ONE HUNDREDTH REPORT

Demands for Grants 2017-18 (Demand No.43) of the Department of Health Research

(Ministry of Health and Family Welfare)

(Presented to the Rajya Sabha on 20th March, 2017)
(Laid on the Table of Lok Sabha on 20th March, 2017)
Website : http://rajyasabha.nic.in
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PARLIAMENT OF INDIA
RAJYA SABHA

DEPARTMENT-RELATED PARLIAMENTARY STANDING
COMMITTEE ON HEALTH AND FAMILY WELFARE

ONE HUNDREDTH REPORT
Demands for Grants 2017-18 (Demand No.43) of the
Department of Health Research
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Rajya Sabha Secretariat, New Delhi
March, 2017/Phalguna, 1938 (Saka)
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COMPOSITION OF THE COMMITTEE  
(2016-17)  

1. Prof. Ram Gopal Yadav — Chairman  

RAJYA SABHA  

2. Shrimati Renuka Chowdhury  
3. Shri Rajkumar Dhoot  
4. Dr. R. Lakshmanan  
5. Dr. Vikas Mahatme  
6. Shri Jairam Ramesh  
7. Shri Ashok Siddharth  
8. Shri Gopal Narayan Singh  
9. Shri K. Somaprasad  
10. Dr. C. P. Thakur  

LOK SABHA  

11. Shri Thangso Baite  
12. Shrimati Ranjanaben Bhatt  
13. Shri Gyan Singh  
14. Shri Nandkumar Singh Chauhan  
15. Dr. Ratna De (Nag)  
16. Shri Dasrath Tirkey  
17. Dr. (Smt.) Heena Vijay Gavit  
18. Dr. Sanjay Jaiswal  
19. Dr. K. Kamaraj  
20. Shri Arjunlal Meena  
21. Shri Anoop Mishra  
22. Shri J. Jayasingh Thiyagaraj Natterjee  
23. Shri Chirag Paswan  

^ ceased to be member of the Committee w.e.f 02nd January, 2017  
^ nominated as a member of the Committee w.e.f 02nd January, 2017
24. Shri C. R. Patil
25. Shri M.K. Raghavan
26. Dr. Manoj Rajoria
27. Dr. Shrikant Eknath Shinde
28. Shri R.K. Singh (Arrah)
29. Shri Bharat Singh
30. Shri Kanwar Singh Tanwar
31. Shrimati Rita Tarai
32. Shri Manohar Untwal

SECRETARIAT

Shri P.P.K. Ramacharyulu, Additional Secretary
Shrimati Arpana Mendiratta, Director
Shri Rakesh Naithani, Joint Director
Shri Dinesh Singh, Joint Director
Shrimati Harshita Shankar, Assistant Director
Shri Pratap Shenoy, Committee Officer
Shrimati Gunjan Parashar, Research Officer
INTRODUCTION

I, the Chairman of the Department-related Parliamentary Standing Committee on Health and Family Welfare, having been authorized by the Committee to present the Report on its behalf, hereby present this Hundredth Report of the Committee on the Demands for Grants (Demand No. 43) of the Department of Health Research, Ministry of Health and Family Welfare, for the year 2017-18.

2. The Committee held one sitting on 3rd March, 2017 for examination of Demands for Grants (2017-18) of the Department of Health Research and heard the Secretary (Health Research) and other Officers thereon.

3. The Committee considered the Draft Report and adopted the same in its meeting held on 17th March, 2017.

4. The Committee while making its recommendations/observations has mainly relied upon the following documents:-

   (i) Address by the President of India to both Houses of Parliament assembled together on 31st January, 2017;

   (ii) Speech of Finance Minister on 1st February, 2017 while presenting the Union Budget 2017-18;

   (iii) Implementation of Budget Announcements 2016-17;

   (iv) Detailed Demands for Grants of the Department of Health Research for the year 2017-18;

   (v) Annual Report of the Department for the year 2016-17;

   (vi) Detailed Explanatory Note on Demands for Grants of the Department of Health Research for the year 2017-18;

   (vii) Physical and financial targets fixed and achievements made so far during the Twelfth Plan period;

   (viii) Projection of outlays for the schemes to be undertaken by the Department during the Financial Year 2017-18;

   (ix) Details of under-utilization of the allocations made under different heads during the Twelfth Plan period;

   (x) Written replies furnished by the Department to the Questionnaires sent to them by the Secretariat;

   (xi) Presentation made by the Secretary (Department of Health Research) and other concerned officers; and

   (iii)
(xii) Written clarifications furnished by the Department, on the points/issues raised by the Members during the deliberations of the Committee.

5. For facility of reference and convenience, observations and recommendations of the Committee have been printed in bold letters in the body of the Report.

NEW DELHI;

17 March, 2017

Phalguna 26, 1938 (Saka)

PROF. RAM GOPAL YADAV

Chairman,

Department-related Parliamentary Standing Committee on Health and Family Welfare

Rajya Sabha
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<thead>
<tr>
<th>ACRONYMS</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AYUSH</td>
<td>Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy</td>
</tr>
<tr>
<td>DHR</td>
<td>Department of Health Research</td>
</tr>
<tr>
<td>DFS</td>
<td>Double Fortified Salt</td>
</tr>
<tr>
<td>GIA</td>
<td>Grants in Aid</td>
</tr>
<tr>
<td>GHR</td>
<td>Guidance of Health Research</td>
</tr>
<tr>
<td>HRD</td>
<td>Human Resource Development</td>
</tr>
<tr>
<td>HIV</td>
<td>Human immunodeficiency virus</td>
</tr>
<tr>
<td>ICMR</td>
<td>Indian Council of Medical Research</td>
</tr>
<tr>
<td>ICDS</td>
<td>Integrated Child Development Services</td>
</tr>
<tr>
<td>JRF</td>
<td>Junior Research Fellowship</td>
</tr>
<tr>
<td>JE</td>
<td>Japanese Encephalitis</td>
</tr>
<tr>
<td>MDA</td>
<td>Mass Drug Administration</td>
</tr>
<tr>
<td>MNP</td>
<td>National Institute of Cancer Prevention and Research</td>
</tr>
<tr>
<td>MRUs</td>
<td>Multidisciplinary Research Units</td>
</tr>
<tr>
<td>MRHRUs</td>
<td>Model Rural Health Research Units</td>
</tr>
<tr>
<td>MDRTB</td>
<td>Multi-Drug Resistant Tuberculosis</td>
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<tr>
<td>MBAPS</td>
<td>Merit Based Assessment Promotion Scheme</td>
</tr>
<tr>
<td>MCI</td>
<td>Medical Council of India</td>
</tr>
<tr>
<td>NARF</td>
<td>National Animal Resource Facility</td>
</tr>
<tr>
<td>NIRTH</td>
<td>National Institute for Research in Tribal Health</td>
</tr>
<tr>
<td>NIH</td>
<td>National Institute of Immunohaematology</td>
</tr>
<tr>
<td>NBE</td>
<td>National Board of Examinations</td>
</tr>
<tr>
<td>NARI</td>
<td>National AIDS Research Institute</td>
</tr>
<tr>
<td>NIN</td>
<td>National Institute of Nutrition</td>
</tr>
<tr>
<td>NFHS</td>
<td>National Family Health Survey</td>
</tr>
<tr>
<td>NCDs</td>
<td>Non-Communicable Diseases</td>
</tr>
<tr>
<td>NIV</td>
<td>National Institute of Virology</td>
</tr>
<tr>
<td>NICED</td>
<td>National Institute of Cholera and Enteric Disease</td>
</tr>
<tr>
<td>NICPR</td>
<td>National Institute of Cancer Prevention and Research</td>
</tr>
</tbody>
</table>
NE  : North Eastern
NVBDCP  : National Vector Borne Disease Control Programme
RMRC  : Regional Medical Research Centre
RCH  : Reproductive and Child Health
RA  : Rheumatoid Arthritis
SHP  : School Health Programme
SAGE  : South Asian Growing Economics
SRF  : Strategic Research Fund
STS  : Short Term Studentship
TB  : Tuberculosis
UCs  : Utilisation Certificates
USFDA  : US Food and Drug Administration
VCRC  : Vector Control Research Centre
VRDLs  : Viral Research and Diagnostic Laboratories
WHO  : World Health Organisation
REPORT

1. INTRODUCTION

1.1 The Department of Health Research (DHR) was created as a separate Department within the Ministry of Health and Family Welfare by an amendment to the Government of India (Allocation of Business) Rules, 1961 on the 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 prevention; to translate them into products and processes and, in synergy with concerned organizations introduce these innovations into public health system.

1.3 The following 10 functions (nine new functions, plus the ongoing function of administering the ICMR) have been allocated to the Department of Health Research:

- 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.

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

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

- Advance training in research areas concerning medicine and health, including grant of fellowships for such training in India and abroad.

- International co-cooperation in medical and health research, including work related to international conferences in related areas in India and abroad.

- Technical support for dealing with epidemics and natural calamities.

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

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

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

- Administering and monitoring of Indian Council of Medical Research (ICMR).
1.4 With a view to fulfil its mandate, the DHR had formulated following new schemes and these schemes had been rolled out in 2013-14.

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

(ii) Establishment of Multidisciplinary Research Units (MRUs) in Govt. Medical Colleges.

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

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

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

II BUDGETARY ALLOCATION

2.1 The total Twelfth Plan outlay (2012-13 to 2016-17) earmarked for the Department of Health Research (including ICMR) was `10029.00 crore. Out of the total outlay, BE allocation from 2012-13 to 2016-17 was `3575.17 crore which was further reduced to `3266.50 crore at RE stage. The actual expenditure was `3180.99 crore for the entire Twelfth Plan Period. The year-wise BE and RE allocations and actual expenditure under the Plan component during the Twelfth Plan is as follows:-

<table>
<thead>
<tr>
<th>Financial Year</th>
<th>BE</th>
<th>RE</th>
<th>Actual Expenditure</th>
<th>% increase of expenditure over previous year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-13</td>
<td>660.00</td>
<td>464.00</td>
<td>461.84</td>
<td>-</td>
</tr>
<tr>
<td>2013-14</td>
<td>726.00</td>
<td>575.00</td>
<td>569.61</td>
<td>23.33%</td>
</tr>
<tr>
<td>2014-15</td>
<td>726.00</td>
<td>610.00</td>
<td>590.65</td>
<td>3.70%</td>
</tr>
<tr>
<td>2015-16</td>
<td>713.17</td>
<td>667.60</td>
<td>647.82</td>
<td>9.67%</td>
</tr>
<tr>
<td>*2016-17</td>
<td>750.00</td>
<td>950.00</td>
<td>911.07</td>
<td>40.66%</td>
</tr>
<tr>
<td>Total</td>
<td>3575.17</td>
<td>3266.50</td>
<td>3180.99</td>
<td>32.56%</td>
</tr>
</tbody>
</table>


2.2 The Committee notes that against the Twelfth Plan Outlay of `10029.00 crore only `3575.17 crore was allocated to the Department at BE stage which was further reduced to `3266.50 crore in the Revised Estimate (32% of the approved outlay). The actual expenditure was `3180.99 crore upto February, 2017. The Committee observes that there is a huge mismatch to the tune of `6762.50 crore between the Twelfth Plan Outlay and the RE allocation made for the Department. The Committee observes that though it is always possible to generate more value for the funds
allocated, it would be unrealistic to expect to achieve key goals of Health Research or to make spectacular break-through in the newly-emerging frontier areas of Health Research with only 32% of the approved outlays. India's rapidly growing economy has thrown up huge health challenges and Department of Health Research has a crucial role to play in ensuring health care to the population by way of generation of new knowledge and its translation into health products. The Government, therefore, owes an explanation to the Committee on the reasons behind such a huge gap between the budgetary allocation made for the Department of Health Research from 2012-13 to 2016-17 and the total approved outlays for the 12th Five Year Plan and its impact on the Department's vision "to bring modern technology to the people through innovations".

2.3 The projected outlays and actual allocations for the years 2013-14 to 2017-18 of the Department of Health Research are given below:-

<table>
<thead>
<tr>
<th>Year</th>
<th>Projected Demand</th>
<th>Actual Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>2283.00</td>
<td>726.00</td>
</tr>
<tr>
<td>2014-15</td>
<td>2581.50</td>
<td>726.00</td>
</tr>
<tr>
<td>2015-16</td>
<td>2817.91</td>
<td>713.17</td>
</tr>
<tr>
<td>2016-17</td>
<td>1689.43</td>
<td>750.00</td>
</tr>
<tr>
<td>2017-18</td>
<td>2933.00</td>
<td>1500.00</td>
</tr>
</tbody>
</table>

2.4 The Committee notes that there is a huge, persistent and recurring mismatch between the projected demand for funds and actual allocation of the schemes/projects of the Department of Health Research. The Department has informed that it has impacted the implementation of schemes of the DHR by restricting the sanctioning of new units/labs on priority, providing recurring grants to the ongoing projects and upgradation of the health research infrastructure of ICMR and pendency of extramural proposals due to non-availability of budgetary allocation. The Committee is of the view that funds constraint should not be a hurdle in prioritising health research and developing new drugs, vaccines and diagnostics.

2.5 Under Demand No.43, an amount of ₹ 1500.00 crore has been allocated to the Department of Health Research for 2017-18. Scheme-wise allocation is as under:-

<table>
<thead>
<tr>
<th>₹ in crore</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget 2017-18</td>
</tr>
<tr>
<td>Revenue</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>Gross</td>
</tr>
<tr>
<td>Recoveries</td>
</tr>
<tr>
<td>Receipts</td>
</tr>
<tr>
<td>Net</td>
</tr>
</tbody>
</table>
A. The Budget allocations, net of recoveries, are given below:

Centre's Expenditure

Establishment Expenditure of the Centre

1. Secretariat 12.00 - 12.00

   **Central Sector Schemes/Projects**
   
   Infrastructure Development for Health Research
   2. Setting up of nation wide network of laboratories 56.00 - 56.00 for managing epidemics and national calamities
   3. Development of infrastructure for Promotion of Health Research 45.00 - 45.00
   4. Development of tools / support to prevent outbreaks of epidemics 3.00 - 3.00
   
   Total Infrastructure Development for Health Research 104.00 - 104.00
   
   5. Human Resource and Capacity Development 150.00 - 150.00

   **Total - Central Sector Schemes / Projects** 46.00 - 46.00

   **Other Central Sector Expenditure**

   6. Indian Council of Medical Research, New Delhi 1150.00 - 1150.00
   7. Bhopal Memorial Hospital and Research Centre, Bhopal 1338.00 - 1338.00

   Total - Autonomous Bodies 1500.00 - 1500.00

   **Grand Total - Other Central Sector Expenditure** 1500.00 - 1500.00

B. Developmental Heads

   **Social Service**

   1. Medical and Public Health 1413.00 - 1413.00
   2. Secretariat - Social Services 12.00 - 12.00

   Total Social Service 1425.00 - 1425.00
   Others 75.00 - 75.00

   **Total Others** 1500.00 - 1500.00

   **Grand Total**
2.6 On being asked about the budgetary allocation for 2017-18, the Secretary of Department of Health Research, during the oral evidence on 3rd March, 2017, informed that against the projected demand of ₹2933.00 crore, an allocation of ₹1500.00 crore has been made for BE 2017-18, leaving a shortfall ₹1433.00 crore which would seriously affect the implementation of various schemes of Department of Health Research. She highlighted the fact that an allocation of ₹894.00 crore was made at BE 2016-17 for ICMR which was increased to ₹1094.00 crore at RE stage, out of which ₹1077.40 crore has been utilised up to February, 2017 and the allocation was expected to be fully utilised. Overall also, the expenditure allocated at RE stage was expected to be fully utilised.

2.7 In reply to a query as to what extent the schemes will be affected due to the shortfall, the Department in its post evidence reply has submitted the following:-

"Implementation of the DHR schemes are likely to be affected due to inadequate budgetary allocations in as much as that very little amount will be left after the committed expenditure for running the already sanctioned research Units/Laboratories and therefore sanctioning of new research Units/Laboratories, particularly in the unserved/under-served areas would be adversely affected. Similarly, inadequate budgetary allocations are likely to affect the research activities of the institutes of ICMR since after meeting the normal office expenses and funding of extra mural projects, hardly on an average ₹50.00 crore are available to accommodate the requirements of providing consumables, chemicals and reagents across the 32 institutes and other laboratories/field stations. Besides, already approved extra mural proposals worth ₹100.00 crore are pending for grant of funding due to non availability of budgetary allocations".

2.8 The Secretary, Department of Health Research during the course of her oral evidence before the Committee on 3rd March, 2017 also underlined the fact that the shortfall in allocation will affect all the schemes especially on the "Grants-in-aid Scheme" which support Health Research projects in medical research colleges and universities and "HRD scheme "whose mandate is to provide training to medical faculty".

2.9 The Secretary in her presentation also added that the Department would try to maximise the output with the given the allocation of ₹1500 crore in the year 2017-18. Small amount of money would be distributed to many small projects across the country and hence, a very big impact in Health Research may not be seen. Therefore, certain themes have been selected for the next 4-5 years including TB, MDR TB, drug resistance, viral infections, other vector borne diseases and other non-communicable diseases. She cited the example of National Institute of Health in the US (a body whose mandate is similar to that of ICMR) whose budget is 32 billion dollars a year. It was, therefore, essential to increase funding of the Department of Health Research.

2.10 On being asked as to what is the bare minimum demand of the ICMR to effectively implement the research projects during 2017-18, the Department in its post evidence reply submitted the following:-
The Committee observes that the health challenges in India are huge and complex due to its large population, rapid industrialization, demographic transition, huge maternal and infant mortality and high burden of diseases like communicable diseases (TB, Malaria, HIV, emerging and re-merging infections), non-communicable diseases (Cardio-vascular diseases, diabetes, cancer etc). To address the high disease burden, our national health research agenda needs to be updated constantly and indigenous health products would need to be developed to combat these challenges. This is all the more important in view of the fact that the global trade and intellectual property rights regimes have made it difficult to use health products and processes developed outside due to their high costs and restrictions placed on producing cost-effect generics.

A paradigm shift in pursuing the national research agenda will therefore need to be made to address these challenges but this is not possible with the current low budget allocation to the Department of Health Research. The Committee takes note of the Secretary's submission that the budget of the National Institute of Health in the U.S. whose functions are as that of ICMR in India, is 32 billion dollars a year and a large amount of that budget goes into basic research. The Committee also takes note of the Secretary's submission that it takes two-and-a-half billion dollars to develop a new drug from scratch and it needs thousands of scientists working on it at different stages.
2.13 Taking all the above facts into account, the Committee observes that if the objective of providing affordable quality healthcare for the people and translating research outputs into measurable social and national outcome is to be realised, investments in health research will have to be increased substantially. The Committee therefore lends its support to the Department's demand for additional funds to the tune of ₹835.00 crore for 2017-18 and recommends that the Ministry of Finance should increase the budgetary allocation to the Department of Health Research so that the Department is able to ensure continuity in critical healthcare research.

2.14 The Scheme-wise allocations and actual expenditures incurred by the Department of Health Research during 2016-17 is given below:-

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Schemes/Programmes</th>
<th>2016-17 (BE)</th>
<th>2016-17 (RE)</th>
<th>Expenditure Upto February, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Network of Laboratories for Managing Epidemics &amp; Natural Calamites</td>
<td>41.50</td>
<td>41.50</td>
<td>37.72</td>
</tr>
<tr>
<td>2.</td>
<td>Multi-disciplinary Research Units (MRUs)</td>
<td>24.25</td>
<td>24.25</td>
<td>23.73</td>
</tr>
<tr>
<td>3.</td>
<td>Model Rural Health Research Units (MRHRUs)</td>
<td>6.00</td>
<td>6.00</td>
<td>5.00</td>
</tr>
<tr>
<td>5.</td>
<td>International Cooperation</td>
<td>1.00</td>
<td>1.00</td>
<td>0.28</td>
</tr>
<tr>
<td>6.</td>
<td>HRD Scheme</td>
<td>13.00</td>
<td>13.00</td>
<td>11.39</td>
</tr>
<tr>
<td>7.</td>
<td>Sectt. Expenditure -DHR</td>
<td>10.80</td>
<td>10.80</td>
<td>5.92</td>
</tr>
<tr>
<td>8.</td>
<td>ICMR</td>
<td>894.00</td>
<td>1094.00</td>
<td>1077.40</td>
</tr>
<tr>
<td>9.</td>
<td>BMHRC Bhopal</td>
<td>140.00</td>
<td>140.00</td>
<td>125.26</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>1144.80</strong></td>
<td><strong>1344.80</strong></td>
<td><strong>1296.74</strong></td>
</tr>
</tbody>
</table>

2.15 The table above indicates that for the Schemes-Network of Laboratories for Managing Epidemics & Natural Calamites, Grant-in-aid Scheme and International Cooperation, funds have not been fully utilised. Allocation for the Network of Laboratories for Managing Epidemics & Natural Calamites was ₹41.50 crore and ₹37.72 crore has been utilised till February, 2017. Out of ₹14.25 crore allocated for Grants-in-aid, ₹10.04 crore has been utilised. Fund utilisation for International Cooperation has been only ₹0.28 crore out of ₹1.00 crore.

2.16 The Committee is constrained to note the under-utilisation of funds w.r.t. to three schemes of the Department. The Committee feels that on one hand the Department is reporting under-utilisation of funds with respect to its three schemes and on the other hand, the Department had
given an enhanced amount as its projected requirement for the next financial year. The Committee, therefore, recommends that the Department should strongly monitor the funds allocated at BE stage so as to ensure that the projected funds sought are allocated at RE stage in 2017-18.

**UTILISATION CERTIFICATES**

2.17 On being asked about the number of Utilization Certificate pending, the Department has furnished the following information as on 30th January, 2017:

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Year</th>
<th>No. of UCs pending</th>
<th>Amount (₹ in crores)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-Disciplinary</td>
<td>2013-14</td>
<td>15</td>
<td>18.75</td>
</tr>
<tr>
<td>Research Units in Govt.</td>
<td>2014-15</td>
<td>3</td>
<td>1.61</td>
</tr>
</tbody>
</table>

Medical Colleges

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<tbody>
<tr>
<td>Total</td>
<td>18</td>
<td>20.36</td>
</tr>
</tbody>
</table>

2.18 The Department has also informed that the efforts are made for expending settlement of UCs by writing letters to the concerned medical colleges/institutes, carrying out field visits and holding desk review meetings. Pendency of UCs has been reduced from the 22 UCs amounting to ₹27.50 crores in February, 2016 to 18UCs amounting to ₹20.36 crores.

2.19 The Committee takes note of the efforts made by the Department to liquidate the pending UCs. However, there are still 18 pending UCs which date back to 2013-14 and 2014-15, majority being from the year 2013-14. The Committee, recommends the Department to adopt a multi-pronged strategy for liquidation of pending UCs within a period of six months.

**III. INDIAN COUNCIL OF MEDICAL RESEARCH**

3.1 ICMR is an apex organisation to formulate, conduct, coordinate and promote biomedical research. It is one of the oldest medical research bodies in the world funded by Ministry of Health and Family Welfare. The Council's Research priorities coincide with the National Health priorities such as control and management of communicable diseases, fertility control, maternal and child health, control of nutritional disorders, developing alternative strategies for health care delivery, containment within safety limits of environment and occupational health problems, research on major non-communicable diseases like cancer, cardiovascular diseases, blindness, diabetes and other metabolic and haematological disorders, mental health and drug research (including traditional remedies). All these efforts are undertaken to reduce the total burden of disease and to promote health and well-being of population.

3.2 The Indian Council of Medical Research continued to serve as the fulcrum of the Department of Health Research (DHR) and further intensified its research programmes and development of newer technologies for the benefit of the public at large. Intramural research is carried out through a countrywide
network of 31 institutes/centres, out of which 17 deal with communicable diseases; 6 with non-communicable diseases; 2 deal with diseases related to Reproductive and Child Health (RCH); 3 deal with nutritional deficiencies and 3 deal with disease related to Basic Medical Sciences including Haemoglobinopathies and Traditional Medicine. Extramural research is promoted by ICMR through setting up Centres for Advanced Research in different research areas around existing expertise and infrastructure in selected departments of Medical Colleges, Universities and other non-ICMR Research Institutes.

3.3 A look at the projected demand for ICMR and the funds allocated for it in the last five years is as given in the table below:-

<table>
<thead>
<tr>
<th>Year</th>
<th>Projected Demand</th>
<th>Funds Allocated</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>1086.00</td>
<td>531.00</td>
</tr>
<tr>
<td>2014-15</td>
<td>1627.00</td>
<td>531.00</td>
</tr>
<tr>
<td>2015-16</td>
<td>1715.91</td>
<td>568.17</td>
</tr>
<tr>
<td>2016-17</td>
<td>1144.10</td>
<td>610.00</td>
</tr>
<tr>
<td>2017-18</td>
<td>2308.00</td>
<td>1150.00</td>
</tr>
</tbody>
</table>

3.4 The Committee notes that there is a huge difference in the funds allocated for ICMR against its projected demand in all the five years from 2013-14 to 2017-18. The shortfall of funds have been massive by any standard and is certain to have an adverse bearing on the implementation of various intramural and extramural research projects of ICMR. Given the satisfactory track-record of ICMR in utilising the budgeted funds, the Committee wonders as to what financial yardstick was applied leading to substantially reduced allocation of funds in BE 2017-18 vis-a-vis the projected demand. In view of the dynamic International health research environment and the current and future health challenges of the country, the role of ICMR is very crucial in generating new knowledge in frontier areas of research in health and related issues. Taking note of the written submission of the Department that an additional amount of ₹835.00 crore is required for 2017-18 to meet the needs of the Department in new and emerging areas of health research as per national priorities, the Committee in the earlier part of this Report has recommended allocation of the additional amount for the Department. The Committee simultaneously recommends to the Department to deploy the available resources for cutting edge research for diseases and translating such research into outcomes for tackling diseases which have been prioritised at National level by the Department of Health and Family Welfare.

3.5 On being asked about the major achievements of ICMR during 2015-16 and 2016-17, the Department in its post evidence reply has inter alia furnished the following information:-

**Research Output during 2015**

- ICMR scientists published total 965 papers during 2015. 33 patents were filed and 2 patents were granted. Efforts were also made for transfer of technologies developed by ICMR to
Industry for commercialization. ICMR funded a total of 1745 research projects including fellowships during the year, while 292 new research projects including fellowships were approved.

**Research Output during 2016**

- New field station of NIRTH was established at Keylong in Lahul and Spiti area of HP to work on the health problems of the tribals. Satellite Centre of NIIH started functioning at Chandarpur, Maharashtra in the area of sickle cell anaemia G6PD.
- ICMR scientists published a total of 720 research papers in various national and international journals. A total of 12 patents were filed and 1 granted.
- ICMR institutes continued to provide training to various state level health officials and ICMR also continued to provide fellowships like JRF, SRF, RA and STS to encourage youngsters to pursue research career.
- MD/Ph.D programme is continuing in 3 universities. More than 500 Non-ICMR scientists were given financial assistance to attend conferences abroad.

3.6 Currently, health research in the country is primarily carried out by 31 Institutes of ICMR which was established in 1911 and is one of the oldest medical research bodies in the world. The Committee observes from the information furnished that in two years i.e. 2015 and 2016, only 1685 research papers (965 in 2015 and 720 in 2016) have been published by ICMR scientists and 3 patents have been granted against 45 patents filed. This clearly indicates that the health research output is not up to the mark and not commensurate with the magnitude and disease burden in India. Given the fact that the country contributes to a fifth of the world's share of diseases (Twelfth Plan Report) and one of the vital elements in improving this situation is the need for a relevant research base that would equip policy makers to take informed health policy decisions, the health research output needs to be augmented substantially to cater to the health challenges faced. The Committee, therefore, recommends that the ICMR should evolve mechanisms to boost quality health research output by way of building alliances and partnerships and create a vibrant ecosystem for the purpose. The Committee is of the view that evolving such frameworks would lead to granting of more patents which, in turn, would generate the much needed funds for ICMR and health research.

3.7 As per submission of the Secretary (HR), ICMR has about 800 scientists working across the 32 institutes. The Committee is of the view that for a country of the size and scale of India, the human resource within ICMR is very small and needs to be augmented substantially. The Committee simultaneously believes that India faces unique health challenges due to its large population and high disease burden and augmentation of human resources of ICMR alone will not serve the purpose unless we develop a critical mass of scientists who are dedicated to carry out basic, applied and clinical research and innovation. It is thus obvious that enhancing the health research output will require tapping of all available avenues of research. One of the many
such avenues is the research being carried out in our medical colleges where research is a mandate of postgraduate training in both MCI and NBE programmes. The country produces around 30,000 Postgraduate students every year who are required to complete a research thesis for a degree. But due to multiple reasons, like inconsequential research topics, inappropriate research mythologies, poor guidance etc., potential scientific talent of PG students is wasted. If post-graduate students could be guided to conduct research relevant to the national health system, critical human resource gaps can be filled. The Committee would therefore, like the ICMR to guide post graduate students in their dissertations by linking with them and faculty guides across India.

3.8 The Committee observes that despite the fact that India contributes disproportionately to the global disease burden, health research in India is hamstrung by paucity of relevant data and the Secretary (HR) admitted that "we need large population based surveys" to do meaningful research. The Committee is of the view that if we are not able to capture relevant data despite the information technology resources currently available in India, it is indicative of not only infrastructural weaknesses, but suboptimal use of IT in data collection also. The Committee, therefore, recommends that in order to develop a strong database, the Department should work in close coordination with other science agencies, academia, all research institutes including privately owned research institutes, laboratories, medical universities, medical colleges and build a strong technology platform for information sharing and research collaborations.

3.9 On being asked about the research being carried out on diseases like Hepatitis, Kala-azar, Filariasis etc, the Department has submitted that ICMR has had a series of meetings with multiple stakeholders and taken the following initiatives:

**Kala Azar:** The aim is to eliminate Kala-azar by 2018. ICMR has also developed a post Kala-azar elimination research agenda for continued surveillance and monitoring. Work on a vaccine is also underway.

**Filariasis:** ICMR's Vector Control Research Centre (VCRC)Puduchery has initiated implementation research project in conjunction with the State Government and National Vector Borne Disease Control Programme (NVBDCP) in Yadgir district of Karnataka. 3 drug MDA (mass drug administration) can help achieve elimination faster is demonstrated. Goal is to achieve filariasis elimination by 2019.

**Hepatitis:** Since burden of Hepatitis A, B and C is not yet established, ICMR is initiating a national survey to find state level burden of these infections. This will help Ministry of Health and Family Welfare to formulate treatment and prevention plans.

**Tuberculosis:** An India TB Research Consortium has been formed to initiate and support research especially clinical trials for new drug combinations and vaccines to achieve elimination of TB in India by 2025.
3.10 The Committee observes that India is the highest TB burden country in the world and the biggest challenge from healthcare point of view is increase in incidence of multi drug resistant and XDR TB, especially in the rural areas. Though the Government has rolled out the administration of Bedaquiline, the first TB drug approval by the USFDA in over 40 years, in six public health hospitals in the country to specifically treat multi-drug resistant TB, a lot remains to be done to improve multi-drug resistant TB treatment outcomes. The Committee therefore recommends that ICMR should focus its research on multi-drug resistant TB strains with a view to discovering potent drug combinations combating MDRTB. The Committee desires to be apprised of the initiatives taken in this regard.

3.11 The Committee observes that Sickle Cell Anaemia and Thalassemia are endemic in certain areas of the country, particularly in the tribal areas. Sickle Cell Anaemia and Thalassemia are genetic diseases and cannot be treated by random medicines. The bone marrow transplant is a cure for Sickle Cell Anaemia, but very few people are able to get that, both for lack of facilities and prohibitive costs. The Committee would therefore like the Department to focus its research upon these two diseases with a view to introducing effective interventions into our healthcare system.

AYUSH-ICMR Collaboration

3.12 To a specific query about the achievements of ICMR's collaboration with Department of AYUSH in scientific validation of traditional and herbal formulations for HIV/AIDS, the Department has furnished the following information:-

1) Development of facility for In-vitro anti-HIV screening and immunomodulatory testing, at NARI, Pune.

2) Infrastructure for setting up preclinical Toxicity and Animal Modal for efficacy studies, at NIN Hyderabad.
   • ICMR and AYUSH have jointly initiated clinical trials of an anti-dengue Ayurvedic preparation.
   • An integrated centre for cancer research and therapy has been set up in NICPR, Noida - this will examine AYUSH products for potential anti-cancer and adjunctive therapies.
   • ICMR's National Institute of Traditional medicine, Belegavi has put in a proposal to AYUSH to set up an Centre of excellence to validate and develop new drugs from herbal sources. This centre will examine not only AYUSH medicines but also leads from traditional healers.

3.13 India has a strong foundation and rich heritage of AYUSH systems and provide people options to avail treatment of their choice. The Committee is of the view that the collaboration of ICMR with AYUSH is a step in the right direction. Such collaborative efforts will provide documented evidence of the side-effects, contra indications and drug reactions, give credibility to AYUSH systems and also help in fostering a synergy between the two systems of medicines (i.e. Allopathy and AYUSH). If AYUSH is to be brought to the global stage, validation of AYUSH
drugs is imperative. Therefore, the Committee recommends to the Department to prepare a framework for validation of classical drugs and according high priority to AYUSH formulations and facilitating interdisciplinary AYUSH research. The Committee would like to be apprised of the progress made in this direction.

ICMR Intervention with Multiple Nutrition to Fight Malnutrition

3.14 Attention of the Committee has been drawn to the project of ICMR relating to tackling malnutrition. ICMR has come up with a micro-nutrient (fortified food to fight malnutrition). The National Institute of Nutrition (NIN), Hyderabad has developed several food fortification intervention programmes like Iron Fortified Salt and Double Fortified Salt (DFS - fortifies with both iron and iodine) to combat iron and iodine deficiency in the country. Recently, NIN, Hyderabad has also developed/formulated multiple micronutrient powder and supplemented the same to the children of 6 months to 48 months in the Nalgonda district of Telangana in cluster randomized trial study design, used at point of care. The intervention with multiple micronutrient trial has shown a significant improvement in Hb, iron, zinc, folate and vitamin 12 and child development indicators like cognition, motor, social, and emotional development was also improved after one year of its continuous and regular implementation. After successful trials, the MNP is now being manufactured by MS Primal Healthcare, Mumbai and is ready for use in any intervention programme. This intervention programme was implemented in few select Anganwadi centers in two ICDS project areas in the state of Telangana as a pilot programme during 2013-14. To know the effectiveness as a public health programme, there was a need to implement and assess the programme in at least 6 different regions of the country and after successful demonstration in 6 districts located at different regions of the country, it can be taken up as a national programme for implementation in the high burden districts of the country.

3.15 The Committee believes that with the intervention of multiple micro-nutrients amongst children for eliminating malnutrition, a major problem of the country could be solved. The World Bank estimates that India is one of the highest ranking countries in the world in respect of the number of children suffering from malnutrition. The 2015 Global Hunger Index Report ranked India 20th amongst leading countries with a serious hunger situation. India's National Family Health Survey (NFHS) and State Government's School Health Programme (SHP) have also indicated that the number of anaemic and malnourished children is rising. As per the latest SHP report for the year 2015-16, the number of anaemic children are 6.06 lakh that increased from 5.13 lakh in 2014-15. In view of the above, the Committee recommends that the efficacy of this intervention with multiple micro nutrients should be tested in different regions of the country on a priority basis. If the results are successful, the intervention programme could be implemented as a national programme to tackle malnutrition. The Committee would also like to emphasize upon the need for co-ordination between the concerned Ministries/Departments to make the programme successful.

Development of Dengue Vaccine

3.16 The Committee has been given to understand that as recommended by the SAGE, countries should take up nation wide dengue sero-survey to assess the dengue antibody prevalence in different regions
of the country. Accordingly, the vaccine may be introduced in areas where sero prevalence in the targeted age group exceeds 50% (and preferably 70%). A meeting was held recently under the Chairmanship of Secretary, Department of Health Research and DG, ICMR wherein 3 vaccine manufacturers viz. Panacea Biotech Ltd. Delhi, Sanofi Pasteur and Serum Institute, Pune who were working on dengue vaccine attended the meeting.

3.17 On being asked about the reasons behind not approving the introduction of a dengue vaccine in the country that has been development outside, the Secretary during her deposition submitted that Sanofi has been trying to introduce the dengue vaccine in the country but the Drug Controller General has not approved the introduction of the Sanofi dengue vaccine because the vaccine works only in people who have previous dengue infection and is not very safe in children under 9.

3.18 The Committee observes that the introduction of the Sanofi dengue vaccine has safety dimensions and all caution needs to be exercised to ensure that a situation does not arise where the harm done would outweigh the benefits therefrom. The Committee also observes that given the high incidences of dengue in different parts of the country, a definite timeline must be given for the development of dengue vaccine so that cases of dengue are dealt with properly. The Committee would also like to be apprised about the expenditure incurred in research for development of dengue vaccine in the last five years.

Antibiotic Resistance

3.19 Antibiotic resistance is one of the biggest threats to our health. It can affect anyone and generally occurs due to misuse of antibiotics. A growing number of infections such as Pneumonia, tuberculosis, gonorrhea etc are becoming hard to beat as the antibiotics used to treat them have become less effective owing to their persistent misuse. The issue has been flagged by WHO recently, citing presence of severe super bugs which are difficult to treat with the present knowhow in the field of antibiotics. These superbugs are seen as a growing threat to modern medicine. India is one of the world's biggest consumers of antibiotics. In India, antibiotic resistant neonatal infections claim lives of 60,000 newborn babies each year, according to the review on Antimicrobial Resistance paper published in 2016.

3.20 The Committee has been given to understand that ICMR has issued guidelines giving directions on antibiotic use, dosage and duration of treatment which has been sent to twenty hospitals so far. This has been done to bring about a change in the way antibiotics are prescribed.

3.21 The Committee observes that the issuing of guidelines for antibiotics use by ICMR to 20 hospitals is quite recent. The Committee feels that this issue is a serious one which requires immediate attention and action. The Committee, therefore, believes that a dedicated action plan on antimicrobial resistance, including antibiotic resistance needs to be prepared by ICMR on a priority basis. The Committee strongly recommends for standardization of the protocol for the administration of antibiotics and expects that a process of sensitizing the medical community about the perils of antibiotic resistance should be taken up on a national scale by involving medical associations, Industry associations, medical academia, media and other groups. The
Committee is also of the view that aggressive awareness generation programmes regarding use of antibiotics without a prescription must be taken up to educate people in this regard.

IV INFRASTRUCTURE DEVELOPMENT FOR HEALTH RESEARCH

4.1 Establishment of Network of Laboratories for Managing Epidemics & Natural Calamities.

As per information furnished by the Department, the scheme entails:-

- Creating infrastructure for timely diagnosis/identification of viruses during outbreaks of epidemics.
- Generating data about viral diseases for facilitating quick deployment of resources & measures to save human lives.
- Providing training to health professionals.
- Undertaking research for identification of emerging and newer genetically active/modified agents.

4.2 As per information furnished by the Department, the scheme entails establishment of 10 Regional Level Labs, 30 State Level Labs and 120 Medical College Level Labs in the State Government Medical Colleges for timely diagnosis and management of viral epidemics and new viral infections, across the country.

4.3 The physical and financial performance during 2015-16 and 2016-17 are as follows:-

<table>
<thead>
<tr>
<th>Year</th>
<th>BE</th>
<th>RE</th>
<th>Actual Expr</th>
<th>Physical Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-16</td>
<td>46.00</td>
<td>45.25</td>
<td>45.25</td>
<td>31 VRDLs were approved and funds were released to 15 VRDLs. 18 VRDLs were made functional, with the testing of about 1 lakh samples.</td>
</tr>
<tr>
<td>2016-17 (upto January, 2017)</td>
<td>39.25</td>
<td>39.25</td>
<td>36.96</td>
<td>20 new VRDLs (4 State Level Labs and 16 Medical College Level Labs) were funded during 2016-17. As many as 30 Viral Diagnostic &amp; Research Laboratories are functional and these VRDLs have tested about 2.61 lakh samples.</td>
</tr>
</tbody>
</table>

4.4 The Committee was informed that so far 82 Viral Research & Diagnostic Laboratories (VRDLs), i.e. 5 Regional Labs, 15 State Level Labs and 62 Medical College Level Labs have been approved. However, funds have been released in respect of 65 VRDLs only (5 Regional Labs, 15 State level labs and 45 Medical College level labs) upto January, 2017. About 300 Technicians plus Scientists were trained on various viruses including Zika Virus and Yellow Fever diagnostics.
4.5 It has been informed that the target in 2017-18 is to fund 5 Regional Labs, 15 State level labs and 17 medical college level labs. However, it would be possible to fund only 20-25 new VRDLs with the allocation of 59.00 crore for 2017-18, since funds are also required to meet the committed liability towards recurring expenditure on account of staff, consumables, etc for the already functional labs. The Department has also informed that the proposals for approval of establishment of new VRDLs would also be considered subject to availability of funds.

4.6 The Committee has been given to understand that against the projected outlay ₹ 145.00 crore for 2017-18 under the head - Establishment of Network of Laboratories for Managing Epidemics & Natural Calamities, an allocation of ₹59.00 crore has been made in 2017-18 which is higher than the previous year's allocation of ₹39.25 crore. The Committee observes that India continues to have epidemics due to various infectious pathogens and it is imperative to promptly respond to localised outbreaks before they pose bigger health challenges. It is in this context that building a network of well-equipped viral diagnostic laboratories is necessary. The Committee recommends that the scheme should not be allowed to be plagued with under funding and the Department should seek more funds, if needed, at RE stage.

4.7 The Committee also notes that the number of VRDLs in the country are not evenly distributed in all States, which results in loss of time and resources in transporting samples from States having no VRDLs to States having presence of VRDLs. The Committee, therefore, strongly recommends setting up of at least one VRDL in each State to ensure that 'samples' collected are analysed in shortest possible time, in order to stem any outbreak of epidemic.

V DEVELOPMENT OF INFRASTRUCTURE FOR PROMOTION OF HEALTH RESEARCH

Establishment of Multidisciplinary Research Units (MRUs) in Government Medical Colleges

5.1 Health research is predominately carried out in the Medical colleges/institutions providing education in allied subjects. Medical colleges are the backbone of both teaching as well as providing specialized services to patients in India. It is also expected that medical colleges will also set the trends in thinking process and innovation to improve our understanding of the disease(s) and their management. As per information furnished by the Department, the Scheme entails:-

- establishing 80 Multidisciplinary Research Units (MRUs) in State Govt. Medical Colleges during Twelfth plan to create a dedicated infrastructure for research in Government Medical colleges with special focus on Non-Communicable Diseases (NCDs);
- ensuring geographical spread of health research, infrastructure by covering un-served and under-served Medical Colleges and other institutions.
- improving the overall health status of the population by creating evidence-based application of diagnostic procedures/processes/methods.
5.2 As per information given in the Annual Report -2016-17, status of implementation of MRUs is given below:-

(i) Against the total target of covering 80 medical colleges, 70 MRUs have been approved (36 in 2013-14 and 13 in 2014-15 and 21 in 2015-16);

(ii) Funds have been released to 58 MRUs (29 in 2013-14 and 15 in 2014-15, 10 in 2015-16 and 4 in 2016-17);

(iii) Funds to 12 medical colleges could not be released since UCs are pending in respect of other schemes of Ministry of Health and Family Welfare; and

(iv) Against the BE/RE provision of ₹24.25 crores, an expenditure upto December, 2016 is ₹20.51 crores.

5.3 The Committee observes that 12 medical colleges have not been released funds due to pending UCs. The Committee does not understand why there is a persistent delay in furnishing of UCs and apprehends that delay in submission of UCs may lead to time overrun and cost escalation of MRUs. The Committee is of the firm view that if the Department streamlines its monitoring mechanism and pursues liquidation of UCs in a sustained manner, all pending UCs can be liquidated within a short span of time. The Department should therefore take up the issue of pendency of UCs at the highest level to expedite their liquidation.

5.4 A statement of physical and financial performance during 2015-16 and 2016-17 is given below:-

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-16</td>
<td>45.50</td>
<td>28.00</td>
<td>25.20</td>
<td>Approval granted for 21 new Multi-disciplinary Research Units (MRUs) in medical colleges.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Funds released to 10 MRUs &amp; release of next instalment to 7 ongoing MRUs.</td>
</tr>
<tr>
<td>2016-17 (upto January, 2017)</td>
<td>24.25</td>
<td>24.25</td>
<td>23.73</td>
<td>Establishment of 4 new MRUs besides release of grants to already sanctioned MRUs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>22 medical colleges have initiated research activities on Non Communicable Diseases.</td>
</tr>
</tbody>
</table>

5.5 The Department has informed that against the projected requirement for the scheme in 2017-18 of ₹ 178.00 crore, an actual allocation of ₹36.00 crore has been made for the scheme. It has been submitted that though 22 MRUs are yet to be established to meet the scheme target of 80 MRUs, the shortfall will be managed by giving priority to meet committed liability towards recurring expenditure on account of staff, consumables, etc for the already functional MRUs and restricting funding for 10 new MRUs only.
Against the projected demand of ₹178.00 crore, the scheme has got ₹36.00 crore only for 2017-18 and this clearly shows that the fund allocation for MRUs is rather low. MRUs are targeted to promote and encourage quality medical research and provide assistance to State Government medical colleges across the country to set up appropriate research facilities and carry out focused research on non-communicable diseases. Given the growing burden of non-communicable diseases that often require life-long management, this scheme is of immense importance. The Committee, therefore, recommends that the Government should ensure that more resources are allocated to MRUs to give an impetus to medical research on non-communicable diseases. The Committee also recommends that the MRUs should be benchmarked with the best institutions in their domain internationally.

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

6.1 As per information furnished by the Department, there is a wide gap between the available specialized health care technology and the technology being developed vis-a-vis their utilization in the State health systems. This is particularly true for rural health settings. In order to develop models for transfer of such technology to the end care users, the Department has planned to establish Model Rural Health Research Units (MRHRUs) in the States where technology transfer and the research targeting health interventions will be done in partnership with the States, ICMR mentor institutes and the nearby medical college.

6.2 It was submitted by the Department that 15 MRHRUs were to be established during the Twelfth Plan period in the States for transfer of modern technology for early diagnosis and managing the disease burden for the overall benefit of rural population and the total estimated cost of the project for the entire Twelfth Plan Period is 67.66 crore. The Department has further informed that 12 MRHRUs have been sanctioned in the States of Assam, Himachal Pradesh, Rajasthan, Tamil Nadu, Tripura, Karnataka, Punjab, Maharashtra, Andhra Pradesh, Odisha, Madhya Pradesh and Chhattisgarh. The proposals for establishment of two MRHRUs have been approved for Jharkhand and West Bengal. 8 MRHRUs have initiated research activities on one multi-centric project on Nutrition and 16 different projects on disease burden and research proposals to cover the areas such as Diarrhoea, TB, Maternal mortality, genital infections, data triangulation, carcinoma of cervix and causes of fever.

6.3 The Committee is constrained to note that out of the 15 MRHRUs planned to be established during the Twelfth Plan period, only 8 MRHRUs have been established which have initiated research activities and the remaining have either been approved only or are in the pipeline. Evidently, the Department has lagged behind in achieving the targets set for the Twelfth Five Year Plan. The Committee would therefore like the Department to ascertain the exact reasons responsible for non-achievement of the targets and take corrective measures accordingly so that the intended outcomes are achieved in future and there are no time and cost overruns due to slippages in implementation of this project.
6.4 In order to ensure success of National Health Programmes at the ground level (i.e. rural area), the Committee strongly recommends that the Department should explore the possibility of setting up of one MRHRUs in each State.

6.5 A statement of financial and physical performance during the years 2015-16 and 2016-17 is given below:

*(₹ in Crores)*

<table>
<thead>
<tr>
<th>Year</th>
<th>B E</th>
<th>RE</th>
<th>Actual Expr</th>
<th>Physical Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-16</td>
<td>10.00</td>
<td>6.50</td>
<td>6.50</td>
<td>Release of 2nd instalment to 6 MRHRUs already sanctioned.</td>
</tr>
<tr>
<td>2016-17 (upto January, 2017)</td>
<td>6.00</td>
<td>6.00</td>
<td>5.00</td>
<td>Release of 2nd/3rd instalment to 6 already sanctioned MRHRUs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Proposals for establishment of two MRHRUs (One in Jharkhand and One in West Bengal) have been approved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Proposal for third MRHRU is in the pipeline.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Funds to the newly approved MRHRUs will be released in 2017-18 due to non availability of sufficient funds in 2016-17.</td>
</tr>
</tbody>
</table>

6.6 The Committee notes that setting up of MRHRUs in States is dependent upon the receipt of proposals from States. Keeping in view the fact that there exists wide disparities between States, the Committee is of the view that it becomes the responsibility of Centre to ensure that benefits of this scheme be reaped by all the States and hence it should facilitate and guide them in sending their proposals. The Centre should also proactively initiate activity in all States to set up MRHRUs.

VII DEVELOPMENT OF TOOLS/SUPPORT TO PREVENT OUTBREAK OF EPIDEMICS

7.1 The Department has informed that diagnosis of viral diseases today is a major health problem and repeated outbreaks of new viral agents have become common phenomena. Accordingly, a separate budget line was created in 2015-16 to meet additional requirements for supply of diagnostic kits, transport of samples, hiring of additional manpower, etc. during such outbreaks.

7.2 The Committee was informed that the enhancement of provision in 2017-18 is only as an incremental increase over the previous year's allocation to take care of specific demands that might be received from National Institute of Virology (NIV) Pune, Central and State agencies for mobilization of resources during outbreaks.

7.3 Against the allocation of ₹2.25 crore in 2016-17, actual utilisation upto January, 2017 is ₹ 46.00
lakhs. Expenditure of another ₹37.00 lakhs is in the pipeline. Details of physical progress in the years 2015-16 and 2016-17 are given below:-

(₹ in Crores)

<table>
<thead>
<tr>
<th>Year</th>
<th>BE</th>
<th>RE</th>
<th>Actual Expr</th>
<th>Physical Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-16</td>
<td>0.00</td>
<td>2.21</td>
<td>2.21</td>
<td>The amount of ₹2.21 was utilised as follows:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(1) ₹70.00 lakhs to Indira Gandhi Medical College, Shimla (HP) for conducting</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>investigation in the aetiology of the periodic outbreaks of Hepatitis in Shimla city:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(2) ₹1.00 crore to SMS Medical College, Jaipur for Strengthening of Health Care</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Facilities for State &amp; Medical College Level Viral Diagnostic Laboratories to cope with the work of control of outbreak of Swine Flu.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(3) ₹51.00 lakhs to ICMR for NIV Pune for providing positive and negative control kits and EILSA Kits for Chikungunya, Dengue and JE, etc.</td>
</tr>
<tr>
<td>2016-17 (upto January, 2017)</td>
<td>2.25</td>
<td>2.25</td>
<td>0.46</td>
<td>Grants Released to National Institute of Virology, Pune and National Institute of Malaria Research, New Delhi (₹37.00 lakhs) and National Institute of Cholera and Enteric Diseases (NICED), Kolkata (₹8.57 lakhs) for activities related to prevention of outbreaks.</td>
</tr>
</tbody>
</table>

7.4 The Committee finds that only ₹46 lakh has been spent out of the total allocation of ₹2.25 crore during 2016-17 under the head-Development of Tools/Support to Prevent Outbreak of Epidemics and expenditure of another ₹37.00 lakhs is in the pipeline. It is obvious that this project is certain to register huge savings. The Committee would expect the Department to be more prudent in making their estimates under this Head and ensure that the funds are fully utilised.

VIII SCHEME OF NORTH EASTERN AREAS

8.1 The Committee has been informed that as per revised guidelines of Ministry of Finance the provision for NE component for the Financial Year 2017-18 is as follows:-
(i) 10% for scheme specific, *i.e.*, ₹15.00 crore out of the provision of ₹150.00 crore for five central sector schemes of the DHR.

(ii) The ICMR has only one Institute in NE region, *i.e.*, Regional Medical Research Centre (RMRC), Dibrugarh. The scope of funding research projects in NE region is very limited since there are only 10 medical colleges in the NE region and three States, namely, Arunachal Pradesh, Mizoram, Nagaland and, Sikkim do not have any Govt. Medical College. However, still a provision of ₹60.00 crore has been made for NE region out of the allocation earmarked for ICMR to ensure that the allocation for NE region is kept atleast at the level of 2016-17.

8.2 A progress detail during the years 2015-16 and 2016-17 is given below:-

### 2015-16

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Scheme</th>
<th>Provision of NE component (₹ in crores)</th>
<th>Actual Expr.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>BE</td>
<td>RE</td>
</tr>
<tr>
<td>1</td>
<td>Establishment of Network of Laboratories for Managing Epidemics and Natural Calamities.</td>
<td>5.50</td>
<td>4.75</td>
</tr>
<tr>
<td>2</td>
<td>Establishment of Multi-Disciplinary Research Units (MRUs) in Government Medical Colleges</td>
<td>5.00</td>
<td>2.80</td>
</tr>
<tr>
<td>3</td>
<td>Establishment of Model Rural Health Research Units in States</td>
<td>1.00</td>
<td>0.50</td>
</tr>
<tr>
<td>4</td>
<td>Human Resource Development for Health Research (HRD scheme)</td>
<td>0.80</td>
<td>1.00</td>
</tr>
<tr>
<td>5</td>
<td>Grant in Aid Scheme for Inter-Sectoral Convergence &amp; Promotion and Guidance on Health Research (GIA Scheme)</td>
<td>2.20</td>
<td>2.00</td>
</tr>
<tr>
<td>6</td>
<td>Indian Council of Medical Research</td>
<td>56.82</td>
<td>55.71</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>71.32</strong></td>
<td><strong>66.76</strong></td>
</tr>
</tbody>
</table>

### 2016-17

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Scheme</th>
<th>Provision of NE component (₹ in crores)</th>
<th>Actual Expr. upto January, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>BE/RE</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Establishment of Network of Laboratories for Managing Epidemics and Natural Calamities</td>
<td>4.25</td>
<td>2.56</td>
</tr>
<tr>
<td>2</td>
<td>Establishment of Multi-Disciplinary Research Units (MRUs) in Government Medical Colleges</td>
<td>2.50</td>
<td>2.50</td>
</tr>
</tbody>
</table>


<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Establishment of Model Rural Health Research Units in States</td>
<td>0.50</td>
<td>0.40</td>
</tr>
<tr>
<td>4</td>
<td>Human Resource Development for Health Research (HRD scheme)</td>
<td>1.25</td>
<td>0.11</td>
</tr>
<tr>
<td>5</td>
<td>Grant in Aid Scheme for Inter-Sectoral Convergence &amp; Promotion and Guidance on Health Research (GIA Scheme)</td>
<td>1.50</td>
<td>0.37</td>
</tr>
<tr>
<td>6</td>
<td>Indian Council of Medical Research (ICMR)</td>
<td>65.00</td>
<td>48.40</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>75.00</strong></td>
<td><strong>54.34</strong></td>
</tr>
</tbody>
</table>

8.3 The Committee notes that the Department has persistently not utilised the funds in the years 2015-16 and 2016-17. The Committee is of the view that the North-Eastern region being hilly and under developed, requires special focus and the Department should take special efforts and ensure that funds allocated are utilised in proper manner.

8.4 The Department has informed that the major research studies in North Eastern Region include the cancer registry programme, development of kit for the detection of paragonimiasis and research studies in the area of malaria, cancer, scrub typhus, rotavirus, nipah virus, West Nile virus, JE, lymphatic filariasis etc. On being asked about the initiatives, research activity on high maternal mortality rate and high infant mortality for the whole country, as well as in North Eastern Region, the Department has informed that ICMR is supporting research in the area of prevention, early diagnosis and management of pregnancy complications such as pre-eclampsia, obstructive labour, sepsis, anaemia, in the country including north-east which helps in providing evidence for the national programme and in developing policy.

8.5 The Committee notes that major research studies include the cancer registry programme, development of kit for the detection of paragonimiasis and research studies in the area of malaria, cancer, scrub typhus, rotavirus, nipah virus, West Nile virus, JE, lymphatic filariasis. The Committee would like to highlight the fact that special attention needs to be given to the North East Region because they lag behind in health indicators. Given the prioritized focus on the area, the Committee is of the view that all out efforts need to be made by the Department to utilize the funds in a time bound manner so that the desired health outcomes for this region are achieved. Further, focused attention should also be given to development of required infrastructure in this region.
II BUDGETARY ALLOCATION

The Committee notes that against the Twelfth Plan Outlay of ₹10029.00 crore only ₹3575.17 crore was allocated to the Department at BE stage which was further reduced to ₹3266.50 crore in the Revised Estimate (32% of the approved outlay). The actual expenditure was ₹3180.99 crore upto February, 2017. The Committee observes that there is a huge mismatch to the tune of ₹6762.50 crore between the Twelfth Plan Outlay and the RE allocation made for the Department. The Committee observes that though it is always possible to generate more value for the funds allocated, it would be unrealistic to expect to achieve key goals of Health Research or to make spectacular break-through in the newly-emerging frontier areas of Health Research with only 32% of the approved outlays. India's rapidly growing economy has thrown up huge health challenges and Department of Health Research has a crucial role to play in ensuring health care to the population by way of generation of new knowledge and its translation into health products. The Government, therefore, owes an explanation to the Committee on the reasons behind such a huge gap between the budgetary allocation made for the Department of Health Research from 2012-13 to 2016-17 and the total approved outlays for the 12th Five Year Plan and its impact on the Department's vision "to bring modern technology to the people through innovations".

(para 2.2)

The Committee notes that there is a huge, persistent and recurring mismatch between the projected demand for funds and actual allocation of the schemes/projects of the Department of Health Research. The Department has informed that it has impacted the implementation of schemes of the DHR by restricting the sanctioning of new units/labs on priority, providing recurring grants to the ongoing projects and upgradation of the health research infrastructure of ICMR and pendency of extramural proposals due to non-availability of budgetary allocation. The Committee is of the view that funds constraint should not be a hurdle in prioritising health research and developing new drugs, vaccines and diagnostics.

(para 2.4)

The Committee observes that the health challenges in India are huge and complex due to its large population, rapid industrialization, demographic transition, huge maternal and infant mortality and high burden of diseases like communicable diseases (TB, Malaria, HIV, emerging and re-merging infections), non-communicable diseases (Cardio-vascular diseases, diabetes, cancer etc). To address the high disease burden, our national health research agenda needs to be updated constantly and indigenous health products would need to be developed to combat these challenges. This is all the more important in view of the fact that the global trade and intellectual property rights regimes have made it difficult to use health products and processes developed outside due to their high costs and restrictions placed on producing cost-effect generics.

(para 2.10)
A paradigm shift in pursuing the national research agenda will therefore need to be made to address these challenges but this is not possible with the current low budget allocation to the Department of Health Research. The Committee takes note of the Secretary's submission that the budget of the National Institute of Health in the U.S. whose functions are as that of ICMR in India, is 32 billion dollars a year and a large amount of that budget goes into basic research. The Committee also takes note of the Secretary's submission that it takes two-and-a-half billion dollars to develop a new drug from scratch and it needs thousands of scientists working on it at different stages.

Taking all the above facts into account, the Committee observes that if the objective of providing affordable quality healthcare for the people and translating research outputs into measurable social and national outcome is to be realised, investments in health research will have to be increased substantially. The Committee therefore lends its support to the Department's demand for additional funds to the tune of ₹835.00 crore for 2017-18 and recommends that the Ministry of Finance should increase the budgetary allocation to the Department of Health Research so that the Department is able to ensure continuity in critical healthcare research.

The Committee is constrained to note the under-utilisation of funds w.r.t. to three schemes of the Department. The Committee feels that on one hand the Department is reporting under-utilisation of funds with respect to its three schemes and on the other hand, the Department had given an enhanced amount as its projected requirement for the next financial year. The Committee, therefore, recommends that the Department should strongly monitor the funds allocated at BE stage so as to ensure that the projected funds sought are allocated at RE stage in 2017-18.

UTILISATION CERTIFICATES

The Committee takes note of the efforts made by the Department to liquidate the pending UCs. However, there are still 18 pending UCs which date back to 2013-14 and 2014-15, majority being from the year 2013-14. The Committee, recommends the Department to adopt a multi-pronged strategy for liquidation of pending UCs within a period of six months.

III. INDIAN COUNCIL OF MEDICAL RESEARCH

The Committee notes that there is a huge difference in the funds allocated for ICMR against its projected demand in all the five years from 2013-14 to 2017-18. The shortfall of funds have been massive by any standard and is certain to have an adverse bearing on the implementation of various intramural and extramural research projects of ICMR. Given the satisfactory track-record of ICMR in utilising the budgeted funds, the Committee wonders as to what financial yardstick was applied leading to substantially reduced allocation of funds in BE 2017-18 vis-a-vis the projected demand. In view of the dynamic International health research environment and the current and future health challenges of the country, the role of ICMR is very crucial in generating
new knowledge in frontier areas of research in health and related issues. Taking note of the written submission of the Department that an additional amount of ₹835.00 crore is required for 2017-18 to meet the needs of the Department in new and emerging areas of health research as per national priorities, the Committee in the earlier part of this Report has recommended allocation of the additional amount for the Department. The Committee simultaneously recommends to the Department to deploy the available resources for cutting edge research for diseases and translating such research into outcomes for tackling diseases which have been prioritised at National level by the Department of Health and Family Welfare. (para 3.4)

Currently, health research in the country is primarily carried out by 31 Institutes of ICMR which was established in 1911 and is one of the oldest medical research bodies in the world. The Committee observes from the information furnished that in two years i.e. 2015 and 2016, only 1685 research papers (965 in 2015 and 720 in 2016) have been published by ICMR scientists and 3 patents have been granted against 45 patents filed. This clearly indicates that the health research output is not up to the mark and not commensurate with the magnitude of disease burden in India. Given the fact that the country contributes to a fifth of the world's share of diseases (Twelfth Plan Report) and one of the vital elements in improving this situation is the need for a relevant research base that would equip policy makers to take informed health policy decisions, the health research output needs to be augmented substantially to cater to the health challenges faced. The Committee, therefore, recommends that the ICMR should evolve mechanisms to boost quality health research output by way of building alliances and partnerships and create a vibrant ecosystem for the purpose. The Committee is of the view that evolving such frameworks would lead to granting of more patents which, in turn, would generate the much needed funds for ICMR and health research. (para 3.6)

As per submission of the Secretary (HR), ICMR has about 800 scientists working across the 32 institutes. The Committee is of the view that for a country of the size and scale of India, the human resource within ICMR is very small and needs to be augmented substantially. The Committee simultaneously believes that India faces unique health challenges due to its large population and high disease burden and augmentation of human resources of ICMR alone will not serve the purpose unless we develop a critical mass of scientists who are dedicated to carry out basic, applied and clinical research and innovation. It is thus obvious that enhancing the health research output will require tapping of all available avenues of research. One of the many such avenues is the research being carried out in our medical colleges where research is a mandate of postgraduate training in both MCI and NBE programmes. The country produces around 30,000 Postgraduate students every year who are required to complete a research thesis for a degree. But due to multiple reasons, like inconsequential research topics, inappropriate research mythologies, poor guidance etc., potential scientific talent of PG students is wasted. If post-graduate students could be guided to conduct research relevant to the national health system, critical human resource gaps can be filled. The Committee would therefore, like the ICMR to guide post graduate students in their dissertations by linking with them and faculty guides across India. (para 3.7)
The Committee observes that despite the fact that India contributes disproportionately to the global disease burden, health research in India is hamstrung by paucity of relevant data and the Secretary (HR) admitted that "we need large population based surveys" to do meaningful research. The Committee is of the view that if we are not able to capture relevant data despite the information technology resources currently available in India, it is indicative of not only infrastructural weaknesses, but suboptimal use of IT in data collection also. The Committee, therefore, recommends that in order to develop a strong database, the Department should work in close coordination with other science agencies, academia, all research institutes including privately owned research institutes, laboratories, medical universities, medical colleges and build a strong technology platform for information sharing and research collaborations. (para 3.8)

The Committee observes that India is the highest TB burden country in the world and the biggest challenge from healthcare point of view is increase in incidence of multi drug resistant and XDRTB, especially in the rural areas. Though the Government has rolled out the administration of Bedaquiline, the first TB drug approval by the USFDA in over 40 years, in six public health hospitals in the country to specifically treat multi-drug resistant TB, a lot remains to be done to improve multi-drug resistant TB treatment outcomes. The Committee therefore recommends that ICMR should focus its research on multi-drug resistant TB strains with a view to discovering potent drug combinations combating MDRTB. The Committee desires to be apprised of the initiatives taken in this regard. (para 3.10)

The Committee observes that Sickle Cell Anaemia and Thalassemia are endemic in certain areas of the country, particularly in the tribal areas. Sickle Cell Anaemia and Thalassemia are genetic diseases and cannot be treated by random medicines. The bone marrow transplant is a cure for Sickle Cell Anaemia, but very few people are able to get that, both for lack of facilities and prohibitive costs. The Committee would therefore like the Department to focus its research upon these two diseases with a view to introducing effective interventions into our healthcare system. (para 3.11)

**AYUSH-ICMR COLLABORATION**

India has a strong foundation and rich heritage of AYUSH systems and provide people options to avail treatment of their choice. The Committee is of the view that the collaboration of ICMR with AYUSH is a step in the right direction. Such collaborative efforts will provide documented evidence of the side-effects, contra indications and drug reactions, give credibility to AYUSH systems and also help in fostering a synergy between the two systems of medicines (i.e. Allopathy and AYUSH). If AYUSH is to be brought to the global stage, validation of AYUSH drugs is imperative. Therefore, the Committee recommends to the Department to prepare a framework for validation of classical drugs and according high priority to AYUSH formulations and facilitating interdisciplinary AYUSH research. The Committee would like to be apprised of the progress made in this direction. (para 3.13)
ICMR Intervention with Multiple Nutrition to Fight Malnutrition

The Committee believes that with the intervention of multiple micro-nutrients amongst children for eliminating malnutrition, a major problem of the country could be solved. The World Bank estimates that India is one of the highest ranking countries in the world in respect of the number of children suffering from malnutrition. The 2015 Global Hunger Index Report ranked India 20th amongst leading countries with a serious hunger situation. India's National Family Health Survey (NFHS) and State Government's School Health Programme (SHP) have also indicated that the number of anaemic and malnourished children is rising. As per the latest SHP report for the year 2015-16, the number of anaemic children are 6.06 lakh that increased from 5.13 lakh in 2014-15. In view of the above, the Committee recommends that the efficacy of this intervention with multiple micro nutrients should be tested in different regions of the country on a priority basis. If the results are successful, the intervention programme could be implemented as a national programme to tackle malnutrition. The Committee would also like to emphasize upon the need for co-ordination between the concerned Ministries/Departments to make the programme successful.

(paragraph 3.15)

Development of Dengue Vaccine

The Committee observes that the introduction of the Sanofi dengue vaccine has safety dimensions and all caution needs to be exercised to ensure that a situation does not arise where the harm done would outweigh the benefits therefrom. The Committee also observes that given the high incidences of dengue in different parts of the country, a definite timeline must be given for the development of dengue vaccine so that cases of dengue are dealt with properly. The Committee would also like to be apprised about the expenditure incurred in research for development of dengue vaccine in the last five years.

(paragraph 3.18)

Antibiotic Resistance

The Committee observes that the issuing of guidelines for antibiotics use by ICMR to 20 hospitals is quite recent. The Committee feels that this issue is a serious one which requires immediate attention and action. The Committee, therefore, believes that a dedicated action plan on antimicrobial resistance, including antibiotic resistance needs to be prepared by ICMR on a priority basis. The Committee strongly recommends for standardization of the protocol for the administration of antibiotics and expects that a process of sensitizing the medical community about the perils of antibiotic resistance should be taken up on a national scale by involving medical associations, Industry associations, medical academia, media and other groups. The Committee is also of the view that aggressive awareness generation programmes regarding use of antibiotics without a prescription must be taken up to educate people in this regard.

(paragraph 3.21)

IV INFRASTRUCTURE DEVELOPMENT FOR HEALTH RESEARCH

Establishment of Network of Laboratories for Managing Epidemics & Natural Calamities

The Committee has been given to understand that against the projected outlay ₹ 145.00 crore for 2017-18 under the head - Establishment of Network of Laboratories for Managing
Epidemics & Natural Calamities, an allocation of ₹59.00 crore has been made in 2017-18 which is higher than the previous year's allocation of ₹39.25 crore. The Committee observes that India continues to have epidemics due to various infectious pathogens and it is imperative to promptly respond to localised outbreaks before they pose bigger health challenges. It is in this context that building a network of well-equipped viral diagnostic laboratories is necessary. The Committee recommends that the scheme should not be allowed to be plagued with under funding and the Department should seek more funds, if needed, at RE stage. (para 4.6)

The Committee also notes that the number of VRDLs in the country are not evenly distributed in all States, which results in loss of time and resources in transporting samples from States having no VRDLs to States having presence of VRDLs. The Committee, therefore, strongly recommends setting up of at least one VRDL in each State to ensure that 'samples' collected are analysed in shortest possible time, in order to stem any outbreak of epidemic. (para 4.7)

V DEVELOPMENT OF INFRASTRUCTURE FOR PROMOTION OF HEALTH RESEARCH

Establishment of Multidisciplinary Research Units (MRUs) in Government Medical College

The Committee observes that 12 medical colleges have not been released funds due to pending UCs. The Committee does not understand why there is a persistent delay in furnishing of UCs and apprehends that delay in submission of UCs may lead to time overrun and cost escalation of MRUs. The Committee is of the firm view that if the Department streamlines its monitoring mechanism and pursues liquidation of UCs in a sustained manner, all pending UCs can be liquidated within a short span of time. The Department should therefore take up the issue of pendency of UCs at the highest level to expedite their liquidation. (para 5.3)

Against the projected demand of ₹178.00 crore, the scheme has got ₹36.00 crore only for 2017-18 and this clearly shows that the fund allocation for MRUs is rather low. MRUs are targeted to promote and encourage quality medical research and provide assistance to State Government medical colleges across the country to set up appropriate research facilities and carry out focussed research on non-communicable diseases. Given the growing burden of non-communicable diseases that often require life-long management, this scheme is of immense importance. The Committee, therefore, recommends that the Government should ensure that more resources are allocated to MRUs to give an impetus to medical research on non-communicable diseases. The Committee also recommends that the MRUs should be benchmarked with the best institutions in their domain internationally. (para 5.6)

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

The Committee is constrained to note that out of the 15 MRHRUs planned to be established during the Twelfth Plan period, only 8 MRHRUs have been established which have initiated research activities and the remaining have either been approved only or are in the pipeline.
Evidently, the Department has lagged behind in achieving the targets set for the Twelfth Five Year Plan. The Committee would therefore like the Department to ascertain the exact reasons responsible for non-achievement of the targets and take corrective measures accordingly so that the intended outcomes are achieved in future and there are no time and cost overruns due to slippages in implementation of this project. (para 6.3)

In order to ensure success of National Health Programmes at the ground level (i.e. rural area), the Committee strongly recommends that the Department should explore the possibility of setting up of one MRHRUs in each State. (para 6.4)

The Committee notes that setting up of MRHRUs in States is dependent upon the receipt of proposals from States. Keeping in view the fact that there exists wide disparities between States, the Committee is of the view that it becomes the responsibility of Centre to ensure that benefits of this scheme be reaped by all the States and hence it should facilitate and guide them in sending their proposals. The Centre should also proactively initiate activity in all States to set up MRHRUs. (para 6.6)

VII DEVELOPMENT OF TOOLS/SUPPORT TO PREVENT OUTBREAK OF EPIDEMICS

The Committee finds that only ₹ 46 lakh has been spent out of the total allocation of ₹2.25 crore during 2016-17 under the head-Development of Tools/Support to Prevent Outbreak of Epidemics and expenditure of another ₹37.00 lakhs is in the pipeline. It is obvious that this project is certain to register huge savings. The Committee would expect the Department to be more prudent in making their estimates under this Head and ensure that the funds are fully utilised. (para 7.4)

VIII SCHEME OF NORTH EASTERN AREAS

The Committee notes that the Department has persistently not utilised the funds in the years 2015-16 and 2016-17. The Committee is of the view that the North-Eastern region being hilly and under developed, requires special focus and the Department should take special efforts and ensure that funds allocated are utilised in proper manner. (para 8.3)

The Committee notes that major research studies include the cancer registry programme, development of kit for the detection of paragonimiasis and research studies in the area of malaria, cancer, scrub typhus, rotavirus, nipah virus, West Nile virus, JE, lymphatic filariasis. The Committee would like to highlight the fact that special attention needs to be given to the North East Region because they lag behind in health indicators. Given the prioritized focus on the area, the Committee is of the view that all out efforts need to be made by the Department to utilize the funds in a time bound manner so that the desired health outcomes for this region are achieved. Further, focused attention should also be given to development of required infrastructure in this region. (para 8.5)
SIXTH MEETING

The Committee met at 11.00 A.M. on Friday, the 3rd March, 2017 in Main Committee Room, Ground Floor, Parliament House Annexe, New Delhi.

MEMBERS PRESENT

1. Prof. Ram Gopal Yadav — Chairman

RAJYA SABHA

2. Dr. Vikas Mahatme
3. Shri Jairam Ramesh
4. Shri Gopal Narayan Singh
5. Shri K. Somaprasad
6. Dr. C. P. Thakur

LOK SABHA

7. Dr. (Smt.) Heena Vijay Gavit
8. Dr. Sanjay Jaiswal
9. Dr. K. Kamaraj
10. Shri Arjunlal Meena
11. Shri J. Jayasingh Thiyagaraj Natterjee
12. Dr. Manoj Rajoria
13. Dr. Shrikant Eknath Shinde
14. Shri Akshay Yadav

SECRETARIAT

Shri P.P.K. Ramacharyulu, *Additional Secretary*
Shrimati Arpana Mendiratta, *Director*
Shri Rakesh Naithani, *Joint Director*
Shri Dinesh Singh, *Joint Director*
Shrimati Harshita Shankar, *Assistant Director*
Shri Pratap Shenoy, *Committee Officer*
Shrimati Gunjan Parashar, *Research Officer*

* Minutes of I to V meetings relate to other matters.
WITNESSES

Representatives from the Department of Health Research

1. Dr. Soumya Swaminathan Secretary & Director General, ICMR
2. Shri Manoj Pant Joint Secretary
3. Shri V. K. Gauba Joint Secretary
4. Ms. Bharati Das Chief Controller of Accounts
5. Shri Sachin Mittal Director (Budget)

Opening Remarks

2. At the outset, the Chairman welcomed the Members of the Committee and briefed them about the agenda of the meeting i.e. presentations of the Secretaries of the Department of Health Research & in connection with the examination of Demands for Grants (2017-18) and

Oral Evidence of the Secretary- Department of Health Research on Demands for Grants - 2017-18 (Demand No.43)

3. The Secretary of the Department of Health Research made a power point presentation on Demands for Grants (2017-18) of the Department of Health Research, highlighting the following points (i) Twelfth Plan allocation in schemes/programmes of the Department; (ii) allocation against projected requirements for the Department; (iii) scheme-wise allocation (2016-17) and utilization trend thereof; (iv) establishment of network of Viral Research and Diagnostics Laboratories (VRDLs); (v) establishment of Multi-disciplinary Research Units (MRUs) in Government Medical Colleges; (vi) establishment of Model Rural Health Research Units (MRHRUs) in the States; (vii) Human Resource Development for Health Research; (viii) Grants-in-aid for Inter-sectoral convergence on research; (ix) utilization of funds and achievement with respect to research activities of Indian Council of Medical Research; (ICMR) (x) antimicrobial research & surveillance network of ICMR; (xi) International co-operation in Health Research; etc.

4. During the course of the meeting, Members raised certain queries on the Demands for Grants (2017-18) of the Department of Health Research. The Secretary, Department of Health Research and other officials replied to some of the queries raised by the Members. The Chairman directed the Secretary to furnish detailed written replies to the queries left unanswered within a week.

5. (The Committee then adjourned at 1.20 p.m. for lunch and assembled again at 2.10 p.m.)

6. 
7. 
8. 
9. A verbatim record of the proceedings of the meeting was kept.
10. The Committee then adjourned at 3.45 P.M.

*** Relate to other matters.
SEVENTH MEETING

The Committee met at 10.00 A.M. on Friday, the 17th March, 2017 in Room "62", First Floor, Parliament House, New Delhi.

MEMBERS PRESENT

1. Prof. Ram Gopal Yadav — Chairman

RAJYA SABHA

2. Shrimati Renuka Chowdhury
3. Dr. R. Lakshmanan
4. Dr. Vikas Mahatme
5. Shri Jairam Ramesh
6. Shri Ashok Siddharth
7. Shri Gopal Narayan Singh
8. Shri K. Somaprasad

LOK SABHA

9. Shri Thangso Baite
10. Shri Nandkumar Singh Chauhan
11. Dr. (Smt.) Heena Vijay Gavit
12. Dr. Sanjay Jaiswal
13. Dr. K. Kamaraj
14. Shri Arjunlal Meena
15. Shri M.K. Raghavan
16. Dr. Shrikant Eknath Shinde
17. Shri R.K.Singh (Arrah)
18. Shrimati Rita Tarai

SECRETARIAT

Shri P.P.K. Ramacharyulu, Additional Secretary
Shrimati Arpana Mendiratta, Director
Shri Dinesh Singh, Joint Director
Shri Rakesh Naithani, Joint Director
Shrimati Harshita Shankar, Assistant Director
Shri Pratap Shenoy, Committee Officer
Shrimati Gunjan Parashar, Research Officer
Opening Remarks

2. At the outset, the Chairman welcomed the Members of the Committee and briefed them about the agenda of the meeting i.e., to consider and adopt draft * * *, 100th and * * * Reports of the Committee on Demands for Grants (2017-18) of the Departments * * *, Health Research (Ministry of Health and Family Welfare) and * * *, respectively.

Consideration and adoption of draft * * *, 100th and * * * Reports of the Committee

3. The Committee then considered and discussed the draft * * *, 100th and * * * Reports of the Committee on Demands for Grants (2017-18) of the Ministry of Health and Family Welfare pertaining to Departments of * * * and Health Research and * * * respectively. After some discussion, the Committee adopted the said Reports with minor changes. The Committee, thereafter, decided that the Reports may be presented to the Rajya Sabha and laid on the Table of the Lok Sabha on Monday, the 20th March, 2017. The Committee authorized its Chairman, Shri Jairam Ramesh and Dr. Vikas Mahatme to present the Reports in Rajya Sabha, and Dr. Sanjay Jaiswal and Dr. Shrikant Eknath Shinde to lay the Reports on the Table of the Lok Sabha.

4. 

5. 

6. 

7. The Committee then adjourned at 10:30 A.M.

*** Relate to other matters.
ANNEXURE
## Details of Additional Requirements of ₹ 500 Cr for 2017-18

Additional Requirements of ₹500 Crores is requested under BE 2017-18 to meet the needs of new and emerging areas of health research as per national priorities as well as to address the acute and emerging challenges which demand immediate redressal as mentioned below:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Research Areas</th>
<th>Sub Projects</th>
<th>Total Budget Required (₹ in Cr)</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Non Communicable Diseases</td>
<td>1. Cancer Research: ICMR plans to fund several large studies on cancer genomics and other risk factors, as well as large field implementation research studies on preventive strategies.</td>
<td>85.00</td>
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<td></td>
<td></td>
<td>2. Other Non-Communicable Diseases like diabetes, cardiovascular diseases and stroke account for 70% of deaths in India. Strategies to reduce mortality and morbidity and research on innovative preventive and therapeutic model need to be supported.</td>
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<tr>
<td>2</td>
<td>Communicable Diseases</td>
<td>1. Anti-microbial resistance: With the growing human population, new drug resistant strains have also emerged and pose serious problem in complete cure of the infections. Constant research in this area is need of the hour. ICMR has created an anti-microbial research (AMR) network to monitor drug resistant organisms, various etiological issues and genes involved in this mechanism to help in better drug delivery and formulating appropriate drug policy. ICMR will also fund new drug development and clinical trials of combination antibiotics.</td>
<td>115.00</td>
</tr>
<tr>
<td></td>
<td>(Vector Borne Disease)</td>
<td>2. Preventing Outbreaks/epidemics: India is prone to many outbreaks and epidemics due to natural</td>
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</tbody>
</table>
calamities like floods, cyclone, droughts, earthquakes, and frequent international travel. Recent examples are the H1N1, SARS, bird flu etc. Hence, there is an urgent need to tackle such issues and prepare an action plan to combat such crisis situation. ICMR will strengthen its surveillance network and train a cadre of epidemic intelligence office.

3. **Diseases identified for elimination such as kalazar, filariasis, leprosy:** India is committed to eliminate disease like kalazar, lymphatic filariasis and leprosy in next 2-3 years. Extra efforts are required to achieve these targets. For Kalazar, new drugs need to be implemented with effective vector control strategy and for filariasis 3 drug regimen is to be tested in some selected district. For leprosy, a preventive vaccine is to be given to close contacts to prevent transmission.

3. **Emerging and Re-emerging Infections and preparedness for epidemics/pandemics**

   **Emerging/re-emerging and new infections:** Due to global warming related climate change and urbanization, many of the diseases which were once controlled or eliminated have re-emerged. The classic example is the rise in cases of dengue and chikungunya. Since there is no specific treatment available for these diseases, there is need to develop vaccine against these diseases and efforts are underway on many candidate vaccines. ICMR will partner with vaccine manufacturing companies to test and validate new vaccine candidates.

4. **Mission Mode Projects**

   1. **Malaria elimination/Mission mode approach for Tuberculosis:** WHO has launched a framework for malaria elimination by 2030. India has also prepared an action plan for malaria elimination in phased manner. This will be requiring regular research and implementation of the key interventions. Similarly, ICMR is gearing up to provide research support for the control of tuberculosis in mission mode.
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<tbody>
<tr>
<td>2. <strong>Research on Traditional Medicine in Collaboration with Ayush:</strong> to test and validate traditional remedies for diseases like dengue, cancer, tuberculosis, etc.</td>
<td>60.00</td>
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<tr>
<td>5. Enhancing community outreach and generating awareness for prevention and control and Policy Implementation</td>
<td>Social determinants of Health and behavioral issues</td>
<td>60.00</td>
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<td></td>
<td>Research Data platform and Research Synthesis</td>
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<td>Research on Evidenced based Policy</td>
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<td>Use of Information and Communication Technology in Health Care</td>
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<td>Focus on mother and child Health and combating malnutrition</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>500.00</strong></td>
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