

# **Annual Report 2019-20**

**DEPARTMENT OF HEALTH RESEARCH  
Ministry of Health & Family Welfare  
Government of India  
New Delhi  
<http://www.dhr.gov.in>**



# Contents

Chapter-1	Introduction	1
Chapter-2	Administration and Finance	5
Chapter-3	Establishment of Network of Research Laboratories for Managing Epidemics and Natural Calamities.	9
Chapter-4	Establishment of Multi-Disciplinary Research Units (MRUS) In State Government Medical Colleges/Research Institutions.	25
Chapter-5	Establishment of Model Rural Health Research Units (MRHRUS) in the States.	35
Chapter-6	Grant-in-Aid Scheme for Inter-Sctoral Convergence & Coordination for Promotion and Guidance on Health Research	41
Chapter-7	Human Resource Development Scheme of DHR	45
Chapter-8	Health Technology Assessment in India (HTAI) Year 2019-2020	49
Chapter-9	Implementation of schemes in North Eastern Region	59
Chapter-10	Bhopal Memorial Hospital and Research Centre	63
Chapter-11	Indian Council of Medical Research	67
Annexure	BE/RE/actual expenditure 2018-19 and BE/RE 2019-20 with actual expenditure upto December, 2019 and BE 2020-21 in respect of Demand No.43-Department of Health Research	72



## 1

## CHAPTER

**Introduction**

1.1 Department of Health Research (DHR) was created as a separate Department within the Ministry of Health & Family Welfare by an amendment to the Government of India (Allocation of Business) Rules, 1961 on 17th Sept, 2007. The Department became functional from November 2008 with the appointment of first Secretary of the Department.

1.2 The aim of the DHR is to bring modern Health Technologies to the people through research and innovations related to diagnosis, treatment methods and vaccines for preventions; to translate them into products and processes and, in synergy with concerned organizations, introduce these innovations into public health system.

1.3 The mandate of DHR is:

1) Promotion and co-ordination of basic, applied and clinical research including clinical trials and operational research in areas related to medical, health, biomedical and medical profession and education through development of infrastructure, manpower and skills in cutting edge areas and management of related information thereto.

2) Promote and provide guidance on research governance issues, including ethical issues in medical and health research.

3) Inter-sectoral coordination and promotion of public - private – partnership in medical, biomedical and health research related areas.

4) Advanced training in research areas concerning medicine and health, including grant of fellowships for such training in India and abroad.

5) International co-operation in medical and health research, including work related to

international conferences in related areas in India and abroad.

6) Technical support for dealing with epidemics and natural calamities.

7) Investigation of outbreaks due to new and exotic agents and development of tools for prevention.

8) Matters relating to scientific societies and associations, charitable and religious endowments in medicine and health research areas.

9) Coordination between organizations and institutes under the Central and State Government in areas related to the subjects entrusted to the Department and for the promotion of special studies in medicine and health.

10) Administering and monitoring of Indian Council of Medical Research (ICMR).

1.4 With a view to fulfil its mandate, the DHR had formulated following schemes and these schemes have since been approved and were rolled out in 2013-14:

1. Establishment of Network of Research Laboratories for Managing Epidemics and Natural Calamities (VRDL).

2. Establishment of Multi-disciplinary Research Units (MRUS) in Govt. Medical Colleges/Research Institutions.

3. Establishment of Model Rural Health Research Units (MRHRUs) in States.

4. Human Resource Development (HRD) for Health Research.

5. Grants in Aid scheme (GIA) for inter-sectoral convergence & promotion and guidance on research governance issues.

1.5 During the year under review, the Department has made significant progress in implementation of aforesaid schemes. 106 Viral Research & Diagnostic Laboratories (VRDLs), 80 Multi-Disciplinary Research Units (MRUs) and 22 MRHRUs were sanctioned up to 2019-20 (up to December 2019).

1.6 Besides this, 28 Fellowships for training in India and abroad along with 4 Start-up Projects under the scheme of Human Resource Development for Health Research were supported up to 2018-19. Further, 54 Fellowships for training in India and abroad and support to 5 Institutes and 5 Start-up Projects have been supported during 2019-20, up to 31st December, 2019. Cumulative achievement up to December, 2019 is funding of 240 fellowships, support to 42 institutions and 53 Start-up Research Projects by the trainees.

1.7 A total number of 243 new Research Projects were approved & funded under the GIA Scheme up to 2018-19. During the year 2019-20 (up to 31st December, 2019), 13 more new Research Projects were approved & funded bringing the cumulative figure to 256 Research Projects up to December, 2019.

1.8 About 55 VRDLs, 56 MRUs and 18 MRHRUs have already initiated research activities. These schemes are largely helping in building up a strong and effective eco-system for carrying out health research in the country and for introduction of new technologies, new methods of treatment and products/processes into the public health system.

### 1.9 SURROGACY REGULATION BILL 2020

The Surrogacy (Regulation) Bill, 2019 was introduced by the Hon'ble Minister of Health & Family Welfare, Dr. Harsh Vardhan in Lok Sabha on July 15, 2019. The Lok Sabha approved the bill on the 5th of August 2019. The Bill defines Surrogacy as a practice where a woman gives birth to a child for an intending couple with the intention to hand

over the child after the birth to the intending couple.

The Surrogacy (Regulation) Bill, 2019 proposes to regulate surrogacy in India by establishing National Surrogacy Board at the Central level and the State Surrogacy Boards and Appropriate Authorities in the States and Union Territories. The major objectives of the Bill are to regulate surrogacy services in the country, to provide altruistic ethical surrogacy to the needy Indian couples, to prohibit commercial surrogacy including sale and purchase of human embryo and gametes, to prevent commercialization of surrogacy, to prohibit potential exploitation of surrogate mothers and protect the rights of children born through surrogacy.

The Bill was placed in Rajya Sabha on the 6th of November 2019 for consideration and on 21st of November 2019 referred to the Select Committee.

### HEALTH TECHNOLOGY ASSESSMENT (HTA) IN INDIA:

1.10 Health Technology Assessment in India (HTAI) is an institutional structure, established in 2017, under the Department of Health Research (DHR), Ministry of Health & Family Welfare (MoHFW) with the approval of the Hon'ble HFM. HTAI is entrusted with the responsibility to analyze evidences related to cost-effectiveness, clinical-effectiveness and equity issues regarding the deployment of health technologies viz. medicines, devices and health programmes by means of HTA in India, in turn helping in evidence-informed decision making for an efficient use of existing health resources and provide people affordable, accessible and quality healthcare. The main objectives of HTAI is maximizing health, reducing Out of Pocket Expenditure (OOP) and minimizing inequality in healthcare services. It will help in developing systems and mechanisms to assess new and existing health technologies based on available data on resource use, cost, clinical effectiveness, and safety. It will also ensure healthcare accessibility and usefulness to inform health policy. Dissemination of research findings and resulting policy decisions will educate and empower the public to make better

informed decisions for health. Hence, HTAI could be a useful tool in taking India towards Universal Health Coverage.

## **NEW INITIATIVES OF DEPARTMENT OF HEALTH RESEARCH**

### **(1) Preparation of Standard Treatment Workflow (STW):**

Simple, self-explanatory treatment algorithms for 53 common & serious medical & surgical conditions have been made. These workflows comprise of symptoms, signs, diagnostics, treatment etc. for concerned diseases. A dissemination strategy is being planned for putting these up in all Medical Colleges, District Hospitals, Primary HealthCare centres across the country. A high-level stakeholder meeting was organized in January which was attended by NITI Aayog, DoHFW, WHO, Unicef and a few identified States.

### **(2) NLEM (National List of Essential Medicines):**

The Secretariat of the Standing National Committee on Medicines and other Health Care

Products (SNCM) is housed by the DHR. The Core Committee, through a series of meetings and consultations with experts from across the country deliberates and revises the National List of Essential Medicines (NLEM) from time to time. DHR provides administrative and IT support to the SNCM. Medicines in NLEM are categorised according to the therapeutic class and listed with doses forms and references to the levels of healthcare, namely, Primary (P), Secondary (S) and Tertiary (T).

### **(3) THE INDIA -TB RESEARCH CONSORTIUM:**

ICMR took a lead and initiated a new flagship Programme to establish India TB research and development Consortium that aims to bring together all major national players (with international collaborators) to address overarching scientific questions to tackle TB in a mission mode. Different trials in the area of TB drugs and vaccine have been initiated. It is proposed to coordinate and monitor the activities at the Department of Health Research to ensure effective and timely completion of the project for TB Elimination by 2025.



Dr. Harshvardhan, Hon'ble Health & Family Welfare Minister and Shri Ashwini Kumar Choubey, Hon'ble Minister of State for Health & Family Welfare with Professor Balram Bhargava, Secretary DHR & DG, ICMR at the Award Distribution Function of the Indian Council of Medical Research, New Delhi on 16th October, 2019



## 2

## CHAPTER

## Administration and Finance

2.1 The Department of Health Research has formulated five Central Sector Schemes for implementation across the country. In addition to the schemes, DHR has established Health Technology Assessment structure under the Research Governance mandate of the Department. Further, the Indian Council of Medical Research (ICMR) is administered by DHR. Presently, DHR has a total of 42 sanctioned posts in different grades with incumbency position as under:

Table (1)

S. No.	Name of the post	Total sanctioned strength	Incumbency position	Vacancy position
1.	Joint Secretary	2	2	0
2.	Director/Deputy Secretary	4	4	-
3.	Scientist 'E'	2	0	2
4.	Under Secretary	4	4	0
5.	Scientist 'D'	2	0	2
6.	Section Officer	6	2	4
7.	Assistant Section Officer	11	5	6
8.	Sr. Principal Private Secretary	0	1*	-
9.	Scientist 'C'	2	0	2
10.	Personal Assistant	2	0	2
11.	Principal Private Secretary	0	3*	-
12.	Private Secretary	2	3*	-
13.	Stenographer Grade 'D'	2	0	2
14.	Lower Division Clerk / Junior Secretariat Assistant	1	0	1
15.	Junior Hindi Translator	1	0	1
16.	Typist (Hindi)	1	0	1
17.	Multi Tasking Staff	0	1*	-
	<b>Total</b>	<b>42</b>	<b>25 (6*)</b>	<b>23</b>

\* 06 incumbents are over and above the sanctioned posts.

2.2 The process of filling up of the vacant posts is under consideration in the concerned Departments/ Cadre Controlling Authorities. Recruitment Rules for the posts of Scientists is under consideration in consultation with the UPSC. Thereafter, these posts will also be filled up.

2.3 Grievance Redressal Mechanism: The Department has Grievance Redressal Mechanism with the Deputy Secretary as nodal officer.

2.4 Constitution of Complaints Committee for Prevention of Sexual Harassment of Women at Work Places: Department has setup a Complaint Redressal Mechanism to look into the matters/ cases of sexual harassment of female employees of the Department.

2.5 E-Governance Initiatives: In order to promote and strengthen ICT enabled e- Governance in the country, Department of Health Research has taken several initiatives to digitize certain activities, in the following manner:

a) The Department has been using the eOffice software, designed and developed by the National Informatics Centre, for online processing of receipts and files. As per Government of India directive, e-filing system is to be implemented in Ministries/ Departments for a more effective and

transparent inter and intra-government processes.

b) The staff of DHR mark their attendance digitally through AADHAR based Biometric Attendance System. It enables monitoring of attendance and generation of reports through the website attendance.gov.in designed and hosted by NIC.

c. Official e-mail IDs of all staff members have been created under the Government of India e-mail services and is used for all official communication.

d. All computer systems have Local Area Network (LAN) connectivity through NIC and leased line circuits to facilitate speedy implementation of e-Governance Policy of Government.

e. Government e-Marketplace (GeM) is a paperless, cashless and system driven e-market place that enables procurement of common use goods and services with minimal human interface. As per the latest General Financial Rules of Government of India, the Department of Health Research uses GeM for procurement of common use goods and services in a transparent, efficient and cost-effective manner.

## FINANCE:

Allocations and Expenditure from 2015-16 to 2019-20 (14<sup>th</sup> Finance Commission period) and for 2020-21 beginning with the 15<sup>th</sup> Finance Commission period, are as follows:

(Rs. in Crores)			
Year	BE	RE	Actual Expenditure
2015-16	1018.17	1012.51	992.77
2016-17	1144.80	1344.80	1323.60
2017-18	1500.00	1743.39	1731.68
2018-19	1800.00	1742.73	<b>1727.87</b>
2019-20	1900.00	1950.00	1465.14 (upto December, 2019)
Total (14 <sup>th</sup> Finance Commission period)	7362.97		

2020-21	2100.00		
---------	---------	--	--

A statement indicating the scheme-wise BE/RE/actual expenditure for 2018-19 and BE/RE for 2019-20 with actual expenditure upto 31<sup>st</sup>December, 2019 and BE 2020-21 in respect of Demand No.43-Department of Health Research is given at Annexure-I.

### Audit Observations:

There was no C&AG Audit Para pertaining to the Department of Health Research (DHR) during the year.

**The position of PAC/C&AG Audit Paras pertaining to the Indian Council of Medical Research is as follows:**

I	Status of PAC Reports			
S.No.	PAC Report No.	Para No.	Brief Subject of the Para	Status of submission of ATN
1.	2 <sup>nd</sup> Report of The Public Accounts Committee (Seventeenth Lok Sabha) on the Action Taken Note on 95 <sup>th</sup> Report of the PAC on Health & Family Welfare (Ministry Of Health & Family Welfare) dated 06.12.2019	Para 17-18	<b>Indian Council of Medical Research (ICMR)-Overpayment of Transport Allowance to Scientists "G"</b>	ATN is under preparation.
II.	Status of C&AG Audit Paras			
S. No.	C&AG Report No. & date of laying of report	Para No.	Brief Subject of Audit Para	Status of submission of ATN
1	CA-16 of 2009 dt. 06.08.2010	10.1	Work Management of ICMR	Final ATN has been uploaded on the APMS Portal
2	No.12 of 2017 dt 21.07.2017	11.5	Irregular Grant of Benefits to Scientists under Flexible Complementing Scheme with retrospective effect leading to irregular payment of Rs.2.35 crores;	Final ATN has been uploaded on the APMS Portal
3	No.12 of 2017 dt 21.07.2017	11.6	Failure of RMRC Dibrugarh to adhere to the investment procedure in investing surplus funds resulting in loss to earn extra interest of Rs.1.04 crores during 2011-15.	Final ATN has been uploaded on the APMS Portal
4	No.4 of 2018 dt 03.04.2018	9.2	Improper procurement planning resulting in idle equipment (ICMR) by National Institute of Nutrition (NIN), Hyderabad.	Final ATN has been uploaded on the APMS Portal

## **Schemes of Department of Health Research (DHR)**

## ESTABLISHMENT OF NETWORK OF RESEARCH LABORATORY FOR MANAGING EPIDEMICS AND NATIONAL CALAMITIES

During the past few years, India has witnessed several outbreaks of emerging/ re-emerging viral infections. Annual epidemics of Dengue, Chikungunya, Influenza, Rotavirus, Measles Rubella, Japanese encephalitis etc. are reported from all parts of the country. Besides, in the past two decades, India has witnessed acute outbreaks or threats of infiltration of new or exotic viruses such as Nipah virus (2001; 2007; 2018 & 2019); SARS-CoV (2003); Avian Influenza H5N1 (2006); ECSA strain of chikungunya (2006); pandemic influenza (2009); Zika virus (2016). Ebola, Yellow fever and MERS-CoV (Middle East Respiratory Syndrome-coronavirus) are the other potential viral agents which pose a serious threat to the country.

Realizing the high risk faced by the country due to emerging/re-emerging viral infections and limited capacity for timely detection of such viruses, the Department of Health Research (DHR)/ Indian Council of Medical Research (ICMR) took a far-sighted decision of enhancing the country's capacity for early identification and diagnosis of all viral infections of public health importance. This initiative of DHR/ICMR has been rolled out on approval of the VRDL Scheme by the Union Cabinet.

Viral Research & Diagnostic Laboratories (VRDLs) play a significant role in surveillance, diagnosis and detection of outbreaks. The Scheme is in the mid phase for setting up of new VRDLs and creating high quality systems for existing network which will effectively identify emerging/ re-emerging viral pathogens at an early stage and prevent spreading of epidemics. During the 14th Finance Commission, a network of 106 functional VRDLs has been laid down. It is now proposed to strengthen this

network by augmenting the quality parameters for consistent, reliable and high-quality diagnosis; initiate event-based surveillance for fast detection of outbreaks; strengthen coordination of VRDLs with the State public health system, Integrated Disease Surveillance Program (IDSP) and National Vector Borne Disease Control Program (NVBDCP); initiate structured research projects which could translate into information for drafting/refining public health policies.

These labs have yielded several diagnoses that helped to take timely interventions and thus ensured public health. The role played by VRDL network has also helped ease the investigation burden of national apex institutes ICMR-NIV, Pune and NCDC, New-Delhi. Most of the VRDLs provide diagnosis within 24-48 hours (depending on the test conducted) and this has immensely brought down the delay in diagnosis/detection.

Components of the Scheme and Funding Norms:

1. Regional Labs\*: The non-recurring cost of a Regional Level Lab would be Rs.14.95 crore for development of infrastructure, which include civil works (Rs.4.20 crore), furnishing & furniture (Rs.50 lakh) and equipment (Rs.10.25 crore). The recurring cost of Regional Lab per annum is Rs 1.25 crore, towards staffing (Rs.90 lakh), consumables, contingencies and training (Rs.35 lakh).
2. State Level Labs #: The non-recurring cost of a State Level Lab would be Rs.3.975 crore for development of infrastructure which include civil works mainly for renovation/modification of the building (Rs.50.00 lakh) and for equipment (Rs.3.475 crore). The recurring cost of a State Level Lab per

annum is Rs.63.00 lakh which will be extended for a period of five years for engaging trained technical manpower on contractual basis (Rs. 38.00 lakh per annum) and for consumables, contingencies and training (Rs.25.00 lakh).

3. Medical College Labs # : The non-recurring cost of a Medical College Level Lab would be Rs.1.439 crore comprising of Rs.93.90 lakh for equipment and Rs.50.00 Lakh for civil works /renovation of building. The recurring cost of a Medical College Level Lab per annum is Rs.39.00 lakh, towards staffing (Rs.24 lakh) and consumables, contingencies and training (Rs.15 lakh).

\*All the Regional Labs will be managed and fully

funded by the Department of Health Research.

The cost towards establishment of State Level Labs and Medical College Labs, will be shared between the Central Government and the concerned State Government in the ratio of 75:25. For north-eastern states, hilly states, including Sikkim and J&K, the ratio would be 90:10. The cost of land/building to be provided by the State Governments will be reckoned towards its contribution.

The List of Institute for establishment of Regional Labs is given at Annexure-I. The State-wise number of Medical Colleges for coverage as State Level/ Medical College Level Virology Labs is given at Annexure-II.

### Physical Achievements

#### 12th Plan Period (2012-2017)

Year	Target			Actual Achievement		
	Regional VRDL	State VRDL	Medical College VRDL	Regional VRDL	State VRDL	Medical College VRDL
2013-2014	2	5	10	2	4	6
2014-2015	3	10	40	3	2	13
2015-2016	5	15	40	0	5	10
2016-2017	0	0	30	0	4	16
Total	10	30	120	5	15	45

#### 14<sup>th</sup> Finance Commission Period (2017-18 to 2019-2020)

Year	Target			Actual Achievement		
	Regional VRDL	State VRDL	Medical College VRDL	Regional VRDL	State VRDL	Medical College VRDL
2017-2018	5	10	15	2	1	11
2018-2019	0	0	30	2	5	10
2019-2020	0	0	0	0	1	9
Total	5	10	45	4	7	30

**Financial achievements:**

Year	BE	RE	Actual Expenditure (Rs. In Cr)
2013-14	45.00	34.00	34.00
2014-15	35.00	30.00	30.00
2015-16	46.00	45.25	45.25
2016-17	39.25	44.25	44.25
2017-18	56.00	66.00	66.00
2018-19	70.00	55.00	52.14
2019-20	80.00	73.00	59.21 upto 31/01/2020

**Scientific Achievement:**

- Total number of tests done since the initiation of the network: 22,28,305
- Total no. of positive test: 3,42,181
- Number of tests done in the year 2019: 6,84,005
- Number of positive test reported in the year 2019: 1,03,729
- Total Number of outbreak investigated: 1,207
- Number of outbreak investigated in the year 2019: 181
- Number of training conducted for NIE portal and total person trained: 9 training conducted and 194 participants trained.
- Number of training conducted in the year 2019 and no. of person trained: 3 training conducted and 73 participants trained
- As on date 87 VRDLs are functional and have started reporting to Data Mining Centre at National Institute of Epidemiology (NIE).
- A total of 610 Technicians plus Scientists trained on techniques and assays for diagnosing various virus etiologies (including Zika Virus, and Yellow Fever diagnostics) and biosafety and biosecurity parameters.
- Capacity built for detection of highly pathogenic viruses.
- VRDLs have been doing surveillance of Zika virus, Influenza virus in India.
- VRDLs have also initiated surveillance of non-viral etiologies-scrub typhus and leptospirosis.
- Turnaround time reduced from 7 days to 24-48 hours.
- A significant achievement has been that 30 VRDLs are contributing to Influenza surveillance (both type and subtype of influenza) in the country and data, through NIV, is being fed into WHO Flunet database.
- Integration of six VRDLs into WHO MR Labnet and nine are in process for integration.
- 30 VRDLs have initiated diagnosis for two non-viral etiologies viz. Scrub and Lepto.
- Research activities: Two multicentric studies are undergoing:
  - Influenza: Assessment of Neuraminidase Inhibitor Susceptibility in influenza A(H1N1) pdm09 viruses.
  - A multi centric hospital based study on epidemiology of keratoconjunctivitis in India
- Dengue: Monitoring of Dengue and Chikungunya viruses circulating in India for changes in the serotypes, genotype and lineages utilizing Viral Research & Diagnostic



## Laboratories Network

20. Diagnostic algorithms: Algorithms for different syndromes were developed in consultation with WHO and experts. These include algorithms for syndromes like AES, fever with rash, respiratory distress, viral diarrhea, viral hepatitis and viral conjunctivitis. VRDLs are strongly encouraged to follow these algorithms while performing tests so as to avoid indiscriminate testing.
21. Standard Operating procedures: A generic SOP for molecular testing of Influenza suspected samples has been written and vetted by experts. This will be disseminated to all the VRDLs so that labs develop their own SOP to have some uniformity of the test procedure. Similar exercise for Flavivirus detection is underway.
22. GCLP workshop: In order to make the VRDLs quality sensitive, two workshop were conducted at ICMR to apprise the 24 VRDLs about GCLP. An in-house program for GCLP workshop has been developed and this will be taught by various ICMR scientists in series of GCLP workshops.
23. Advocacy workshop: In the annual review meeting, a need was felt to work on better coordination of VRDL network with the state health surveillance programs like IDSP and NVBDCP. To fulfil this, four workshops have been organized where in VRDL labs interacted with central and state officers of IDSP and NVBDCP. IDSP has shown a great interest in leveraging the VRDL expertise to complement their labs. A series of workshops is planned to cover the remaining VRDLs.

## DETAILED ACTIVITIES UNDERTAKEN DURING 2019-20

### Technical Review Meeting

Annual Technical Review Meeting was held at Department of Health Research under the Chairmanship of Dr. Lalit Dar, Professor, Department

of Microbiology, All India Institute of Medical sciences, New Delhi on 6-7<sup>th</sup> June, 2019 to review a network of Viral research & Diagnostic Laboratories (VRDLs). All laboratories were scored as per their performance.

### Workshop on Good Clinical Laboratory Practice for DHR-ICMR VRDL Network

In the last few years, there has been a lot of focus globally on having a set of standards for clinical/diagnostic laboratories processing clinical specimens. Good Clinical Laboratory Practice (GCLP) describes the principles and procedures which needs to be followed by diagnostic laboratories involved in patient care and/or clinical research so as to provide results which are reliable, accurate and reproducible. GCLP helps to generate such quality results which can be reliably used for patient care and for performing quality research. The Virus Research and Diagnostic Laboratories (VRDL) network play an important role in providing clinical results which are being used for diagnosis and research purposes. Over a period of time, the VRDL network of laboratories should be made GCLP compliant to improve the credibility and authenticity of their test results. As part of our effort to improve the quality systems for the VRDLs, we plan to start a series of GCLP workshops for laboratory personnel from VRDLs.

### GCLP-001 conducted on 30<sup>th</sup> September-1<sup>st</sup> October, 2019.

Network of following 12 VRDLs were trained:

IMS, BHU, Varanasi

PGIMER, Chandigarh

KGMU, Lucknow

GMC, Amritsar

JN Medical College, Aligarh

GMC, Patiala

UPUMS, Saifai

BPS, GMC, Sonapat

PGIMS, Rohtak



NICED, Kolkata

GMC, Kozhikode

NIV, Kerala

**GCLP-002 conducted on 8<sup>th</sup> January-10<sup>th</sup> January 2020.**

Network of following 12 VRDLs were trained:

IPGMER, Kolkata

Darbhanga Medical College, Darbhanga, Bihar

Sri Venkateswara Institute of Medical Sciences,  
Tirupati

Rajendra Institute of Medical Sciences, Ranchi

Govt. Medical College, Thrissur

AIIMS, New Delhi

Govt. Medical College, Haldwani

NIRTH, Jabalpur

Rajendra Memorial Institute of Medical Sciences,  
Patna

Andhra Medical College, Vishakhapatnam

Govt. Medical College, Trivandrum

Lady Harding Medical College, New Delhi



Good Clinical Lab Practice (GCLP) Workshop from 30th September to 1st October, 2019



2nd Workshop at, Regional VRDL, AIIMS, New Delhi on 5th November, 2019 for Network of 8 VRDLs

### **Regional Advocacy Workshops for DHR-ICMR VRDL Network:**

For effective synchronization between VRDL and other public health programmes for communicable diseases and infections (viz., WHO-India, IDSP, NVBDCP) and effective epidemic preparedness and smooth operationalization to trigger a better working mechanism which will help the nation in tackling emerging and re-emerging viral infectious diseases.

1st Workshop conducted at Regional VRDL, Regional Medical Research Centre, Bhubaneswar on 21.08.2019 for network of 11 VRDLs. State involved are Odisha, Andhra Pradesh, Chhattisgarh.

2nd Workshop conducted at Regional VRDL, All India Institute of Medical Sciences, New Delhi on 05.11.2019 for network of 8 VRDLs : States involved- Haryana, Uttar Pradesh, Uttarakhand and NCT Delhi

3rd Workshop at Jawaharlal Institute of Postgraduate Institute of Medical Education & Research, Puducherry on 14.12.2019 for network of 18 VRDLs : States/UTs involved- Tamilnadu, Karnataka, Puducherry, Andaman & Nicobar Islands

4th Workshop conducted at Rajendra Memorial Research Institute of Medical Sciences, Patna on 21.08.2019 for network of 6 VRDLs: States involved- Bihar, Jharkhand

### **Laboratory preparedness and response for handling and detection of high-risk pathogens conducted in August, 2019 (13.08.2019 to 17.08.2019) at National Institute of Virology, Pune**

20 participants from 11 laboratories including 5 Regional VRDLs, 5 State VRDLs, and NCDC were trained for preparedness and response for handling and detection of high risk pathogens including Ebola, Nipah, Zika etc.



3rd Workshop at Jawaharlal Institute of Post Graduate Institute Medical Education and Research (PGIMER), Puducherry held on 14th December, 2019 for network of 18 VRDLs.



**List of Regional VRDLs**

1. The Postgraduate Institute of Medical Education and Research, Chandigarh
2. ICMR-Regional Medical Research Centre, Dibrugarh
3. ICMR-National Institute of Cholera and Enteric Diseases, Kolkata
4. All India Institute of Medical Sciences, New Delhi
5. Government Medical College, Kozhikode
6. All India Institute of Medical Sciences, Bhopal
7. ICMR-Regional Medical Research Centre, Bhubaneswar
8. Jawaharlal Institute of Postgraduate Medical Education and Research, Puducherry
9. All India Institute of Medical Sciences, Jodhpur



## Statewise list of VRDLs

S.No.	State/UT	Level of VRDL		LIST OF FUNDED VRDLs
1	Andaman	State Level	1	Regional Medical Research Centre, Port Blair
2	Andhra Pradesh	State Level	2.	Sri Venkateswara Institute of Medical Sciences, Tirupati, Andhra Pradesh
		Medical College Level	3.	Siddhartha Medical College, Vijayawada
		Medical College Level	4.	Government Medical College, Anantapur
		Medical College Level	5	Rajeev Gandhi Institute of Medical Sciences, Kadapa
		Medical College Level	6.	Rangaraya Medical College, Kakinada
		State Level	7.	Guntur Medical College, Guntur
		Medical college Level	8	Andhra Medical college, Vishakhapatnam
2	Assam	Regional level	9.	Regional Medical Research Centre, Dibrugarh
		State Level	10	Gauhati Medical College, Guwahati
		Medical College Level	11	Silchar Medical College, Silchar
		Medical College Level	12	Jorhat Medical College, Jorhat
		Medical College Level	13	Tezpur Medical College, Tezpur
		Medical College Level	14	Fakhruddin Medical College, Barpeta
3	Bihar	Medical College Level	15	Patna Medical College, Patna
		Medical College Level	16	Darbhanga Medical College, Darbhanga
		Medical College Level	17	S K Medical College, Muzaffarpur
		Medical College Level	18	Rajendra Memorial Research Institute of Medical Sciences, Patna
4	Chandigarh	Regional level	19	PGIMER, Chandigarh
		Medical College Level	20	Government Medical College & Hospital, Chandigarh
5	Chhattisgarh	Medical College Level	21	Late Sri Baliram Kashyap Memorial Govt. Medical College, Jagdalpur
		State Level	22	All India Institute of Medical Science (AIIMS) Raipur, Chhattisgarh.
6	Delhi-NCT	Regional Level	23	All India Institute of Medical Sciences, New Delhi-110029
		Medical College Level	24	Lady Hardinge Medical College, New Delhi

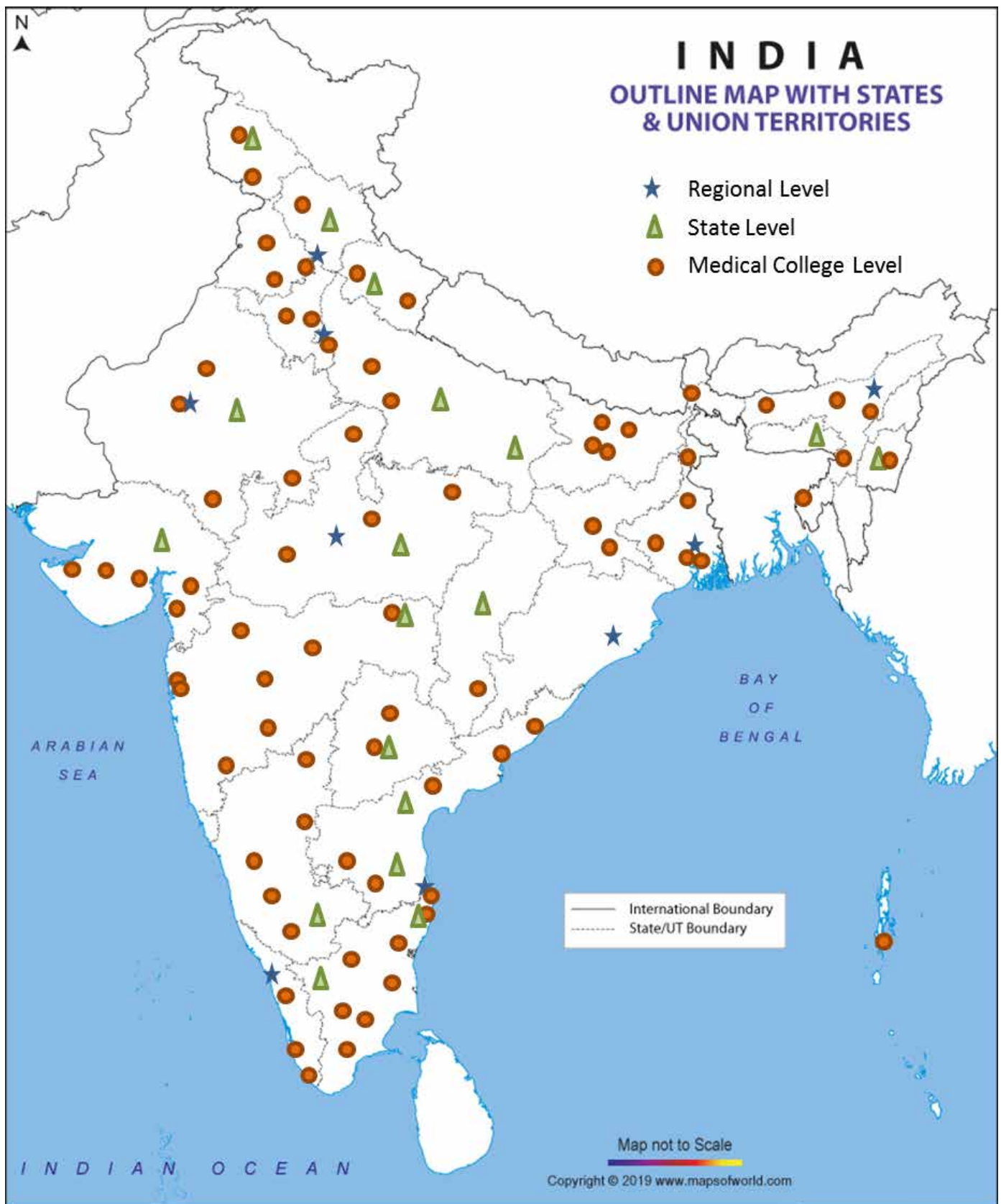
6	<b>Gujarat</b>	State Level	25	B.J. Medical College, Ahmedabad
		Medical College Level	26	M.P. Shah Medical College, Jamnagar
		Medical College Level	27	Government Medical College, Surat
		Medical College Level	28	GMC, Bhavnagar
		Medical College Level	29	PDU GMC, Rajkot
		Medical College Level	30	Government Medical College & SSG Hospital, Vadodara
7	<b>Haryana</b>	Medical College Level	31	PGIMS, Rohtak
		Medical College Level	32	BPS Government Medical College for Women, Sonapat
8	<b>Himachal Pradesh</b>	State Level	33	Indira Gandhi Medical College, Shimla
		Medical College Level	34	Dr. Rajendra Prasad Government Medical College, Tanda
9	<b>Jammu and Kashmir</b>	State Level	35	Sher-i-Kashmir Institute of Medical Sciences, Srinagar
		Medical College Level	36	Government Medical College, Jammu
		Medical College Level	37	Government Medical College, Srinagar
10	<b>Jharkhand</b>	Medical College Level	38	Rajendra Institute of Medical Sciences, Ranchi
		Medical College Level	39	MGM Medical College, Jamshedpur
11	<b>Karnataka</b>	State Level	40	Bangalore Medical College & Research Institute, Bangalore
		Medical College Level	41	Mysore Medical College & Research Institute, Mysore
		Medical College Level	42	Vijayanagar Institute of Medical Science, Bellary
		Medical College Level	43	Hassan Institute of Medical Sciences, Hassan
		Medical College Level	44	Shimoga Institute of Medical Sciences
		Medical College Level	45	Gulbarga Institute Of Medical Sciences, Gulbarga
12	<b>Kerala</b>	Regional Level	46	Government Medical College, Kozhikode
		State Level	47	National Institute of Virology, Alappuzha
		Medical College Level	48	Government Medical College, Trivandrum
		Medical College Level	49	Government Medical College, Thrissur



13	<b>Madhya Pradesh</b>	Regional level	50	AIIMS, Bhopal
		Medical College Level	51	Bundelkhand Medical College, Sagar
		Medical College Level	52	MGM Medical College, Indore
		Medical College Level	53	Gajra Raja Medical College, Gwalior
		State Level	54	National Institute for Research in Tribal Health(NIRTH), Jabalpur
		Medical College Level	55	S.S Medical College, Rewa
14	<b>Maharashtra</b>	Medical College Level	56	Indira Gandhi Government Medical College, Nagpur
		Medical College Level	57	Government Medical College, Miraj, Sangli
		Medical College Level	58	Kasturba Hospital for Infectious Diseases, Mumbai
		Medical College Level	59	Seth GS Medical College & KEM Hospital , Mumbai
		State Level	60	Government Medical college, Nagpur
		Medical College Level	61	Government Medical College, Aurangabad
		Medical College Level	62	V. M. Government Medical College, Solapur
		Medical College Level	63	Shri Bhausaheb Hire Government Medical College, Dhule
		Medical College Level	64	Government Medical College and Hospital & Superspeciality Hospital, Akola
15	<b>Manipur</b>	State Level	65	Regional Institute of Medical Sciences, Imphal
		Medical College Level	66	JNIMS, Imphal
16	<b>Meghalaya</b>	State Level	67	NEIGRIHMS, Shillong
17	<b>Odisha</b>	Regional level	68	RMRC, Bhubaneswar
		State Level	69	SCB Medical College, Cuttack
18	<b>Puducherry</b>	Regional level	70	JIPMER, Puducherry
		Medical College Level	71	Indira Gandhi Medical College & Research Institute, Puducherry
19	<b>Punjab</b>	Medical College Level	72	Government Medical College, Amritsar
		Medical College Level	73	Government Medical College, Patiala

20	<b>Rajasthan</b>	State Level	74	SMS Medical College, Jaipur
		Medical College Level	75	Dr. S.N. Medical College, Jodhpur
		Medical College Level	76	RNT Medical College, Udaipur
		Medical College Level	77	S.P. Medical College & Associated Group of Hospitals, Bikaner, Rajasthan
		Medical College Level	78	Jhalawar Medical College, Jhalawar, Rajasthan
		Regional level	79	AIIMS, Jodhpur
21	<b>Tamil Nadu</b>	Medical College Level	80	Madurai Medical College, Madurai
		Medical College Level	81	Government Medical College, Theni
		Medical College Level	82	Government Mohan Kumaramangalam Medical College, Salem
		Medical College Level	83	Government Medical College, Thiruvavur
		Medical College Level	84	Government Medical College, Villupuram
		Medical College Level	85	Tirunelveli Medical College, Tirunelveli
		State Level	86	Coimbatore Medical College, Coimbatore
		State Level	87	King Institute of Preventive Medicine and Research, Chennai, Tamil Nadu
		Medical College Level	88	Madras Medical College, Chennai, Tamil Nadu
22	<b>Tripura</b>	Medical College Level	89	Government Medical College, Agartala
23	<b>Telangana</b>	Medical College Level	90	Osmania Medical College, Hyderabad
		Medical College Level	91	Kakatiya Medical College, Nizampura, Warangal
		State Level	92	Gandhi Medical College, Secunderabad
24	<b>Uttar Pradesh</b>	State Level	93	King George Medical University, Lucknow
		Medical College Level	94	J N Medical College, Aligarh
		Medical College Level	95	UPUMS, (Formerly UPRIMS) Saifai
		State Level	96	Institute of Medical Sciences, Banaras Hindu University, Banaras
25	<b>Uttarakhand</b>	Medical College Level	97	Government Medical College, Haldwani
		State Level	98	AIIMS, Rishikesh
		Medical college Level	99	Doon Government Medical College, dehradun
26	<b>West Bengal</b>	Regional level	100	NICED Virus Unit, Kolkata
		Medical College Level	101	IPGMER, Kolkata
		Medical College Level	102	Murshidabad Medical College & Hospital, Murshidabad, Berhampur, West Bengal
		Medical College Level	103	Midnapore Medical College & Hospital, Midnapore
		Medical College Level	104	North Bengal Medical College, Darjeeling
		Medical College Level	105	Malda Medical College, Malda
		Medical College Level	106	RG Kar Medical College, Kolkata

## Geographical spread of Viral Research & Diagnostic Network across India





## 4

## CHAPTER

## ESTABLISHMENT OF MULTI-DISCIPLINARY RESEARCH UNITS (MRUs) IN STATE GOVERNMENT MEDICAL COLLEGES/RESEARCH INSTITUTIONS.

4.1 Health Research is predominantly carried out in the Medical Colleges/Institutions providing education in allied subjects. Medical Colleges are the back bone of both teaching and providing specialized services to patients in India. They are also expected to set the trends in the thinking process and innovations to improve the understanding of the diseased and their management. However, over the years it has been noticed that the majority of Medical Colleges have confined themselves to routine patient care and teaching based on conventional methods. Presently quality medical research is largely confined to a handful of institutions and medical colleges in the country that too in few States only. The standard of papers published / research projects undertaken by the students of Post-graduate courses/PhD in most of the Medical Colleges are not inspiring. The Department observed that it may be attributed both to lack of appropriate facilities for conducting research and a lack of motivation and knowledge on the part of faculty and students in Medical Colleges for conducting research.

4.2 Due to lack of infrastructural facilities, the

Medical Colleges have not been pursuing newer methods of investigation for understanding the pathological diagnosis, treatment and management practices. Even for State Governments, Health Research has not been perceived as a priority area. This has also affected the quality of clinical services being provided.

4.3 Therefore to promote and encourage quality medical research in the country and provide assistance to medical colleges to set up appropriate research facilities, the Department of Health Research rolled out the MRU scheme in the year 2013-14 during 12th five year plan and was extended for the 14th Finance Commission Period i.e. 2017-18 to 2019-20 with total estimated cost of the project of Rs. 394.86 Crores. The Government has further extended the scheme for 2020-21.

4.4 The scheme aims to provide infrastructural support, in terms of civil works, equipment and recurring expenditure, to carry out research focused on non-communicable diseases, to various State Govt. Medical Colleges across the country in phased manner.

### Target during 14<sup>th</sup> finance commission

Year	Physical Targets	Estimated Cost		Total (Rs. In Crores)
		Non Recurring	Recurring	
2017-18	12	179.00	27.77	206.77
2018-19	10	112.50	33.42	145.92
2019-20	10	12.50	29.67	42.17
<b>Total</b>	<b>32</b>	<b>304.00</b>	<b>90.86</b>	<b>394.86</b>

For the Year 2020-21, a target of establishing 10 MRUs has been fixed with budgetary outlay of Rs. 60.00 Crores.

- 4.5** The scheme entailed setting up of 90 MRUs in the Government Medical Colleges/ Research Institutions till the 14<sup>th</sup> Finance Commission Period. However, 80 MRUs have been approved till December, 2019 and admissible grant to 79 MRUs has been released.

#### Financial Achievements:

(Rs in Crore)

Year	Budget Estimates (BE)	Revised Estimates (RE)	Actual Expenditure
2013-2014	45.00	37.10	36.25
2014-2015	80.00	31.00	31.00
2015-2016	45.50	28.00	25.20
2016-2017	24.25	24.25	24.25
2017-2018	36.00	45.00	45.00
2018-2019	50.00	37.00	36.99
2019-2020	58.00	55	41.05

#### Physical Achievement

Year	Target as per SFC	Approved against target
2013-14	35	36
2014-15	45	25
2015-16	-	9
<b>2016-17</b>	-	-
2017-18	12*	4
2018-19	10*	5
2019-20	10	1
<b>TOTAL</b>	<b>90</b>	<b>80</b>

\*Spill over from previous year.

\*\* 10 new MRUs to be opened in 2019-20

## FUNDING NORMS AS APPROVED BY THE SFC FOR EXTENDED PERIOD OF THE SCHEME:

- 4.6** Rs. 5.25 crore per MRU toward Equipment & Civil works. In addition, recurring expenditure of Rs. 47.44 lakhs per annum toward staffing on contractual basis and consumables, etc.

### Contribution from the State Governments:

- To provide requisite space (minimum 300 sqmtr), free of cost, at the concerned Medical College.
- Signing of MoA with the Department of Health Research for taking over the liability of running the centers after five years.

### Status of Implementation

- i. Against the total target of covering 90

medical colleges, 80 MRUs have been approved and funds to 79 MRUs have been released till December, 2019. However, one college namely BJ Medical College, Pune, Maharashtra could not be released funds as the matter is under discussion with the State Government.

- ii. Against the RE provision of Rs. 55.00 Crores during 2019-20, an expenditure of Rs. 40.17 Crores has been incurred till December, 2019.

### 4.7 List of Medical Colleges/Institution sanctioned & funded for establishment of Multi-Disciplinary Research Units (MRUs) upto December, 2019 is as follows:

S.No	State	Name of the approved medical college
1	Andhra Pradesh(4)	Siddhartha Medical College, Vijaywada
2		Rangaraya Medical College, Kakinda, Andhra Pradesh
3		Andhra Medical College, Visakhapatnam Andhra Pradesh
4		SV Medical College, Tirupati
5	Assam (3)	Silcher Medical College and Hospital, Silcher
6		Zorhat medical College, Zorhat, Assam
7		Fakhruddin Ali Ahmed Medical College, Barpeta, Assam
8	Bihar (1)	Indira Gandhi Institute of Medical Sciences, Patna
9	Chandigarh (1)	Government Medical College, Chandigarh
10	Chhattisgarh(1)	Pt. JNM Medical College, Raipur, Chattisgarh
11	Delhi (NCT) (3)	University College of Medical Sciences, Delhi
12		Vallabh Bhai Patel Chest Institute, Delhi
13		Maulana Azad Medical College
14	Goa (1)	Goa Medical College, Bambolin
15	Gujarat (2)	M.P.Shah Medical College, Jamnagar
16		SMIMER, Surat, Gujarat
17	Haryana(1)	Pt. BD Sharma Medical College, Rohtak
18	Himachal Pradesh(2)	Indira Gandhi Medical College, Shimla

S.No	State	Name of the approved medical college
19		Dr. R.P. Govt. Medical College, Kangra at Tanda, HP
20	J & K (3)	Govt. Medical College, Jammu
21		Govt. Medical College, Srinagar
22		Sher-i-Kashmir Medical College, Srinagar
23	Jharkhand(2)	MGM Medical College, Jharkhand
24		Rajendra Institute of Medical Sciences, Ranchi
25	Karnataka(6)	Dharwad Institute of Medical Sciences, Dharwad, Karnataka
26		Mandya Medical College, Karnataka
27		Karnataka Institute of Medical Sciences, Hubli
28		ShimogaInstt. Of Medical Sciences, Shimoga
29		Mysore Medical College, Mysore, Karnataka
30		Hassan Institute of Medical Sciences, Hassan
31	Kerala (3)	Medical College, Thiruvanthapuram
32		Calicut Medical College, Calicut
33		Govt. medical College, Kottayam, Kerala
34	Madhya Pradesh (5)	S.S. Medical College, Rewa
35		Netaji Subhash Chandra Bose Medical College, Jabalpur
36		M.G.M. Medical College, Indore
37		Gandhi Medical College, Bhopal
38		GR Medical College, MP
39	Maharashtra (4)	Seth G.S Medical College & KEM Hospital Mumbai
40		Dr. Vaishampayan Memorial Government Medical College, Sholapur
41		Armed Forces Medical College, Pune
42		B.J. Medical College, Pune
43	Manipur (1)	Regional Institute of Medical Sciences, Imphal
44	Orissa (3)	S.C.B. Medical College, Cuttack
45		VSS Medical College, Burla
46		M.K.C.G. Medical College, Berhampur,
47	Punjab(3)	Govt. medical College, Amritsar
48		Govt. Medical College, Patiala
49		Guru Gobind Singh Medical College, Faridkot
50	Rajasthan (7)	Dr. S.N. Medical College, Jodhpur



S.No	State	Name of the approved medical college
51		Sardar Patel Medical College, Bikaner.
52		J.L.N. Medical College & Associated Group of Hospital, Ajmer
53		SMS Medical College, Jaipur
54		R.N.T Medical College, Udaipur
55		Rajasthan University of Health Sciences, Jaipur
56		Government Medical College, Kota
57	Tamil Nadu(9)	Madras Medical College, Chennai
58		Tirunelveli Medical College, Tirunelveli
59		Coimbatore Medical College, Coimbatore
60		Dr.ALM Post Graduate Institute of Basic Medical Sciences, Taramani
61		Medical College, Tanjavur, Tamil Nadu
62		Govt. Mohan Kumarmangalam Medical College, Salem, Tamil Nadu
63		Govt. Theni Medical College, Theni, Tamil Nadu
64		Chengalpattu Medical College, Chengalpattu
65		Madurai Medical College, Madurai
66	Telangana(3)	Osmania Medical College, Hyderabad
67		Gandhi Medical College, Secunderabad
68		Nizam Institute of Medical Sciences
69	Tripura (1)	Agartala Govt. Medical College, Agartala
70	Uttar Pradesh (4)	G.S.V.M Medical College, Kanpur
71		King George Medical University, Lucknow
72		Institute of Medical Sciences, Banaras Hindu University, Banaras
73		Rural Institute of Medical Sciences & Research, Safai, Etawah
74	Uttarakhand(3)	Govt. Medical College, Haldwani (Nainital)
75		Veer Chandra Singh Garhwali Govt Medical Science & Research Institute, Srinagar
76		AIIMS, Rishikesh
77	West Bengal(4)	R.G. Kar Medical College, Kolkata
78		Medical College & Hospital, Kolkata
79		Institute of Post Graduate Medical College Education & Research, Kolkata
80		Nil RatanSirkar Medical College, Kolkata

#### 4.8 Initiation of Research Activities by the MRUs:

- i. As of now, a total of 528 Research Studies by 47 MRUs after approval by the Local Research Advisory Committee (LRAC) of the respective Medical Colleges are underway on different aspects of Non-Communicable Diseases (NCDs) such as cardiovascular disease, hypertension, maternal child health, diabetes, mental disorders etc. Details of Research Studies and the concerned Medical Colleges are as under;

S.No	Name of Medical Colleges	Research Projects Undertaken
1.	Andhra Medical College, Visakhapatnam Andhra Pradesh	6
2.	SV Medical College, Tirupati	18
3.	Osmania Medical College , Hyderabad	21
4.	Gandhi Medical College, Secunderabad	7
5.	Silcher Medical College and Hospital, Silcher	9
6.	Fakhruddin Ali Ahmed Medical College, Barpeta, Assam	10
7.	Pt. JNM Medical College, Raipur, Chattisgarh	18
8.	MGM Medical College, Jharkhand	14
9.	Indira Gandhi Medical College, Shimla	9
10.	Dr. R.P. Govt. Medical College, Kangra at Tanda, HP	12
11.	Sardar Patel Medical College, Bikaner.	10
12.	SMS Medical College, Jaipur	10
13.	Rajasthan University of Health Sciences, Jaipur	12
14.	Madras Medical College, Chennai	19
15.	Tirunelveli Medical College, Tirunelveli	22
16.	Coimbatore Medical College, Coimbatore	18
17.	Dr. ALM Post Graduate Institute of Basic Medical Sciences, Taramani	21
18.	Medical College, Tanjavur, Tamil Nadu	22
19.	Govt. Mohan Kumarmangalam Medical College, Salem, Tamil Nadu	9
20.	Govt. Theni Medical College, Theni, Tamil Nadu	14
21.	Chengalpattu Medical College, Chengalpattu	^
22.	Madurai Medical College, Madurai	10
23.	Agartala Govt. Medical College, Agartala	8
24.	Govt. Medical College, Haldwani (Nainital)	6
25.	R.G. Kar Medical College, Kolkata	4
26.	Institute of Post Graduate Medical College Education & Research , Kolkata	11
27.	University College of Medical Sciences, Delhi	12
28.	Vallabh Bhai Patel Chest Institute, Delhi	3
29.	S.S. Medical College, Rewa	6
30.	S.C.B. Medical College, Cuttack	10

S.No	Name of Medical Colleges	Research Projects Undertaken
31.	VSS Medical College, Burla	8
32.	M.K.C.G. Medical College, Berhampur,	12
33.	Seth G.S Medical College & KEM Hospital Mumbai	18
34.	G.S.V.M Medical College, Kanpur	3
35.	King George Medical University, Lucknow	8
36.	Karnataka Institute of Medical Sciences, Hubli	10
37.	ShimogaInstt. Of Medical Sciences, Shimoga	16
38.	Mysore Medical College, Mysore, Karnataka	18
39.	Govt. Medical College, Jammu	5
40.	Govt. Medical College, Srinagar	1
41.	M.P.Shah Medical College, Jamnagar	8
42.	SMIMER, Surat, Gujarat	12
43.	Medical College, Thiruvanthapuram	11
44.	Calicut Medical College	17
45.	Govt. medical College, Amritsar	3
46.	Guru Gobind Singh Medical College, Punjab	4
47.	Regional Institute of Medical Sciences, Imphal	6
	<b>Total</b>	<b>528</b>

- ii. Since each Medical College has constituted its own local Research Advisory Committee (RAC), which decides research projects under MRU, the role of DHR & ICMR is limited to providing handholding to the medical colleges on designing research proposals, monitoring of progress of the research activities and achievement of outcomes. For this purpose, a National Level Research Advisory Committee (NAC) consisting of three expert members has been constituted for making suggestion and providing guidance from time to time. A suggestive structure/composition of the Local RAC has also been conveyed to the medical colleges for effective & qualitative examination and approval of research proposals.
- iii. A total of 5 Review Meetings during year 2019-20 at DHR-ICMR level have been conducted to review the research activities under MRU of respective colleges by the eminent experts of Review Committee.
- iv. Two workshops on Scientific Paper Writing Techniques and Research methodologies were also organized by DHR at Dibrugarh in May, 2019 for North Eastern Region and at Dharamshala in September, 2019 for Northern Region of the country during 2019-20 for benefit of upcoming researchers.

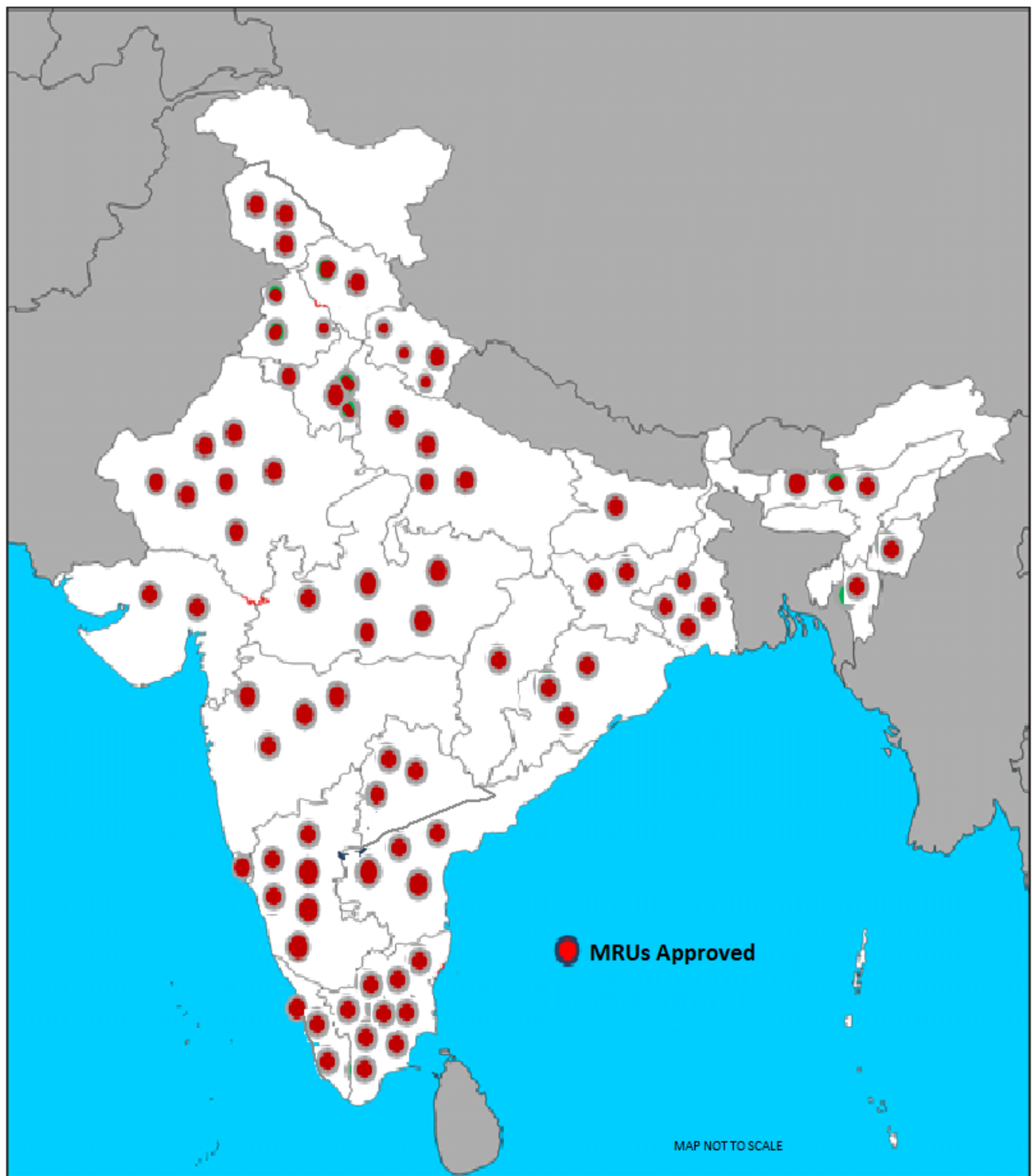


From L to R : (i) Prof Bhanu Awasthi, Principal, Dr R P GMC, Kangra, Himachal Pradesh; (ii) Dr Nasreen Z. Ehtesham, Officer Incharge, National Institute of Pathology, New Delhi; (iii) Smt. Geeta Narayan, Joint Secretary, Department of Health Research, MoH&FW; (iv) Dr. R.S. Dhaliwal, Head, NCD, ICMR, New Delhi; (v) Prof Kameshwar Prasad, Head, Department of Neurology, AIIMS, New Delhi; (vi) Prof. Peush Sahni, Department of Gastro enterology, AIIMS, New Delhi



Participants at the workshop held in Dharamshala on "Research Methology and Scientific Paper Writing Techniques" on 05-06 September, 2019

**4.10** Map showing country-wide establishment of Multi-Disciplinary Research Units in Govt. Medical Colleges.







Multidisciplinary Research Unit (MRU) at Coimbatore Medical College



Multidisciplinary Research Unit (MRU) at GGSMC&H, Faridkot, Punjab



Multidisciplinary Research Unit (MRU) at IGM, Shimla

## 5

## CHAPTER

## ESTABLISHMENT OF MODEL RURAL HEALTH RESEARCH UNITS (MRHRUs) IN THE STATES.

5.1 Public health system in India has a wide network of primary centres at the periphery, plus referral, secondary and tertiary level hospitals at district, state and other levels. Over the last more than 60 years, preventive, diagnostic and therapeutic services have been provided through this network managed by States. It has been observed that a big gap exists between PHC/CHC and tertiary care hospitals with state-of-art-facilities created by centre and also by some of the state governments. The professional and policy makers have a general view that modern methods of diagnosis and management cannot be practiced at a peripheral level.

5.2 Further, wide variations exist in the pattern of diseases prevalent in different geographical areas, the local conditions which require development of state/area specific disease; specific strategy to provide better health care facilities ensuring that the modern technology is available to the general public. Transfer of research findings/technologies at the rural level has been found to be major lacuna for providing quality medical services to the rural population.

5.3 To bridge the gap, Department of Health Research has rolled out a Scheme for 'Establishment Model Rural Health Research Units (MRHRUs) in the States' under the initiative of Infrastructure Development for Health Research in the country. The scheme is based on the experience of establishing such a unit at Ghatampur under the National JALMA Institute of Leprosy and other Mycobacterial Diseases (ICMR), Agra, where the methods of diagnosis and treatment as well as epidemiology are shown to be workable deep at the grass root rural settings. These units have been envisaged to function as an interface between the developers of new technologies (Researchers in the medical and other institution; State or Centre), health systems

operator (Centre/State Health services) and the beneficiaries (community).

5.4 The Model Rural Health Research Units set up under the Scheme undertake the following functions:

- i. Develop state / area specific models depending upon the disease profile, morbidity patterns and local conditions for transfer of the technology for providing better health care services to the rural masses.
- ii. Training the health professional of State Health System for the use of modern field adaptable methods and the model developed.
- iii. Undertake various research projects in close coordination with the State Government institutions and others that are relevant and beneficial to the rural population.
- iv. The Units will develop State specific models depending on the disease profile, topography and the local conditions as per the priorities & location identified by the State Govt. in close coordination with State health authorities.

5.5 The MRHRU will be an interface between patient, health providers and health researcher to provide latest / sophisticated technology for diagnosis and management of disease in rural areas. The activity will be entirely supported by DHR for its sustenance. In total, 25 MRHRUs are to be established during the 14th Finance Commission period. Each MRHRU has to be linked to the nearest ICMR institute to mentor and guide the research activities of MRHRU relevant to local needs. The research activities carried out at each MRHRU are monitored/guided by a Committee, consisting of eminent Scientists of National repute with representation from state govt. medical colleges,

state health services and other concerned state health officials, constituted with the approval of Secretary, DHR. Total estimated cost of the project for 14th Finance Commission Period is 105 Crore. The scheme has been extended for 2020-21 also.

#### **FUNDING NORMS AS APPROVED BY THE SFC FOR EXTENDED PERIOD OF THE SCHEME:**

5.6 Rs.3.075 crore per MRHRU toward Equipment & Civil works. Besides, recurring expenditure of Rs. 84.44 lakhs per annum toward staffing on contractual basis and consumables/ contingency/ training etc.

Action Expected from the State Governments:

5.7 To provide requisite land sufficient to construct covered space of about 620 sq. meters

in close proximity to the PHC/CHC, free of cost, to tackle mainly the rural population of that area.

5.8 Signing of MoA with the Department of Health Research for implementation of the program. The MRHRUs will be developed and maintained as departmental units of Government of India, Department of Health Research, Ministry of Health & Family Welfare.

#### **Status of Implementation**

5.9 23 MRHRUs have been approved and funds to 21 MRHRUs has been released up to December, 2019.

5.10 Against the Provision Rs. 19.00 crores in 2019-2020, grant of Rs. 8.41 crores has been released till December, 2019.

### **Physical Target and Financial Achievement for the 14<sup>th</sup> Finance Commission Period.**

#### **5.11. Physical Achievements:**

Year	Physical	
	Target	Achievement
<b>2017-2018</b>	5*	-
<b>2018-2019</b>	4	4
<b>2019-2020</b>	4	5
<b>Total</b>	25	23**

\*Spill over from previous year

\*\*List Enclosed

For the Year 2020-21, a target of establishing 5 new MRHRUs with budgetary outlay of Rs. 20.00 Crores has been fixed

#### **5.12. Financial Achievements**

(Rs in Crore)

Year	B. E.	R. E.	Actual Expenditure (Rs in Crore)
2013-14	10.00	12.50	12.40
2014-15	20.00	13.00	13.00
2015-16	10.00	6.50	6.50
2016-17	6.00	6.00	4.90
2017-18	11.00	11.00	8.00
2018-19	13.00	10.00	10.00
2019-20	15.00	19.00	9.32



**Physical Achievements:**

Year	Physical	
	Target	Achievement
<b>2013-2014</b>	7	8
<b>2014-2015</b>	8	4
<b>2015-2016</b>	-	-
<b>2016-2017</b>	-	2
<b>2017-2018</b>	5*	-
<b>2018-2019</b>	4	4
<b>2019-2020</b>	4	5
<b>Total</b>	25	23**

\*Spill over from previous year

\*\*List Enclosed

**List of 23 MRHRUs in Various States**

S.No	State	Location of MRHRU	Linked Medical College	ICMR Mentor Institute
1.	Assam	PHC Chabua	Assam Medical College, Dibrugarh	RMRC, Dibrugarh
2.	Himachal Pradesh	CHC, Haroli, Una	Dr. RPGMC, Tanda, Kangra	NJIL&OMD, Agra
3.	Tamil Nadu	State Rural Health Centre at Tirunelveli	Tirunelveli Medical College, Tirunelveli	NIE, Chennai
4.	Tripura	Kherengbar Hospital, Khumulwng	Agartala Medical College, Agartala	RMRC, Dibrugarh
5.	Rajasthan	BhabpurKalan, Govt. Health Clinic, Jaipur	SMS Medical College, Jaipur	DMRC, Jodhpur
6.	Maharashtra	Sub District Hospital, Dahanu, Thane	Grants Medical College and JJ Group of Hospital, Mumbai	NIRRH, Mumbai
7.	Punjab	CHC Bhunga, Hoshiarpur	Govt. Medical College, Amritsar	NIOP, New Delhi
8.	Karnataka	PHC, Sirwar, ManviTaluk, Raichur	RaichurInstt. of Medical Sciences, Raichur	RMRC, Belgaum
9.	Andhra Pradesh	Old RHTC Premises, Chandragiri, Tirupati	S.V. Medical College, Tirupati	NIN, Hyderabad
10.	Odisha	Block, CHC, Tigiria	SCB Medical Collge, Cuttak	RMRC, Bhubaneshwar
11.	Madhya Pradesh	PHC Badoni, Datia	GR Medical College, Gwalior	RMRCT, Jabalpur
12.	Chattishgarh	CHC Jheet, Patan Block, Durg District	Govt. Medical College Rajnandagaon	RMRCT, Jabalpur
13.	West Bengal	North Bengal Medical College (NBMC), Darjeeling (A rural hospital and designated Rural Health Training Centre)	North Bengal Medical College, Darjeeling	National Institute of Cholera and Enteric Diseases (NICED), Kolkata

14.	Jharkhand	Angara CHC, Ranchi	Rajendra Institute of Medical Sciences (RIMS), Ranchi	NIMR, New Delhi AND NIMR filed unit Itki, Ranchi
15.	Gujarat	RHTC Surat	GMC, Surat	NIOH, Ahmedabad
16.	Kerala	CHC, Chettikade, Alappuzha	Govt. Medical College, Alappuzha	National Centre for Disease Informatics and Research (NCDIR), Bangalore
17.	Jammu & Kashmir	PHC Khag, Budgam	Govt. medical College, Srinagar	National Institute of Pathology (NIOP), Delhi
18.	Nagaland	PHC Niuland, Dimapur	There is no medical College, so CHC Niuland will be the linked to MRHRU	Regional Medical Research Centre, Dibrugarh, Assam
19.	Arunachal Pradesh	CHC Sagalee, Papumpare	TomoRiba Institute of Health & Medical Sciences (TRIHMS), Neharlagun	Regional Medical Research Centre, Dibrugarh, Assam
20.	Meghalaya	Sohra CHC East KhasiHills	District Surveillance (IDSP), East Khasi Hills	Regional Medical Research Centre, Dibrugarh, Assam
21.	Puducherry	CHC Kanchipuram Naptassbbi	Pondicherry Institute of Medical Sciences Rural Health Training Centre, Chunampet, Kanchipuram	VCRC, Puducherry
22.	Haryana	CHC, NUH, Mewat, Sonapat	SHKM GMC Nalhar	NICPR, Noida
23.	Haryana	CHC, Khatpura, Panipat	Kalapana Chawla Memorial Govt. Medical College, Karnal, Haryana	NICPR, Noida

### Initiation of research activities by the MRHRUs:

5.13 Guidelines have been formulated for composition of Research Advisory Committee (RAC), Terms of Reference and Procedure for Land Transfer by State to Department of Health Research. All MRHRUs have constituted the RAC and submitted the research proposals after approval through respective RAC.

5.14 All the research projects submitted by these MRHRUS have been reviewed by Research Advisory Committee of respective MRHRU as below:

Table		
S.No.	Name of MRHRUs	No. of Projects
1.	Sub District Hospital, Dahanu, Thane , Maharashtra	12
2.	State Rural Health Centre at Tirunelveli , Tamil Nadu	23
3.	Old RHTC Premises, Chandragiri , Andhra Pradesh	3
4.	CHC Bhunga, Hoshiarpur, Punjab	16
5.	Kherengbar Hospital, Khumulwng , Tripura	11
6.	PHC Chabua, Assam	9

7.	BhanpurKalan, Govt. Health Clinic, Jaipur, Rajasthan	4
8.	PHC, Sirwar, ManviTaluk, Raichur, Karnataka	21
9.	PHC Badoni, Datia, Madhya Pradesh	2
10.	Block, CHC, Tigiria, Orissa	3
11.	CHC, Haroli, Una , Himachal Pradesh	4
	Total	108

5.15. Besides the above mentioned research projects undertaken by individual MRHRUs , Few Multi-centric project have also been initiated.

- "Improving health and nutritional status of vulnerable segment of population by implementing multi-component health and nutrition education intervention as sustainable model of intervention" has been initiated at Rajasthan, Tamil Nadu, Punjab, Maharashtra and Karnataka, MRHRUs.
- The study has also been initiated in some MRHRUs titled "Snake Venom as Potential Inflammation Inhibitor and Antivenome Activity of plant extract", considering this as a widespread problem in most of the rural areas in the country.

### 5.16 Map showing distribution of Model-Rural Health Research Units in the States is as follows.





MRHRU Building at PHC Badoni, Datia, Madhya Pradesh



MRHRU Building at Kherengbar Hospital, Khumulwng, Tripura



MRHRU Building at PHC Chabua, Dibrugarh, Assam

## 6

## CHAPTER

## GRANT-IN-AID SCHEME FOR INTER-SCTORAL CONVERGENCE & COORDINATION FOR PROMOTION AND GUIDANCE ON HEALTH RESEARCH

6.1 The scheme launched during 2013-14 aims at providing support in the form of grant-in-aid for carrying out research studies to identify the existing knowledge gap and to translate the existing health leads into deliverable products. There will be special focus on encouraging innovation, their translation, and implementation by collaboration and cooperation with other agencies by laying special stress on implementation research so that there is a better utilization of available knowledge.

6.2 The Scheme was originally approved by Cabinet Committee on Economic Affairs (CCEA) on 6<sup>th</sup> February, 2014 at a total cost of Rs.1242 crore for the 12<sup>th</sup> Plan period. Continuation of the scheme beyond 12<sup>th</sup> Plan period, from 2017-18 to 2019-20 (14<sup>th</sup> Finance Commission period) has been approved in the meeting of the Standing Finance Committee (SFC) held on 18<sup>th</sup> September, 2017 at a total estimated cost of Rs.297.08 crore, as follows:

(Rs. in Crore)

Year	Physical Targets		Grand Total
	No. of projects	Estimated Expr.	
2017-18	41	95.00	101.86
2018-19	41	95.00	99.36
2019-20	41	95.00	95.86
<b>Total</b>	<b>123</b>	<b>285.00</b>	<b>297.08</b>

### 6.3: The Scheme has the following components for funding:

#### (i) Research studies with emphasis on public health:

The objective of this component is to support research studies on diseases burden, risk factors, diagnosis & treatment, etc. of major diseases. The studies will be limited to Non-communicable diseases. In this category a total number of 63 studies, with the maximum duration of 3 years and cost range between Rs.50 lakh-Rs.3 crores each, can be funded at a total estimated cost of Rs.135 crores, during 14<sup>th</sup> Finance Commission period (i.e.) 2017-2018 to 2019-2020.

#### (ii) Translational Research Projects:

The objective of this component is to translate the already identified leads into products and processes in the area of human healthcare, through coordination among the agencies involved in basic, clinical and operational research for use in the public health system. It is proposed to take up 75 leads already available with ICMR, 25 leads from Extramural projects funded by ICMR and 15 leads from other Science & Technology Departments/ Organizations. Total Number of 30 projects with a duration of 1-3 years and cost range of Rs. 50 lakhs-10 crores can be funded with a total estimated cost of Rs.90 crores during 14<sup>th</sup> Finance Commission period. However, a total of 4 projects at the cost of Rs.97,27,301/- were funded.



**(iii) Inter-sectoral Co-ordination including Funding of Joint Projects**

The objective of this component is to promote joint/collaborative research projects with other agencies involved in bio-medical-health research in the country for optimum use of resources and transfer of knowledge. Total number of 15 projects with a cost range of Rs.50-10 crore and duration of 1-3 years per project can be funded under this component, at a total estimated cost of Rs.45 crores, during 14<sup>th</sup> Finance Commission period (i.e.) 2017-2018 to 2019-2020.

**(iv) Cost effectiveness analysis of health technologies through a health technology assessment system**

The aim of the studies would be to come up with appropriate recommendations and guidelines on cost effective but viable technology/process/diagnostics for managing various disease, to facilitate public choice and controlling health care costs, while maximizing health outcomes. Total of 15 projects with a cost range of Rs.50 lakh to Rs.2 crores and duration of 1-3 years can be funded under this component at a total estimated cost of Rs.15 crores during 14<sup>th</sup> Finance Commission period (i.e.) 2017-2018 to 2019-2020.

**6.4 STATUS OF IMPLEMENTATION****Financial Achievement:****(Rs. in Crore)**

Year	Budget Estimate (B.E)	Revised Estimate (R.E)	Actual Expenditure
2013-14	40.00	5.35	4.95
2014-15	31.00	23.50	23.26
2015-16	30.50	16.00	13.99
2016-17	14.25	16.99	15.99
2017-18	20.00	30.00	28.14
2018-19	35.00	5.00	4.50
2019-20 (December 2019)	24.00	16.00	15.30

**Physical Achievement:**

Components of the Scheme	No. of Projects Sanctioned						
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20 (December 2019)
Research Studies with Emphasis on Public Health	40	74	22	8	40	2	11
Translation Research	-	12	11	-	4	-	-
Inter-Sectoral Coordination	-	5	3	-	3	-	2
Cost-effectiveness analysis	-	9	5	3	2	-	-
<b>Total</b>	<b>40</b>	<b>100</b>	<b>41</b>	<b>11</b>	<b>49</b>	<b>2</b>	<b>13</b>

### 6.5 Funds released to private/voluntary organizations during 2019-20:

The following Principal Investigators of private/voluntary organizations received recurring grant-in-aid from Rupees 10 lakhs to Rupees 25 lakh and non-recurring grant-in-aid from Rupees 10 lakhs to Rupees 50 lakhs for carrying out research studies to identify the existing knowledge gap and to translate the existing health leads into deliverable products during 2019-20 (upto December 2019).

<b>Grant- in-aid released to non-government organizations/ private organization for health research projects during the financial year 2019-20.</b>				
Sl.No.	Name of the PI and Address	Name of Project	Amount of GIA	
			Recurring	Non-Recurring
1	Dr. John Antony Jude Prakash, Christian Medical College, Vellore	To determine the prevalence of rickettsial disease and Q fever and identify the vectors transmitting these disease in urban and rural communities in Northern Tamilnadu	1855704	-
2	Dr. D. Prabhakaran, Centre for Chronic Disease Control, New Delhi	m-Power heart project: a cluster randomized controlled trial	1467285	-

6.6. Grant-in-aid Scheme for Inter-Sctoral Convergence & Coordination for Promotion and Guidance on Health Research in North Eastern states:

(Rs. in Lakhs)

2017-18	2018-19	2019-20 (December 2019)
32.91	12.93*	0

\*Sanctioned but not released as yet to concerned institute because of non-submission of UC.





## 7

## CHAPTER

## HUMAN RESOURCE DEVELOPMENT SCHEME OF DHR

**7.1. Introduction (about the scheme and its objectives)**

The Human Resource Development Scheme of Department of Health Research is intended to create a pool of talented health research personnel in the country by upgrading skills of faculty of Medical Colleges/Institutes, mid - career Scientists, medical students, etc., by specialized training in priority areas of health research in leading national and international institutions, encourage and support the trainees to develop and take up research projects for addressing critical national and local health problems and financial assistance to Institutions for up-gradation of infrastructure to enable such Institutions to provide training with state of the art technologies.

**7.2 The scheme was approved during 12th Five Year Plan period and support under the program is imparted in following categories:****I. Short Term Fellowship for training in Foreign Institutes/ Indian Institute:**

Short Term Fellowship supports for training in Foreign/Indian Institutes in identified areas (1-3 months) to persons employed as regular faculty those who are not above the age of 55 years. A stipend of \$3000 per month for foreign institute and Rs 40,000 per month for Indian institute is being given to the fellows. In year 2019-20, 32 short term training in foreign institute and 3 short term training in Indian Institute have been supported under HRD scheme.

**II. Long Term Fellowships in India/abroad:**

Long Term Fellowship supports for training abroad/ Indian Institutions in identified priority areas (6 to 12 months) to the persons

employed as regular faculty those who are not above the age of 45 years. A stipend of \$3000 per month for foreign institute and Rs 40,000 per month for Indian institute is being given to the fellows. In year 2019-20, 19 long term training in foreign institute and nil long term training in Indian Institute have been supported under HRD scheme.

**III. Start-up grant for fellows undergone long term/short term training supported by DHR:**

The Start-up grant, with an average cost of Rs. 30 lakhs per research project, for three years, will be supported. In year 2019-20, 19 long term training in foreign institute and nil long term training in Indian Institute have been supported under HRD scheme. In year 2019-20, 5 Start-up grant projects have been supported under HRD scheme.

**IV. Fellowship Programme for Young Scientists:**

This fellowships aims to fulfil the objectives of creation of inclination / attitude of research among the young bright students from the medical colleges / universities. In year 2019-20, 66 fellowships have been awarded under this category.

**V. Fellowship Programme for Women Scientists:**

This fellowships aims to encourage women candidate to undertake biomedical research who have break in their career. In year 2019-20, 25 fellowships have been awarded under this category.

**VI. Support to Institute for imparting training:**

This program aims to provide support to selected domestic Institutions for providing training. A grant upto Rs.50 lakhs for equipments, up-gradation, etc. and a grant of Rs. 10 lakhs per year upto a period of 5 years for recurring expenses and for conducting training programme. In year 2019-20, 8 institutes have been supported under this program for imparting training in biomedical research.

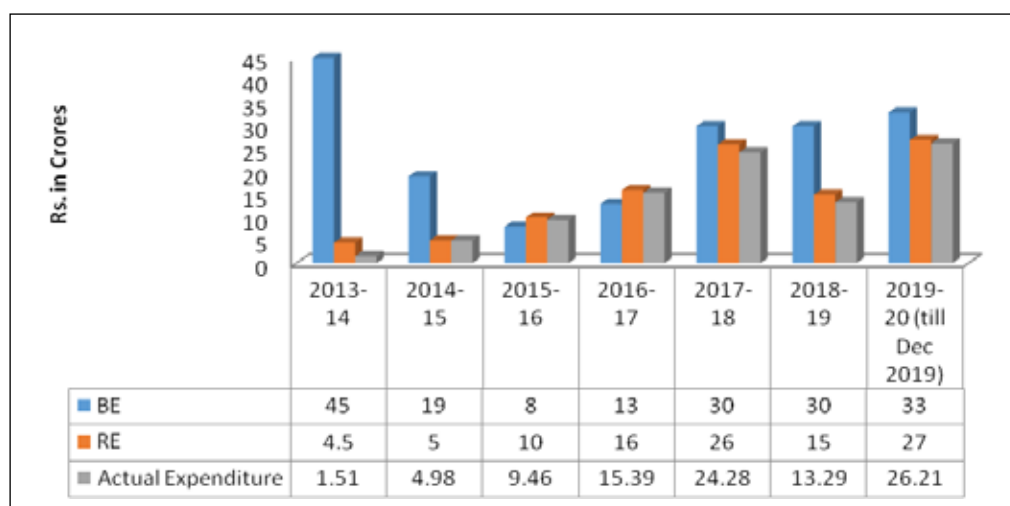
## VII. Strengthening of research through the establishment of online courses and web-portal on health research for students, faculty and other researchers:

This programme will help prospective Institutions and individuals to access resources both financial and technical on research and promote research across the country. This facility will include the following facilities: Online courses along with contact Programmes in relevant institutions

- On line resource material for researchers
- On line mentoring for researchers
- Inter active forums and e groups for researchers
- other stakeholders.

## VIII. Research grant and fellowship to encourage Health Research Personnel [Non-resident

- *Graph Showing the year wise Financial Achievement of the HRD scheme (till Dec 2019)*



## Indian (NRI), Persons of Indian Origin (PIO), Overseas Citizen of India (OCI)] serving abroad, to come back to India for undertaking research in identified areas :

This Scheme has been designed to provide contractual research positions to the Indian scientists settled abroad who are willing to come back to India on a fulltime basis or for short duration to pursue medical/ health research in India and take up health research projects in collaboration with Indian scientists, particularly in areas of national priority. In year 2019-20, 1 fellowship has been supported under this program for imparting training in biomedical research.

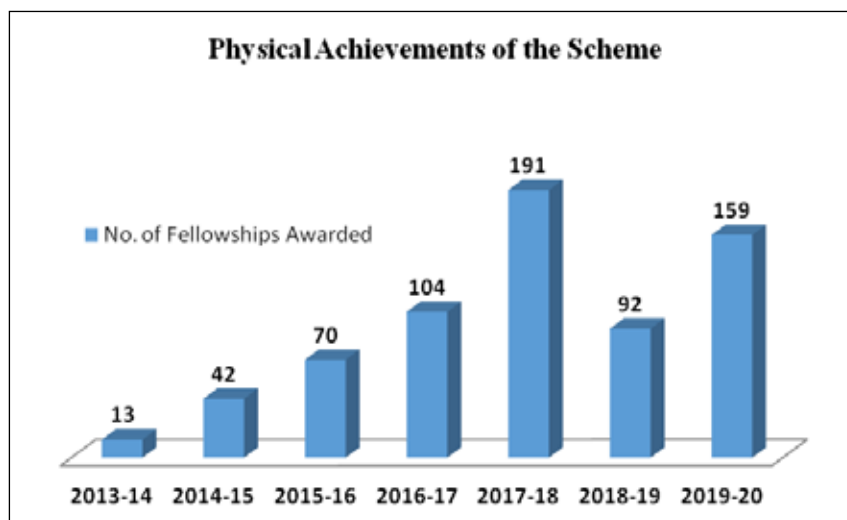
### 7.3. Major initiatives of the Scheme in 2019-20

- During the year, around 600 applications have been received under the scheme out of which 159 applications have been approved for the award of the fellowships under various categories.
- 4 fellowships have been awarded to the institutes in North Eastern States.

### 7.4. Status of Implementation of the Scheme

Since the inception of the Scheme under 12th Five Year Plan, the achieved physical and financial targets of the scheme are shown below:

- Graph Showing the year wise Financial Achievement of the HRD scheme(till Dec 2019)



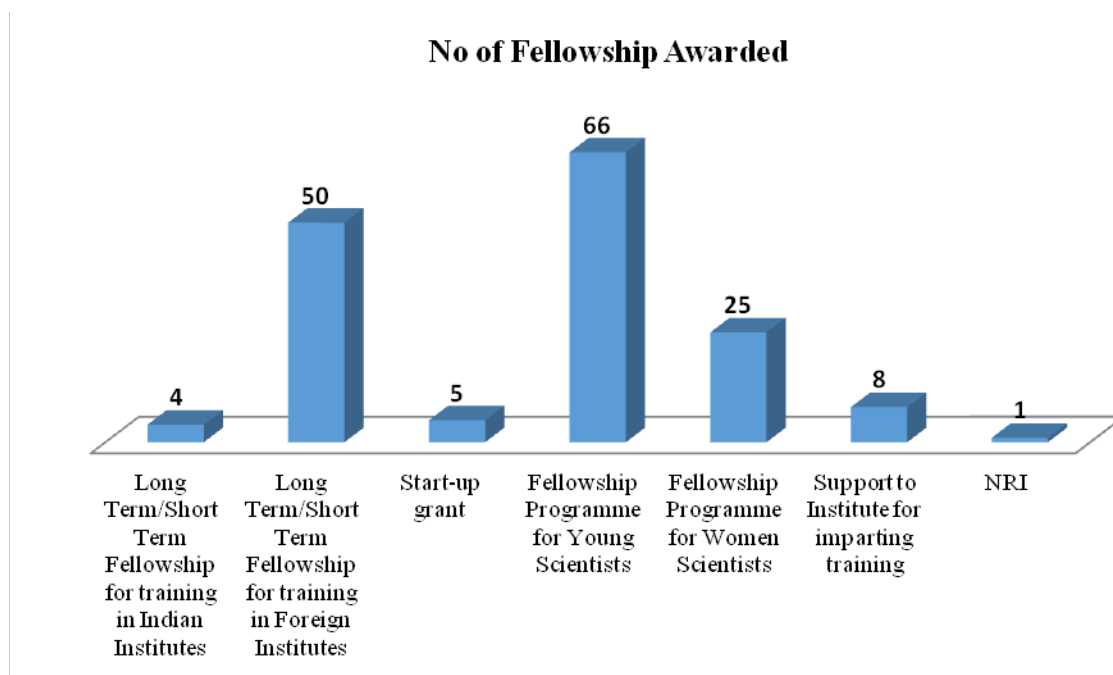
#### 7.5. Progress of scheme component wise in the financial year 2019-20 (till Dec 2019)

( Amount in Rs)

S.No	Components	No. of New Fellowship Supported	Total Budget	No of Ongoing Fellowships Supported	Total Budget
1.	Long Term/Short Term Fellowship for training in Indian Institutes	4	390000	-	-
2.	Long Term/Short Term Fellowship for training in Foreign Institutes	50	100347900	7	12000000
3.	Start-up grant for fellows undergone long term/short term training supported by DHR	5	6429433	9	8532604
4.	Fellowship Programme for Young Scientists	66	77698860	11	13319934
5.	Fellowship Programme for Women Scientists	25	30339226	5	4953092
6.	Support to Institute for imparting training	8	12118216	6	4541693
7.	Strengthening of research through the establishment of online courses and web-portal on health research for students, faculty and other researchers	-	-	-	-
8.	Research grant and fellowship to encourage Health Research Personnel [Non-resident Indian (NRI), Persons of Indian Origin (PIO), Overseas Citizen of India (OCI)] serving abroad, to come back to India for undertaking research in identified areas	1	1926731	-	-
<b>Total</b>		<b>159</b>	<b>229250366</b>	<b>38</b>	<b>43347323</b>

## 7.6 Significant Achievements of Scheme in 2019-20 (till December 2019)

- 159 research projects have been supported under various component of HRD scheme:



- 22 Research Publications have been published from the projects funded under the scheme.
- Around 160 number of manpower have been trained in the advanced biomedical research area like genetics, medical ethics, health technology assessment, molecular biology, drug chemistry etc under the support to institute category.
- Under support to institute category five new programs have been supported in following biomedical areas:

### Institute Supported for providing training programs

S.No	Institute	Title/Area
1.	National Institute Of Mental Health And Neuro Sciences, Bangalore	Training Program for Assessment & Management of Technology Addiction
2.	Indian Institute of Public Health, Gurgaon, Haryana	a) Evidence synthesis and Health technology assessment – blended learning b) Operations Research in Public Health
3.	ICMR-National Institute of Research in Reproductive Health, Mumbai	Support to Indian Institutes for imparting training.
4.	ICMR-Regional Medical Research Centre, Bhubanewar.	Online Certificate course on “One Health”

## Health Technology Assessment in India (HTAI) Year 2019-2020

### Introduction

The Government of India is committed to extend healthcare services to its 1.37 billion populations as part of India's Universal Health Coverage (UHC) agenda. The main purpose of the HTAI is to engage in explicit and evidence-based priority setting of health resources towards providing universal health coverage for all individuals. HTA will help to bridge the evidence to policy gap and ensure alignment of academic and policy interests through HTA towards the common goal of improving decision-making for health resource allocation to improve the health of the Indian population.

### Health Technology Assessment in India (HTAI)

HTAI is an institutional body established in 2017, under the Department of Health Research (DHR), Ministry of Health & Family Welfare (MoHFW) with the approval of the Hon'ble HFM. HTAI is entrusted with the responsibility to analyze evidences related to cost-effectiveness, clinical-effectiveness and equity issues regarding the deployment of health technologies viz. medicines, devices and health programmes by means of HTA in India, and in turn help in efficient use of the limited health budget and provide people access to quality healthcare at minimum cost.

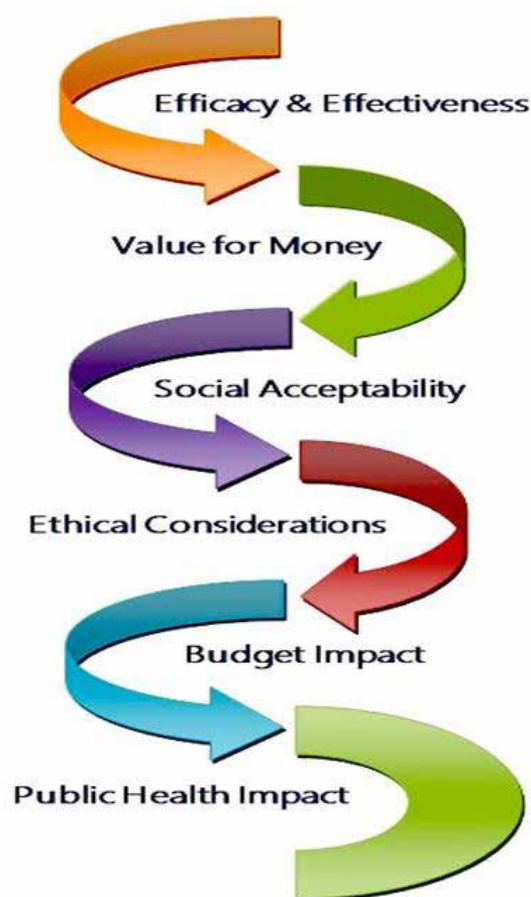


Fig. 1: Components of HTA

## Objectives and Significance of HTAIn:

- Maximising health, reducing out of pocket expenditure (OOP) and reducing inequity.
- To support the process of decision-making in health care at the Central and State policy level by providing reliable information based on scientific evidence.
- Develop systems and mechanisms to assess new and existing health technologies by a transparent and inclusive process.
- To appraise health interventions and technologies based on available data on resource use, cost, clinical effectiveness, and safety.
- To collect and analyse evidence in a systematic and reproducible way and ensure its accessibility and usefulness to inform health policy.
- Disseminate research findings and resulting policy decisions to educate and empower the public to make better informed decisions for health.

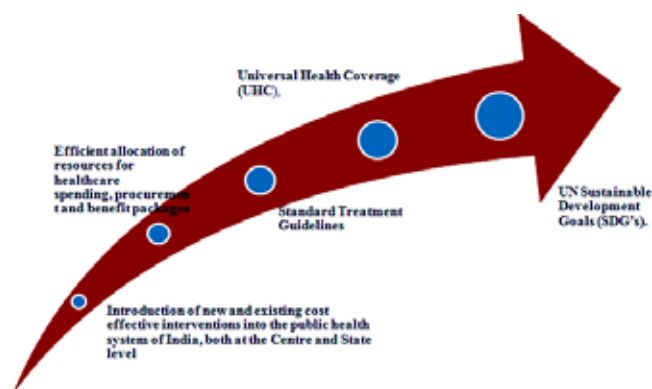


Fig. 2: Significance of HTA

## Structure of HTAIn

HTAIn consists of a Board, Technical Appraisal Committee (TAC), Project Appraisal Committee, Regional Resource Centres, Technical Partners and HTAIn Secretariat, DHR (fig. 3).



Fig 3: HTAIn Structure

**Board:** Board is the highest decision-making body of HTAIn that appraise the TAC approved Outcomes/ Recommendation. The Board consist of Government officials, Policy experts, Clinicians etc. If required, the Board may seek clarification on any aspect of the study through comments. The Board may also look into the gaps in evidence and instruct for further research. i.e. Board can identify the area that require further research.

**HTAIn Secretariat:** HTAIn Secretariat is a DHR-in-house body that coordinates between the User Department, TAC, Technical Partners and Resource Centres. Secretariat consist of Scientists, Economists, Health Policy Analyst, Financial Consultants, Project Manager, Data Entry Operators and Multi-Tasking Staffs etc. It provides necessary assistance to the TP/ Resource Centres wherever required. Secretariat may also undertake topic(s) to study in certain situations. Besides that, secretariat conducts all the TAC and Stakeholders consultation meetings in DHR and ensures transparency at all stages of the study by consultation and regular updates from the Technical Partners and Resource Centres.

**Technical Appraisal Committee:** Technical Appraisal Committee (TAC) is a multidisciplinary body with experts drawn from different areas viz economists, clinicians, researchers, social scientists, health policy experts etc. There may be co-opted members in the TAC depending upon the study under consideration by HTAIn. The Committee is invariably headed by an eminent person. It ensures the appraisal of the study at different stages viz. topic selection, allocation, proposal development,



outcome report and recommendations. TAC does the quality assurance and provides overall stewardship to the HTAIn. Till 31st January 2020, sixteen TAC meetings have taken place in DHR regarding the appraisal of the HTA proposals submitted by the TP and discussing potential challenges HTAIn may face in the Indian scenario such as perspective, equity issues, availability of evidences, etc.

**Project Appraisal Committee (PAC):** Project appraisal committee has been established for operational and Implementation research. PAC considers all the term implementation research also denotes the same scope that contributes to technology choice, program & system design. Till 31st January 2020, 2 PAC meetings have been conducted to discuss proposals related to operational research.

**Regional Resource Centres or Resource Centres:**

Some of the technical partners are upgraded to the Resource Centres to become an extended arm of the HTAIn Secretariat. DHR will provide requisite manpower to these Centress in order to bridge the gap between Central and the State Governments, assist capacity building, support a bunch of States located in the vicinity and undertake the studies allocated to them by the Secretariat. The mentor of the Centres would liaise with the officials of the State Governments and sensitize them about a need for Health Technology Assessment (HTA) for any health intervention. Presently, the following Regional Resource Hubs are in place:

i. Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh.

- ii. Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST), Trivandrum
- iii. National Institute for Research in Reproductive Health (NIRRH), Mumbai
- iv. National Institute for Research in Tuberculosis (NIRT), Chennai
- v. Regional Medical Research Center (RMRC), Bhubaneswar
- vi. Indian Institute of Public Health (IIPH), Shillong
- vii. Indian Institute of Public Health (IIPH), Gandhinagar
- viii. Kalam Institute of Technology (KIT), Hyderabad
- ix. National Institute of Epidemiology, Chennai
- x. Jawaharlal Institute of Postgraduate Medical Education and Research, Puducherry.
- xi. All India Institute of Medical Sciences, Rishikesh
- xii. State Cancer Institute and King George Medical University, Lucknow
- xiii. National Centre for Disease Informatics and Research, Karnataka
- xiv. Indian Institute of Public Health, Hyderabad
- xv. National Institute of Virology, Pune
- xvi. All India Institute of Medical Sciences, Jodhpur

The Resource Hubs and Technical Partner so far have been depicted in the following map:

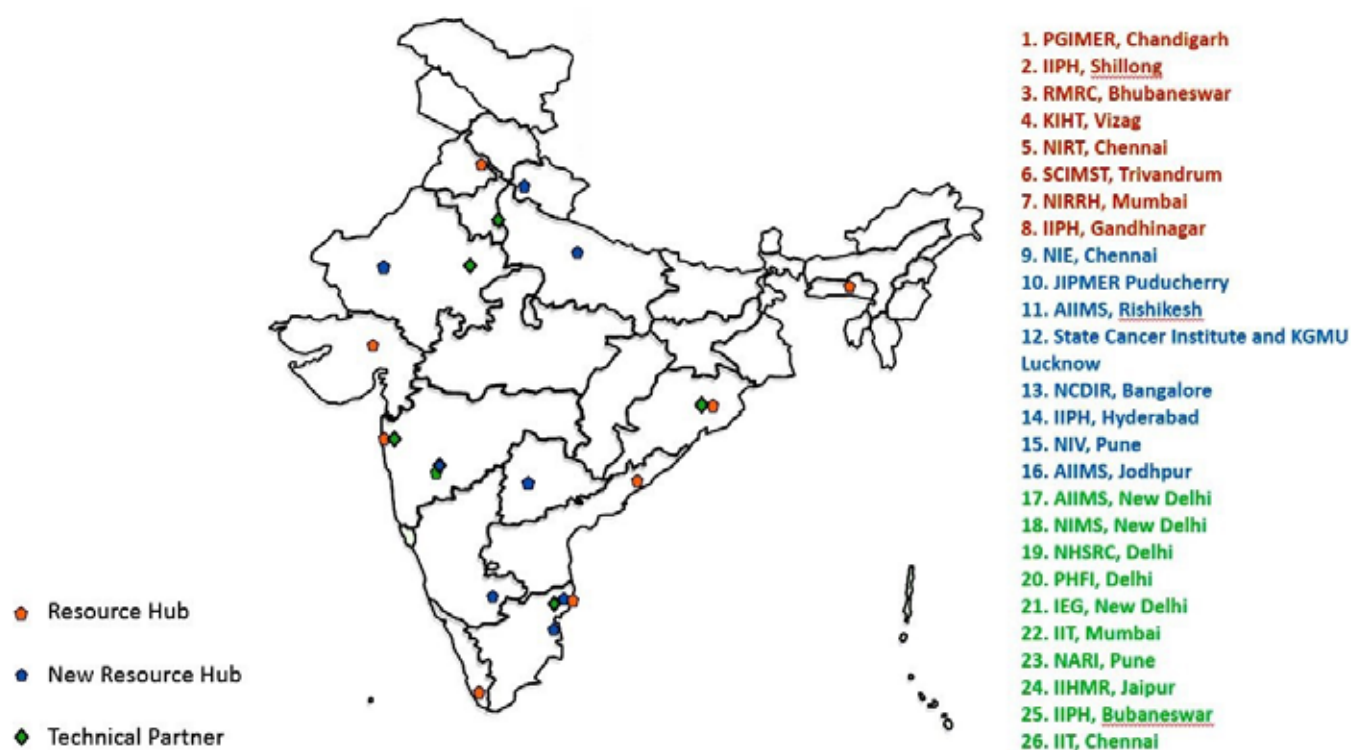


Figure 4: HTAIn Regional Resource Hubs and Technical Partners

**Technical Partners:** Technical Partners are Institutes of the Central/ State Government which have been identified by HTAIn secretariat, with regards to their capacities, expertise and previous experience in the area of HTA/ Multi-centric/ Operational research. Technical Partners are the research conducting body for HTAIn with their existing capacity/ manpower. The outcome reports of the studies conducted by technical partners are submitted to the HTAIn Secretariat for approval from the TAC and Board.

#### Stakeholders:

Stakeholders are individuals, organizations or communities that have a direct interest in the process and/or outcomes of the study under consideration by the HTAIn. Stakeholders may include the user department e.g. Central/ State Govt., NHM, RSBY or NPPA, public health authorities, policy makers, medical insurers,

regulatory agencies, industrial associations (e.g. manufacturers, suppliers, wholesalers, distributors and retailers), academicians or methodological experts, researchers, social groups, NGOs, patient group and so on.

Stakeholders are distinct from the common public as they have direct interest in a certain HTA topic; therefore, their participation in a specific HTA is both rational and likely to contribute to the quality and legitimacy of the process and outcomes. The stakeholders are informed when the topics are selected for study and a consultation meeting is organized where TP present their proposal to the stakeholders for their feedback and the same stakeholders are again consulted for a second meeting when outcomes are to be discussed. Conflicts of interests, if any, are addressed making the process transparent and all inclusive.



## Key Phases of HTAIn Process



Fig 5. Overview of HTA Process (At Macro Level)

## PROCESS OF HTAIn

- The User Department will send their topic(s) to the Secretariat according to their priority area with a clear policy question to conduct an assessment in order to address those questions.
- After prioritization Secretariat present the topic(s) to the TAC and a suitable Technical Partner/ Resource Centres is identified to allocate those topic(s) to conduct the study.
- The respective TP/ Resource Centres then come up with a study proposal that contains the policy question(s), research question(s), objective(s), methodology, timeline, manpower required and the estimated budget.
- The proposal is submitted to the TAC and the TP/Resource hubs are called to present the same before the TAC in the TAC meeting held at DHR.

- After the appraisal and approval of the proposal by the TAC TP/ Resource Centres are allowed to conduct the HTA study and after completion of the study come up with the outcome report and recommendations to the TAC once again for appraisal of the outcome and approval of the recommendations.
- Once the outcome report is approved by the TAC it is submitted to the Board for final approval. TP/Resource hubs may also be called to present the outcome before the board.
- The recommendations made by MTAB would be used to inform health services provided by the Government like the National Health Programs, the National Health Protection Scheme (formerly RSBY), the National List of Essential Medicines (NLEM), State-specific Health Insurance Packages, etc

## Completed HTA Studies

### During 2019-2020 The following studies have approved by Board and policy briefs generated

- i. Health Technology Assessment of Long Acting Reversible Contraceptives in India
- ii. Validation of Diagnostic efficacy of digital hemoglobinometer (TrueHb), HemoCue and non-invasive devices for screening patients for anemia in the field settings
- iii. Health Technology Assessment of Strategies for Cervical Cancer Screening in India

### The Following Studies have been approved by the Technical Appraisal Committee

- i. Health Technology Assessment of Portable automated ABR Neonatal Hearing Screening Devices
- ii. Rapid Health Technology Assessment for incorporating TrueNat as a diagnostic tool for tuberculosis under RNTCP in India
- iii. Health Technology Assessment of various RT-PCR kits for the diagnosis of Influenza A/

H1N1pdm09 virus in all age patients in India

- iv. Health Technology Assessment on population based screening for Type 2 Diabetes and Hypertension in India
- v. Evaluation of Pulse Oximeter as the Tool to Prevent Childhood Pneumonia related Mortality and Morbidity
- vi. Cost effectiveness analysis Hypothermia detection devices (BPMU, Thrmospot and fever Watch) for pre-mature and low birth weight neonates in India
- vii. Health Technology Assessment of Uterine Balloon Tamponade for Management of Postpartum Haemorrhage in India

### Meetings Conducted

- 9 Technical Appraisal Committee meetings conducted
- 1 Board Meeting Conducted
- 6 stake holders meeting Conducted
- 3 Costing Healthcare study review meeting conducted

- 2 Project Appraisal Committee meeting

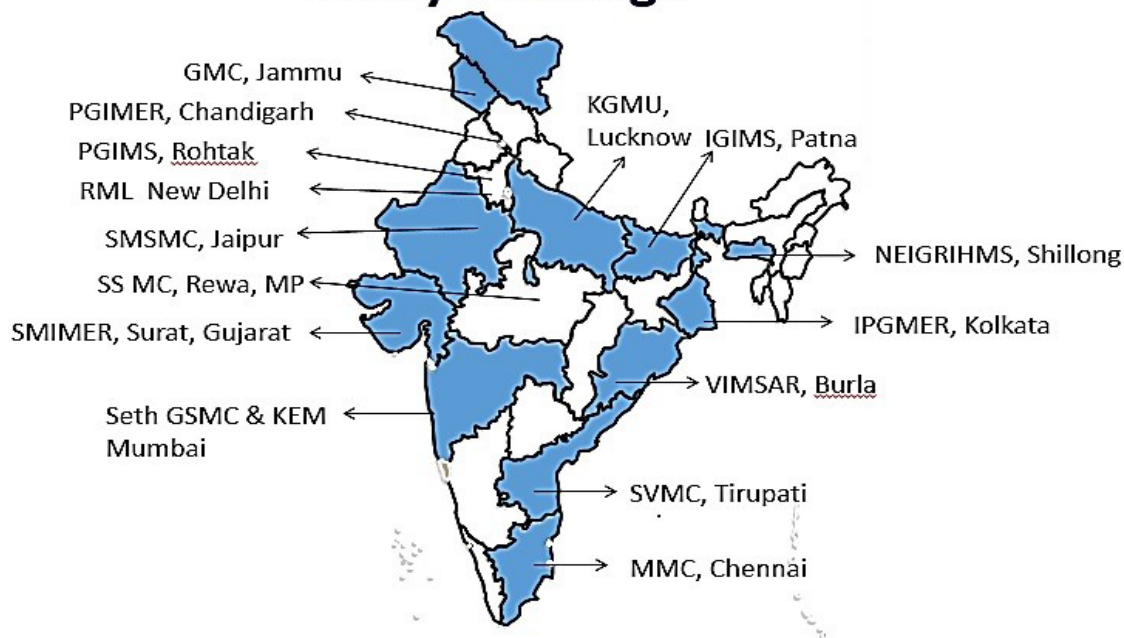
### Capacity Building work shops

Workshop/Training	Organized by	Date
Introduction to Economic Evaluation in Health Technology Assessment (HTA) Advanced Training	Department of Health Research	20 – 24 May 2019
Orientation workshop with National Health Mission, Tamilnadu	Department of Health Research NIRT, Chennai	29 June 2019
Introduction to Economic Evaluation in Health Technology Assessment (HTA)	Department of Health Research	16 – 20 Sep 2019
3rd National Workshop on 'Costing of Health Services' for new centres	By HTAIn Resource hub, PGIMER Chandigarh	10 - 13 Dec 2019

### Ongoing Multi-centric studies:

1. **A multi-centric Costing of Health services in India Phase I** has been completed with evaluation of 855 packages. Phase II of the study is ongoing. The costing study will evaluate a total of 1393 health packages upon completion.

### Study Coverage



- To assess the cost information from different parts of the country, the study utilises the Multidisciplinary Research Units (MRUs) of DHR functional in government medical colleges in different states of India.
- This multistate costing study aims to collect cost information from 15 public tertiary medical colleges, 30 district hospitals and 40 private hospitals from across the above-mentioned States.
- The Costing is used to revise the health benefit packages of Ayushman Bharat-PMJAY packages. The study has been completed for 855 packages and Phase 2 has been initiated for 493 packages

## 2. National EQ-5D Quality of Life threshold validation Study in 8 States



Figure 6: Statewide EQ5D Study Areas

To conduct an EQ5D (EuroQol5Dimension) study to facilitate the calculation of quality-adjusted life years (QALYs) that are used to inform economic evaluations of health care interventions. It is a multi-centric study that in which the institutes

involved with their roles are as follows:

- a. PGIMER: Serve as the lead agency to develop the methods and protocol for data collection in collaboration other institutes involved in the study. PGIMER Principal Investigator and Co-Investigators will also be responsible for data quality assurance and supervision.
- b. JIPMER, Puducherry: Data collection, data entry & and its preliminary analysis from their respective state.
- c. AIIMS, Bhubaneswar, Odisha: Data collection, data entry & and its preliminary analysis from their respective state.
- d. NEIGRIHMS, Shillong, Meghalaya: Data collection, data entry & and its preliminary analysis from their respective state.
- e. IIPH, Gandhinagar: Data collection, data entry & and its preliminary analysis from their respective state.
- f. AMS, Lucknow, Uttar Pradesh: Data collection, data entry & and its preliminary analysis from their respective state.

## 3. DIAMOnDS-Oncopathology Services

Apart from the above mentioned, a multi-centric **DIAMOnDS - Oncopathology Services** study has also been undertaken. Details of the study are mentioned below:

### Introduction

Cancer care services in India: In India, most of the population does not have access to a well-organised and well-regulated cancer care system. A diagnosis of cancer often leads to catastrophic personal health expenditures. Patients with cancer generally have a poorer prognosis in India, because of relatively low cancer awareness, late diagnosis, and the lack of or inequitable access to affordable curative services compared with patients in high-income countries. The value of correct and timely reports of diagnostic and prognostic tests is paramount in selecting right treatment for cancer.

## Objective

The study aims to set up zonal oncopathology labs to provide basic as well as high-end advance diagnostic services to cancer patients and research facilities for basic, translational and clinical research. These laboratories will be established in Government Medical Colleges that will ensure the optimum utilization of facilities available there, in terms of equipment and manpower and will also provide the much required diagnostic services to the cancer patients in those areas. A two-phase pilot development model will be followed where following activities will be performed phase wise.

### Phase 1:

Step 1: Identifying institutes in four zones of India i.e. east, west, north and south to setup oncopathology labs.

Step 2: Providing facilities, infrastructure and manpower to perform diagnostic and prognostic

tests related to the cancer of highest prevalence in India in male (lung cancer) and female (breast cancer).

Step 3: Establishing and standardizing the tests related to Breast and lung cancer and developing a fast, digital system for reporting.

### Phase 2:

Step 4: Creating awareness among the physicians, diagnostic service providers, primary health workers and patients about the facilities available at zonal oncopathology labs.

Step 5: Networking between the health and wellness centres, primary and community healthcare centres, districts hospitals, and medical colleges for proper guided referral.

Step 6: Monitoring and evaluation of services for assessment and improvements.

**The following institutes has been selected for establishing DIAMONDS lab.**

S No.	Zone	Established Centre (DIAMONDS Regional Hub)	To be Established Centre (DIAMONDS Centre)
1	North	AIIMS (New Delhi)	State Cancer Institute- Lucknow
2	South	CMC (Vellore)	JIPMER- Pondicherry
3	North East	TMC (Kolkata)	Cachar Cancer Hospital and Research Centre (CCHRC)- Silchar RIMS, Imphal
4	West	TMH (Mumbai)	AIIMS-Jodhpur, Rajasthan



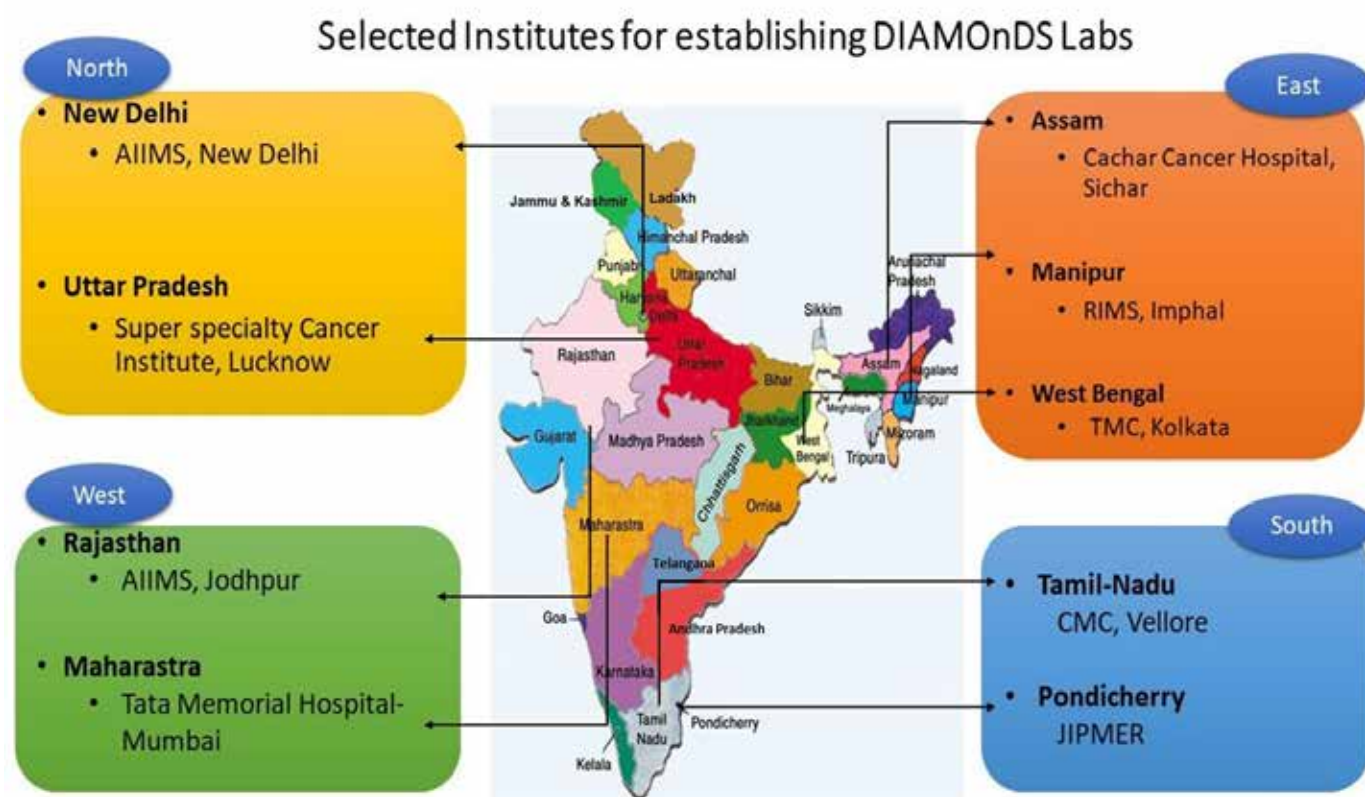


Figure 7: Institutes selected under DIAMOnDS study

#### Budgetary Allocations for implementation of HTA are as follows:

Year	BE	RE	Actual Expenditure Rs. in Crores
2017-2018	5.00	5.00	4.98
2018-2019	6.00	6.00	5.83
2019-2020	25.00	23.00	20.18 till 31st Jan 2020

#### The Health Technology Assessment Board Bill 2019

The Bill has been proposed to institutionalize the structure and function of the HTAIn body. The Bill is to provide for the constitution of a Board for

providing evidences related to cost-effectiveness, clinical- effectiveness and safety of medicines, devices, vaccines and health programs by means of Health Technology Assessment (HTA) studies for decision making. It will evaluate affordability, appropriateness and cost effectiveness of the available and new health technologies in India. It will work on the objectives of maximizing health, reducing out of pocket expenditure and reducing inequality so that maximum people can have access to quality healthcare at minimum cost in the country. The Bill has 5 chapters elaborating the functions and powers of the Board, Duties of the Technical Appraisal Committees and Secretariat, procedure for sanction of financial assistance, finance audit/ accounts and miscellaneous.



## 9

## CHAPTER

## IMPLEMENTATION OF SCHEMES IN NORTH EASTERN REGION

9.1 There are 10 Medical Colleges in the North-Eastern States. Efforts will be made to cover few more Medical Colleges during the year 2020-21.

Department is taking due care and proactive steps to sanction the proposals in the North eastern region under the following five schemes rolled out for implementation since 2013-14.

1. Establishment of Network of Research Laboratories for Managing Epidemics and Natural Calamities.
2. Establishment of Multi-disciplinary Research Units (MRUS) in Govt. Medical Colleges/ Research Institutions.

3. Establishment of Model Rural Health Research Units (MRHRUs) in the States.
4. Scheme for Human Resource Development for Health Research.
5. Grant-in-aid Scheme for Inter-Sectoral Convergence and Coordination for Promotion and Guidance on Health Research.

9.2 Scheme wise position of implementation of above Schemes in North Eastern States is as follows:

**I. Establishment of VRDLs in Govt. Medical College:**

(Rs. in lakhs)

S.No.	Name of State	Name of VRDL	Funds Released	
			2013-14 to 2018-19	2019-20 Upto Dec, 2019
1	Assam	RMRC Dibrugarh	799.06	92.34
		Guwahati Medical College, Guwahati	475.77	60.05
		Tezpur Medical College & Hospital, Tezpur	200.50	26.35
		Jorhat Medical College & Hospital	197.90	39.00
		Fakruddin Ali Ahmed Medical College, Barpeta	173.90	-
		Silchar Medical College, Silchar	173.90	26.74
2	Manipur	Regional Institute of Medical Sciences, Imphal	259.37	-
		JN Institute of Medical Sciences, Imphal	243.91	25.22
3	Meghalaya	North eastern Indira Gandhi Regional Institute of Health & Medical Sciences, Shillong	335.00	52.43
4	Tripura	Government Agartala Medical College, Agartala	232.92	39.00

**II. Establishment of MRUs in State Government Medical Colleges:**

(Rs. in lakhs)

S.No.	Name of State	Name of the Medical College with sanctioned MRU	Funds Released	
			2013-14 to 2018-19	upto Dec., 2019
1	Assam	Silchar Medical College and Hospital, Silchar	354.79	25.12
		Fakhruddin Ali Ahmed Medical College, Barpeta	387.35	43.72
		Jorhat Medical College, Jorhat	125.00	--
2	Manipur	Regional Institute of Medical Sciences, Imphal	335.52	--
3	Tripura	Agartala Government Medical College, Agartala	373.00	247.44

**III. Establishment of MRHRUs in North Eastern States :**

(Rs. in lakhs)

S.No.	State	Location of MRHRU	ICMR mentor Institute/ Centre	Funds Released	
				2013-14 to 2018-19	2019-20 (upto December, 2019)
1	Assam	PHC Chabua	RMRC, Dibrugarh	447.79	--
2	Tripura	Kherengbar Hospital Khumulwung	RMRC, Dibrugarh	417.21	9.02
3	Nagaland	PHC, Niuland, Dist. Dimapur	RMRC, Dibrugarh	150.00	--
4	Meghalaya	CHC Sohra	RMRC, Dibrugarh	--	90.98
5	Arunachal Pradesh	CHC Sagalee	RMRC, Dibrugarh	--	150.00 (General Head)



**IV. Implementation of HRD Scheme in North Eastern States:****(Rs. in lakhs)**

S.No.	State	Name of the Institute	Funds Released	
			2013-14 to 2018-19	upto Dec., 2019
1	Manipur	Jawaharlal Nehru Institute of Medical Sciences	14.66	Nil
2	Assam	Department of Biotechnology Tocklai Tea Research Institute Tea Research Association	14.66	Nil
3	Nagaland	Yingli College Longleng, - 798625	3.10	Nil
4	Tripura	C/O: Mr.MrinalKanti Paul 43,B.K.Road, Near Womens College Agartala, West Tripura,	1.80	Nil
5	Nagaland	Senior Nagaland State Department of Health and Family Welfare,	1.80	Nil
6	Nagaland	Health & Family Welfare, Govt. of Nagaland	1.80	Nil
7	Assam	Regional Medical Research Centre-NE Region, Indian Council of Medical Research	15.70	Nil
8	Assam	Regional Medical Research Centre, Northeast Region, ICMR, Dist-Dibrugarh, Assam	15.04	Nil
9	Assam	RMRC, Dibrugarh, ICMR, N.E. Region, Dibrugarh	2.00	Nil
10	Assam	Principal, Governing Body, MoinulHoque Choudhury Memorial Science College, Algapur	3.10	Nil
11	Manipur	Community Medicine, Imphal West, Manipur	5.96	Nil
12	Nagaland	Department of Health & Family Welfare, Govt. of Nagaland-797001	1.80	Nil
13	Assam	Regional Medical Research Center, N.E. Region (ICMR), Dibrugarh, Assam, India Pin	45.12	Nil
14	Assam	C/o Dr. H.K. Sharma, Department of Pharmaceutical Sciences Dibrugarh University Dibrugarh-786004, Assam, India	28.87	Nil
15	Assam	C/O Dr. Siraj Ahmed Khan (Scientist E), ICMR-RMRC, Dibrugarh, Post Box No-105 Pin-786001	29.72	Nil
16	Tripura	Department of Microbiology Agartala Government Medical College and GBP Hospital Post Office: Kunjavan	61.21	Nil
17	Gauhati	Dept. of Bioengineering and Technology GUIST, Gauhati University	68.81	Nil
18	Assam	Dept. Of Biotechnology, Tocklai Tea Research Institute Tea Research Association Jorhat	28.07	Nil
19	Assam	Deptt. of Community Medicine, Jorhat Medical College, Jorhat - 785001,	30.18	Nil

20	Manipur	Community Medicine Department, Jawaharlal Nehru Institute of Medical Sciences , Porompat, Imphal, MANIPUR – 795005	3.00	Nil
21	Manipur	Department of Forensic Medicine, Regional Institute of Medical Sciences, Imphal – 795004	2.00	Nil
22	Manipur	Community Medicine Department Regional Institute of Medical Sciences, Imphal – 795004	3.00	Nil
23	Assam	Dept. of Bioengineering and Technology GUIST, Gauhati University	Nil	5.31
24	Assam	Department of Biotechnology Tocklai Tea Research Institute Tea Research Association Jorhat	Nil	8.72
25	Assam	Tezpur University , Tezpur, Napaam, Assam, India, SONITPUR	Nil	11.81
26	Assam	Gauhati Medical College and Hospital, Bhangagarh, Guwahati, Assam , Guwahati	Nil	11.06
		<b>Total</b>	<b>381.41</b>	<b>36.90</b>

V. Grant-in-aid Scheme for Inter-sectoral Convergence and Coordination for Promotion and Guidance on Health Research in North Eastern States:

(Rs. in lakhs)

S.No.	State	Name of the Institute	Funds Released	
			2013-14 to 2018-19	2019-20 upto Dec., 2019
1	Meghalaya	Martin Luther Christian University, Shillong	52.73	-
2	Assam	Sri SankaradevaNethralaya Postgraduate Institute of Sri Kanchi Sankara Health and Educational Foundation, Guwahati, Assam. Dr. Bhubaneswar Borooah Cancer Institute, Guwahati. ICMR-Regional Medical Research Institute, Dibrugarh.	57.15	-
		<b>Total</b>	<b>109.88</b>	

## BHOPAL MEMORIAL HOSPITAL AND RESEARCH CENTRE

The Bhopal Memorial Hospital and Research Centre (BMHRC) and its eight Health Centers saw the light of the day more than twenty years back in 1998, with a mission to provide free health care to those affected by the major gas disaster of 1984, resulting from a toxic gas leak incident in Bhopal, India, which is considered as the world's worst man-made industrial disaster that occurred till now.

### CLINICAL WORK

Clinical work at BMHRC involves treatment of patients in the out-patient department (OPD), investigations (Pathology, Radiology and Microbiology), procedures and surgeries, in-patient department (IPD) care and rehabilitation. 17 specialties are present at the main hospital.

OPDs are run at the eight Health Centres 6 days a week, Radiological and Pathological investigation are done here too.

### PATIENT DATA

- The OPD footfall in the hospital and health centers is approx. 60,000 per month.
- Inpatients are approx. 900 per month
- Nearly 4.5 lakh patients and their children have been registered in BMHRC for health care in the period from April 2019 to December 2019.

Free health care services are provided to all registered gas victims and their children.

Total number of patient visits in BMHRC in the period April 2019 to December 2019 is approx. 4,46,000.

Total number of diagnostic laboratory investigations from April 2019 to December 2019 is 383872.

### TEACHING/TRAINING ACTIVITIES AT BMHRC, BHOPAL.

❖ Bhopal College of Nursing conducts the following courses

- Post Basic BSc Nursing
- M.Sc. Nursing
- B.Sc. Nursing

Admissions were taken into Post Basic BSc Nursing and M.Sc. Nursing in 2019.

❖ Paramedical Institute conducts the following courses

- Diploma in Anesthesia Technician
- Diploma in Blood Transfusion Medicine
- Diploma in Dialysis Technician
- Diploma in Cath Lab Technician
- Diploma in Medical Lab Technician
- Diploma in Optometry & Refraction Technician
- Diploma in Perfusion Technician
- Diploma in X-Ray & Radiographer Technician

65 New admissions were taken in 2019 into the various courses. Currently there are 121 students pursuing their paramedical courses in the institute.

### Trainings/Internships were conducted in the following Departments in 2019

- Psychiatry
- Physiotherapy
- Nursing College

- Dietetics
- Hospital Administration
- Pathology
- Microbiology
- Research
- Transfusion Medicine
- Pharmacy
- Anaesthesia
- Nephrology
- Cardio-thoracic and Vascular Surgery

## RESEARCH ACTIVITIES

In the department of Research, the following are the major sponsored National level activities from April to December 2019.

1. Molecular Neuro Oncology Workshop on 4th April during the annual session of ISNOCON – 2019 sponsored by Indian Neuro Oncology Society.
2. 6th July 2019 - Inauguration of Biodosimetry Reference Laboratory by DG – DRDO, at department of Research, BMHRC, Bhopal.



## SIGNIFICANT ACTIVITIES AT THE INSTITUTE DURING THE PERIOD APRIL, 2019 TO DECEMBER, 2019

### Institutional Activities

#### • Department of Ophthalmology

In Ophthalmology the number of surgeries were 4955 in the year 2019, which is the highest in any year since the inception of the Ophthalmology department.

#### • Department of Psychiatry - National Health Mission (Mental Health)

Training of 300 staff Nurses from the government of Madhya Pradesh under the National Health Mission is being conducted in the Department of Psychiatry beginning from November 2019 onwards.





- **Department of Transfusion Medicine** – The department of Transfusion Medicine celebrated World Blood Donor Day on the 14th June, 2019.
- **Swachhata Action Plan (SAP):** The Swachhata (cleanliness) is observed at BMHRC and the 8 Health centres all through the period (April 2019 to December 2019). During the period 12th September to 2nd October 2019 various activities were undertaken on day-to-day basis to evoke a sense of responsibility among staff and public about the significance of cleanliness under 'Swachhata Hi Seva' in line with the Government of India objectives of Swachh Bharat Abhiyan. Cleanliness, waste collection activity, cleaning of sewers and lecture on the 'Effective ban of single use plastic (SUP) and prevention of Dengue' in BMHRC campus.

### International Yoga Day Celebration (20th June, 2019)

On the occasion of the International Yoga day, Yoga practice session as per Common Yoga Protocol (CYP) was convened at BMHRC campus. The yoga session has been conducted by a trained yoga instructor and well attended by the BMHRC Staff, students & family members of staff.

### FINANCE SECTION

The following details pertaining to Budget Allocation 2019-20, funds released/utilized from the period 1st April 2019 to 31st December 2019.

**Amount (Rs. in Crores)**

<b>Budget Head</b>	<b>Budget Allocation</b>	<b>Fund received</b>	<b>Fund Utilised</b>
	<b>2019-20</b>	<b>till 31.12.19</b>	<b>till 31.12.19</b>
Grant in Aid-Salary	92.0	78.60	70.41
Grant in Aid -General	38.00	19.50	16.99
Grant for Creation of capital Assets	10.00	5.00	1.79
Total	140.00	103.10	89.19

## Indian Council of Medical Research

11.1 Indian Council of Medical Research (ICMR) is the apex and premier medical research organization in the country which spearheads planning, formulation, coordination, implementation and promotion of biomedical and health research. It is one of the oldest medical research bodies in the world. In 1911, Government of India made a historic decision to establish Indian Research Fund Association (IRFA) with the specific objectives of sponsoring and coordinating medical research in the country. After Independence, in 1949, the IRFA was re-designated as Indian Council of Medical Research (ICMR) with considerable expansion in its functions and activities.

11.2 ICMR has pan-India presence with 26 research institutes mandated to conduct research focused on national health research needs. ICMR has made outstanding contribution as a knowledge generating agency and contributed in understanding various diseases of national importance such as malaria, Japanese encephalitis, tuberculosis, AIDS, Kala-azar, Filariasis, Leprosy and Poliomyelitis. Additionally, ICMR has made extensive contributions in the areas of nutrition, reproduction, maternal and child health, occupational and environmental health and research complimenting health systems.

11.3 Another major aspect of health research development is training and capacity building of young investigators as well as medical and allied health professionals and providing funding support for research projects to investigators all over the country. ICMR continues to provide funding to various extramural research projects of institutes within the council as well as other research institutes, medical colleges and non-Governmental organizations. It promotes extramural research through different schemes such as Centres for Advanced Research in chosen research areas, task

force studies with goal-oriented approach and clearly defined targets; and grant-in-aid to stand-alone research applications received from various parts of the country.

11.4 ICMR supports Human Resource Development for biomedical research through various schemes such as SHARP (Support for Human resource Academics and Research Programme); Research Fellowships [Junior and Senior Fellowships and Research Associateships]; Short-term Visiting Fellowships (which allow scientists to learn advanced research techniques from other well-established research institutes in India); Nurturing Clinical Scientists Scheme (NCSS) to foster high quality research opportunities to promising fresh MBBS degree holders; Short-term Research Studentships (for undergraduate medical students to encourage them to familiarize themselves with research methodologies and techniques); and various Training Programmes and Workshops conducted by ICMR Institutes and Headquarters. For retired medical scientists and teachers, the Council offers the positions of Emeritus Scientists to enable them to carry out research on specific biomedical research areas. The Council also awards prizes to Indian scientists (young as well as established ones), in recognition of their significant contributions in biomedical and health research.

11.5 The major activities and achievements of ICMR during the year 2019-20 are given below:

**Making country Bio-secure:** The network of VRDLs (Virus Research and Diagnostic Laboratories), duly supported by National Institute of Virology (NIV), Pune with BSL-4 facility, tackles outbreak investigations in the country. ICMR was instrumental in timely detection and successful containment of the recent Zika (ZiV) and Nipah Virus (NiV) outbreaks. In an effort to keep the country bio-



secure and establish itself as a leader among South East Asia in tackling crisis investigation, DHR-ICMR has established 'RESEARCH - Regional Enabler for South East Asia Research Collaboration for Health' in collaboration with WHO and 10 countries of South-Asian region. The platform will work to effectively combat emerging and re-emerging infectious diseases in South East Asia region.

**Fast-tracking TB elimination: End TB 2025:** To aide TB elimination efforts, ICMR's India TB research Consortium (ITRC) has launched two TB vaccine trials. TIE-TB project successfully implemented in 5 states and 17 districts, covering a total population of approximately 17.65 million. It brought the out of pocket expenditure of patients to zero and increased the case finding. To assess the true burden of TB, the National TB Prevalence survey is being conducted in all states/UTs in 625 clusters covering 5 lakh population. ICMR has provided evidence to bring the TB treatment from sanatorium to doorstep of masses and now it is committed towards providing a cost-effective and PHC friendly diagnostics (TruNAT), a universal TB treatment and a vaccine to achieve the target of 'End TB 2025'.

**The Fight against Vector- Borne Diseases:** The Vector-Borne Diseases are being tackled in mission mode.

MERA India (Malaria Elimination Research Alliance) has been established to bring multiple stakeholders (national and international) under one umbrella to achieve the aim of disease elimination.

Malaria Elimination model projects in Odisha, Madhya Pradesh and Punjab utilizing integrated malaria control interventions demonstrated an 85-90% decline in average monthly malaria cases.

A novel surveillance system along international borders to North-East India using mobile platforms has been developed for malaria, which has a potential to be up-scaled further to include more vector borne diseases in wider geographical areas with coverage of entire districts / states in a phase-wise manner.

Based on the successful efficacy studies of triple

drug regimen (IDA- Ivermectin, DEC, Albendazole) for the treatment of Lymphatic Filariasis by ICMR, IDA has been rolled out in five districts of the country, namely Nagpur (Maharashtra), Varanasi (Uttar Pradesh), Simdega (Jharkhand), Arwal (Bihar) and Yadgir (Karnataka) under Accelerated Plan for Elimination of LF (APELF) by national programme. With this, India became the first country in South-East region to roll out IDA.

Developing a Monitoring and Evaluation protocol for accelerated mass drug administration (MDA) with IDA (ivermectin, DEC, albendazole) for LF elimination programme. The preliminary results show in Simdega, both drug coverage and surveyed coverage were above the recommended levels, indicating good performance in implementing the MDA and achieving community compliance.

**Anti-microbial Resistance:** A network of Antimicrobial Resistance surveillance is now functional in 29 hospitals and labs. Structure and process of antimicrobial stewardship has been established in 20 hospitals. A total of six projects have been funded under ICMR-Research Council Norway. Four projects have been selected for funding under ICMR-BMBF Germany collaboration. Frame work and SOP for integrated surveillance have been created. A National Biorepository for AMR Bacterial Strains & AMR-Hub has been established at ICMR NICED

### Controlling Viral Disease:

Holistic research agenda for Acute Encephalitis Syndrome (AES) in Muzaffarpur, Bihar has been formulated.

Three Polio Essential Facilities have been identified their certification process has been initiated.

The study on validation of immunogenicity of HIV-I Indian Subtype C vaccine constructs in rhesus macaques and preclinical safety evaluation of vaccine constructs in mice/rats and rabbits showed significantly high humoral and cellular immune responses without any morbidity and mortality.

Task Force on dengue viral disease constituted. Ten

projects in major areas – clinical, epidemiological, diagnostics etc. funded.

### **Tackling Non-Communicable Diseases:**

India Hypertension Control Initiative (IHCI) has been expanded across the country. Launched in November 2017, the initiative has enrolled more than three lakh patients with high blood pressure in government health facilities in 25 selected districts. The expansion is expected to accelerate the implementation of quality hypertension treatment for over 15 crore population over the next four years.

Release of a white paper by ICMR on use of e-Nicotine products has led to banning of ENDS (electronic Nicotine Delivery Systems) through The Prohibition of Electronic Cigarettes (Production, Manufacturing, Import, Export, Transport, Sale, Distribution, Storage & Advertisement) Bill, 2019, thus saving a generation from the ill effects of nicotine.

Mission DELHI for early diagnosis and treatment of heart attack patients by trained motorcycle first respondent paramedics is covering 20-25 lakh population in the national capital.

MACE registry has collected information on around 17,388 patients from 32 tertiary care and secondary care hospitals spread in different States in the country.

A National Heart Failure Registry program has also been initiated with 9 nodal heart failure registries set up in Government hospitals. Each nodal centre has 5-6 sub- centres under them (Total 52 centres). The registry has recruited 8000 patients.

11 Centres for Excellence and 102 task force projects are ongoing in the area of Non-Communicable Disease.

**Supporting Ayushman Bharat:** ICMR is supporting Ayushman Bharat and ensuring a sustainable and cost-effective model through its ongoing programmes like standard treatment work flows and national list of essential medicines and diagnostics. These programmes would serve

as an important tool in prioritizing national health spending and providing a uniform guideline to ensure quality healthcare services across the nation.

**National essential diagnostics list** has been prepared to ensure that quality diagnosis is provided at all levels of healthcare facilities.

**Standard Treatment Workflows (STW):** The first volume has been released on 17<sup>th</sup> November 2019 that includes 50 diseases across 9 specialities. They will serve as uniform treatment guideline for doctors in primary and secondary healthcare settings. About 200 experts across India's government and private hospitals have been roped in to prepare STWs for 100 common illnesses, ranging from kidney diseases, infections in children to cardiac diseases.

**Affordable & Made in India Solutions:** A Medical Innovation Board has been established to fast track the lab to market process and a roadmap for scaling up of Med-Tech Innovations has been developed. Eighteen diagnostic technologies have been transferred to various companies through execution of license agreement.

**Shigella Vaccine:** Technology has been transferred to Hilleman Laboratories.

**Point-of-Care Nipah Diagnostic Test:** A rapid diagnostic test has been developed for Nipah Virus in collaboration with industry.

**TrueNAT:** A cost-effective, PHC friendly TB diagnostic test, validated in collaboration with DBT and industry, has been endorsed by WHO after successful completion of a multi-country trial.

**MIP Vaccine against Leprosy:** ICMR has validated the Made in India vaccine and is being implemented in National Leprosy Elimination Programme

**Point of Care Diagnostic Test for Blood Disorder:** INR 50 test developed for detection of blood disorders, Haemophilia A & von Willebrand disease.

### **New Infrastructure**

**NIH-Centre for Research, Management and Control of Haemoglobinopathies, Chandrapur:**

This centre will cater to the needs of entire Vidarbha region especially in the area of sickle cell anaemia. There are around 4,00,000 Sickle cell disease patients in this region along with approximately 40,00,000 sickle cell carriers. The Foundation Stone of was laid by Hon'ble Prime Minister in February, 2019.

**Centre for One Health, Nagpur:** The centre will address the issue of zoonosis and Anti-microbial resistance through inter-sectoral collaboration. MoU has been signed with MAFSU (Maharashtra Animal and Fishery Sciences University) and land has been transferred. Foundation stone to be laid soon.

### National Guidelines Released

National Guidelines for Gene Therapy Product Development & Clinical Trials in collaboration with Department of Biotechnology (DBT) to cater to the requirements for gene therapy trials was released.

Guidelines for evaluation of nano-pharmaceuticals in collaboration with DBT and Central Drugs Standard Control Organisation (CDSCO) were released.

Handbook on ICMR National Ethical Guidelines for Biomedical and Health was released.

**Gandhi & Health @ 150: Mission SHAKTTI** (School-based Health Awareness, Knowledge Test and Training Initiative): A School-Based Dissemination Programme initiated by ICMR in collaboration with Directorate of Education and National Gandhi Museum in 36 schools to take forward the Gandhiji message of Health and Hygiene adopting physical fitness, meditation, balance diet and cleanliness for Happy and Health India. This program will be extended in other parts of the country in days to come. Also, a Collector's Edition of Indian Journal of Medical Research was published on theme, Gandhi & health. It was released by His Holiness The Dalai Lama. The Hindi version of the same was released by Hon'ble HFM on 16<sup>th</sup> October 2019. This edition features articles on the health file of Mahatma Gandhi, his medical legacy, his virtues and their importance in the current health scenario followed

by writings from the pens of ardent Gandhian followers and a special section that documents the role played by ICMR and its 26 institutes over the last 100 years following Gandhian thoughts.

### Other Achievements

To strengthen South-South collaboration in advancing health sciences research and to enhance local capacity and ownership, a MoU was signed between ICMR and African Union (AU) on 27<sup>th</sup> March 2019. Under this initiative, ICMR in collaboration with AU-STRC announced the 'Call for Applications for African Health Practitioners/Researchers under ICMR/AU-STRC Capacity Building Scheme (Training Courses in India 2019)' whereby 7 training courses were offered by 3 ICMR Institutes (NICPR, Noida; NIN, Hyderabad and NIE, Chennai) which were announced in the first round of training i.e. in June, 2019. A total of 428 applications were received by AU-STRC in response to the call and 121 candidates were selected by ICMR & AU-STRC.

MoU Signed with Population Council: Innovations to Improve & Institutionalize Data Quality & Analytics" to strengthen India's health data ecosystem.

Signed a Declaration of Intent (DoI) with the National Institute of Allergy and Infectious Diseases (NIAD) of the National Institutes of Health, USA and the Bill & Melinda Gates Foundation (BMGF). This Declaration builds on an ongoing collaborative research and training programme between India and the U.S., including enhancement of research capacity.

ICMR-AIIMS Computational Genomics Centre has been established for providing services where 31 data analysis projects are ongoing.

**Newton Bhabha Researcher Link workshops:** ICMR has partnered with British Council, UK for the Researcher Link Workshops under the Newton Bhabha Fund programme. Grants are designed to provide financial support to bring together UK/Indian cohorts of early career researchers to take part in workshops to meet the overarching objectives. For the year 2019-2020, Call for applications were announced for the thematic

research area of: Elimination Strategy for HIV and HIV-TB co-infection. 7 applications were received against this call, of which 2 applications qualified under ICMR themes/ criteria. ICMR constituted an Expert Group to review both the applications for funding.

ICMR is the Secretariat for Heads of International (Biomedical) Research Organizations (HIROs 2020) meeting scheduled to be held on 12-13th March, 2020 in New Delhi. ICMR and DBT will jointly co-host the Annual Meeting of the HIROs.

**National Ethics Committee Registry for Biomedical and Health Research** has been set up. Ministry of Health and Family Welfare, Government of India had notified the New Drugs and Clinical Trials Rules -2019 that came into force from 19th March 2019. Under the Rules, Chapter IV entitled "Ethics Committee for biomedical and health research" states that Ethics Committees reviewing biomedical and health research should register

with the authority designated by the Central Government in the Ministry of Health and Family Welfare, Department of Health Research (DHR).

**National Data Quality Forum:** Establish protocols and good practices for data collection, storage, use and dissemination

Indian Council of Medical Research (ICMR) has published more than 800 articles through the intramural research conducted at ICMR affiliated institutes and more than 1000 articles through extramural research that is funded by ICMR and conducted at various medical colleges and universities across the nation.

ICMR has awarded 46 scientists for excellence in biomedical research and 3 lifetime achievement awards for contribution in public healthcare (Dr. Kiran Mazumdar-Shaw, Dr. Cyrus Poonawalla and Dr. Prakash Amte).

**BE/RE/actual expenditure 2018-19 and BE/RE 2019-20 with actual expenditure upto December, 2019 and BE 2020-21 in respect of Demand No.43-Department of Health Research**

(Rs. in crores)

S. No.	Scheme/ Programme	Budget Head	2018-19			2019-20			BE 2020-21
			BE	RE	Actual Expr.	BE	RE	Actual Expr. upto 31.12.2019	
1	2	3	4	5	6	7	8	9	10
1.	Secretariat-Social Services	Secretariat-Social Services	34.00	32.15	25.42	38.00	38.00	16.89	42.00
2.	Human Resource Development for Health Research	Advanced Training in research in medicine and health	30.00	15.00	13.29	33.00	30.00	20.33	34.00
		International cooperation in medical and health research	1.00	1.00	0.15	1.00	6.00	0.18	6.00
3.	Grant-in-aid Scheme for inter-sectoral convergence & promotion and guidance on research governance issues	Inter-sectoral coordination in medical, biomedical and health research	35.00	5.00	4.50	28.00	18.00	15.26	27.00
		Promotion & guidance on research governance issues.	6.00	7.01	5.83	25.00	23.00	20.18	25.00
4.	Managing epidemics and national calamities	Matters relating to epidemics, natural calamities and development of tools to prevent outbreaks	70.00	55.00	52.14	80.00	73.00	56.57	83.00
		Development of Tools to prevent Outbreaks of Epidemics	5.00	5.00	4.96	7.35	6.00	4.16	7.29
5.	Development of infrastructure for promotion of health research	Promotion, coordination and development of basic, applied and clinical research-Establishment of Multi-Disciplinary Research Units (MRUs) in Govt. Medical Colleges.	50.00	37.00	36.01	58.00	55.00	40.17	60.00
		Establishment of Model Rural Health Research Units.	13.00	10.00	10.00	15.00	19.00	9.32	20.00
6.	Indian Council of Medical Research (ICMR), New Delhi		1416.00	1447.85	1447.85	1474.65	1552.22	1,178.98	1795.71*
7.	Bhopal Memorial Hospital & Research Centre (BMHRC), Bhopal		140.00	127.72	127.72	140.00	129.78	103.10	-
	<b>Total</b>		<b>1800.00</b>	<b>1742.73</b>	<b>1727.87</b>	<b>1900.00</b>	<b>1950.00</b>	<b>1465.14</b>	<b>2100.00</b>

**Note: Figures include provision of Rs. 103.00 crores in BE 2019-20 and Rs. 101.00 crores in RE 2019-20 and Rs. 104.00 crores in BE 2020-21 under NE component.**

**\* BMHRC has been merged with ICMR.**