locomotor disabilities.

Mission: To optimally enable persons with locomotor disability by quality interventions that go beyond their medical needs, so as to achieve social and economic independence, train Rehabilitation Professionals and undertake Research.

Objectives

- To create and provide comprehensive medical rehabilitation services for all categories of neuro - musculo - skeletal disorders including chronic disorders.
- To create and provide services through interdisciplinary approach with emphasis on disability prevention and rehabilitation.
- To train rehabilitation professionals through short term orientation courses and long term graduate and post graduate courses.
- To train health functionaries at community level.
- Fabrication of aids and appliances.
- To conduct research in the field of physical medicine and rehabilitation.
- Collaboration and co-ordination with Government and NGOs for providing consultative services for formulating improvement and monitoring of rehabilitation services from time to time.

16.1.1 Augmentation of Capacity

- **E-governance activities as per Government mandate**
 - Digitalization of medical & other records and online registration for PWDs.
 - Implementation of Employees Information System (EIS) for personnel information, payroll & service book from July onwards.
 - Implementation of Hospital Management Information System (HMIS).
- **Pathology**
 - Hindlab pathology collection facility has been started in Institute premises for staff and patients at subsidized rates (CGHS).
- **Physiotherapy Department**
 - New services launched in the department: Balance training in persons with chronic stroke rehabilitation using elastic bands has been started.
- **Prosthetic & Orthotic Department** - Patient care services and fabrication of appliances were improved by the addition of following equipment:
 - Foot Orthotics Laboratory,
 - Lathe Machine,
 - Polishing Machine,
 - Mechanical forging hammer,
 - Milling machine.
- **Speech Therapy** - Diagnostic services were improved by addition of High Frequency Audiometer and Impedance Audiometer.

- **Occupational Therapy Department**

Myotrainer and tester - demonstrations were conducted to enable upper limb amputees to identify suitable sites in their limbs for operating myoelectric prosthesis.

16.1.2 Research and Development

- **Physical Medicine and Rehabilitation**

- Evaluation of sexual dysfunction in spinal cord injured Men.
- Efficacy and safety of USG guided saphenous nerve block in patients with OA Knee.
- A comparative study of effect of intra-articular steroid vs USG guided saphenous nerve block on pain & functional improvement in osteoarthritis of knee.
- Study of median nerve compression in independent manual wheel chair users with spinal cord injury using ultrasonography.

- **Physiotherapy Department**

Sl. No.	Areas of Research	No. of Studies
1	Balance assessment and training in children, adults and elderly	4 studies
2	Observational studies in children with cerebral palsy	4 studies
3	Observational studies using Isokinetic assessment of trunk in healthy men	1 study
4	Electrophysiological assessment and Upper Extremity function, Balance Performance and Gait in Type II Diabetic Mellitus	3 studies
5	Observational and interventional studies in Musculoskeletal conditions	10 studies
6	Observational and interventional studies in stroke rehabilitation	4 studies
7	Observational and interventional studies in rehabilitation of persons with spinal cord injury	1 study

- **Prosthetic & Orthotic Department**

- Assistive devices for below elbow amputee using locally available resources.
- Modified HCTO (Head Cervico Thoracic Orthoses).

- **Occupational Therapy Department**

- Comparison of visual motor integration skills in pre-school children with and without disability.
- A study of the effect of prosthetic training and continued use of prehensile ability, functional ability and quality of life in adults with upper limb amputation using body power prosthesis.
- To study the effect of virtual reality training on cognitive skills and hand function in children with cerebral palsy.
- Effectiveness of home based occupational therapy on shoulder functioning and pain in long term manual wheelchair users.
- Comparison of handwriting performance in children with developmental disability with typically developing children on Evaluation Tool of Childrens Handwriting (ETCH).
- To compare effect of visual perceptual training using transfer training approach vs. functional approach in school going cerebral palsy children.

16.2 ALL INDIA INSTITUTE OF SPEECH AND HEARING (AIISH), MYSORE

Introduction

The All India Institute of Speech and Hearing (AIISH) is a premier educational organization pertaining to communication and its disorders in the country. Founded in the year 1965 under MoHFW as an autonomous organization, it started as an institute to train the post-graduate students in speech and hearing.



All India Institute of Speech and Hearing, Mysuru, Karnataka

The major activities carried out by the Institute from 1st April to 30th September, 2017 are given below:

- **Learning and Teaching**

During the year the institute offered 17 long-term academic programmes which include:

- one postdoctoral,
- three doctoral,
- three post-graduate degree,
- our post-graduate diploma,
- two under-graduate degree,
- three diploma, and
- one certificate programmes.

Admissions to the B.ASLP, M.Sc. (Audiology) and M.Sc. (SLP) programmes were conducted through national level entrance examinations. In addition to the long-term training programmes, the Institute conducted 101 short-term training/orientation programmes and 14 workshops/seminars on various aspects of communication disorders. Also, a Student Enrichment and Expansion of Knowledge (Gyan) programme, a

Technology Development Meet and activities such as guest lectures by eminent personalities, departmental peer evaluation, journal club and clinical conference presentations were organized during the period.

- **Research Accomplishments**

Different levels of research works were conducted at the institute during the period viz. (i) funded research by faculty and staff (ii) student research at post-graduate, doctoral and post-doctoral levels carried out under the supervision of faculty.

Totally, 49 funded research projects were progressing in different departments of the institute during the period.

- **Clinical Care**

Clinical evaluation for communication disorders was offered for the clients across the country and abroad and a total number of 37,275 persons availed the facility during the period. A wide range of rehabilitation services were provided for the persons identified with speech, language and hearing disorders, psychological and otorhinolaryngological disorders related to communication disorders.

Clinical Services	No. of Clients	Therapy Sessions/ Surgery
Speech and language assessment	3,698	14,115
Hearing evaluation/ listening training	7,399	4,977

- **Public Education and Outreach Services**

The Institute carried out various public education and outreach activities for the early identification and prevention of communication disorders during the reporting period. The major ones are given below:

- Opening of outreach service centre with newborn screening service at the Sub-divisional hospital, Sarguru, Karnataka.
- Organization of twenty communication disorders screening camps in various localities of Karnataka in which 2207 persons were evaluated and provided therapeutic services.
- Clinical evaluation of 184 employees for hearing disorders as a part of industrial screening programme.
- Neonatal and pediatric screening of communication disorders for 24,002 neonates and infants at 19 hospitals/immunization centres in Mysore, six outreach service centers of the Institute located in different parts of Karnataka, and the six newborn screening centres of the institute at JIPMER, Puducherry, JLNMC, Ajmer, NSCB, Jabalpur, RIMS, Imphal, RIMS, Ranchi and SCBMC, Cuttack.
- Speech and hearing diagnostic and therapeutic services for 1321 clients residing in the nearby areas of the four outreach service centers of the institute located in Mysore, Mandya and Chamarajanagar districts.
- Preparation and distribution of communication disorders related public education materials like manuals, brochures and pamphlets both in print and CD/DVD-ROM formats were carried out.
- Organization of public lectures by experts on various issues in disabilities to create awareness among the public.

- Tele-diagnostic and rehabilitation services for 178 clients with disabilities from across the country in 917 sessions.

- **Other Activities and Events**

- **Hearing Aid and Ear Mould Services:** 3897 clients were evaluated for hearing aids and 803 hearing aids were distributed under the scheme of Assistance to Disabled Persons (ADIP) for purchase/fitting of aids/appliances of the Ministry of Social Justice and Empowerment, Government of India. In addition, 4148 ear impressions were taken and ear moulds were made.
- **Educational Rehabilitation of Special Children:** The pre-school attached to the Department of Special Education of the Institute provided training for 204 children with hearing impairment, cerebral palsy and mental retardation. A graduation day and one-month summer camp were organized for the special children during the period.
- **Annual Day:** The Institute celebrated its 52nd year of establishment on 9th August, 2017. The day was marked by the launching of software apps, releasing of institute publications, and felicitation of Ph.D. awardees, meritorious students, retired employees and best employees of the Institute.

16.3 ALL INDIA INSTITUTE OF HYGIENE & PUBLIC HEALTH (AIH&PH), KOLKATA

All India Institute of Hygiene & Public Health, Kolkata established on 30th December, 1932 is a pioneer institute of its kind dedicated to teaching, training, and research in various disciplines of public health and allied sciences. The teaching, training and research at AIH&PH have the unique support of its field laboratories, viz. Urban Health Unit and Training Centre, Chetla and Rural Health Unit & Training Centre, Singur.

The regular courses conducted by the Institute are as follows:

MCI Recognised Courses: MD (Community Medicine), Diploma in Public Health (DPH), MPH (Epidemiology).

NON-MCI Courses: M.Sc. in Applied Nutrition, Master in Veterinary Public Health (MVPH), Diploma in Health Promotion and Education, Diploma in Dietetics (Dip-Diet), Diploma in Health Statistics (DPH), Post Graduate Diploma in Public Health Management (PGDPHM).

In addition to the regular courses, the Institute also conducts various short courses/training programmes on a regular basis for capacity development in the field of public health. This year, as part of the initiative of MoHFW, following skill based training programmes have been added to the list: Diabetes Educator; duration: 3 Months; Dietetic Assistant; duration: 5 Months; General Duty Assistant; duration: 5 Months; Home Health Aide; duration: 4 Months and Sanitary Inspector: duration: 9 months.

New Initiatives

1. The Institute has received approval of MoHFW for starting the following new regular courses: M.Sc. in Public Health (Occupational Health), M.Sc. in Public Health (Health Promotion), M.Sc. in Public Health (Maternal and Child Health).
2. Proposal for adopting e-Office has been approved and the implementation is under process.
3. An MoU has been signed with the NIOH, Ahmedabad for collaborative action in the field of Occupational Health, which includes the exchange of knowledge and collaborative research programmes.
4. An MoU has been signed with NIPER, Kolkata for research and academic exchange in global health care through scientific and technical collaboration having focus mainly on public health including occupational health and environmental health.

16.4 CENTRAL LEPROSY TEACHING AND RESEARCH INSTITUTE (CLT&RI), CHENGALPATTU

Central Leprosy Teaching and Research Institute (CLT&RI), Chengalpattu was originally established in 1955 by the Government of India under a

Governing Body by taking over Lady Wellington Leprosy Sanatorium established in 1924. Later, in 1974, Government of India had made CLT&RI as a subordinate office of the Dte. GHS. The hospital has a sanctioned strength of 124 beds.

16.4.1 Objectives

1. To undertake research in basic problems relating to the occurrence and spread and complications of leprosy.
2. To train manpower necessary to implement National Leprosy Eradication Programme (NLEP).
3. To provide specialized services for diagnosis of leprosy, lepra reactions, relapse and reconstructive surgeries.
4. To monitor and evaluate the National Leprosy Eradication Program.
5. To function as a pivotal center for promoting anti leprosy work in the country.

16.4.2 Training Section performance

Sl. No.	Name of Training Course	Duration	Participants
1.	NLEP Training for State / District Leprosy Officer	5 days	47
2.	NLEP Training for District Leprosy Consultant	3 days	03
3.	NLEP Training for PG Community Medicine	5 days	17
4.	NLEP Training for Non-Medical Health Supervisors	2 months	28
5.	In plant Training in Bio-Technology	10 days	2
6.	NLEP Training for Health Supervisors	5 days	24
7.	Internship for CRRRI Training	4 / 5 days	191
8.	Observational Visit for Medical Students	1 day	154
9.	Observational Visit for Nursing Students	1 day	20
10.	Observational Visit for Bio Technology	1 day	02

16.5 REGIONAL LEPROSY TEACHING AND RESEARCH INSTITUTE (RLT&RI), RAIPUR

RLTRI, Raipur was established in the year 1979 with a mandate to provide treatment to the leprosy affected persons and undertake training and research in the field of Leprosy. This institute works under administrative control of Central Leprosy Division of Dte. GHS.

The Institute performs as a tertiary level hospital and has three wards with a total bed strength of 60. In addition to OPD & IPD the hospital is also having a well equipped laboratory with a Microbiologist and trained technical manpower for doing skin smear examination, PCR procedure and other laboratory investigation. The Institute has a surgical side which consists of orthopedic surgeon who undertakes various kind of Re-constructive surgery for leprosy related deformity & polio surgeries at RLTRI, Raipur. The surgeon also undertakes RCS for leprosy cases across the country on camp mode. The officers and staff of the institute undertake regular field visits inside/outside the State to give supportive supervision to NLEP programme/technical guidance whenever necessary.

The institute has undertaken Leprosy related training for the various cadres of health staff.

The institute has additional responsibilities of Regional Office of Health & Family Welfare (ROHFW) for the State of Chhattisgarh to monitor various National Health Programmes including NLEP at State and District level and cross checking of beneficiaries like JSY, immunization status of children, ANC/PNC follow up, eligible couple using different contraceptive methods, work of ASHA (Mitamin) at different level.

16.6 REGIONAL LEPROSY TEACHING AND RESEARCH INSTITUTE (RLT&RI), ASKA

This Institute was established in 1977. At present, there are 31 [(Gr.-A-2, Gr.C-15 & Gr.C (MTS)-14)] staff in position out of 67 sanctioned posts. It has a 50 bedded hospital and average bed occupancy is about 41.55%. The Institute provides both outdoor

and indoor services to leprosy patients. The Institute also works as a referral center for management of difficult to diagnose leprosy cases and problematic, complicated and intractable cases of reaction and ulcers. Thalidomide is given to intractable recurrent ENL reaction cases. Physiotherapy measures and MCR chappals are provided to needy patients. Amputation and various other surgical procedures are carried out regularly and RCS (Re-Constructive Surgery) camps have been done in the past. It also works as a nodal training and research center for the cause of leprosy elimination.

Brief activities performed by this Institution (1st April 2016 to 31st March 2017)

1. OPD Attendance - 1636 (Leprosy-1239, Non-leprosy -397).
2. Indoor admission - 217.
3. Reaction cases managed (OPD) - In 342 episodes of reaction Type I- 279 & Type II - 63 out of which 3 patients has given Thalidomide.
4. Major surgeries - 25 & Minor Surgeries -156.
5. DPMR- MCR Chappals - 61 and aepair - 239.
6. Lab. - Total inv. - 260.

Training Faculty of this Institute participated as resource person to impart modular training in NLEP to doctors and paramedical staffs of Odisha State and also participated in NLEP Review and Planning meetings of State. 172 Medical Officers (MBBS) were trained for 3 days in four batches, 123 AYUSH MOs for two days in four batches and 154 number of MOs of different districts of Odisha trained in LCDC in different batches. Director of the Institute participated as Central Monitor Level II for LCDC for the States of Uttarkhand, Uttar Pradesh, Karnataka and Odisha.

16.7 REGIONAL LEPROSY TEACHING AND RESEARCH INSTITUTE (RLT&RI), GOURIPUR (WEST BENGAL)

At RLTRI, Gouripur, a 50 bedded leprosy hospital has been set up by Government of India in 1984 with the objectives as mentioned on next page:

- a) To create sufficient trained manpower of different categories including Medical Officers, for better implementation of NLEP in different States, especially of the North-Eastern region to eradicate/eliminate leprosy.
- b) To carry out operational research on leprosy.

The institute is located at a village named Gouripur which is well connected with the district town Bankura (12 kms), Kolkata city (245 kms), Durgapur Rly. Station (56 kms), Kharagpur Jn. (130 kms), Asansol & Purulia towns. Different towns/cities of the neighboring State of Jharkhand e.g. Ranchi (217 kms), Dhanbad (117 kms), Gomoh, Vojudih (84 kms) etc. are also well connected through rail and road.

In the changing scenario of NLEP management, presently, the institute has been conducting Training of Trainers (TOT) course on NLEP for Senior Medical Officers (DLOs & BMOs). Training on NLEP of three days duration and PMW Training on Leprosy of five days duration throughout the year as per schedule which is available on NLEP Website also.

16.8 VALLABHBHAI PATEL CHEST INSTITUTE (VPCI), NEW DELHI

The Vallabhbhai Patel Chest Institute (VPCI) is a unique research institution devoted to the study of chest diseases and allied sciences. VPCI is fully funded by the MoHFW, Government of India and maintained institution of University of Delhi. During FY 2016-17, Government of India released Grants-in-aid to the tune of Rs. 51 crore to VPCI.

The institute continues to conduct post-graduate courses (Diploma in Tuberculosis & Chest Diseases (DTCD), MD, DM in Pulmonary Medicine, MD in Biochemistry, Microbiology, Pharmacology, Physiology and Ph.D in Pulmonary Medicine, Microbiology, Pharmacology, Physiology, etc.) in chest diseases in India.

The Viswanathan Chest Hospital (VCH), the clinical wing of the Institute, is a tertiary care Chest Hospital with State-of-the-art patient-care facilities. This 128 bedded hospital with 24 hours respiratory emergency services, continues to treat almost 84,000 OPD

patients and 5200 Indoor (general and emergency wards) patients annually. The Institute also provides diagnostic facility for the pandemic influenza H1N1 virus. The National Center of Respiratory Allergy, Asthma and Immunology (NCRAAI), Allergy Clinic, Tobacco Cessation Clinic, Cardio-pulmonary Rehabilitation Clinic, Sleep Lab., Yoga Therapy Research Centre, National Tobacco Quit Line service, Multi-Disciplinary Research Unit (MRU) to play their important roles in effective VCH functioning.

The institute also conducts various symposium/conferences/seminars and workshops/CMEs and other programmes in the field of research in order to maintain quality research and patient care.

Patient Care

1. Diagnostic tests carried out in pathology department for patients in OPD, IPD, Emergency and ICU of VP Chest Institute: Blood Test 42383, Urine Test 1029, Sputum Test 657 and Histopathology 163.
2. Patients attendance to the Cardiopulmonary Rehabilitation Clinic, VPCI
 - Supervised Rehabilitation Sessions - 417
 - Explained Breathing exercises - 425
3. Total admissions (inclusive of in-patient & out-patient admissions): New Patients OPD 14,869 and Old Patients OPD 69,994.
4. Patients attendance in the wards: General Wards 2,227, Emergency Ward 3011, I.C.U. 438, Emergency treatment provided 29,178.
5. A number of routine and specialized investigations done at VCH during the year: Pulmonary function tests 28,757, Arterial blood gases 12,246, Bronchoscopy 234, Bronchoalveolar lavage 166, CT scans 3,757, Ultrasound Examinations 127, X-Rays 27,617, Electrocardiogram 7,188, Polysomnogram 398, HIV testing 1050 and Clinical biochemistry 64,287.

16.9 NATIONAL INSTITUTE OF TB AND RESPIRATORY DISEASES (NITRD), NEW DELHI

National Institute of Tuberculosis and Respiratory Diseases (NITRD), an autonomous institute under the Ministry, is an apex institute well recognised for diagnosis, treatment, teaching, training and research in the field of tuberculosis and respiratory diseases. The Institute has 16 Departments and 11 Sections/Centres.

The institute runs a daily OPD for diagnosis of TB and various non-tubercular respiratory diseases. Special clinics like Sleep Clinic, Lung Cancer Clinic, Thoracic Surgery Clinic, Allergy Clinic, Tobacco Cessation Clinic, Pulmonary Rehabilitation Clinic and Laser Therapy Clinic, and Pre-Anesthesia check-up Clinics focus on various Non-tubercular Respiratory Diseases.

The institute provides indoor treatment to the seriously ill patients of Tuberculosis and Respiratory Diseases through 470 beds in wards and ICU. Availability of a 24-hour respiratory emergency facilitates critical care delivery to these patients.

The institute is a WHO Collaborating Centre for training. It runs the Post-Graduate DNB (Respiratory Diseases) Degree Course since 1999 and is now admitting 19 DNB students in the course during the year. In addition, two students are being admitted to the 3-year DNB Course in the sub-specialty of Thoracic Surgery and two DNB students in Microbiology. During the period from April, 2017 to July, 2017, more than 250 participants (including nursing students/staff) from various areas of health care attended the trainings/educational sessions at the institute. Many research projects including those by the DNB students as well as by the institute faculty, were carried out. More than 3 scientific publications of the institute faculty were published during this period. The Institute continues to publish the regular 3-monthly Newsletter.

During the period April to July, 2017, a total of 19,990 new chest symptomatics attended the OPD with an average of 200 new registrations per day. The total OPD attendance was 79,673 averaging 797 patients

daily. 2,950 cases were diagnosed to have TB and were referred out to respective DOTS Centres. A total of 27,456 smear microscopy tests, 858 pulmonary and 1380 extra pulmonary conventional cultures, 4533 pulmonary and 1321 extra-pulmonary MGIT liquid cultures, 2235 line probe assays and 141 & 1260 drug susceptibility tests respectively by conventional and MGIT methods tests were done. Other investigations carried out were 52038 haematology tests, 1,08,587 biochemistry tests, 1915 cytology tests, 318 histopathology tests, 27,728 X-rays, 1617 Ultrasounds, 3204 PFT, 210 Bronchoscopies with 555 procedures, 3191 ECGs, and 35 Sleep studies. There were 2485 Indoor admissions, 4838 Emergency patient visits, 210 ICU admissions, 188 Major Thoracic surgeries, and 1109 patients alive on Anti Retroviral Therapy (ART).

1. Nursing department formed a Continuing Nursing Education (CNE) Cell in the Institute and organized a TB Quiz on 25th April, 2017.
2. Meeting on LTBI at NIRT, Chennai was held from 29th to 30th June 2017 and 23rd National Conference of Environment Science and Pulmonary Diseases (NESCON) was organised at Mumbai from 7th to 9th July 2017.
3. A PFT Workshop on “Practical Training on Spirometry” and a lecture on “Interpretation of Spirometry” at 42nd Workshop on “Respiratory Allergy: Diagnosis and Management” was organized by VP Chest Institute from 25th to 26th April, 2017 at New Delhi.
4. The Institute conducted a DPR-Korea WHO Fellowship Training for 5 fellows from Korea from 27th March, 2017 to 15th April, 2017. The Institute also conducted a Working Group Meeting for development of tools for PMDT evaluation from 5th to 6th May, 2017 and a training on “Preparatory activities for NABL Accreditation of selected culture and DST Labs under RNTCP” organized by FIND, CTD, MOHFW from 24th to 27th May, 2017.
5. Department of Microbiology conducted a Culture & DST training for 37 participants including 16 Microbiologists from SAARC countries from 10th to 14th July 2017.



Valedictory Function of the SAARC Regional Training

16.10 NATIONAL TUBERCULOSIS INSTITUTE (NTI), BENGALURU

Established in 1959, the National Tuberculosis Institute (NTI), Bengaluru is a premier Institute in the field of Tuberculosis control in South East Asia, which caters to the human resource needs for TB control and operational research in the region.

16.10.1 HRD and Documentation Division

The Institute has pioneered the field of Human Resources Development. The Division conducted 297 different training programmes for 570 participants deputed from different parts of the country during the period of reporting.

16.10.2 Laboratory Division

The laboratory at NTI has been designated as one of the National Reference Laboratories, which assess the quality of the sputum smear microscopy, culture and drug susceptibility testing services by phenotypic and genotypic methods in the laboratory network under RNTCP. As an NRL, NTI supervises and monitors the quality of sputum smear microscopy in the network of laboratories in the three States allocated viz., Karnataka, Maharashtra and Rajasthan. The NRL trains laboratory personnel and is responsible for certifying State Level laboratories i.e. the IRLs, Medical Colleges and other private laboratories for culture and drug susceptibility testing for detection of Drug Resistant Tuberculosis (DR-TB in the States supervised by NTI).

Besides these activities, it also supports State level Drug Resistance Surveillance (DRS), PMDT activities, QAS, EQA, Certification of mycobacteriology laboratories etc.

16.10.3 Animal Model Research Unit (AMRU)

The main objective of the unit AMRU is to experiment in laboratory animals and their utility in TB Control. The routine activity involves breeding and maintenance of homogenous stock laboratory animals guinea Pigs.

16.10.4 International Center of Excellence for Laboratory Training (ICELT)

International Center of Excellence for Laboratory Training, supported by FIND, RNTCP and UNITAID, was started in NTI Bangalore with the mission “to support the scaling up of laboratory capacity building in India by providing hands-on training courses in the diagnosis and monitoring of major infectious diseases such as TB. Presently, ICELT is imparting training on WHO endorsed newer diagnostic techniques for TB and its drug resistance and bio-safety measures. During the period of reporting 6 National TOT programmes for 60 participants from different parts of the country were conducted.

Epidemiology and Research Division

The major responsibility of Epidemiology and Research Division comprises conducting epidemiological and operation research studies on TB and imparting training in TB Epidemiology and operation research. The research activities of the division during the period of reporting are briefed as under:

Current status

- Data entry collected between 2014 and 2017, completed and sent to NIRT, Chennai.
- Comments/suggestions on initial draft of findings were sent to NIRT and also inputs for further analysis.

India TB Research Consortium related activities

S. N.	Title	Status
1	Active Case finding for pulmonary tuberculosis in congregate settings.	Proposals along with letter of interest submitted to ICMR
2	Active case finding in key population in health institutional settings	
3	Randomized, controlled, phase II study to evaluate safety, immunogenicity and POD after vaccination in high risk group (IGRA positive subjects)	

Monitoring & Evaluation Division

At present, the monitoring activity is being carried out by the Central TB Division under Dte. GHS. Monitoring and Evaluation Division provide support to statistical needs of all the research activities carried out by the institution.

Communication and Sociology Division

Scientific Gallery: The Scientific Gallery has been established to disseminate the general information on TB, the evolution of the programme and achievements of the Institute since its inception. Considering the needs of various categories of trainees and general public, two methods of display units viz., photo displays, health education panels and information kiosk are available.

Visit of students: Under advocacy communication and social mobilization, communication & sociology division at NTI has been conducting one-day orientation/sensitization training about RNTCP. Students from different institutions of the State and neighboring states are utilizing this programme. A total of 306 students & scholars of life sciences visited NTI in 10 batches and was sensitized by the divisional staff during the period of reporting.

Accounts

The unit caters to the financial matters of the Institute. Details of Budget received under Non-Plan and Plan and Expenditure up to end of August, 2017 is as follows:

	Budget Estimate	Expenditure*
Revenue	Rs. 11,20,00,000	Rs. 5,57,99,000
Capital	Rs. 1,10,00,000	Rs. 25,00,000

*April, 2017 to August, 2017

The revenue generated by the Institute for the year 2017-18 through various sources was credited to the consolidated fund of Government of India as given in the table below:

Year	Amount (Rs.)
2017-2018 (April, 2017 to August, 2017)	Rs. 1,87,250

Research & Documentation Cell:

The Research Documentation cell is carrying out the responsibility to digitize and upload the published TB research in Indian context as a nodal centre of NTI. The uploaded research articles are available in the research documentation portal www.tbresearch.ntiindia.org.in.

16.11 NEW DELHI TUBERCULOSIS (NDTB) CENTRE, NEW DELHI

New Delhi TB Centre is a Central Government funded institute, providing free diagnosis and treatment for tuberculosis patients from Delhi and its neighboring States since 1940. With the implementation of Revised National Tuberculosis Programme (RNTP) in the year 1997, New Delhi TB Centre joined hands with programme in Delhi State and provided DOTS to the patients under its jurisdiction in Delhi.

As State TB Training & Demonstration Centre (STDC) and Intermediate Reference Laboratory (IRL) for Delhi State since 2005, the Centre is actively involved in all the programme activities of Delhi State, in addition to its activities as referral Centre for TB and respiratory diseases.

During 2016-17, the Centre was involved in following activities:

- Clinical:** As a referral Centre, the difficult to diagnose patients are referred to the Centre by Private practitioners and chest clinics of Delhi State and neighboring areas. During the year, 10,157 new cases and 9,895 revisits cases visited the centre for opinion and treatment. In addition, 562 patients were enrolled in special clinics (TB and Diabetes and COAD clinic). In all, 455 TB patients got DOTS treatment from the DOT Centre of New Delhi TB Centre. A total of 8,425 cases were referred for tuberculin testing from private practitioners and various hospitals.
- Laboratory:** Laboratory of New Delhi TB Centre provides facilities of diagnosis for TB and MDR TB to patients referred by PPs and various hospitals of Delhi and neighboring states. During 2016-17, more than 35,000

laboratory tests were performed which included, smear examination culture for AFB and drug sensitivity testing. In addition, as IRL for Delhi State, the laboratory provided monitoring of microscopy activities in microscopy centres of 21 out of 25 chest clinics of Delhi. During 2016-17, a total of 1561 radiological examinations were done which included patients from clinical section and health check up cases from different embassies and organizations.

- iii. **Teaching and training:** New Delhi TB Centre is a teaching centre for students and interns of MBBS and MD students of Maulana Azad Medical College and post graduate students of VP Chest Institute. In addition, initial training and re-training is provided to doctors and para medical staff working under RNTCP in Delhi State, apart from sensitization of nurses on TB is also done. During 2016-17, a total of 2439 personnels were trained. The Centre conducts RNTCP approved TB supervisor course for three month duration in different batch during the year. In the year 2016-17, 51 students successfully completed the course in different batches.
- iv. **Supervision and Monitoring:** As STDC, this is the responsibility of the Centre to monitor activities of chest clinics of Delhi State and provide them feedback on their quarterly performance. During 2016-17, 21 chest clinics were visited to review their DOTS and microscopy activities.
- v. **Research Activities:** During the year 2016-17, 7 papers have been published/submitted by the faculty of the Centre in national/international journals. Six papers were presented at 71st National Conference on Tuberculosis and Chest Diseases organized by TB Association of India at Chandigarh under the aegis of TB Association of India at Department of Pulmonary Medicine, PGI Chandigarh from 16th to 18th December 2016. Six projects were undertaken by the faculty during 2016-17. Nine MD/MS/DMB theses being undertaken during 2016-17.

An insight on New Delhi TB Centre's activities during 2017-2018

A. Out-patient attendance

Parameters	Year 2016-2017	Up to August, 2017
New out-patient registered	10157	5253
Revisits	9895	4810
Total	20052	10063

B. Patients attendance for utilizing various diagnostic/treatment facilities available at New Delhi TB Centre.

Parameters	Year 2016-2017	Upto August 2017
Attending for Laboratory tests	35782	18043
Attending for Mantoux test	8425	4066
Taking treatment under DOT Centre of NDTB Centre	455	190
Radiological Examinations	1561	1037
Attending special clinics (Diabetes, HIV, COAD)	562	345

16.12 NATIONAL CENTRE FOR DISEASE CONTROL (NCDC)

The National Centre for Disease Control has its headquarters in Delhi. It has 8 branches located at Alwar (Rajasthan), Bengaluru (Karnataka), Kozhikode (Kerala), Coonoor (Tamil Nadu), Jagdalpur (Chhattisgarh), Patna (Bihar), Rajahmundry (Andhra Pradesh) and Varanasi (Uttar Pradesh).

The technical centers/divisions at the headquarters of the Institute are:

- Centre for Epidemiology and Parasitic Diseases (Dept. of Epidemiology, Dept. Parasitic Disease),
- Division of Microbiology (including Centre for AIDS & related Diseases and Biotechnology),

- Division of Zoonosis,
- Centre for Medical Entomology and Vector Management,
- Division of Malariology,
- Coordination, Centre for Non-Communicable Diseases,
- Centre for Environmental & Occupational Health and Division of Climate Changes & Health,
- The Institute is also running the Integrated Disease Surveillance Programme (IDSP).

16.12.1 Divisions and Programmes of NCDC

A. Integrated Disease Surveillance Programme (IDSP)

Under the IDSP, surveillance units at Centre, State and District level have been established and Human Resource Development – Training of State Surveillance Officers, District Surveillance Officers, Rapid Response Team and other Medical and Paramedical staff on principles of disease surveillance, Training of Trainers and Rapid Response Teams (RRTs) - has been completed in all the States/UTs. The Strategic Health Operations Centre (SHOC) managed outbreak detection and response capacities of the States and districts through collection, compilation and analyzing the heat wave related illness surveillance, H1N1 data and floods data on daily basis in 2017.

Data Management: Data is collected on epidemic prone diseases on weekly basis (Monday–Sunday). IDSP receives weekly disease surveillance data from about 96% districts in the country. States and districts also report the outbreaks immediately through an Early Warning Signal (EWS) format. A total of 1250 outbreaks were reported from 2nd January, 2017 till 27th August, 2017. Majority of outbreaks reported in 2017 were of acute diarrheal disease (19.4%), food poisoning (19.6%), chickenpox (19.2%) and measles (15%).

Media scanning and verification cell had reported and verified 515 media alerts for any unusual health events from 1st January, 2017 till 28th September, 2017. These alerts are further verified and responded to by the States and districts.

Strengthening of Laboratories: 259 district public health labs has been approved for strengthening through RoPs, out of which 138 DPHLs are performing tests as per IDSP standards. A State based referral laboratory network has been established by utilizing the existing functional labs in the identified medical colleges and other major centers in the States. Presently network is functional in 23 States/UTs involving 108 labs.

States/UTs have been requested to provide land to NCDC for establishing its branches. Jharkhand, Agartala, Himachal Pradesh, Uttarakhand, Mizoram, West Bengal, Chhattisgarh, Arunachal Pradesh, Maharashtra, Nagaland and Kerala have so far agreed to provide free land/building to NCDC.

B. Department of Parasitic Diseases

It is the nodal agency for planning, implementation, monitoring and evaluation of Yaws Eradication Programme (YEP) and Guinea Worm Eradication Programme (GWEP) in the country. World Health Organization has declared India as Yaws-free on 5th May, 2016 and India has become the first WHO member State to achieve this important milestone. Regular surveillance for Yaws and Guinea Worm diseases is continuing till global eradication is achieved. NCDC is also the nodal agency for prevention and control of soil-transmitted helminthiasis in the country. About 70,23,850 and 708 patients were screened for lymphatic filariasis at NCDC's branches at Varanasi, Kozhikode and Rajahmundry respectively during the period 1st April, 2017 to 31st August, 2017.

C. Zoonosis Division

The division provides technical support for outbreak investigations, conduct operational research and trained manpower development in the field of zoonotic diseases and their control in the country. Diagnostic support is provided to State Governments for laboratory diagnosis of zoonotic infections of public health importance. The Division has reference laboratory for plague. It has also been recognized by the World Health Organization as WHO Collaborative Centre for Rabies. The ongoing programmes under the Division are National Rabies Control Programme and National Programme for Prevention and Control of Leptospirosis.

D. Centre for Environmental & Occupational Health

The Centre for Environmental & Occupational Health (CEOH) enhances health-sector leadership for creating a healthier environment through intensifying primary prevention aimed at tackling the root causes of environmental & occupational threats to health and influencing public policies in all sectors to respond to emerging & re-emerging consequences of development.

E. Centre for AIDS and related Diseases

The Centre evaluates diagnostic kits and about 6,000 tests were carried in this evaluation. The HIV sero-status of all samples received from State Reference Laboratories (SRLs) and their Integrated counseling and testing centre (ICTCs) are tested. Quality control testing of HIV of serum Samples received under ANC Sentinal Surveillance was done on 1641 samples and HIV-2 confirmation of patient referred through ART centre's of 7 States of Delhi, Punjab, Chandigarh, Haryana, Rajasthan, Jammu & Kashmir and Himachal Pradesh was conducted.

F. Biochemistry Division

The Division performed of 175 clinical samples for 10 parameters of the biochemical tests. The Division also organized World No Tobacco Day, International Yoga Day, World Heart Day and the World Health Day.

G. Centre for Non-Communicable Diseases (NCDs)

The Centre provides technical support to NPCDCS, and is involved in capacity building, IEC & advocacy with policy makers and programme managers, monitoring & evaluation and research. It developed the 'Training Module for Medical Officers for Prevention, Control and Population level Screening of Hypertension, Diabetes and Common Cancers (Oral, Breast and Cervical)'.

H. Epidemiology Division

The division is involved in the organization and coordination of training courses in Epidemiology to develop trained manpower. It develops teaching materials such as modules, manuals etc. on disease surveillance and outbreak investigation of epidemic prone communicable diseases and investigates outbreak of diseases of known/unknown etiology and recommend measures for its prevention and control to the States/UTs.

I. Centre for Medical Entomology and Vector Management

Centre for Medical Entomology and Vector Management is a National Centre par excellence for undertaking research, providing technical support and to develop trained manpower in the field of vector-borne diseases and their control.



Review meeting of Vector Borne Diseases by Hon'ble Union Health Minister on 04.07.2017

J. Division of Microbiology

The Division provides technical support for national health programmes, outbreak investigations, operational research and manpower development in the field of communicable diseases. The Division has a Respiratory Virology & Teratogenic Virus Lab, an Enterovirus Laboratory, a Mycology Laboratory, a Diarrhoeal Diseases Laboratory. A Central Media Room, an Environment Laboratory a Bacteriology & Drug Resistance Lab and a Tuberculosis Laboratory.

K. National Programme for containment of Antimicrobial Resistance

Antimicrobial Resistance is a global public health threat with serious health, political and economic implications. India has given due cognizance to this problem and to tackle this issue, the Government has constituted a National Task Force on AMR containment, culminating in the development of National Policy document on AMR containment. The conclave of the Health Ministers of the South East Asia Region had given a strong commitment to fight this scourge jointly known as *Jaipur Declaration on AMR Containment*. Thereafter, the Government of India launched a “National Programme on Containment of Antimicrobial Resistance”. The National Health Policy also highlights the problem of antimicrobial resistance and calls for a rapid standardization of guidelines regarding antibiotic usage in the country.

India has been successfully enrolled in GLASS (Global Antimicrobial Surveillance System) coordinated by WHO, Geneva. A National Action Plan for AMR (NAP-AMR) containment programme has been finalized and uploaded on the NCDC website. India’s National action plan on AMR is well aligned with the global action plan on AMR, with a One Health approach. This document covers the national priorities to tackle AMR in India and provides an overview of the AMR situation in India. A National consultation was also organized to facilitate operationalization of action against antimicrobial resistance in New Delhi on 24-25 August, 2017.

L. Division of Viral Hepatitis

The Division conducts routine and referral diagnostic services for Viral Hepatitis, provides laboratory support to outbreak investigations, training on laboratory aspects and conducts Viral Hepatitis

Surveillance. So far, 818 samples were tested in the Hepatitis Laboratory.

Under the National Programme of Viral Hepatitis detection of outbreaks, description of trends in type-specific acute hepatitis and identification risk factors, estimation of the proportion of chronically infected persons, estimation of the burden of chronic infections, estimation of the incidence of HCC and cirrhosis and other actionable opportunities for intervention are conducted.

M. Division of Biotechnology/Molecular Diagnostics

The division provides molecular diagnostic services, molecular epidemiology, specialized training and applied research on various important epidemic-prone diseases of public health importance for molecular diagnostic support for confirmation of microbial pathogens, to identifying new, emerging and re-emerging pathogens, to genotyping and Sub-typing of strains and for characterizing drug-resistant strains.

N. Division of Malariology & Coordination

The division provides technical support for outbreak investigations, conduct operational research and trained manpower development in the field of malarial diseases and their control in the country. It also provides diagnostic support to state Governments for laboratory diagnosis of malaria infection and coordinates and conducts short term orientation/training visits & conference etc. for post graduate medical, nursing and homeopathic students & other professionals.

16.12.2 Other activities conducted by NCDC during the year

An Expert Group meeting for preparation of guidelines for prevention and control of KFD and Glanders in India was held on 12th April, 2017. A National workshop of strengthening surveillance system for Infectious disease hospitals across India was conducted on 15th-16th May, 2017. Consultative workshop on dengue fever outbreak in Kerala was conducted on 17th July, 2017 and an in depth review of Bihar, Haryana and Rajasthan was conducted during April- September, 2017. NCDC deputed expert technical teams to States/UTs at very short notice to investigate disease outbreaks and provide necessary assistance. During the year, expert terms were sent to various States in first table on next page:

States/UTs visited	Purpose	Period of visit
Kerala	Investigate outbreak of H1N1, Leptospirosis and Dengue	June - July, 2017
Maharajganj, Uttar Pradesh	Outbreak investigation of Chickenpox	April, 2017
Longding, Arunachal Pradesh	Measles outbreak investigation	June, 2017
Maharashtra, Gujarat	To investigate and assist the state on H1N1(Swine flu)	June-August, 2017
Noida and Mahrajganj Districts of Uttar Pradesh	To investigate Hand, Foot and Mouth disease, Chicken pox	August and April, 2017
Karnataka	To investigate Dengue cases	August, 2017
Andhra Pradesh and Lucknow, Uttar Pradesh	A team visited to assess the suitability of the Guntur and Krishna district infrastructure and logistics for implementation of the "one health surveillance monitoring project" under Indo-Netherlands collaboration on Antimicrobial Resistance	August, 2017

16.13 CENTRAL RESEARCH INSTITUTE (CRI), KASALI

Central Research Institute, Kasali was established on 3rd May, 1905 as Pasteur Institute for North India. It is under Dte. GHS, MoHFW. The Institute has a huge complex and is divided in seven sub-sections i.e. establishment, academic, auxiliary facilities, production division, quality control division, animal house and research & surveillance division. It has a network of large number of laboratories engaged in manufacturing of vaccines/sera and research activities.

Present Activities

Central Research Institute is engaged in:

a) production of Bacterial and viral vaccines &

sera on large scale,

- Production & supply of diagnostic reagents,
- Research and development in the field of immunology and vaccinology,
- Teaching and training in vaccinology and Microbiology and,
- Quality control of immunologicals.

Manufacturing and Supply of Vaccines and Anti-sera

During the year 2017-18 (up to 31/08/2017), the Institute has supplied different life saving product i.e. Sera & Vaccine manufactured in the Institute detail of which as following table:

Sl. No.	Name of Vaccine	Opening Balance 01.04.2017	Demand	Production	Supply	Lab Use	Stock in Hand 25.08.2017
1	DPT(Doses)	-	-	-	-	-	-
2	DT (Doses)	-	-	-	-	-	-
3	TT (Doses) (UIP) TT (Doses) (Non-UIP)	33,52,900 -	41,24,000* 1,01,750	11,77,050 -	6,50,000 1,01,750	1,910 -	37,76,290 -
4	Yellow Fever vaccine (Doses)	1,01,664	66,814	39,900*	67,040	1,428	73,096
5	ARS (Vials)	5,682	13,100	3,267	8,600	230	119
6	ASVS (Liq)(Vials)	2,776	1,650	-	1,630	141	1,005
7	DATS (Liq)(Vials)	143	400	-	130	-	13
8	NHS (Vials)	25	6	-	6	1	18
9	DIAG. AG. (ML)	11,250	55,450	50,350	32,300	900	28,400

*imported through WHO

Other activities of the Institute

In addition to manufacturing of vaccines and antisera, the institute is also engaged in a large number of other activities such as quality assurance and quality control activities:

- National Salmonella and Escherichia Coli Centre,
- National influenza surveillance centre and rabies research centre,
- National polio laboratory for surveillance,
- Experimental animal House,
- Medical treatment centre & diagnostic laboratory,
- Academic & research activities,
- M.Sc. (Microbiology) classes are running in this Institute under H.P. University, Shimla,
- Certificate course on production on immunobiologicals and animal care is running in this Institute. Presently, 25 Candidates are taking training under skill development programme of Government of India.

16.14 NATIONAL INSTITUTE OF BIOLOGICALS (NIB), NOIDA

The National Institute of Biologicals (NIB) has been performing quality evaluation of biologicals and bio-therapeutic products including Albumin, normal and specific immunoglobulin, coagulation factor VIII, insulin and its analogues, Erythropoietin, Granulocyte Colony Stimulating Factor (G-CSF), Streptokinase, Rituximab, Trastuzumab (Herceptin), Adalimumab, Immunodiagnostic Kits (HIV,HCV, HBsAg), blood grouping reagents and glucose test strips in its various State-of-the-art Laboratories and animal house by following various national/international pharmacopoeias. The Institute has performed quality evaluation of 1900 batches of 185 types of various biologicals during the year 2016-17.

Standardization and validation of Bevacizumab is going on. Testing of Glucose Test Strips, which are commonly used for measuring blood sugar level particularly in human beings suffering from diabetes, has been fully taken up. Nucleic Acid Testing (NAT)

laboratory has done evaluation of a few kits used for monitoring of viral load in the patients.

Standardization and validation of viral vaccines like Cell Culture Rabies Vaccine (CCRV), MMR Vaccine, Live Attenuated Measles Vaccine, Rubella Vaccine & BCG Vaccine have been completed. Standardization of the other vaccines like JE Vaccine, HPV, Polysaccharide Quadrivalent, Typhoid Vi Polysaccharide are in progress.

The institute has been declared as Central Drugs Laboratory (CDL) vide extra ordinary Gazette Notification G.S.R. 250 (E) - Part-II - Section 3 - Sub-Section (i) dated 15th March, 2017 for 07 additional biologicals viz. Bacillus Calmette-Guerin (BCG) vaccine, Live attenuated Measles vaccine, Live attenuated Rubella vaccine, Cell culture Rabies vaccine, Streptokinase (Natural and Recombinant), Human Chorionic Gonadotropin (hCG), Human Menopausal Gonadotropin (hMG) tested by Bacterial Vaccine Lab, Viral Vaccine Lab and Enzyme & Hormone Lab respectively.

As an on-going exercise, the Insulin National Reference Standard and HIV, HCV, HBsAg and Syphilis Reference Sera panels are available for sale to indigenous manufacturers as and when required. The Institute has successfully participated in External Quality Assurance Programme of HIV, HBsAg, HCV and Syphilis with National Reference Laboratory, Australia. The Institute is regularly participating in EQAS of Glucose Testing at Christian Medical College (CMC), Vellore, India. Institute has also successfully participated in International Collaborative Study with National Institute for Biological Standards and Control- UK for Rituximab, Para- thyroid hormone. The NABL accreditation of biologicals has reached up to 91. In addition, 19 Monographs on biologicals have been prepared by the Institute for their publication in Indian Pharmacopoeia, 2018.

Training/workshops conducted by NIB

Outside NIB: The Haemovigilance Programme of India has been initiated by the Institute to report adverse drugs reactions (ADR) caused due to administration of blood and blood products in the country. 67 centres located in Blood Banks of Medical Colleges/Institutions, Government/Private Hospitals

have been enrolled under this programme. 672 adverse transfusion reaction reports were received and 827 of adverse reaction reports associated with blood donations were also received. NIB under Haemovigilance Programme of India (HvPI) has organized 05 CMEs/workshops across the country & trained about 770 participants which includes blood bank officials, clinicians, nurses & blood bank technical staff besides biannual release of HvPI newsletter to disseminate information about HvPI to health care professionals & other stakeholders.

Within NIB: The institute under the “Pradhan Mantri Kaushal Vikas Yojana (PMKVY)” has provided 4-8 weeks training programme and 3-6 months dissertation/project work for 58 Graduate and Post Graduate Students, which includes 3 International students of various Universities and Institutes in Quality Control of Biologicals. NIB in collaboration with Clinical Development Services Agency, DBT conducted national workshops at NIB in the area of diagnostics in two batches comprising of 84 participants. NIB in collaboration with National Health Mission conducted 02 training programmes for State Blood bank Officials, covering 11 States and 76 participants and imparting the training to 120 blood bank officials of Uttar Pradesh & Karnataka states in three batches of 40 participants each during 2017. Conducted in-house training for 50 scientific and technical staff on ISO/IEC 17025:2005. A total 1038 trainees have been trained by the NIB.

Budget

The funds of the institute are received as Grants-in-Aid from the MoHFW. The B.E & R.E. of the Institute are as under:

(Rs. in Crores)

Financial Year	B.E.	R.E.	Expenditure
2016-17	37.00	34.00	34.45
2017-18	39.42	-	10.04*

*Incurred upto 31-07-2017

16.15 BCG VACCINE LABORATORY, GUINDY

This institute was established in 1948. The major activities of the Institute are:

- Production of BCG Vaccine (10 doses per vial)

for control of childhood Tuberculosis and supply to Expanded Programme of Immunization (EPI) since 1948.

- Production of BCG Therapeutic (40 mg) for use in Chemotherapy of Carcinoma Urinary Bladder since 1993.

16.15.1 Performance of laboratory at present

- The new facility is complete.
- After revalidation of facility, trial batches done.
- A Joint Inspection was carried out by Drug Inspectors from CDSCO (SZ), Chennai at BCGVL on 26.4.2017 to verify the current status of test batches manufactured.
- CDSCO (SZ) had certified that BCGVL has complied with the deficiencies pointed out in previous inspection.
- Validation work done and calibration of instruments undertaken in the production area and calibration of rest of the instruments carried out.
- Opening of the seed for consistency batches undertaken on 10/07/2017.
- Received Consent to Operate (CTO) from Pollution Control Board for Air & Water for the period till 31st March, 2018.
- Internal training on cGMP standards/documentation/SOP is being imparted to BCGVL staff. Documentation as required and for cGMP compliance has been undertaken.

Sl. No.	Particulars	Quantity
1	Installed capacity per annum	500 lakh doses
2	Quantity manufactured	Nil
3	Quantity of demand received	Nil
4	Quantity of supply released	Nil

16.15.2 Significant achievements

- The consistency batches have already been started and three batches are scheduled to be filled in September, 2017.
- As per process, the commercial batches will start after clearance from CDL & NRA. (as of now 1st commercial batch was planned on 14.11.2017- Children's day)

16.15.3 Others

- Revenue earned from April, 2017 to August, 2017 by sale of guinea pigs, training fee for project students etc. was Rs. 3,80,000/-.

Approval awaited for construction of diesel storage tank with an estimate of Rs. 40 lakhs (approx) submitted by HLL, which was initially out of scope of project work.

16.16 PASTEUR INSTITUTE OF INDIA (PII), COONOOR

The institute started functioning as Pasteur Institute of Southern India on 6th April, 1907 and the Institute took a new birth as the Pasteur Institute of India (registered as a Society under the Societies Registration Act 1860) and started functioning as an autonomous body under the MoHFW, Government of India from the 10th of February, 1977. The affairs of the Institute are managed by a Governing Body. This Institute has been involved in the production of DPT group of vaccines and Tissue Culture Anti Rabies (TCAR) vaccines.

Present activities

- Establishment of cGMP compliant DPT vaccine laboratories is underway.
- Academic programmes like Ph.D. in the faculty of Microbiology, Biochemistry and Biotechnology (part time & full time) affiliated to Bharathiar University, Coimbatore.
- Breeding of mice and guinea pigs for experimental purpose like quality control of DPT group and TCAR vaccines.
- This Institute has Rabies Diagnostic Lab and Anti Rabies treatment centre to cater the need of the general public.

Current activities undertaken in respect of establishment of Green Field Manufacturing GMP (Good Manufacturing Practice) facilities for production of DPT group of vaccines

- The Government of India proposed to create Green Field GMP facility for manufacturing DPT group of vaccines at this institute. HLL Lifecare Ltd., Trivandrum is Project Management Consultant (PMC). EFC has recommended for a total estimated non-recurring expenditure of Rs. 149.16 crores.
- Most of the civil works have been completed. Factory Acceptance Test (FAT) for water system for formulation block/heat exchangers, Tetanus block have been completed. Pre-bid meeting for Lab equipment has been completed. Critical equipment have been installed and Operational Qualification (OQ) is underway.
- Local monitoring committee meeting to assess and evaluate the progress of the project has been conducted periodically.
- After the mechanical completion, the equipment installation, validation will be carried out by the PMC by December, 2017. Subsequently process validation and trial batch production will be taken up by PII, Coonoor from January, 2018 onwards.
- The proposed annual supply from the new facility will be : DPT- 60 Mld; TT –55 Mld; DT- 15 Mld- (Total- 130 million doses).

Anti rabies clinic

Since its inception in 1907, PII, Coonoor has been running an Anti-Rabies Clinic for Rabies prophylaxis. About 159 patients attended the clinic for Anti-Rabies prophylaxis and tissue culture Anti-Rabies vaccine was administered as on 31.08.2017.

Rabies diagnostic lab

PII, Coonoor is running a Rabies diagnostic lab for general public. About 81 serum samples were received for Rabies Neutralizing Antibody testing to assess post-vaccination sera conversion for the protection against rabies infection upto 31.08.2017.

Academic activities

13 scholars are pursuing Ph.D. course affiliated to Bharathiar University, Coimbatore. Industrial visit for students from different colleges and universities are organized to create awareness in vaccine production, immunization procedures etc. In addition to this, in plant training and projects are also carried out for the college students.

World Rabies Day

In commemoration of World Rabies Day observed on 28th September 2017, an awareness rally was organized, followed by drawing, essay writing competitions and quiz competition were organized for school children.

Details of grant-in-aid received from the Ministry of Health and Family Welfare, New Delhi during 2017-18:

A total of Rs. 70.00 crores was sanctioned in budget estimate for the year 2017-18. Further a sum of Rs. 92.90 crores is sought in revised estimate for the year 2017-18.

16.17 INSTITUTE OF SEROLOGY, KOLKATA

Institute of Serology, a sub-ordinate office of Directorate General of Health Services was established in 1912 as Imperial Serologist's Department. It was renamed as Institute of Serology in 1996.

Role of the institute

- Forensic Serology for determination of origin of species of different biological exhibits and its group when the species origin is human.
- Production of various quality diagnostic reagents like VDRL antigen, species specific antisera, Anti H Lectin etc. and supply to the Government and Non-Government Institutions like Forensic Science Laboratories and Hospitals all over the country.
- The V. D. Serology Section provides service in determining syphilis to Govt. Medical Colleges & Hospitals of Kolkata.
- Regional STD Reference Laboratory for East Zone under NACO has been functioning from 1983. This helps WBSACS for diagnosis of

STD and Training of Laboratory Technicians of ICTC of West Bengal in various fields of serology and Sexually Transmitted Diseases.

- Isolation of Polio Virus from stool samples of AFP cases from Eastern & NE Region and part of Bihar, Jharkhand by National Polio Laboratory under the WHO and NPSP. Isolation of Polio virus from environmental samples (sewage water) from some municipal corporation areas in Kolkata is being done for surveillance and intratypic differentiation of Polio Virus by ITD Laboratory using PCR technique.
- National Measles Laboratory for detection of Measles & Rubella from Eastern part of Jharkhand and Bihar.

Present activities (upto August, 2017)

- **V. D. Serology:** 1111 Nos. blood samples were tested for syphilis.
- **Forensic Serology:** 1906 Nos. exhibits were tested for species origin and group determination.
- **BGRC Section:** 2100 mls. anti H Lectin was produced and 1865 mls. supplied to different forensic laboratories.
- **Antibody Section:** 1785 mls. of antisera were produced and 960 mls. supplied to different State & Central forensic science laboratories.
- **Measles Laboratory:** 352 Nos. of samples were received and tested for Measles and 230 Nos. for Rubella.
- **Quality Control:** 46 Lots of cases were received and tested.
- **National Polio Laboratory:** 5107 Nos. stool samples were tested for NPV and VDPV and 110 Nos. samples tested for environmental surveillance.
- **Antigen Production Section:** Produced 1230 mls. antigen and supplied 1190 mls. antigen to different hospitals and STD Clinics throughout India.
- **STD/Bacteriology Section:** 3908 Nos. of tests were done for diagnosis of different types of STIs from STI Clinics of Medical Colleges of Kolkata.

16.18 INTERNATIONAL INSTITUTE FOR POPULATION SCIENCES (IIPS), MUMBAI

Established in 1956, the International Institute for Population Sciences (IIPS), Mumbai was declared a 'Deemed University' in 1985.

16.18.1 Teaching

During the academic year 2016-17, the Institute offered the following regular courses: (a) Diploma in Health Promotion Education (DHPE), (b) Master of Arts/ Science in Population Studies (M.A/M.Sc.), (c) Post Graduate Diploma in Community Health Care (PGDCHC), (d) Master of Science in Biostatistics and Demography (M.Sc), (e) Master of Population Studies (MPS), (f) Master of Philosophy in Population Studies (M.Phil.) and (g) Doctor of Philosophy in Population Studies (Ph.D.). Apart from these programmes, the Institute also offers Master of Population Studies (MPS) and Diploma in Population Studies through distance learning.

During the academic year 2016-17, 24 students qualified for award of Diploma in Health Promotion Education (DHPE), 28 students qualified for award of degree in Master of Arts/Science in Population Studies (M.A/M.Sc.), 06 students qualified for award of Post Graduate Diploma in Community Health Care (PGDCHC), 08 students qualified for award of degree in Master of Science in Biostatistics and Demography (M.Sc), 40 students qualified for award of degree in Master of Population Studies (MPS), 43 students qualified for award of degree in Master of Philosophy in Population Studies (M.Phil.), 07 students qualified for the award of degree in Master of Philosophy in Biostatistics & Demography (M.Phil) 18 students qualified for award of Doctor of Philosophy in Population Studies (Ph.D.), 24 students qualified for award of degree in Master of Population Studies (MPS) (Distance Learning) and 02 students qualified for award of Diploma in Population Studies (Distance Learning) through distance learning.

16.18.2 Research and Publications

Institute conducts research programme using its own resources and also through external funding. The externally funded projects are usually initiated at the

request of the concerned agencies. The completed and ongoing projects at the Institute are given below:

A. Research Projects Funded by the Institute

(a) Completed Projects

- Magnitude, causes and consequences of Kala-azar in India: A Study of Eastern Bihar.
- Use of verbal autopsy for estimating the causes of death in Amravati district of Maharashtra.
- Socio-Economic and Health Conditions of Nepali Migrants in Mumbai.

(b) Continuing Projects

- Population scenario in India: Long term prospective.
- Estimation of vital rates for Bombay Presidency in the colonial period.
- Changes in the household amenities and assets in India: A census based study.
- Follow-up of comprehensive nutrition survey in Maharashtra.
- Historical trends and patterns of population and development in India: A district Level analysis.
- Causes and consequences of out-migration from middle Ganga plain.
- Health Infrastructure and MCH Care in the Rural Areas of India.
- Indirect study of survival from Cancer: A large scale empirical application in India.
- Daughter only families in India: Levels, trends and differentials.

(c) New Projects

- Equal living condition of housing shelters for different social groups in Tamil Nadu: model village created for social development.
- Trends in Out-Of-Pocket Expenditure (OOPE) and Catastrophic Health Spending (CHS) in India
- Population growth and State of healthcare services in North East India: with special reference to the recognized tribes, 1951 to 2011.

16.18.3 Research Projects Funded by the External Agencies

a) Continuing Projects

- Longitudinal Ageing Study in India (LASI) main wave 1 and 2 (2014-2019).
- Study of Global Ageing and Adult Health (SAGE) wave 2-India, 2014-16.
- National Family Health Survey-4.
- Unintended Pregnancy and Abortion Incidence (UPAI).
- Population Environment and Settlement (ENVIS).
- Impact assessment of dumping ground fire on health: A case study in Mumbai.
- Counting women's work.
- Lead technical support agency for baseline survey for SWABHIMAAN.

16.18.4 Major Events

The National Seminar on "Population and Health in the Context of Sustainable Development Goals" was held in Nabakrishna Choudhury Centre for Development Studies (NCCDS), Bhubaneswar, organized by the Institute during 10-13 January, 2017.

16.19 MAHATMA GANDHI INSTITUTE OF MEDICAL SCIENCES (MGIMS), SEVAGRAM, MAHARASHTRA

The Mahatma Gandhi Institute of Medical Sciences (MGIMS), Sevagram is India's first rural medical college established in 1969. Kasturba Hospital has the distinction of being the only hospital in the country which was started by the Father of the Nation himself.

The annual recurring expenditure is shared by the Government of India, Government of Maharashtra and the Kasturba Health Society in the proportion of 50:25:25 respectively. The GoI released Grants-in-aid of Rs. 55 crore to meet recurring expenditure of the Institute during the financial year 2016-17.

The vision of the institute is to develop a replicable model of community oriented medical education which is responsive to the changing needs of our country and

is rooted in an ethos of professional excellence. In the spirit of its founder, the Mahatma Gandhi Institute of Medical Sciences, Sevagram is committed to pursuit of exemplary standards of professional excellence in medical education, research and clinical care by evolving a pattern of integrating value-based medical education with accessible and affordable health care, especially to underprivileged rural communities.

Health Care

Kasturba Hospital has 934 beds: 690 teaching beds, 100 service beds, 32 private rooms and 62 beds in different intensive care units. The institute also runs a 50-bedded Dr. Sushila Nayar Hospital, in the tribal areas of Utawali, in Melghat in Amravati district. Almost three-fourth of the patients who visit hospital comes from rural areas.

9,17,079 patients attended the hospital OPD and 48,869 patients were admitted for various ailments in 2016-17. The Hospital has state-of-the-art ICU in Medicine, Surgery, Obstetrics & Gynecology and Pediatrics which provide excellent critical care. The Sri Satya Sai Accident and Emergency Unit (Trauma Centre) provides succor to patients of trauma. The Institute has a Blood Component Unit which provides components not only to patients in Kasturba Hospital, but also to adjoining private hospitals. Patients of Sickle Cell Anemia and Thalassemia are given blood free of cost. Facilities for MRI, CT Scan and Mammography are available. The Institute's radiotherapy department has state-of-the-art equipment for treatment of cancer patients including advanced dual energy linear accelerator with Intensity Modulated Radiotherapy (IMRT) with 3D conformal radiotherapy (CRT) with multiple electron beam, simulator and HDR brachytherapy. The Pathology, Microbiology and Biochemistry laboratories have in-house facilities to conduct a battery of diagnostic tests. MGIMS has also added a Cardiac Catheterization Lab and digital subtraction angiography to its armamentarium. All departments of the hospital are connected by an advanced Hospital Information System.

Kasturba Hospital has constructed a brand new state-of-the-art operation theatre (OT) complex extending over 15000 square feet. It features ten modular OT suites, an intensive care unit and pre-operative assessment ward with ten beds each, two recovery rooms and a medical

store. A model Maternal and Child Health (MCH) wing has been inaugurated. The MCH wing has beds for Obstetrics and Gynecology and Pediatrics and Neonatology. It includes the outpatient department, antenatal and postnatal wards, high dependency units, operation theatres, sick newborn critical unit, labour rooms, obstetric intensive care units, skills labs and other such areas.

The Institute's commitment to the community is well known. Community programmes have consistently been implemented to enhance health care services. The institute has adopted three primary health centres and developed a model of decentralized healthcare delivery at village level through Community based Organizations and the Panchayati Raj Institutions. It has formed 277 Self-help groups, 10 Kisan Vikas Manch and 89 Kishori Panchayats in the adopted villages. The National Rural Health Mission has lauded the positive contribution of MGIMS in maternal health activities conducted in partnership with the Govt. of India.

16.20 CENTRAL BUREAU OF HEALTH INTELLIGENCE (CBHI)

Introduction

Central Bureau of Health Intelligence (CBHI), established in 1961, is the Health Intelligence wing of the Directorate General of Health Services in the Ministry of Health & Family Welfare, Government of India with the vision to have “**A strong Health Management Information System in entire country**”.

16.20.1 The Objectives of CBHI

- i. To Collect, Analyze & disseminate Health Sector related data of the country for evidence based policy decisions, planning and research activities;
- ii. To develop Human resource for scientifically maintaining medical records in both Government & private medical Institutes in India;
- iii. To Carry Out Need Based Operational Research for Efficient implementation of Health Information System & use of Family of International Classifications in India;

- iv. To sensitize & create a pool of Master Trainers in Health sector for implementation of Family of International Classification in India;
- v. To collaborate with National & International Institutes for imparting knowledge & skill development including WHO.

16.20.2 Activities under taken by CBHI

- **Publication National Health Profile and its analytical report:** CBHI collects primary as well as secondary data on various communicable and non-communicable diseases, human resource in health sector and health infrastructure from various Government Organizations/Departments to maintain and disseminate Health Statistics through its annual publication “National Health Profile” which highlights most of the relevant health information under 6 major indicators viz. Demographic, Socio-economic, Health Status, Health Finance, Health Infrastructure and Human Resources. CBHI has started publishing Analytical Report based on the National Health Profile from the NHP-2017 issued on 2017.
- **HS-PROD:** CBHI collects the information on reform initiatives for Health Sector Policy Reform Option Database (HS-PROD). [www.hsprodindia.nic.in]. It is a web-enabled database that documents and further creates a platform for sharing of information on good practices, innovations in health services management while also highlighting their failures that are very important for the success of NHM. Total number of reform initiatives received and uploaded in HS-PROD website is 277.
- **Capacity Building:** For capacity building and human resources development in health sector, CBHI conducts long term and short term in-service training programme for the officers and the staff working in various Medical Record Department & health institutions of the Central/ State Governments, ESI, Defence and Railways as well as private health institutions through its various training centres.

- **Long-term training Programme**

Sl. No.	Name of the Training	Batch	Duration	Training Centre
1	Medical Record Officer	2 (at each training centre)	1 Year	1. Safdarjang Hospital, New Delhi. 2. JIPMER, Puducherry
2	Medical Record Technician	5 (at each Training centre)	6 Months	1. Safdarjang Hospital, New Delhi. 2. JIPMER, Puducherry 3. Dr. RML Hospital, New Delhi

- **Short-term training Programme**

Sl. N.	Name of the Training	Batch	Duration	Training Centre
1.	Training Course on Master Trainers On (ICD-10 & ICF)	2	5 days	Regional Health Statistics Training Centre (RHSTC), Mohali, Punjab
2.	Orientation training course on HIM (For Officers)	14	5 days	RHSTC, Mohali, Punjab & 6 Field Survey Units
3.	Orientation training course on HIM (For Non Medical Personnel)	14	5 days	RHSTC, Mohali, Punjab & 6 Field Survey Units
4.	Orientation training course on (ICD-10 & ICF) (For Non-Medical Personnel)	14	5 days	RHSTC, Mohali, Punjab & 6 Field Survey Units
5.	Orientation training course on MR & IM for Non-Medical Personnel	7	5 days	RHSTC, Mohali, Punjab & 6 Field Survey Units

- CBHI publishes a concise information/data on Goal 3 of Sustainable Development Goal (SDG) i.e. Maternal Mortality Ratio, Proportion of births attended by skilled personnel, Under Five Mortality Rate (per 1000 live Birth), Infant Mortality Rate (per 1000 live birth), TB incidence per 1000 persons per year, Malaria incident cases per 1000 persons per year and Health workers density and distribution in its annual publication “National Health Profile”. Latest publication is NHP 2017.

- **Function as WHO Collaborating Centre on Family of International Classifications (ICD**

- **- 10 & ICF) in India with the following major objectives:**

- To promote the development & use of the WHO Family of International Classifications (WHO-FIC) including the International Statistical Classification of Diseases and Related Health Problems (ICD), the International Classification of Functioning, Disability and Health (ICF) and other derived and related classifications and to contribute to their implementation and improvement in the light of the empirical experience by

multiple parties as a common language.

- Networking with current and potential users of the WHO-FIC and act as reference centre.
- Work in at least one related and/or derived area of the WHO-FIC: Specialty based adaptations, primary care adaptations, interventions/procedures, injury classification (ICECI).

- **National Health Resource Repository (NHRR) project:**

- CBHI has initiated the work of National Health Resource Repository (NHRR) Project for nationwide roll-out.
- **The NHRR project aims** to create a web-based and geo-mapping enabled single platform of all the health resources both Government and private which inter-alia includes, hospitals, diagnostic labs, doctors and pharmacies, etc. and will comprise of the data on health infrastructure, human resource and the availability of medical facilities in each health establishment in the country.
- The census would cover data points pertaining to Affordability, Accessibility, and Availability of services across all the Healthcare Establishments including Sub Centre, Primary Health Centre, Community Health Centre and District Hospitals from Public Health and Doctors, Hospitals, Diagnostic labs, Chemists from private health sector.
- **Technology requirements:** As a Technology partner, Bill & Melinda Gates Foundation (BMGF), WHO and ISRO have also been associated with this project. A MoU has been signed with National Remote Sensing Corporation (NRSC), Indian Space Research Organization (ISRO) on 3rd May, 2017 for Design & Development of Geo-web Portal & Mobile App for National Health Resources Repository and Capacity

Building-Addressing Geo-tagging, Geo-Visualization & Spatial Analysis of Healthcare Assets of India on Bhuvan Platform.

- Launching of pilot survey for field assessment study: In collaboration with the above partners, preparatory activities have been completed and a field assessment study across 5 districts, namely, Hamirpur (Himachal Pradesh), Jodhpur (Rajasthan), North Sikkim (Sikkim), Bhopal (Madhya Pradesh) and Ernakulam (Kerala) is being executed.

16.21 CENTRAL HEALTH EDUCATION BUREAU (CHEB)

The “Central Health Education Bureau” (CHEB) was set up in 1956 as a part of Directorate General of Health Services, MoHFW with a mandate to generate & disseminate health information for creating awareness among the community resulting in desired health behavior towards “Health Promotion”. It also develops capacity of medical, paramedical and other non-health personal to take care of the health needs of the community enhancing public health capacity to achieve health equity and health of all.

Demographic shift leading to increased longevity and Epidemiological transition resulting in changed disease profile has made it essential to go beyond the standard treatment of illness and injuries and deal with these challenges through population based approaches of Health promotion focusing primarily on the physical, psychological, social, cultural, economic and political determinants that affect health.

16.21.1 Achievements

Healthy Children Healthy India: As per direction of Hon’ble Union Health Minister and the Secretary, Health & Family Welfare, CHEB has designed & developed a twenty four page booklet for adolescents “Healthy Children Healthy India”. The book was released by Hon’ble Union Minister of Health & Family Welfare and Hon’ble Minister for Human Resource Development jointly in a function. Seven lakh copies have already been printed and distributed to school children across the country.

Media Plan: CHEB facilitated development of need based, 360 degree IEC plan for NVBDCP, NCDC, NIDDCP, RNTCP, NLEP, NPHCE and NOTTO.

Risk communication: CHEB has developed “Risk communication strategy for ZIKA virus disease” and is in process of developing health education material including audio-video, audio and print material for ZIKA virus disease.

Anti-microbial Resistance: CHEB is nodal agency for development of “National Action Plan for Anti-microbial Resistance” for communication and training. Initiative has been taken to develop “Operationalization Plan” for National Anti-Microbial Resistance communication plan. Efforts have also been made to develop health education material regarding Antimicrobial Resistance.

The Mental Healthcare Act, 2017: Comprehensive, 360 degree, media plan to generate awareness amongst general public and other stakeholders about the “Mental Healthcare Act, 2017” is being developed by CHEB.

Health Education Material: CHEB facilitated development of health education and communication material for NVBDCP, NCDC, NIDDCP, RNTCP, NLEP, NPHCE and NOTTO.

CHEB developed Health Education material for 8th to 10th standard students on the request of Ministry of Home Affairs.

WASH: Health material on “Water Sanitation and Hygiene” (WASH) was developed and presented by CHEB before the Hon’ble Minister of State for the Ministry of Development of North Eastern Region, Prime Minister Office, Personnel, Public Grievances and Pensions.

National Health Days: CHEB developed tweet messages on all ‘National Health Days’ for Hon’ble Union Minister of Health & Family Welfare, Government of India and Director General of Health Services

Renovation of CHEB building: CHEB building was constructed in 1956 and required renovation. A high-tech conference room, a computer lab and lecture hall are being developed besides officers rooms,

administrative division and a library.

Linkages & Networking: Initiative taken to develop the linkage with States and Union Territories to strengthen Advocacy, Communication and Social Mobilization (ACSM) skills of staff at state level, focussing on “healthy life style” and emerging public health concerns.

Orientation Training Programmes: Conducted 32 orientation training sessions for capacity & skill development of medical, paramedical and other non-health personal were conducted, sensitizing 1258 Medical, Nursing and ANMs students from different parts of country about generation of health awareness through Health Education & Health Promotion.

16.22 REGIONAL OFFICES OF THE HEALTH AND FAMILY WELFARE, NEW DELHI

Introduction

Nineteen Regional Offices of Health & Family Welfare are functioning under the Directorate General of Health Services, located in the various State Capitals.

16.22.1 Roles and Functions

These offices have been established with the primary objective of ensuring proper liaison and coordination between the Centre and State Governments in the context of the implementation of National Health and Family Welfare Programmes. Main functions of the Regional Offices are enumerated below:

- i. Centre-State coordination,
- ii. National Health Programmes,
- iii. Training and IEC,
- iv. Regional Evaluation Team (RET),
- v. Health Information Field Unit (HIFU),
- vi. Malaria Operational Field Research Scheme (MOFRS),
- vii. Monitoring and Supervision of Centrally sponsored schemes.

16.22.2 Staff Strength

The sanctioned strength of staff in the Regional Offices

as on the March, 2016 across cadres was 549 and the staff in-position was 318. The senior most officers in the respective RHO's are designated as Senior Regional Director/Regional Director depending upon their ranks/grade pay.

16.22.3 Budget allocation & Utilization

The budget proposals for the financial year 2017-18

were Rs. 30 crore (Plan) and Rs. 16.70 crore (Non Plan). The Approved BE for the year 2017-18 is Rs. 53.44 crore. The expenditure incurred for the six month i.e. up to the Month of September, 2017 is approx. Rs. 20.94 crore (39.16%).

Technical Activities undertaken: The details of the technical activities of the ROH&FW undertaken are given below in table No. 4.

Table 4: Activities undertaken by the ROH&FW April - September, 2017

Sl. No.	Technical Activities	Performance 2017-18
1	Meetings attended	
	National level	178
	State level	325
	Issues Facilitated	218
2	District visited to Review NRHM and Disease Control Programme	
	National Rural Health Mission (NRHM)	142
	National Vector Borne Disease Control Programme (NVBDCP)	219
	Revised National TB Control Programme (RNTCP)	112
	National Leprosy Eradication Programme (NLEP)	85
	National Programme for Control of Blindness (NPCB)	54
	National AIDS Control Programme (NACP)	30
	Integrated Disease Surveillance Programme (IDSP)	112
	National Iodine Deficiency Disorders Control Programme (NIDDSP)	66
	National Tobacco Control Programme (NTCP)	44
	National Programme for Health Care of Elderly (NPHCE)	50
	National Programme for Prevention and Control of Cancer, Diabetes, CVD & Stroke (NPCDCS)	58
	National Mental Health Programme (NMHP)	31
	Capacity building for Trauma Care facilities in Govt. Hospitals on National Highways	53
Oral Health	24	
3	Training Courses Organized	
	Malaria microscopy	
	Batches	40
	Persons trained	606
	CBHI training	
Batches	29	

Sl. No.	Technical Activities	Performance 2017-18
	Persons trained	710
	Other trainings	
	Batches	47
	Persons trained	2,136
4	Research Studies	
	Drug resistance studies	6
	Entomological studies	66
	H&FW evaluation studies	22
5	Cross-checking	
	Number of blood slides cross checked	3,45,492
	Number of Discrepancies observed in blood slides	1,410
6	Field Verification of RCH beneficiaries	
	Number of CC users contacted	1,452
	Number of fake and denial cases	148
	Number of Children contacted for Immunization	1,455
	Number of Children found fully immunized	1,411
	Number of Mothers contacted to verify ANC Check-up	1,551
	Number of Mothers found 3 ANC Check-up & Given 100 Tabs IFA	1,507
	Number of ANC mothers have complications	18
	Number of Mothers contacted for PNC check-up by HW	1,430
	Number of mothers have visited for 3 PNC check-up during PNC period	1,488
	Number of mothers have any complication during PNC period	1,246
	Number of Mothers contacted for verification of JSY	1,318
	Number of Mothers have got monetary benefits under JSY	1,157

16.23 NATIONAL MEDICAL LIBRARY (NML), NEW DELHI

16.23.1 Introduction

National Medical Library (NML) provides valuable library information services/assistance to support the academic, research and clinical work of health science professionals in the country. It occupies important place in health care information delivery system in the country. The library remains open on 359 days of the year.

In the year 2017, NML has taken initiative to

implement the Digital India campaign of Government of India and as a mission, NML is committed to convert it from a traditional library to digital library and connectivity to all States Medical Libraries.

16.23.2 Digital Library services

Following Online Services have been commenced by NML

- (a) **NML-ERMED Consortium** is an initiative taken to develop nationwide electronic information resources in the field of medicine for delivering effective health care. It was

started in 2008. In 2017, NML has subscribed 241 e-journals from five foreign publishers for ERMED consortium (www.erned.in) for 87 members (Medical Colleges/Institutes) in following 29 States across the Country. 4,82,640 articles are access/downloaded from e-resources of ERMED (January to August, 2017)

- (b) **The Cochrane Library:** The Cochrane Library is a collection of six databases that contain different types of high-quality, independent evidence to inform healthcare decision-making and a seventh database that provides information about Cochrane groups.

Systematic reviews are published electronically in full text in Cochrane Library. The abstracts and plain language summaries of all Cochrane Reviews are also freely available on Cochrane.org. NML has the distinction of having PAN India License of Cochrane Library. India recorded 3rd highest number of full downloads between January, 2017 to July, 2017 with 179594 full text downloads. Reviews in the Cochrane Library can be accessed at www.cochranelibrary.com and www.erned.in.

- (c) **On Line Public Access Catalogue (OPAC):** Servers and computer in Library are networked to form a LAN having integrated Library Management Software Package–LIBSYS about 50,000 records of books and 2000 Titles of journals are now available through OPAC computer search by Users.

- (d) **Document Delivery System (print and electronic):** A large number of requests for photocopy of articles were received from outside Delhi by post, e-mail and fax through Government as well as private photocopy counters. Two lakh photocopies of research content were provided to medical research scholars across the country. No postal charges were taken for delivery of articles outside Delhi. The Library also got 2000 sets of periodicals bound and also got 1500 books/journals repaired.

- (e) **Database of Theses:** Bibliographic database

of doctoral thesis and dissertation submitted to Medical Colleges/Institutes is compiled by National Medical Library. (www.erned.in)

- (f) **Current Awareness Services (CAS):** Current Literature in Health Sciences (CLHS) is a current awareness service compiled by National Medical Library, DGHS every month. It provides bibliographic details of the articles pertaining to new medical research and new techniques in Health Sciences journals, those subscribed by NML. CLHS covers mostly broad subject headings in the field of Health Sciences.
- (g) **Newspaper clipping service:** To keep the users abreast of latest news that has relevance to the medical science.

16.23.3 Branch Library

National Medical Library maintains a branch library in Nirman Bhawan to cater to the library and information needs of staff and officers in the Dte. GHS and the MoHFW for reading purpose.

16.24 RURAL HEALTH TRAINING CENTRE, NAJAFGARH

Rural Health Training Centre, Najafgarh, New Delhi, was set up as health unit in 1937 is covering nearly 5 lakh population RHTC, Najafgarh, PHCs of Najafgarh, Palam and Ujwa and 16 sub centres are covering 73 villages. The major activities of RHTC Najafgarh are as follows:

16.24.1 Training

- Training to medical interns under ROME Scheme. Around 350 unpaid medical interns undergone rural posting from this Centre.
- Training to ANM 10+2 (Voc.) Students with intake capacity of 40 students per academic session.
- Community health nursing training to BSc/MSc/GNM students of various Nursing Institutions like College of Nursing, Safdarjung Hospital, RML Hospital, Lady Hardinge Medical College, Holy Family Hospital, Batra Hospital, Apollo Hospital and various other Government/State Government/Private institutions. Nearly

1000 nurses were trained during the period.

- Promotional training to nursing personnel.
- One day observation visit.

16.24.2 Delivery of Health Services: Providing primary health care, preventive, promotive and curative services to the low socio-economic group of people of 64 villages and 9 town of Najafgarh area through its three Primary Health Centres and 16 Sub-Centres including 24x7 Emergency Services in PHC Najafgarh.

16.24.3 Field Studies: Conducts field studies related to RCH, nutrition, health education and communicable diseases and also provides field services for research work to the various health institutions i.e. NIHAJ, AIIMS in public health.

Major Highlights in the Development of RHTC, Najafgarh:

- DGHS inaugurated the newly constructed Director's Office in the campus of RHTC Najafgarh.
- 100% placement of ANM final year students.

The following activities were also organized/performed in the Institute:

IEC Activities including Group Discussion, Nukkad Nataks, JSY payments using portal, ASHAs' refresher training, Anti leprosy fortnight programme, Beti Bachao Beti Padhao under PNDDT programme, New Born Care week activities, NSV week, Breast feeding week (counseling, competition & skits on BFW), Intensified Diarrhoea Control Fortnight activities (IDCF), Dampati Sampark Pakhwada, Jansankhya Sthirtha Pakhwada, Safe Motherhood week, Pradhan Mantri Surakshit Matritwa Abhiyan (PMSMA) and NVBDCP.

16.25 LADY READING HEALTH SCHOOL, DELHI

Lady Reading Health School, Delhi was established in 1918 under the Countess of Dufferin Fund for training nursing personnel for M.C.H. service programme. In 1931 it came under the administrative control of the Indian Red Cross Society (Maternity & Child

Welfare Bureau). In 1952, the Government of India took over the school and attached Ram Chand Lohia MCH Centre to it. Total capacity of the school was 24 Health Visitor trainees from all over India (even these candidates were not available at that time). Duration of the course was one and a half year for matriculates who were qualified midwives, which was replaced by two and half years integrated course for health visitor in 1954.

The School aims at providing training facilities to various categories of Nursing Personnel in community health as well as M.C.H. and family welfare services through the attached Ram Chand Lohia MCH and Family Welfare Centre.

The Institution is imparting the following courses at present:

(i) **Auxiliary Nurse-Cum-Midwife Course:** This course is under Indian Nursing Council and eligibility criteria for the course is 12th pass. 38 students completed their training in August, 2017. For the 2017-19 session, 40 students have been admitted. Total number of students are 80 i.e. 40 students each for 2016-18 and 2017-19 sessions.

(ii) **Certificate Course for Health Workers (Female) under multipurpose workers scheme:** This course is of six months duration. Students are admitted twice a year i.e. in January and July every year with admission capacity of 20 in each batch. 20 students selected for January, 2017 batch, completed their training in June, 2017. 20 candidates are undergoing the course presently and will appear for the final exam in December, 2017.

(iii) **Post Basic B.Sc (Nursing):** Administrative approval of the Ministry has been granted for conducting post basic B.Sc (Nursing) at this institution.

16.25.1 Clinical Experience

The students are sent for their clinical experience in Rural and Urban Health Centre, different Hospitals like Safdarjung Hospital, RML Hospital, Lady Hardinge Medical College and Kalawati Saran Children's Hospital in Delhi.

16.25.2 Ram Chand Lohia MCH and Family Welfare Centre

Students are also posted for urban health experience through Ram Chand Lohia MCH and Family Welfare Centre. The Centre gives integrated MCH Family Welfare Services to over 40,000 populations. Weekly clinics are conducted like antenatal care, post-natal care, well baby immunization and family planning clinics door to door services are also imparted to the community by the students. Exhibition and Health education are also organized in the community by MCH centre through students & staff.

16.25.3 Budget

The total budget for the institution and welfare of staff is Rs. 4,04,00,000/- (Rs. Four crore four lakh only) for the year 2017-18.

16.26 HOSPITAL SERVICES CONSULTANCY CORPORATION (INDIA) LIMITED (HSCC LTD.)

HSCC was incorporated on 30th March, 1983 under the Companies Act, 1956 in March, 1983 as Public Sector Enterprise under the Ministry of Health & Family Welfare with an authorized capital of Rs. 50 lakhs and paid up capital of Rs. 40 lakhs. Authorized capital and paid up capital has been increased from time to time. The authorized capital of the company as on 31.03.2016 is Rs. 500 lakhs divided into 5,00,000 equity shares of Rs. 100/- each. The paid up capital of the company as on 31.03.2016 is Rs. 240 lakhs. It includes the bonus shares of Rs. 120 lakhs and 80 lakhs issued during the financial year 2003-04 and 2008-09 respectively, to existing shareholders out of its reserves & surplus. Since inception, the total business of the company has been managed without any borrowing either from the Government or from other sources.

HSCC is currently the “Mini Ratna-1” Status w.e.f. 31.12.2015. HSCC has its registered office at Delhi and Corporate Office at Noida.

HSCC is a multi-disciplinary renowned project consultant, executing and procurement management service organization in the health care and other social infrastructure development sectors. Its scope of work covers feasibility studies, design engineering,

detailed tender documentation, construction supervision, comprehensive project management, procurement support services in all areas of civil, electrical, mechanical, information technology and auxiliary medical service areas. Its important clients include. Ministry of Health & Family Welfare and its Hospitals/Institutes. Ministry of External Affairs and other Ministries. State Governments and their Hospitals/Institutes. PSUs/Other Institutes such as ICMR, CSIR, ICAR, DOBT, PIMS, PGI Chandigarh, Government of Punjab, Government of Haryana and other business associates.

16.26.1 Summary of Major ongoing Projects

- Super-Specialty & Emergency Blocks at Safdarjung Hospital, New Delhi.
- National Cancer Institute at AIIMS Jhajjar (Hospital Work).
- Redevelopment of Lady Harding Medical College & Associated Hospitals, New Delhi.
- Construction of All India Institute of Ayurveda at Sarita Vihar, New Delhi.
- Upgradation of Nursing College – RAK College, Delhi.
- Construction of Housing work at AIIMS Rae Bareilly.
- Surgical Block at AIIMS, New Delhi.
- Mother & Child block, Hostel block, new OPD block, expansion of Trauma Centre, new paid ward at AIIMS, New Delhi.
- Kalpana Chawla Medical College (Hospital Work), Karnal.
- Satellite Unit of Post Graduate Institute of Medical & Educational Research at Sangrur (OPD & Main Work).
- Development of Cancer Hospital at Bathinda, Punjab.
- Indian Institute of Integrative Medicine, Jammu.
- Hospital Block at Fatehabad (Design & Engineering Work), Haryana.
- NRHM- Chhattisgarh, NRHM- Uttar Pradesh, NRHM- Kerala and NRHM- Himachal Pradesh.

- Construction of Super-specialty Block at NIMHANS Bengaluru.
- Mother & Child Metro Block for Bengaluru Metro Rail Corporation.
- National Institute of Animal Biotechnology, Hyderabad.
- Vaccine processing facilities for Institute of Veterinary Biological Products, Pune.
- Construction of 750 Bedded Hospital (Phase I – 400 bedded) for IIT, Kharagpur.
- Residential & Hostel Complex for New AIIMS, Bhubaneswar.
- Construction of Super-specialty Block, OPD & Academic Block at Kolkata Medical College, Kolkata under PMSSY.
- North Eastern Institute of Ayurveda & Homeopathy (NEIAH), Shillong, Meghalaya.
- Upgradation of Government Hospital at Naharlagun, Arunachal Pradesh and Medical College at Nahan, Hamirpur & Chamba, Himachal Pradesh.
- Regional Institute of Paramedic & Nursing Sciences (RIPANS), Aizwal.
- Upgradation of LGBRIMH at Tezpur (Main Building).
- Implementation for increase of UG seats from 100 to 150 intake P.A. for RIMS, Imphal.
- Nurses Hostel & Auditorium work at LGBRIMH, Tezpur.
- PMSSY Upgradation Phase III Projects at Rewa, Berhampur, Udaipur, Gwalior, Patiala, Bikaner, Jabalpur, Burla, Aurangabad, Vijayawada, Dibrugarh, Jhansi, Kota, Guwahati, Shimla, Allahabad, Latur, Panaji (Goa) and Darjeeling.
- New AIIMS at Nagpur, Kalyani and Guntur.
- Mizoram Institute of Medical Education and Research, Falkawn, Mizoram.
- Lokopriya Bordoloi Institute of Mental Health, Tezpur, Assam.
- 100 intakes Medical College at Pali, Rajasthan.
- Housing & Hostel for Dr. R.P. Medical College, Kangra.
- National Cardio Vascular Institute for AIIMS, New Delhi at Jhajjar, Haryana.
- Establishment of Cochin Cancer & Research centre, Ernakulam.
- 100 bedded Hospital for ESIC at Siliguri.

16.26.2 Procurement Management Services

- Medical Equipment for Super Speciality & Emergency Block, Safdurjung Hospital, New Delhi.
- Medical Equipment for Kalpana Chawala Government Medical College, Karnal, Haryana.
- Procurement of Equipment for AIIA, Sarita Vihar.
- Medical Equipment for NEIGRIHMS, Shillong.
- Medical Equipments for Bir Hospital, Kathmandu, MEA.
- Medical Equipments for Yangon & Sittway Myanmar.
- Medical Equipment for CNCI, Kolkata.

16.26.3 Financial Highlights

The Financial performance of the company for the financial year 2016-17 along with the comparative figures for 2015-16 is indicated below:

(Rupees in Crores)

Particulars	2016-17	2015-16
Total Income	1619.25	1106.98
Total Expenditure	1563.56	1017.41
Gross Margin	55.69	89.57
Exceptional & Extraordinary items	(0.47)	2.71
Profit Before Tax	56.16	86.87
Taxation (net)	18.55	32.25
Profit After Tax	37.61	54.62
Dividend	11.28	16.38
Net Worth	198.25	174.22
Earnings per Share(Rs.)	1566.95	2275.47

16.27 HLL LIFECARE LIMITED (HLL)

Introduction

HLL Lifecare Limited (HLL), a PSU under the administrative control of MoHFW since 1966, began operations on 5th April, 1969 at Peroorkada in Thiruvananthapuram district of Kerala in technical collaboration with M/s Okamoto Industries Inc. Japan. Today, with seven manufacturing plants, HLL has grown into a multi-product, multi-unit organisation addressing various public health challenges facing humanity.

Now, HLL is a Mini Ratna, Schedule B, Central Public Sector Enterprise. HLL is the only company in the world which manufactures and markets such a wide range of contraceptives. Today, HLL has a capacity to produce 1.9 billion condoms annually, making it one of the world's leading condom manufacturers, accounting for nearly 10 percent of the global production capacity.

With a vast array of innovative products, services and social programmes to meet the country's healthcare needs, HLL Lifecare Limited is firmly on track, with its motto of 'Innovating for Healthy Generations'.

16.27.1 Financial Results 2016-17

The Company's financial performance for the year ended March 31, 2017 is summarised below:

(in lakhs)

Financial particulars	Standalone		Consolidated	
	2016-17	2015-16	2016-17	2015-16
Revenue from operations	105,434.98	104,469.12	116,086.77	109,950.31
Other income	1,035.73	728.00	1190.29	708.16
Total income	106,470.71	105,197.12	117,277.06	110,658.47
Profit/(Loss) before tax	(4,059.51)	3,614.59	(3,144.70)	3,452.56
Tax expense	(1,521.31)	900.27	(927.93)	1,028.16
Profit/(Loss) for the year	(2,539.03)	2,714.32	(2,216.77)	2,424.40

During the year 2016-17, HLL has incurred loss (Loss after Tax) of Rs. 25.39 Cr. compared to Rs. 27.14 Cr. profits in 2015-16. The major reasons impacting the performance during the year is given below:

- a. Condoms for Government supplies were billed at the revised and reduced provisional price of Rs. 1.55 per piece, compared to previous year price of Rs. 1.76 per piece. Profitability affected by this revision in price alone amounts to Rs. 26.12 Cr., on a sale of 1244 M pcs.
- b. Average realization on condoms for export sales also reduced from Rs. 2.27 per piece to Rs. 1.50 per piece. Profitability impact due to this is Rs. 39.92 crore on a sale of 518 M Pcs.
- c. Increase in cost due to change in packaging and packing mode of condoms for Government supplies, also has impacted on the profitability by Rs. 7.97 crore, compared to previous year.
- d. Overall operating profits of PCD/IDD has come down by Rs. 7 crore in 2016-17, from Rs. 29 crore in 2015-16, in view of the lower consultancy Income, as the new businesses are accruing in the subsidiary company, HITES.
- e. Capacity utilization has been low in respect of sutures, PTK, tubal ring, OCP, Saheli, Copper-T and blood bag due to lack of major orders.
- f. Out of revenue generated, JE vaccine sales is Rs. 174.24 Cr (increase of Rs. 46 crore compared to previous year) and margin from the product is only 0.37%. Excluding JE vaccine, reduction in turnover compared to previous year is 3%.

16.27.2 Physical Performance: 2016-17

HLL is a leading manufacturer and marketer of a range of contraceptive products around the globe. It also provides a variety of hospital products, pharma products and healthcare delivery services. A review of HLL's manufacturing activities is given below:

Sl. No.	Product	Unit	Installed Capacity	Quantity Manufactured (Previous year)	Capacity utilization (%)
1	Condoms	M.pcs	1892.00	1846.63 (1795.45)	98%
2	Blood Bags	M.pcs	12.50	9.26 (11.80)	74%
3	Suture	L. Doz	6.00	2.03 (1.91)	34%
4	Cu-T	M.pcs	5.50	3.70 (5.95)	67%
5	Steroidial OCP	Million cycles	98.67	34.91 (44.32)	35%
6	Non-Steroidial OCP (Saheli)	Million Tablets	30.00	32.96 (29.77)	110%
7	Sanitary Napkin	M.pcs	392.00	276.32 (228.48)	70%
8	Pregnancy Test Card	M.pcs	26.00	12.55 (8.55)	48%

16.27.3 Major Marketing Initiatives and Achievements

HLL focused to continue with the modern marketing practices viz digital marketing, E Commerce to strengthen domestic and global presence. HLL is also thriving to establish itself in the service of diagnostic health care. The significant marketing initiatives and achievements of the company during the year 2016-17 are stated below:

- “Moods” was identified as “prestigious brand” by Elsol Research Trend & Consulting (ERTC).
- Launched the premium segment “MOODS SILVER” in domestic market.
- Successful launch of MOODS ON WAVES contest for consumer activation.
- Billed highest sale of 187.7 million pcs of Deluxe.
- SAHELI OCP achieved highest sale of 32.17 million pills.
- Launched happy days – Silver Sanitary Napkins with Silver Nano particles.
- Launch of MOODS Silver Series (Joyride, Electrify, Cool, Blaze, 1500 dots) in the domestic market (Premium Segment).
- Introduced the Make Sure–Mini (economy pack) by the end of March.
- RBD achieved a growth of 204% over the 2015-16 turnover.
- Established 84 AMRIT pharmacies and planning to expand it to 300 soon.
- 17.71 Lakhs patients benefited from AMRIT Pharmacy across the country with a total savings to the patients worth Rs. 97.86 Crs.
- Established 52 AMRIT Deen Dhayal Pradan Mantri Jan Aushadhi Stores in Gujarat.

- Bagged order to establish AMRIT in 25 district hospitals of Assam.
- Bagged NHM-MAH order, to set up 112 diagnostic testing labs and 2301 collection centers across 33 districts of Maharashtra.
- Bagged order to set up 28 diagnostic testing labs connecting the 33 districts of Assam.
- HLL won the Indian Express Awards 2016 for “HLL’s Menstrual Hygiene Awareness & Distribution” under Express Public Health Award to the Most Effective Public Private Partnership.
- Pharma Division achieved a growth of 48 % in sales over previous year performance.
- Emily achieved a market share of 87% in LNG IUS market in units (as per AIOCD AWACS MAT December, 2016).
- Pharma division launched R&D developed Uterine Tonic – ULIXIR – for Menstrual Disorders in Adolescent Girls.
- Export division gained entry into 19 new markets for various products.

16.27.4 Subsidiaries and Joint Ventures

As on March 31, 2017, HLL has Four subsidiary companies and one joint venture company. The summary of performance of the subsidiary and joint venture companies is provided below:

a) HLL Biotech Limited [HBL]

HLL Biotech Limited [HBL] is a wholly owned subsidiary company and has completed fifth year of its incorporation on 12th March, 2017. The Authorized Share capital of the Company stood at Rs. 285 Cr. as the same of previous year and the issued, subscribed and paid up equity share capital as on 31st March, 2017 stands at Rs. 274.89 Cr.

As a regulatory achievement, HBL also received the test manufacturing license in Form 29 for Liquid Pentavalent Vaccine for IVC site from Tamil Nadu Drug Control Authority on 22nd February, 2017 demonstrating the readiness of HBL in cGMP manufacturing of this product.

HBL successfully established its marketing network in Tamil Nadu and Kerala for Liquid Pentavalent Vaccine (PentaHil) and Hepatitis B (HIVAC-B) vaccine. The earnest efforts of the marketing team has facilitated HBL to make inroads into well-established hospitals like CMC, Vellore and Stedford. From the supply chain perspective, HBL has implemented E-procurement on 16th November, 2016 for smooth and faster operationalization of the tender process.

Facility validation and readiness to manufacture of other blocks like Rabies Bulk and Viral Vaccine formulation are expected to be completed in the year 2017-18. As a marketing strategy, HBL envisages an expansion of its Marketing network to other States with an increased customer base in the year 2017-18.

b) Goa Antibiotics & Pharmaceuticals Limited [GAPL]

The authorized and paid up share capital of GAPL is Rs. 25 crore and Rs 19.02 crore respectively as on 31st March, 2017. The shareholding of HLL Lifecare Limited (holding company) in GAPL is 74% and balance 26% is held by EDC Limited.

During the year under review, the revenue from operations has grown by 64% as compared with the previous year. The net profit of the Company has grown by 198% as compared with the year before.

GAPL will be focusing to promote generic drugs in the first phase through the retail medicine outlets of GAPL in Goa and channel partners appointed in southern states. In the subsequent years, high value products like Dry Powder Injectable will be added in the product range. Business opportunities for supply of generic medicines to Jan Aushadhi Schemes of GoI, supply to free generic medicine outlet in AIIMS, Amrit outlets operated by HLL will also be explored.

GAPL runs five medi-centre outlets throughout the State of Goa in Government hospital. GAPL plans to expand this division to an efficient chain of three pharma retail outlets by March, 2018.

c) HLL Infra Tech Services Limited. [HITES]

HITES was incorporated on 3rd April, 2014 as a wholly owned subsidiary of HLL Lifecare Limited to carry on the business of providing services viz., infrastructure

development, facilities management, procurement consultancy and allied services, foreseeing the enormous scope of business in these segments.

During the year 2016-17, HITES achieved an impressive turnover of Rs. 3655.35 lakhs. The profit before tax was increased to Rs. 408.64 lakhs and the net worth has grown to Rs. 184.66 lakhs.

d) HLL Medipark Ltd. (HML)

On 20th December, 2016, HLL formed a 100% subsidiary company by name HLL Medipark Limited [HML] an exclusive facility with the state-of-the-art infrastructure, for the manufacture of medical devices and equipment along with knowledge and environmental management infrastructure, in a sprawling 330 acres of land at Chengalpattu, Tamil Nadu. The Medipark project will be a “one-stop facility” for manufacturing units through the creation of an integrated ecosystem to facilitate business, approvals, stimulate innovation and R&D, develop new technologies, prototyping and commercialization activities and become a hub for the sector in the country. The project shall also strengthen the Make in India drive of the Government by reducing the dependence on imports and creating a strong base for the growth of indigenous and domestic industry by providing access to state of art infrastructure and technology.

The Medipark project is expected to attract manufacturers in the sector. Apart from boosting the investment in the country and providing affordable medical devices, it will give a fillip to an affordable healthcare delivery system and also enhance employment opportunities. Medipark is considered to be the enterprise zone aimed to attract major medical device companies and medical research companies to set up their plants and laboratories.

The authorized and paid up share capital of HML as on 31st March, 2017 is Rs. 50.00 lakh and Rs. 10.01 lakh respectively.

e) LifeSpring Hospitals (P) Limited [LSH]

Life Spring has been in existence for almost 10 years as a joint venture between HLL Lifecare and Accumen Fund. During this period, LifeSpring has evolved a unique model for providing high quality

maternal and child health care at affordable rates for low- income population group, which meets a social objective while being sustainable. LifeSpring has established a long term strategy to expand/scale up the business of the company and for its future growth.

In the current year 2016-17, the performance at the enterprise level has been steadily improving. The company recorded a profit of `5.24 lakhs during 2016-17. LSH has facilitated delivery of 7912 babies during the year under review.

16.27.6 Procurement of goods from MSMEs

During the year 2016-17, HLL has procured goods of value of Rs. 6574.00 lakhs from Micro, Small and Medium Enterprises (MSMEs) out of the total procurement of Rs. 26,441.00 lakhs which is 24.86% as against the target of 20%. The Company has also conducted 10 vendor development programmes for MSMEs.

16.27.7 Research & Development

During the year, under review HLL R&D undertook In-vitro cancer studies with Ormeloxifene by collaborating with TATA Cancer Centre, Mumbai and the results are highly promising for Cancer inhibition. HLL R&D Centre has completed the contract research project towards the development of novel UPA/Cu based Intra Uterine System and supply of phase I Clinical trial materials at a cost of Rs.1 Crore for HRA Pharma, France and Population Council, USA. The Phase-I clinical trial is in progress in Dominican Republic. R&D also developed of a cost effective patentable new process for production of Ormeloxifene. It is under production validation.

The R&D projects of CRDC have bagged funding as mentioned below:

- Funding from Biotechnology Industry Research Assistance Council (BIRAC) for undertaking Phase III trial on Breast cancer with Ormeloxifene. Funding from Department of Science and Technology (DST) for “Development of mucoadhesive microspheres of ferrous sulphate with enhanced bioavailability for treating anaemia.
- Funding from Department of Science and

Technology (DST) under Women Scientist Scheme for “Evaluation of a combinatorial approach using Ormeloxifene, a novel Selective Estrogen Receptor Modulator (SERM) with other drugs in 3D breast cancer model.

- Funding from Indian Council of Medical research (ICMR) for “Activity guided screening of phosphodiesterase inhibitors from Indian medicinal plants to treat erectile dysfunction.

Patent awarded to CRDC:

1. International Patent No. AP3716 awarded in African Regional Intellectual Property Organization (ARIPO) - an improved female condom and process of manufacturing the same using natural rubber latex.
2. Patent No. 1/2013/500806 - A novel intrauterine device with controlled copper release.

