Report of the
Comptroller and Auditor General of India
on
Performance Audit of
Reproductive and Child Health under National Rural Health Mission

Union Government (Civil)
Ministry of Health and Family Welfare
Report No. 25 of 2017
(Performance Audit)

Report of the
Comptroller and Auditor General of India
on
Performance Audit of
Reproductive and Child Health under
National Rural Health Mission

for the year ended March 2016

Union Government (Civil)
Ministry of Health and Family Welfare
Report No. 25 of 2017
(Performance Audit)

Contents

Preface

The National Rural Health Mission (NRHM)[1] was launched in April 2005 to provide accessible, affordable and quality health care to the rural population. The aim of NRHM is to bridge gaps in healthcare facilities, facilitate decentralised planning in the health sector, and provide an overarching umbrella to the existing disease control programmes run by the Ministry of Health and Family Welfare. The yearly expenditure on the programme increased from ₹ 15,961 crore during 2011-12 to ₹ 26,397 crore during 2015-16.

Under the umbrella of NRHM, the Government has been implementing Reproductive and Child Health (RCH) programme with the main components being Maternal Health, Child Health, Immunisation and Family Planning. Considering the strong correlation between health facilities and RCH outcomes and given that RCH indices are pursued under the Millennium Development Goals[2], this performance audit concentrated on assessing the impact of NRHM on improving RCH. The performance audit, which covers the period from 2011-12 to 2015-16, attempts to touch upon the various facets of the programme such as financial management, infrastructural facility and quality of health care and suggests ways to bring about improvement in programme delivery.

The specific objectives for this performance audit have been finalised on the basis of detailed examination of all available dataset, such as District Level Health Survey-3 (2007-08), Health Management Information System (HMIS) 2013-15, Annual Health Survey (2012-13) and National Sample Survey Round 71 (2014) with regard to prevailing health conditions. We have availed the assistance of Evidence for Policy Design (EPoD), operating through the Institute for Financial Management and Research, Chennai for finalising the audit objectives, determining the sampling strategy and designing the surveys.

Surveys of the selected facilities, Accredited Social Health Activists (ASHAs) and beneficiaries were carried out to assess the status of infrastructural facilities, the equipment available with field level functionaries and its utilization and also for assessing the level of awareness among the population about the programme and the difficulties faced by them in utilising the facilities available.

---

1 National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM) are sub-missions under the National Health Mission (NHM).

2 Eight development goals framed by the United Nations, to which India is a signatory.

We also analysed the Health Management Information System (HMIS) using Computer Assisted Audit Techniques (CAATs) for checking the accuracy, completeness and timeliness of data which is used by the Ministry to evaluate the pan-India performance of NRHM. We also compared the data in HMIS with the data in the basic records available at the health facilities.

Shortfalls in the availability of required health facilities in the States coupled with deficient infrastructural facilities and unhygienic surroundings in some existing facilities are areas of concern. Significant shortfalls of doctors, health care support staff, technicians, etc., across Community Health Centres (CHCs), Primary Health Centres (PHCs) and Sub-Centres (SCs) countrywide compromised the administration of health care.

The primary objective of the RCH programme, of increasing institutional deliveries, had not been fulfilled in most of the States. Poor record management across all States rendered the quality of some of the data reported in Health Management Information System (HMIS) erroneous. The objectives of the National Quality Assurance Programme (NQAP) launched by Government of India in 2013 for improving the quality of care in District Hospitals, CHCs and PHCs remained largely unfulfilled.

This report has been prepared for submission to the President of India under Article 151 of the Constitution of India.

The audit has been conducted in conformity with the Auditing Standards issued by the Comptroller and Auditor General of India.

Executive Summary

Introduction

The National Rural Health Mission (NRHM) was launched in April 2005 with the objective of providing accessible, affordable and quality health care to the rural population, especially the vulnerable sections. The Reproductive and Child Health (RCH) programme is a primary sub-component of NRHM and aims at improving the health outcome indicators viz., Infant Mortality Rate and Maternal Mortality Ratio, also mentioned in the Millennium Development Goals. The key features to achieve the goals of the Mission include making the public health delivery system fully functional and accountable to the community, human resource management, rigorous monitoring and evaluation against standards.

Why did we conduct this performance audit?

NRHM was earlier reviewed between April and December 2008 covering the period 2005-06 to 2007-08; the audit findings were incorporated in the C&AG's Report No. 8 of 2009-10. Audit observed various deficiencies in fund flow management, planning and monitoring, community participation, convergence, infrastructure development and capacity building, procurement and supply of medicines and equipment, IEC (information, education and communication) activities, achievements in healthcare etc. The expenditure on the programme was ₹ 1,06,179 crore during 2011-16. Considering the substantial investment in the programme and as RCH indices were pursued under the Millenium Development Goals for laying the foundation for a healthy mother and child, it was decided to take up the performance audit of the Reproductive and Child Health under NRHM to review its progress. This performance audit covered the period from 2011-12 to 2015-16.

Main findings

(A) Fund Management

(i) Financial management at both Central and State levels was not satisfactory with substantial amounts persistently remaining unspent with the State Health Societies at the end of each year. In 27 States, the unspent amount increased from ₹ 7,375 crore in 2011-12 to ₹ 9,509 crore in 2015-16**.**

(Para: 2.2)

(ii) Funds amounting to ₹ 5,037.08 crore and ₹ 4,016.37 crore released in 2014-15 and 2015-16 to the State treasuries were transferred to State Health Societies with delays ranging from 50 to 271 days.

(Para: 2.3)

(iii) In six States **(Andhra Pradesh, Gujarat, Jammu and Kashmir, Rajasthan, Telangana** and **Tripura)**, ₹ 36.31 crore was diverted to other schemes.

(Para: 2.4)

(B) Availability of Physical Infrastructure

(i) The shortfall in the availability of Sub-Centres (SCs), Primary Health Centres (PHCs) and Community Health Centres (CHCs) in the 28 States/UT, ranged between 24 and 38 *per cent*. The shortfall was more than 50 *per cent* in five States **(Bihar, Jharkhand, Sikkim, Uttarakhand** and **West Bengal).**

(Para: 3.1)

(ii) Survey of 1,443 SCs, 514 PHCs, 300 CHCs and 134 District Hospitals (DHs) countrywide revealed that some of these were functioning in unhygienic environment and/or were inaccessible by public transport. Other infrastructural issues such as poor condition of the buildings, non-availability of electricity and water supply, non-availability of separate wards for male and female beneficiaries, labour room not being functional, etc., were observed in a number of SCs, PHCs, CHCs and DHs.

(Para: 3.2 and Para: 3.3)

(iii) Shortfall in construction of SCs, PHCs in 25 States and CHCs in 17 States ranged between 32 to 44 *per cent*. In four States **(Kerala, Manipur, Mizoram** and **Uttar Pradesh)**, 400 works costing ₹ 2,207.67 crore were awarded on nomination basis. In five States **(Assam, Gujarat, Jammu and Kashmir, Karnataka** and **Manipur)**, 22 works were dropped/abandoned due to various reasons such as absence of clear title of land, site issues etc.

(Para 3.4)

(iv) In 20 States **(Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Jammu and Kashmir, Jharkhand, Kerala, Madhya Pradesh, Manipur, Maharashtra, Mizoram, Odisha, Rajasthan, Tamil Nadu, Telangana, Tripura, Uttar Pradesh, Uttarakhand** and **West Bengal)**, 1,285 works, though completed, were not commissioned or made functional.

(Para 3.4.5)

(C) Availability of Medicine and Equipment

(i) In 17 States (**Andhra Pradesh, Assam, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Karnataka, Meghalaya, Punjab, Rajasthan, Tamil Nadu, Telangana, Tripura, Uttarakhand** and **West Bengal**), 428 equipment (ultrasound, X-ray, ECG, cardiac monitors, auto analyzer, incinerator, OT equipment, blood storage unit etc.) costing ₹ 30.39 crore were lying idle/unutilised due to non-availability of doctors and trained manpower to operate the equipment, lack of adequate space for their installation, etc.

(Para: 4.3)

(ii) In 24 States (**Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Jammu and Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Odisha, Punjab, Rajasthan, Sikkim, Tamil Nadu, Telangana, Tripura, Uttar Pradesh, Uttarakhand** and **West Bengal**), instances of non-availability of essential drugs were observed. In eight of these States, essential medicines/ consumables such as Vitamin-A, contraceptive pills, ORS packets, RTI/STI[1] drugs, essential obstetric kits, etc., were not available in selected health facilities.

(Para: 4.5)

(iii) In 14 States **(Assam, Bihar, Haryana, Jharkhand, Karnataka, Kerala, Maharashtra, Manipur, Odisha, Punjab, Telangana, Tripura, Uttar Pradesh** and **West Bengal)**, medicines were issued to patients without ensuring the prescribed quality checks and without observing the expiry period of drugs, thus exposing the patients to health risks.

(Para: 4.6)

(iv) Mobile Medical Units were not operational in four States of **Chhattisgarh, Himachal Pradesh, Mizoram** and **Uttar Pradesh** while these were partially operational in 10 States of **Bihar, Gujarat, Haryana, Jammu and Kashmir, Jharkhand, Kerala, Madhya Pradesh, Maharashtra, Odisha** and **Tripura.**

(Para: 4.7)

(v) High percentage of 3,588 Accredited Social Health Activists (ASHAs) surveyed did not have disposable delivery kits and blood pressure monitors.

(Para: 4.9)

[1] RTI-Reproductive Tract Infection, STI-Sexually Transmitted Infection.

(D) Availability of Human Resources

(i) Shortages of doctors and paramedical staff were observed in almost all selected facilities, compromising the quality of health care being administered to the intended beneficiaries. In the selected CHCs of 27 States, the average shortfall of five types of Specialists (General Surgeon, General Physician, Obstetrician/Gynaecologist, Paediatrician and Anaesthetist) ranged between 77 to 87 *per cent*. In selected 236 CHCs in 24 States/UT, only 1,303 nurses were posted against the required 2,360.

(Para: 5.1 and Para 5.4)

(ii) In 13 States **(Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Haryana, Himachal Pradesh, Karnataka, Madhya Pradesh, Odisha, Punjab, Rajasthan, Uttar Pradesh** and **Uttarakhand)**, 67 PHCs were functioning without any doctor.

(Para: 5.5)

(iii) In 13 States **(Andhra Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jammu and Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Sikkim, Tripura, Uttar Pradesh** and **Uttarakhand)**, ANM/Health Worker (Female) was not posted in 80 SCs (10 *per cent*). Similarly, Health Workers (Male) were not posted in 749 SCs (65 *per cent*) in 22 States.

(Para: 5.6)

(E) Quality of Health Care

(i) The institutional framework for implementation of National Quality Assurance Programme (NQAP) was either not in place or was not effective in assuring quality of services across all levels viz. national, state, district and facility.

{Para: 6.1.1 (A), (B) and (C)}

(ii) Out of 716 facilities in 19 States, internal quality assurance team was constituted in only 308 facilities (43 *per cent*). In 541 health facilities of 15 States, the system of periodic internal assessment was formulated only in 114 (21 *per cent*) facilities.

{Para: 6.1.1 (D)}

(iii) Key Performance Indicators (KPIs) were not monitored in 267 facilities of eight States (**Arunachal Pradesh, Andhra Pradesh, Himachal Pradesh, Jharkhand, Mizoram, Telangana, Uttarakhand** and **Uttar Pradesh).** Out of 411 facilities in 10 States, only 79 facilities (19 *per cent*) monitored the KPIs.

{Para: 6.1.1 (D) (iv)}

(iv) In 18 States, against the requirement of ₹ 132.83 crore, reflected in State Programme Implementation Plans during 2013-16, ₹ 85.64 crore was allocated. States were not able to utilize even the allocated amount with the spending remaining low at ₹ 42.89 crore.

(Para: 6.1.5)

(v) Shortfalls, ranging from 29 to 100 *per cent,* in holding of meetings by the monitoring committees at State level (State Health Mission and State Health Society) were noticed.

(Para: 6.2)

(F) Services under Reproductive and Child Health

(i) In 20 out of 28 States, non-maintenance of records of administration of Antenatal Checkups (ANCs) of pregnant women was noticed.

(Para: 7.2.2 (a)

(ii) Shortfalls in administration of Iron Folic Acid tablets were noticed in all the 28 States. Similarly, in four states (**Arunachal Pradesh, Jammu and Kashmir, Manipur** and **Meghalaya**), less than 50 *per cent* of pregnant women were immunized with both doses of Tetanus Toxoid vaccine (TT1 and TT2).

(Para: 7.2.2 (a) (i) and (ii)

(iii) Against the target of Infant Mortality Rate (27 per 1,000 live births) to be achieved by 2015 as per the Millenium Development Goals, the achievement was 39. IMR was higher than 40 in the six States of **Assam** (49), **Bihar** (42), **Chhattisgarh** (43), **Madhya Pradesh** (52). **Odisha** (49) and **Uttar Pradesh** (48).

(Para: 7.2.6)

(iv) Against the target of Maternal Mortality Ratio (109 per 1,00,000 live births) to be achieved by 2015 as per the Millenium Development Goals, the achievement was 167. MMR was higher than 200 in nine States of **Assam** (300), **Bihar** (208), **Chhattisgarh** (221), **Jharkhand** (208), **Madhya Pradesh** (221), **Odisha** (222), **Rajasthan** (244), **Uttar Pradesh** (285) and **Uttarakhand** (285).

(Para: 7.2.6)

(v) Deficiencies were noticed in the implementation of Janani Suraksha Yojana, such as non-payment of incentive to beneficiaries, delayed payment to beneficiaries, payment to 12,723 excess number of beneficiaries, etc.

(Para: 7.3.1)

(G) Data Collection, Management and Reporting

(i) During 2015-16, about 13,000 facilities did not report data on Health Management Information System (HMIS). In the absence of reporting by all the facilities, the overall position on health indicators remained unascertainable.

(Para: 8.3.1 (i)

(ii) Audit observed significant discrepancies in the data as reported in HMIS vis-à-vis the information available as per basic records/registers in the selected health facilities of 14 States.

(Para: 8.3.3)

(iii) There was no adequate computerization, networking and human resources in the selected facilities. As a result, the facilities had to upload the reports on HMIS portal from the district headquarters or the nearest internet accessible area. This resulted in delayed availability or non-availability of data.

(Para: 8.5)

(iv) The prescribed records for Health Management Information System (HMIS) were either not maintained or poorly maintained in most of the selected health facilities. As a result of inadequate reporting and poor record management across all states, the quality of data reported in HMIS was erroneous and unreliable.

(Para: 8.6)

(v) Analysis of HMIS data revealed that for some major RCH parameters, the achievement shown was more than hundred *per cent*, such as number of pregnant women who availed the benefit of ANC, immunisation, was more than the number of pregnant women registered. The data was, therefore, unreliable.

(Para: 8.8.1)

(vi) 14 to 64 *per cent* of the health facilities were not reporting infrastructure data on HMIS for 2015-16 due to which the MIS reports failed to present a comprehensive picture.

(Para: 8.9.1)

(vii) 8 to 12 *per cent* of the data fields were not filled up by various health facilities making the data reporting under MIS reports unreliable.

(Para: 8.9.2)

Summary of important recommendations:

i. Funds flow management should be rationalised keeping in view the absorptive capacity of State Health Societies. The Ministry should monitor and maintain the details of interest earned on the unspent balances by these societies to ensure better utilization of funds.

ii. Ministry may ensure that all civil works are reviewed by concerned authorities in all States in the light of extant rules for removing the delays/impediments and ensure faster completion and commissioning of buildings.

iii. Availability of all essential drugs and equipment should be ensured at all health facilities. Mobile Medical Units and ambulances should be made fully operational and equipped with the required manpower and equipment.

iv. The Ministry should scrupulously follow up with States to ensure that the sanctioned posts of health care professionals are filled up to meet the NRHM requirements.

v. The Ministry and the States should secure compliance with the operational guidelines for quality assurance at all levels. Assessment of health facilities on the defined parameters should be documented and reviewed on a consistent basis for taking appropriate follow up action. Provision for monitoring the implementation of National Quality Assurance Programme may be made in the Health Management Information System. The Ministry/State governments need to strengthen the monitoring mechanism at all levels.

vi. IEC activities should be improved, so that the public is encouraged to adopt institutional delivery. Adequate distribution of IFA tablets and complete administration of TT vaccines to all pregnant women should be ensured by each healthcare facility.

vii. The Ministry should formulate a clearly documented organizational structure with identified positions for data management responsibilities. A documented and structured training programme for the personnel involved in data recording, reporting, aggregation, verification and feeding should be put in place. The reliability of data in HMIS by providing for proper validation controls at all levels should be improved. A mechanism for verification of data before uploading on the HMIS should be incorporated.

CHAPTER I : INTRODUCTION

1.1 Background

Our country has registered significant progress in improving life expectancy at birth as well as reducing infant and maternal mortality over the last few decades. The Infant Mortality Rate[1] decreased from 80 in 1990[2] to 39 in 2014[3]. Similarly, Maternal Mortality Ratio[4] decreased from 437 in 1990[2] to 167 in 2011-13[5]. Despite such progress, a high proportion of the population, especially in rural areas, continues to suffer and die from preventable diseases, pregnancy and child-birth related complications as well as malnutrition.

The Ministry of Health and Family Welfare (Ministry) has a large number of schemes to support States in a range of health sector interventions and many of the schemes pertain to disease specific control programmes. Given the status of public health infrastructure in the country, particularly in the Empowered Action Group (EAG) States[6] and the North Eastern States, it will not be possible to provide the desired services till the infrastructure is sufficiently upgraded.

Government of India therefore launched the National Rural Health Mission (NRHM)[7] on 12 April 2005 throughout the country with special focus on 18 States[8] including eight EAG States, the North-Eastern States, Jammu and Kashmir and Himachal Pradesh to provide accessible, affordable and quality health care to the rural population, especially the vulnerable sections. The NRHM seeks to establish functional health facilities in the public domain through revitalisation of the existing infrastructure and fresh construction or

---

1 The Infant Mortality Rate is the number of deaths in children under one year of age per 1,000 live births.

2 Source: India Country Report 2015 of Ministry of Statistics and Programme Implementation.

3 Source: Statistical Report 2014 of Sample Registration System of Office of the Registrar General and Census Commissioner, India.

4 The Maternal Mortality Ratio is the number of women who die from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes) during pregnancy and childbirth or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, per 1,00,000 live births.

5 Source: Statistical Report 2011-13 of Sample Registration System of Office of the Registrar General and Census Commissioner, India.

6 Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh, Odisha, Rajasthan, Uttar Pradesh and Uttarakhand

7 National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM) are sub-missions under the National Health Mission (NHM).

8 Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Himachal Pradesh, Jharkhand, Jammu and Kashmir, Manipur, Mizoram, Meghalaya, Madhya Pradesh, Nagaland, Odisha, Rajasthan, Sikkim, Tripura, Uttaranchal and Uttar Pradesh.

renovation wherever required. NRHM also seeks to improve service delivery by putting in place enabling systems at all levels.

1.2 Objectives of the Mission

The important objectives of NRHM, are, *inter-alia*:

- Reduction in child and maternal mortality
- Universal access to public health care services with emphasis on services addressing women's and children's health and universal immunization.
- Prevention and control of communicable and non-communicable diseases, including locally endemic diseases.
- Access to integrated comprehensive primary health care.

The Ministry, in its documents 'Framework of Implementation 2005-2012' and 'Framework of Implementation 2012-17', prescribed expected outcomes in respect of Infant Mortality Rate (IMR), Maternal Mortality Ratio (MMR), Total Fertility Rate (TFR)[9], etc., to be achieved by the end of 11th and 12th Five Year Plan periods.

1.3 Organisational structure

Health is a State subject. The role of the Central Government is to push reforms in States through additional financial resources. NRHM has the following organization structure at Central and State levels.

1.3.1 Central level

The Mission Steering Group (MSG) headed by the Union Minister of Health and Family Welfare provides policy direction to the Mission. Financial proposals brought before the MSG are first placed before the Empowered Programme Committee (EPC), which is headed by the Secretary of the Ministry. The Mission is headed by the Additional Secretary cum Mission Director (AS&MD).

[9] The average number of children expected to be born per woman during her entire span of reproductive period

1.3.2 State and district levels

In the States, the Mission functions under the overall guidance of the State Health Mission headed by the Chief Minister. The State Health Society (SHS), headed by the Chief Secretary, carries out the functions of the Mission. The District Health Mission is headed by the Chair Person, Zila Parishad/ Mayor as decided by the State depending upon classification of the district as rural or urban. A chart depicting various functionaries and some of their duties at State level is shown below in **Chart-1.1**:

Chart-1.1: Various functionaries and their duties at State level

State Health Mission (SHM)	•Responsible for health system oversight •Consideration of policy matters related with health sector •Review of progress in implementation of NHM, etc. The functions of the Mission are carried out through the State Health Society.
State Health Society (SHS)	•Approval/endorsement of Annual State Action Plan. •Detailed review of expenditure and implementation. •Release of funds to the District Health Societies. •Follow up action on decisions of the State Health Mission.
District Health Mission (DHM)	•The functions of the Mission are carried out through the District Health Society.
District Health Society (DHS)	•Responsible for planning and managing all health and family welfare programmes including NRHM in the district. •Receive, manage and account for funds received from the SHS. •Facilitate preparation of integrated district health development plans for health, nutrition, etc.

1.3.3 Other functionaries for delivery of services under NRHM

NRHM seeks to strengthen the delivery of public health services in the rural areas at the village, Sub-Centre, Primary Health Centre and Community Health Centre levels. At the village level, trained female community health worker *viz.*, ASHA (Accredited Social Health Activist) is to be appointed in the ratio of one per thousand of population. ASHAs act as the interface between the community and the public health system, and receive performance-based compensation for promoting universal immunization, referral and escort services for Reproductive and Child Health (RCH) and other healthcare delivery programmes. A brief description of Sub-Centre, Primary Health Centre and Community Health Centre is given below:

(i) **Sub Centres (SCs) –** These are the first contact point between the primary health care system and the community and provide services of ante-natal care, post-natal care, immunization, minimum laboratory services of pregnancy testing/estimation of hemoglobin, counselling for family planning, etc. SCs have been further categorised into Types 'A' and 'B'. The former provides all recommended services except facilities for delivery; the latter provides facilities for delivery also.

(ii) **Primary Health Centres -** Primary Health Centres (PHC) are the first contact point between village community and the medical officer. They provide maternal and child healthcare including family planning, counselling and appropriate referral for safe abortion services (MTP[10]), nutrition services such as diagnosis and management of anaemia and Vitamin-A deficiency. Each PHC acts as a referral unit for six SCs and refers cases to Community Health Centres and higher order public hospitals at sub-district and district levels.

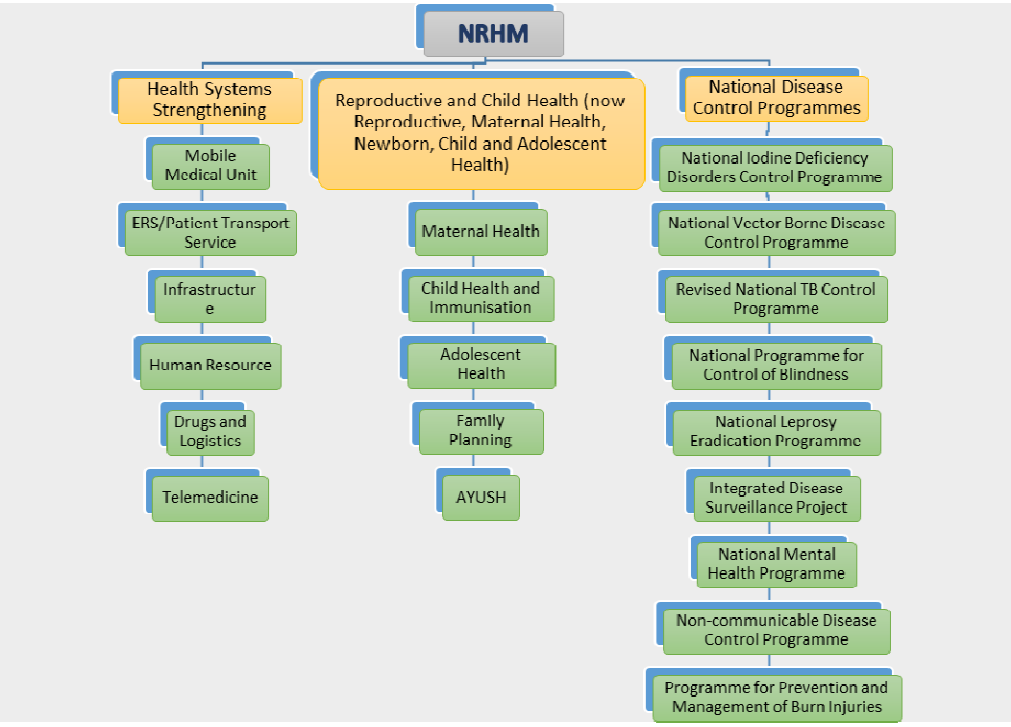
(iii) **Community Health Centres -** Community Health Centres (CHC) are 30-bedded hospitals providing specialist care in Medicine, Obstetrics and Gynecology, Surgery, Paediatrics, Dental and AYUSH[11]. It serves as a referral centre for four PHCs and also provides facilities for obstetric care and specialist consultations. A CHC can be declared a fully operational **First Referral Unit (FRU)** only if it is equipped to provide round-the-clock services for emergency obstetric care, new born care and blood storage facility, in addition to all emergency services that any hospital is required to provide.

1.4 Components of NRHM

NRHM is an umbrella programme subsuming most of the earlier programmes in the health and family welfare sectors and comprises the components as depicted in **Chart-1.2** given below:

[10] Medical Termination of Pregnancy
[11] Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy

Chart-1.2: Components of NRHM



Source: Ministry's website: nrhm.gov.in

The Reproductive and Child Health (RCH) Programme was launched in October 1997 with the aim of reducing infant, child and maternal mortality rates. RCH was subsequently revised and included (RCH-II) as a component of the National Rural Health Mission (NRHM) launched in April 2005.

1.5 Financial arrangements under NRHM

The Ministry releases funds[12] to State Governments based on NRHM State Programme Implementation Plans (PIPs) approved by the Ministry. All Union Territories (UTs) are fully funded by the Ministry. Out of ₹ 81,081.77 crore released by the Ministry under NRHM during the period 2011-16, ₹ 47,383 crore pertained to Reproductive and Child Health.

1.6 Audit objectives

Considering the strong correlation between facilities created and the health outcomes (maternal and infant mortality rates) and given that Reproductive and Child Health (RCH) indices are pursued under the Millennium

[12] In proportion to their share, which was 85:15 of PIP in 2011-12, 75:25 in 2012-15, and 60:40 from 2015-16 onwards in respect of all States, except for the North East States and the three Himalayan States (Jammu and Kashmir, Uttarakhand and Himachal Pradesh), where the proportion has been 90:10 throughout.

Development Goals[13], this performance audit has mainly concentrated on RCH under NRHM. The specific objectives of this performance audit have been decided with the assistance of Evidence for Policy Design (EPoD), operating through the Institute for Financial Management and Research (IFMR), Chennai after analysis of all available datasets (District Level Health Survey-3 2007-08), Health Management Information System (HMIS) 2013-15, Annual Health Survey (2012-13) and National Sample Survey Round 71 (2014) with regard to prevailing health conditions. These objectives are:

a) Assess the impact of NRHM on improving Reproductive and Child Health in the country by the:

   i. Extent of availability of physical infrastructure;

   ii. Extent of availability of health care professionals; and,

   iii. Quality of health care provided, and services under RCH (Chapter 7)

b) Mechanism for data collection, management and reporting which serve as indicators of performance (Chapter 8).

1.7 Scope of Audit

The performance audit covered the period from 2011-12 to 2015-16. All the States (except Goa) and UT of Andaman and Nicobar Islands were selected (as per the rural population criteria). In the case of Nagaland, Audit collected information through survey sheets only, since the performance audit of NRHM for the period 2009-14 had already been conducted in the State and findings incorporated in Audit Report No. 1 of 2016 placed in the State Legislature.

As in the case of selection of objectives for the performance audit, evidence based approach[14] has been adopted for determining the sampling strategy with the assistance of Evidence for Policy Design (EPoD), operating through the IFMR, Chennai. A focused sampling strategy was adopted to sample only the rural districts so that implementation of the programme in relation to the envisaged outcomes could be assessed specifically. A district has been classified as rural if rural population of the district is at least 70 *per cent* of its population. Districts within a State have been stratified into three categories (I - low performance districts, II - medium performance districts and III - high

[13] Eight goals framed by the United Nations, to which India is a signatory.

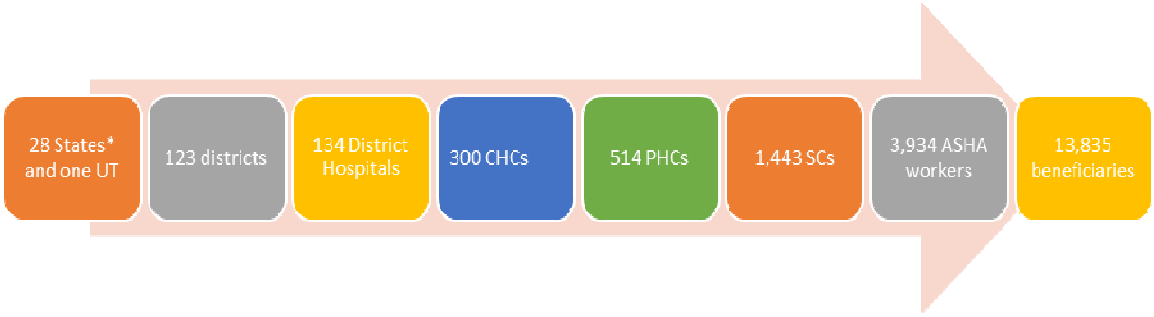
[14] Evidence based approach entailed examination of all the available and reliable data sets containing information on the prevailing health conditions in the country in order to evolve a robust and focussed audit approach especially for setting of audit objectives and selection of samples.

performance districts) based on health indices – infrastructure, health personnel, health services and data (that are relevant for the audit objectives being pursued). The number of districts to be selected from different categories within a State/UT is on proportionate basis with positive bias in favour of low performing districts. The following statistical framework was adopted for selection of sample:

- From each State/UT, 25 *per cent* of the districts (with minimum of two and maximum of 10) satisfying the rural population criterion of 70 *per cent* were selected from each stratum using Simple Random Sampling without Replacement (SRSWOR).
- Within each selected district, two (if total number of Blocks/Tehsils in the district is up to 10) and three Blocks/Tehsils (if total number of Blocks/Tehsils is more than 10) were selected. All the CHCs/ SDHs within the sampled Blocks/ Tehsils were selected.
- Under each CHC, two PHCs linked to the sampled Blocks/Tehsils were selected by using SRSWOR method.
- Three SCs linked to the sampled PHCs were selected using SRSWOR method.
- All the ASHAs (subject to maximum of three) attached with the selected SCs were selected.
- 10 eligible beneficiaries[15] per selected SC using SRSWOR were selected for survey.

The sample for the performance audit is as depicted in **Chart-1.3.**

Chart-1.3: Sample selection



* Only surveys carried by the Accountant General, Nagaland

[15] Women who gave birth within the last 24 months

1.8 Audit methodology

The performance audit commenced with an entry conference with the Ministry on 5 May 2016 where the audit objectives, scope and methodology were explained. Similar entry conferences were held in each State by the respective Principal Accountants General/Accountants General with the nodal departments involved in the implementation of the programme. Thereafter, records relating to the programme were examined in the Ministry, nodal departments and implementing agencies in the States between April 2016 and August 2016. Surveys of the selected facilities, ASHAs and beneficiaries were also carried out. Besides, data drawn from the IT-based system, namely Health Management Information System (HMIS) used by the Ministry to evaluate the pan-India performance of NRHM, were also analysed. After completion of audit, an exit conference was held with the Ministry on 28 February 2017 to discuss the audit findings. Exit conferences were also held at the State levels, where State specific findings were discussed. The Report has taken into account the replies furnished by the Ministry (December 2016) and States, in addition to the points discussed in the exit conferences.

1.9 Sources for Audit criteria

The following are the sources for audit criteria:

a) NRHM Framework for Implementation (2005-12);

b) NHM Framework for Implementation (2012-17);

c) NRHM Operational Guidelines for Financial Management;

d) Indian Public Health Standards (IPHS) – Guidelines (2007 and 2012) for Sub-Centres (SC), Primary Health Centres (PHC), Community Health Centres (CHC), Sub-District/ Sub-Divisional Hospitals (SDH) and District Hospitals;

e) Operational guidelines for Quality Assurance in public health facilities 2013; and

f) Assessor's Guidebook for Quality Assurance in District Hospitals 2013, Community Health Centres (First Referral Unit) 2014 and Primary Health Centres 2014.

1.10 Previous audit findings

Performance audit of NRHM for the period 2005-06 to 2007-08 was conducted between April to December 2008 and the audit findings were reported to the Parliament through CAG Audit Report no. 8 of 2009-10 (Union Government-Civil). The Public Accounts Committee (PAC) (Fifteenth Lok Sabha) in its 32nd Report (2010-11) had made observations/recommendations on the audit findings of the said Report.

The present performance audit of NRHM for 2011-12 to 2015-16 revealed that deficiencies pointed out in the earlier CAG's Report persisted despite assurances by the Ministry to the PAC. Details are given in **Table-1.1** below:

Table-1.1: Status of the implementation of some important observations/ recommendations of the PAC

Sl. No.	Recommendations of the Public Accounts Committee	Response of the Ministry	Status as per current audit report
1.	State Governments take immediate corrective steps to maintain requisite infrastructure facilities and standard hygiene levels in all the health facilities. **(Recommendation no. 12)**	The Ministry had asked all States, through its letter dated 28 January 2012, to issue necessary instructions to all to comply with the guidelines of Government of India in this regard.	Infrastructural facilities continued to be below par in some of the selected health care facilities country-wide. **(Para nos. 3.3).**
2.	Immediate steps must be taken for recruitment/ deployment of adequate and skilled human resources in the health facilities in the rural areas. **(Recommendation no. 13)**	The posts in the health facilities are filled up by respective State/UT Governments and GOI had repeatedly impressed on the State/UT Governments to fill up the vacant posts at the earliest.	In 111 District Hospitals audited in 23 States, shortage as per IPHS norms and sanctioned strength of doctors/specialists (33 and 34 *per cent* in both categories), nurses (25 and 18 *per cent*) and paramedical staff (54 and 27 *per cent*) was observed. Similar shortage of manpower as per IPHS and as per sanctioned strength was observed in 43 Sub-District/Sub-Divisional Hospitals audited in 10 States. Significantly, 77 to 87 *per cent* of the selected CHCs were functioning without specialist doctors. In 13 States, 67 PHCs were functioning without allopathic or AYUSH doctor **(Para nos. 5.1 to 5.5)**
3.	Necessary steps should be taken to provide necessary infrastructure and standard	SC/ PHC/ CHC to be upgraded, and living facilities constructed	No significant improvement was noticed as staff quarters were lying vacant at various health

Sl. No.	Recommendations of the Public Accounts Committee	Response of the Ministry	Status as per current audit report
	living facilities at all the SCs/ PHC/ CHCs so that the doctors and other medical staff are encouraged to stay there. **(Recommendation no. 15)**	within specified time frame by State/ UT governments.	facilities due to non-availability of basic amenities, unwillingness of staff to occupy the quarters due to their inconvenient location, etc. **(Para no. 3.5)**
4.	Department should strengthen internal controls to check delay in procurement process, avoid excess procurements and stock-outs and ensure purchases of good quality medicines and equipment at the most competitive rates in accordance with the canons of financial propriety. **(Recommendation no. 16)**	The procurement manual containing standard procurement procedures and practices to streamline and professionalize the procurement of health sector goods has been prepared and circulated to all States. Workshops on 'Best practices on Quality assurance and Quality Control Procedures' have been organized in September 2010.	In three States, discrepancies in procurement of drugs/ medicines were observed. **(Para no. 4.4).** In 17 States, 428 equipment (ultrasound, X-ray, ECG, auto analyzer, incinerator, OT equipment, etc.) costing ₹ 30.39 crore were lying idle for want of required personnel to operate them, lack of adequate space, etc. **(Para no. 4.3)**
5.	All possible steps should be taken including stringent periodic monitoring to ensure timely availability of adequate quantity of qualitative essential medicines, vaccines, etc., in all the health facilities. **(Recommendation no. 18)**	Procurements to be made by State/ UTs out of NRHM funds, ensuring timely availability of medicines, vaccines, diagnostics and other items, is primarily the responsibility of State/ UTs.	Shortfall in availability of drugs was observed in 24 States. **(Para no. 4.5)**

1.11 Acknowledgement

Audit acknowledges the cooperation and assistance extended by the Ministry of Health and Family Welfare, State Health Departments, implementing agencies and their officials and Evidence for Policy Design (EPoD), operating through the Institute for Financial Management and Research (IFMR), Chennai, during conduct of this performance audit.

CHAPTER II : FUND MANAGEMENT

2.1 Introduction

The Ministry released funds[1] directly to State Health Societies (SHS) till 2013-14, and through the State Governments thereafter. Such funds are released in five parts: NRHM Reproductive and Child Health (RCH) Flexipool, National Urban Health Mission (NUHM) Flexipool, Flexible pool for Communicable Diseases, Flexible pool for Non Communicable Diseases including Injury and Trauma and Infrastructure Maintenance. The State Governments in turn, disburse funds to the District Health Societies, for further release to the blocks, who in turn, further disburse funds to various implementing units (CHCs/PHCs/SCs/VHSNCs)[2].

2.2 Release and utilisation of funds

As per Ministry records, State Health Societies (SHS) had spent ₹ 1,06,179.78 crore out of ₹ 1,10,930.30 crore available during the period 2011-16, as depicted below. The year wise details of fund released by the Ministry, State share credited, total fund available (excluding interest earned) and expenditure incurred under NRHM[3] during the last five years in all States/UTs is given in **Table-2.1** below:

Table-2.1: Release and utilisation of funds

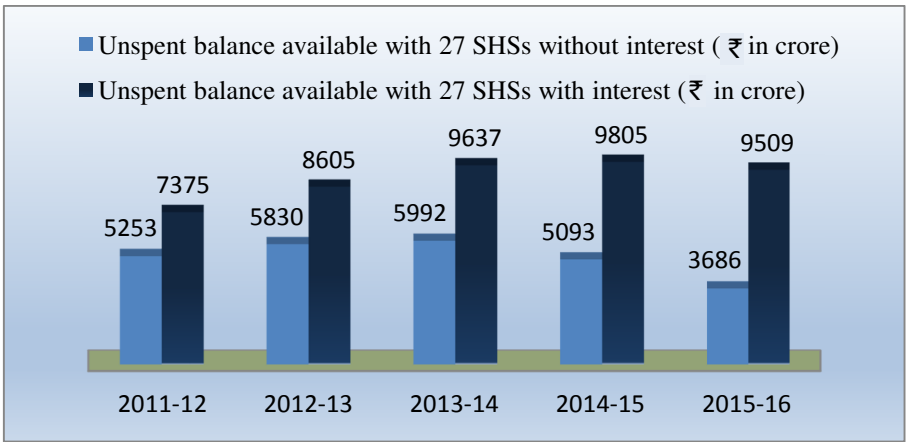
(₹ in crore)

Year	Opening balance	Central release	State share credited	Total fund available	Expenditure	Closing balance
2011-12	3,985.06	14,960.43	2,778.79	21,724.29	15,960.78	5,763.50
2012-13	5,763.50	15,002.45	5,246.10	26,012.05	19,606.85	6,405.20
2013-14	6,405.20	16,583.70	4,920.63	27,909.53	21,138.27	6,771.25
2014-15	6,771.25	17,160.31	5,093.35	29,024.91	23,076.94	5,947.97
2015-16	5,947.97	17,374.88	7,824.60	31,147.45	26,396.94	4,750.51
TOTAL		**81,081.77**	**25,863.47**		**1,06,179.78**	

[1] In proportion to their share (explained in the footnote to paragraph 1.5 of this report).
[2] CHC-Community Health Centre, PHC-Primary Health Centre, SC-Sub-centre, VHSNC-Village Health Sanitation and Nutrition Committee
[3] National Health Mission (NHM) with effect from January 2014, which includes National Urban Health Mission (NUHM).

Audit observed, however, that the Ministry did not depict the interest earned by State Health Societies (SHSs) on NRHM funds, contrary to stipulations in paragraph 5.5.4 of the operational guidelines. Audit collated the amount of interest earned by the SHSs in 27 states and accordingly re-worked the amount of unspent balance available with the SHSs as depicted in the **Chart-2.1** below:

Chart-2.1: Unspent balance available with 27 States



Audit further observed that the unspent amounts with the 27 states rose from ₹ 7,375 crore in 2011-12 to ₹ 9,509 crore in 2015-16. The States where the unspent balance ranged between 40 to 76 *per cent* are listed below:

Year	Name of State where shortfall was more than 40 *per cent* *(Percentage)*	No. of States
2011-12	Andhra Pradesh (58), Arunachal Pradesh (42), Chhattisgarh (57), Himachal Pradesh (45), Jammu and Kashmir (40), Manipur (52), Tamil Nadu (64), Tripura (46), Uttar Pradesh (58), Uttarakhand (42) and West Bengal (51),	11
2012-13	Andhra Pradesh (55), Arunachal Pradesh (49), Chhattisgarh (53), Manipur (40), Tamil Nadu (67), Uttar Pradesh (58) and West Bengal (50).	7
2013-14	Andhra Pradesh (62), Chhattisgarh (43), Karnataka (42), Manipur (47), Meghalaya (47), Tamil Nadu (53), Tripura (46), Uttar Pradesh (59), Uttarakhand (49) and West Bengal (46).	10
2014-15	Andaman & Nicobar Islands (46), Andhra Pradesh (49), Arunachal Pradesh (41), Karnataka (47), Manipur (52), Meghalaya (55), Tamil Nadu (42), Telangana (60), Uttar Pradesh(56), Uttarakhand (44) and West Bengal (50).	11
2015-16	Andaman & Nicobar Islands (69), Andhra Pradesh (41), Arunachal Pradesh (49), Karnataka (50), Meghalaya (76), Telangana (52), Uttar Pradesh (52) and West Bengal (43).	8

Case Study-Karnataka

The State Government of Karnataka released ₹ 379.57 crore to SHS during 2011-16 towards state share of the Infrastructure Maintenance without having a plan in place for utilisation of the funds by the Society. As a result, the entire amount released to the Society remained un-utilised.

The Ministry stated that the amount shown towards unspent balance included the amount of advances provided to agencies for construction and procurement, and the amount that is required to be maintained to carry out essential and recurring health care activities.

However, in the absence of details/breakup of advances, the contention of the Ministry remained unverifiable. Moreover, substantial unspent balances with the States indicates that funds were released by the Ministry without reckoning the absorptive capacity of the concerned States and calls for rationalising the procedure for release of funds.

2.3 Delay/Non-release of funds from State Treasury to SHSs.

In terms of the procedure approved by the Union Cabinet (applicable from 2014-15 onwards), funds were released to State Governments for further release to State Health Societies (SHS) within 15 days of their receipt, failing which State Governments were liable to pay interest. Audit observed that ₹ 49.45 crore released during 2014-15 and ₹ 450.20 crore released during 2015-16 under Mission Flexi Pool and RCH Flexi Pool to the State Treasuries were not transferred to the SHSs as of May 2016. Similarly, funds amounting to ₹ 5,037.08 crore and ₹ 4,016.37 crore released during the years 2014-15 and 2015-16 to the State Treasuries were transferred to SHSs with delays ranging from 50 to 271 days. The Ministry replied that they had asked the States to ensure timely release of funds to SHS, from time to time.

The reply is however silent with regard to action taken by the Ministry for repeated defaults by the State Governments in releasing funds to SHSs in a timely manner. Further, the Ministry failed to take action in line with the recommendations of the Cabinet to levy interest on the State Governments for delayed transfer of funds.

2.4 Diversion of Funds

Paragraph 3.3.5 of the operational guidelines provides that, all levels should ensure that the funds provided for various programmes are used for the purpose for which they were given and are not mixed with other funds. In six states **(Andhra Pradesh, Gujarat, Jammu and Kashmir, Rajasthan, Telangana** and **Tripura)**, ₹ 36.31 crore was diverted to other schemes *viz.* Mukhyamantri Subh Lakshmi Yojana (MSLY), Sukhibhava Scheme, etc.

In the exit conference, the Ministry accepted that the diversion of NRHM funds for non NRHM purposes was not proper.

2.5 Outstanding Advances

In terms of para 6.9.1 of the operational guidelines, advances are to be given only for admissible activities under the programme and are to be settled within 90 days. In seven States **(Jharkhand, Himachal Pradesh, Odisha, Rajasthan, Tamil Nadu, Uttar Pradesh** and **West Bengal)** advances amounting to ₹ 909.96 crore made to various Implementing Agencies and staff during the period 2011-16 were not adjusted as of March 2016. The State-wise details are given in **Annexure-2.1.**

The Ministry replied that while it is desirable to settle all advances within a period of 90 days and before sanctioning further advances, this may not be practicable in case of construction related activities, procurement of drugs, supplies and equipment. The reply is unacceptable as it is inconsistent with the operational guidelines.

2.6 Outstanding Utilization Certificates (UCs)

The General Financial Rules stipulate that Utilization Certificate should be submitted within twelve months of the closure of the financial year by the concerned Institution or Organisation. Audit observed for the period 2011-15, UCs of ₹ 4,283.45 crore, under Mission Flexipool, were pending from 22 States/UTs and UCs of ₹ 3,174.72 crore, under RCH Flexipool were pending from 21 States/UTs as of May 2016.

2.7 Release of ₹ 2898 crore without approval of PIP

The Ministry released ₹ 2,897.74 crore during 2014-15 towards the first tranche to 23 States in respect of three pools/programmes (RCH Flexipool,

Mission Flexipool and Pulse Polio Immunization) without the approval of Project Implementation Plan (PIP) of the concerned States in contravention of the provisions under Para 3.3.5 of NRHM Operational Guidelines for Financial Management.

The Ministry stated that the bulk of the approvals under the NHM every year were for continuing/ongoing activities. Accordingly, approval was conveyed by the competent authority to States/UTs, so that, there was no disruption in the ongoing activities such as Janani Shishu Suraksha Karyakram (JSSK), Janani Suraksha Yojana (JSY), etc. The reply of the Ministry is not valid as approval of PIP by the National Programme Coordination Committee is the pre-condition for release of funds to the SHSs.

2.8 Observations relating to Maintenance of Accounts

2.8.1 Appointment of Chartered Accountant

Para 8.3.2 of the NRHM Operational Guidelines for Financial Management provides that, State Health Society was to engage Chartered Accountant (CA) for Statutory Audit of the State and District Health Societies. The appointment of CAs was to be made from the list of Chartered Accountant firms empanelled by the Comptroller and Auditor General of India and selection was to be done through open bidding process. Further, the process of engagement of CAs was required to commence from 31 January each year and completed by 31 March.

It was however observed that in seven States **(Andhra Pradesh, Assam, Meghalaya, Mizoram, Rajasthan, Telangana** and **Uttar Pradesh),** appointment of CA firms was delayed by periods ranging between 7 to 206 days. This in turn delayed the submission of audited accounts to the Ministry by 27 to 195 days.

2.8.2 Discrepancies in maintenance of Accounts

Audit observed discrepancies such as non-depiction of interest in the annual accounts, non-maintenance of separate sub-bank account for RCH, under-statement of closing balance, under-statement of receipts, over-statement of expenditure, non-maintenance of important records such as journal, ledger and register of advances, etc., in 15 States **(Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Gujarat, Jharkhand, Kerala, Manipur, Odisha, Rajasthan, Sikkim, Tamil Nadu, Telangana, Uttarakhand** and **West Bengal).**

Conclusion

The financial management at both Central and State levels was not satisfactory with amounts persistently remaining unspent with the State Health Societies at the end of each year. The Ministry failed to take action in line with the recommendations of the Cabinet to levy interest on delayed transfer of funds by the State Governments to SHSs. There were cases of diversion of funds to other schemes. Various discrepancies were noticed in maintenance of accounts.

Recommendations:

- Funds flow arrangement should be rationalised keeping in view the absorptive capacity of SHSs.
- The Ministry should monitor and maintain the details of interest earned on the unspent balances by SHSs to ensure efficient utilisation of funds.

CHAPTER III : AVAILABILITY OF PHYSICAL INFRASTRUCTURE

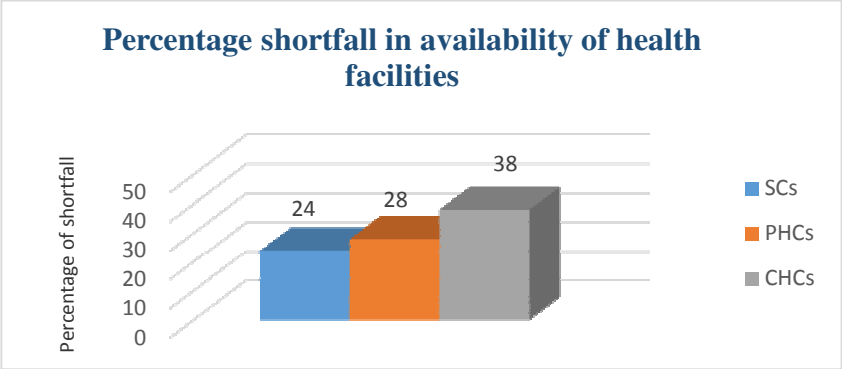
NRHM envisages establishing functional health facilities through revitalization of existing infrastructure and fresh construction or renovation wherever required. The Mission developed comprehensive Indian Public Health Standards (IPHS) defining infrastructural standards for different levels of health facilities.

3.1 Availability of health facilities against the requirement

As per IPHS, one Community Health Centre (CHC), one Primary Health Centre (PHC) and one Sub Centre (SC) was to be established for population[1] of 1,20,000, 30,000 and 5,000 respectively.

The position of availability of health facilities against the requirement for all the 28 States (State-wise details in **Annexure-3.1**) is shown in the **Chart-3.1** given below:

Chart-3.1



However, the percentage of shortfall in availability of SCs, PHCs and CHCs was more than 50 *per cent* in the five States of **Bihar** (SC-53, PHC-85, CHC-92), **Jharkhand** (SC-55, PHC-76), **Sikkim** (CHC-71), **Uttarakhand** (CHC-53) and **West Bengal** (PHC-70, CHC-63).

In five States of **Chhattisgarh, Haryana, Manipur, Tamil Nadu** and **West Bengal**, shortfall in availability of health facilities resulted in coverage of

[1] For hilly/tribal areas, the norm of population was 80,000 for CHC, 20,000 for PHC and 3,000 for SC.

more population than the prescribed norms as noticed in 155 out of 237 selected health facilities.

Case Study: Shortage of health facilities in tribal areas

In Rajasthan, the availability of facilities was in excess of IPHS norms in non-tribal areas but deficient in tribal areas. The excess of medical facilities in non-tribal areas was 130 CHCs (34.03 *per cent*), 369 PHCs (24.12 *per cent*) and 3,787 SCs (41.23 *per cent*) whereas the shortage in tribal areas was 9 (13.24 *per cent*), 89 (32.96 *per cent*) and 374 (20.65 *per cent*). In the selected districts, shortage of SCs and PHCs in all the five tribal districts ranged between 13.62 and 32.25 *per cent* and 15.38 to 71.43 *per cent* respectively. Shortage of CHCs in three tribal districts ranged between 6.25 to 33.33 *per cent* against the prescribed requirement.

During the exit conference, the Ministry attributed the shortfall of health facilities largely to shortage of funds as in the 12th Five Year Plan, against the requirement of ₹ 1,93,405/- crore, only ₹ 91,022/- crore was made available. However, the reply is not acceptable as there were substantial unspent funds with the States, indicating less utilisation of resources, as pointed out in paragraph no. 2.2. Further, the reply does not explain why despite shortage of funds, facilities were provided in excess of IPHS norms in non-tribal areas while depriving tribal areas.

3.2 Location of health facilities

As per IPHS norms, SCs are to be located within the village for providing easy access to the people and Auxiliary Nurse and Midwife (ANM). Further, it should be so located that a person is required to travel not more than 3 kilometres to reach there. SCs should also have some communication network (road communication/public transport/telephone). Similarly, PHCs and CHCs should be centrally located in an easily accessible area. Every health facility should be away from areas of garbage collection, cattle shed, etc.

Survey of 1,443 SCs, 514 PHCs, 300 CHCs, 134 District Hospitals (DHs) revealed that some of these were functioning in unhygienic environment, were inaccessible by public transport or were located at distances of more than three kilometre from the remotest village. The details are tabulated below in **Table-3.1**.

Table-3.1: State-wise details of location of health facilities

Sl. No.	Factors found deficient	SCs			PHCs			CHCs			DHs		
		Number	*Per cent*	States/ UTs involved	Number	*Per cent*	States/ UTs involved	Number	*Per cent*	States/ UTs involved	Number	*Per cent*	States/ UTs involved
1.	Distance of more than three kilometres from the remotest village	1031	73	29	NA	NA	NA	NA	NA	NA	NA	NA	NA
2.	Not accessible by public transport	404	28	28	104	20	24						
3.	Unhygienic surroundings	236	17	27	96	19	27	78	26	19	40	30	24

NA: Not applicable

3.3 Infrastructure in health facilities

For effective delivery of RCH services, IPHS lay down norms for infrastructure in SCs[2], PHCs[3] and CHCs[4], apart from basic necessities such as provision for own building, electricity, water supply, vehicles for referral services, etc.

Survey of 1,443 SCs (including 123 Type 'B' SCs), 514 PHCs, 300 CHCs, 134 DHs in 29 States/UT revealed the following infrastructural deficiencies as detailed below in **Table-3.2**.

Table-3.2: Infrastructural deficiencies in health facilities

Sl. No.	Infrastructural facility not available	Number of health facilities	Percentage of total health facilities surveyed	Number of States/ UT involved
	SC			
1.	Own designated Government building	401	28	27
2.	Cleanliness of premises	171	12	26
3.	Electricity supply	507	36	25
4.	Water supply	516	36	29
5.	Toilet	482	34	27
6.	Labour room for Type 'B' SC	24	20	8

[2] For Type 'B' SC (i.e SCs with delivery facilities), one labour room with one labour table and newborn corner.

[3] 4-6 beds, separate wards for males and females, separate clean toilets for men and women, labour room with a newborn care corner, etc.

[4] 30 beds with separate wards for males and females, should be operationalised as FRU with all facilities for emergency obstetric care, operation theatre, newborn care facilities such as separate resuscitation space and outlets for newborn, etc.

Sl. No.	Infrastructural facility not available	Number of health facilities	Percentage of total health facilities surveyed	Number of States/ UT involved
	PHC			
1.	Own designated Government building	43	8	18
2.	Condition of plaster on walls (plaster coming off/no plaster)	235	46	28
3.	Proper flooring	168	33	27
4.	Electricity supply	30	6	12
5.	Standby generator/Standby generator available but not functional	347	68	27
6.	Water supply	60	12	19
7.	Four beds	199	39	25
8.	Labour room/ Labour room available but not functional	174	34	23
9.	Newborn care corner	253	50	27
10.	Separate male and female wards	324	64	25
11.	Transport facility for referrals	219	43	23
	CHC			
1.	Condition of plaster on walls (plaster coming off/no plaster)	111	37	26
2.	Proper flooring	84	28	19
3.	Operation theatre /available but not in use	100	33	26
4.	Separate male and female wards	57	19	20
5.	Newborn care facilities/available but not in use	78	26	23
	DH			
1.	Condition of plaster on walls (plaster coming off/no plaster)	52	39	23
2.	Proper flooring	45	34	19

Some photographs of some of the SCs in poor condition are given below:

Condition of roof at SHC, Galonda, Jashpur, Chhattisgarh

Dilapidated condition of toilet at SC, Uttar Borbil, Karbi Anglong district, Assam

Some State-wise instances of non-availability of facilities essential for Reproductive and Child Care and their impact on the delivery of health services are discussed below:

In **Gujarat**, out of three selected General Hospitals[5] (GHs) where OTs were functional, pre-operative and post-operative rooms were not available in GH,

[5] Equivalent to a DH.

Nadiad. Due to lack of space, the laboratory was functioning in the waiting room at the entrance in GH, Nadiad (photograph given below). In General Hospital, Godhra, against the requirement of 440 beds, only 210 beds were available, due to which patients had to be accommodated on the floor.

Laboratory functioning in waiting room at the entrance of GH, Nadiad, Gujarat

In **Jharkhand**, in 17 selected PHCs, due to non-availability/shortage of bed or non-existence of PHC buildings, essential services *viz.* Out-patient department (OPD) services, 24 hours emergency services, referral services and In-patient department (IPD) were not being provided to the patients. In five selected DHs, against recommended 32 categories of specialty treatment facilities as per IPHS, only 6 to 14 facilities were functional.

In **Kerala**, only 23 CHCs out of 1,158 health facilities (CHC -234 and PHC-924) provided delivery services. The remaining 1,135 facilities were not functioning as delivery points as they did not have the basic infrastructure, manpower, equipment, etc. During the entry meeting, Secretary, Health and Family Welfare Department stated that 75 *per cent* of pregnant women use antenatal care services at Government institutions, but when it comes to delivery, they prefer private hospitals. The main reasons he cited were general perception of the people that delivery at the private hospital was safer and painless and availability of better paediatric services at private institutions.

In CHC Barkhed, Multai Block, Betul District, **Madhya Pradesh**, a ward boy was seen performing the duty of medical and paramedical staff exposing the beneficiaries to grave risk.

In **Maharashtra,** during field visit to DH, Bhandara, it was observed that due to inadequate waiting area, OPD counter was crowded and the patients had no place to sit. The ramp was not fitted with railing. There was no proper security arrangement in the hospital premises and stray animals were roaming in the hospital corridor. Similarly, in DH, Buldhana, the compound wall at the back side of the hospital was in dilapidated condition as a result of which stray

animals (pigs) were roaming in this area with access to Special Neo-natal Care Unit Ward.

In **Meghalaya**, in CHC, Bhoirymbong, due to faulty drainage system, water would overflow from the drains during rains and flood almost all the rooms in the CHC. In DH, Nongpoh, leaking pipes and overflowing septic tank were located next to kitchen area and general waste was being disposed/dumped near the hospital (photograph given below):

Leaking pipes and overflowing septic tank – DH, Nongpoh, Meghalaya

In **Rajasthan**, several deficiencies (such as cracks in walls, leakage in roofs, blockage in water drains, seepage of water in underground fittings, broken kitchen platform and broken stairs railing, etc.) were observed in four newly constructed buildings[6] in seven selected districts, indicating that the quality of construction of these buildings was sub-standard.

In **Sikkim**, CHC, Jorethang was functioning from an old building which was in dilapidated condition. Against the requirement of 30 beds, only 12 beds were available.

In **Tripura**, labour rooms in three PHCs was not made operational due to non-availability of staff and lack of equipment viz., radiant warmer, suction machine, steriliser, normal delivery kit etc. Due to poor infrastructure, pregnant women did not get the facility of delivery in four PHCs and had to be referred to SDH/CHC. In the selected CHCs/SDHs, emergency services, surgery, obstetrics and gynaecology, safe abortion services, MTP[7] services, facility for tubectomy and vasectomy operation, etc. were not available.

In **West Bengal**, overcrowding was observed in the Rural Hospital, Krishnapur (photograph given below).

[6] These buildings were constructed between March 2012 and December 2013 at a cost of ₹ 1.44 crore.

[7] Medical Termination of Pregnancy.

Overcrowded Rural Hospital, Krishnapur, Murshidabad, West Bengal (August 2016)

3.4 Status of Civil works under NRHM

The Ministry allocates funds to States[8] for creation and upgradation of health facilities. Targets of construction of health facilities and achievement there against during 2011-16, are given in the **Table-3.3** below (State-wise details in **Annexure-3.2**).

Table-3.3: Targets of construction of health facilities and achievement

Sl. No.	Type of healthcare facility	Target	Achievement	Shortfall (*per cent*)
1.	SCs (25 States)	9,563	6,089	3,474 (36)
2.	PHCs (25 States)	1,830	1,024	806 (44)
3.	CHC (17 States)	733	495	238 (32)

The shortfalls were attributed to non-finalisation/allotment of land, administrative delays in tendering, approval of revised cost, etc.

3.4.1 Execution of works

All works to be carried out by the Government or Government agencies are governed by the General Financial Rules, guidelines issued by Central Vigilance Commission and PWD manual. Scrutiny of records revealed various instances of violation of rules in execution of works under NRHM as discussed in subsequent paragraphs:

a) Award of works on nomination basis

In four States, 400 works costing ₹ 2,207.67 crore were awarded on nomination basis in violation of the provisions of extant rules[9] as detailed below in **Table-3.4**:

[8] Under the sub heads 'Hospital Strengthening' and 'New Construction/Renovation and Setting up'

[9] As per circular dated 5 July 2007 of Central Vigilance Commission, tendering process is a basic requirement for the award of contract by any Government agency as any other method, especially award of contract on nomination basis would amount to a breach of Article 14 of the Constitution guaranteeing right to equality, which implies right to equality to all interested parties.

Table-3.4: Award of works on nomination basis

Sl. No.	State	Number of works awarded	Cost (₹ in crore)	Year	Agency whom work awarded
1.	Kerala	15	50.32	2014-16	HLL Life Care Limited, Bharat Sanchar Nigam Limited, Kerala State Nirmithi Kendra, etc.
2.	Manipur	158	72.92	2011-16	Manipur Development Society (16), Manipur Tribal Development Corporation (96), Manipur Industrial Development Corporation (46)
3.	Mizoram	7	1.06	2012-14	Various local contractors
4.	Uttar Pradesh	220	2083.37	2012-14 & 2015-16	10 construction agencies of State Government and Union Government
	Total	**400**	**2207.67**		

In **Uttar Pradesh**, works were allotted to the construction agencies in an arbitrary and non-transparent manner and without assessing the capacity of the agency to execute the work resulting in delays in execution of NRHM works. For instance, against 34 works costing ₹ 685 crore awarded to UPRNN[10] on nomination basis in 2012-13, the agency was able to complete only three works at a cost of ₹ 244.80 crore as of March 2016. Similarly, HSCC[11], Noida was awarded six works costing ₹ 120 crore in 2012-13 but the agency was not able to complete even a single work as of March 2016.

b) Cases of suspected misappropriation

Cases of suspected misappropriation of funds amounting to ₹ 32.98 lakh in construction of Neo-natal Intensive Care Unit in Chitradurga, Karnataka and renovation of Institutional Building at Kamjong, Manipur were observed. In **Karnataka**, the work of construction of a Neo-natal Intensive Care Unit (INCU) ward on the first floor of the MCH building in the premises of District Hospital, Chitradurga was sanctioned (February 2011) for an estimated amount of ₹ 31.60 lakh for the year 2010-11. An amount of ₹ 65.00 lakh[12] was released to the DH from March 2013 to March 2014 and the funds were kept in a common bank account along with other scheme funds under NRHM. The cash books, cheque issue registers, vouchers, bank statements, etc. were not maintained properly for the concerned accounts. It was observed that NRHM funds of ₹ 25.62 lakh were misappropriated out of this bank account (from April 13 to March 14) by the officials of the District Health Hospital by altering the cheques of the beneficiaries under Family Planning Scheme, JSY Scheme etc. In **Manipur**, against ₹ 10 lakh approved for Renovation of

[10] Uttar Pradesh Rajkiya Nirman Nigam Ltd.
[11] Hospitals Services Consultancy Corporation.
[12] For construction of the building and procurement of equipment and medicines.

Institutional Building at CHC, Kamjong, the SHS, Manipur paid ₹ 7.36 lakh to the contractor (October 2014). However, during joint physical verification, the Medical Officer-in charge stated that no renovation work had been carried out as of August 2016.

c) Miscellaneous observations

Discrepancies regarding execution of works were noticed in nine States as detailed below:

In six States, instances of unadjusted advances, excess payment, etc. with cost implication of ₹ 306.96 crore were noticed as tabulated below in **Table-3.5**:

Table-3.5: Instances of unadjusted advances, excess payment, etc.

Sl. No.	State	Nature of observation	Amount (₹ in crore)
1.	Assam	Non-imposition of liquidated damages and other charges	0.99
2.	Himachal Pradesh	Blockage of funds	19.97
3.	Jammu and Kashmir	Unfruitful expenditure	0.91
4.	Karnataka	Excess payment	0.54
5.	Manipur	Unadjusted advances	30.56
6.	Uttar Pradesh	Unadjusted advances and non-refund of interest income	250.34
		Non-imposition of liquidated damages	3.65
		Total	**306.96**

In **Kerala**, agreements for works did not contain mandatory clauses for timely completion of work, inspection for quality check, etc.

In **Manipur**, an amount of ₹ 4.94 lakh (out of approved cost of ₹ 9.88 lakh) was released for construction of Compound Wall of PHC, Maram, District Senapati, Manipur during 2009-10. However, during joint physical verification (May 2016), it was found that no compound wall had been constructed around the PHC. The State Mission Society replied (November 2016) that the work could not be started due to boundary issue and it was targeted for completion by March 2017.

In **Uttar Pradesh**, instances of improper cost estimation and approvals by the Department and implementing agencies, undue favour to contractors due to non-adoption of norms of PWD of the State Government in preparing detailed estimates, lack of quality assurance in 28 works having financial implication of ₹ 247.20 crore, were observed.

3.4.2 Non-commencement of work

In nine States (**Assam, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Odisha, Rajasthan, Sikkim** and **Tripura**), 1514 works were not commenced/cancelled due to non-availability of land, non-completion of codal formalities, delay on the part of construction agencies, etc. Out of nine States, in five States of **Himachal Pradesh, Kerala, Odisha, Sikkim** and **Tripura**, an amount of ₹ 134.91 crore was released for 538 works which, though unutilised, was not refunded by the executing agencies/contractors.

In **Haryana**, administrative approval of ₹ 171.18 lakh for the construction of CHC, Mulana by adding a new floor to the existing building was accorded in November 2009. Subsequently, the department realised that there was no provision of adding floor to the existing building and accorded administrative approval and revised sanction of ₹ 657.81 lakh for construction of new building in March 2015. The work had not commenced as of April 2016 and was at the tendering stage. Thus poor planning led to inordinate delays.

Similarly, in the case of construction of PHC Barna (Kurukshetra), PHC Gudiyana (Rewari) and PHC Pakshma (Rohtak), administrative approvals were accorded in 2008-09 and 2009-10, but the construction could not commence due to dispute/non-availability of land.

Administrative approval for construction of 37 Sub-centres costing ₹ 782.92 lakh accorded between 2007-09, was withdrawn between May 2013 and September 2014, due to non-availability of land in 32 cases and in five cases, SCs were already functioning in Government buildings. The department realized its fault in planning after a lapse of four years. It was also observed that construction of these facilities had not been completed till July 2016.

3.4.3 Delay in completion of works

In nine States **(Chhattisgarh, Haryana, Himachal Pradesh, Karnataka, Kerala, Manipur, Rajasthan, Telangana and West Bengal)**, 199 works costing ₹ 186.55 crore were delayed for periods ranging from one year to more than three years beyond the scheduled date of completion, as shown below in **Table-3.6**:

Table-3.6: State-wise details of works delayed

(₹ in crore)

Sl. No.	Name of State	Total number of works delayed and their cost	Number of works with		
			Delay of more than 1-2 years and their cost	Delay of more than 2-3 years and their cost	Delay of more than three years and their cost
1.	Chhattisgarh	74 (22.37)	7 (0.76)	20 (4.24)	47 (17.37)
2.	Haryana	10 (2.11)	1 (0.21)	3 (0.63)	1 (0.21)
3.	Himachal Pradesh	48 (18.25)	23 (5.30)*	3 (0.48)	22 (12.47)
4.	Karnataka	76 (47.75)	4 (0.83)	Nil	1 (0.21)
5.	Kerala	23 (75.33)	8 (43.27)	5 (24.72)	1 (0.39)
6.	Manipur	1 (0.35)	1 (0.35)	Nil	Nil
7.	Rajasthan	34 (52.44)	6 (3.78)	1 (2.06)	Nil
8.	Telangana	3 (35.45)	Nil	1 (16.23)	2 (19.22)
9.	West Bengal	42 (33.82)	Nil	9 (6.87)	33 (26.95)
	Total	**311 (287.87)**	**50 (54.50)**	**42 (55.23)**	**107 (76.82)**

** Delay of more than nine months to two years*

The delays were attributed to site and land disputes, paucity of funds, delay in obtaining site clearances, etc.

3.4.4 Works abandoned/dropped

In five States (**Assam, Gujarat, Jammu and Kashmir, Karnataka** and **Manipur**), 22 works were dropped/abandoned (State-wise details in **Annexure-3.3**) due to various reasons such as absence of clear title of land, site issues, etc. Of these, 19 works costing ₹ 5.23 crore were abandoned/ dropped after spending ₹ 1.37 crore.

3.4.5 Works completed but not commissioned/made functional/handed over

In 20 States (**Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Jammu and Kashmir, Jharkhand, Kerala, Madhya Pradesh, Manipur, Maharashtra, Mizoram, Odisha, Rajasthan, Tamil Nadu, Telangana, Tripura, Uttar Pradesh, Uttarakhand** and **West Bengal**), 1,285 works, though completed, were not commissioned or made functional. This was attributed to shortage of human resources, improper location of building, poor road connectivity, etc. Out of 1,285 works in 20 States, expenditure of ₹ 81.96 crore was incurred on the construction of 165 works in 15 States.

In three States (**Bihar, Kerala** and **Rajasthan**), expenditure of ₹ 1.21 crore towards electricity bill of vacant premises, procurement of equipment and rent was incurred due to non-commissioning of 36 completed buildings. Out of

three States, the period of non-commissioning of three works in **Bihar** and **Rajasthan**, ranged between 12 to 18 months. The reasons were shortage of manpower and improper location of constructed buildings.

Photographs of some of the unutilized buildings in **Bihar, Chhattisgarh, Gujarat, Jharkhand, Manipur, Rajasthan, Telangana** and **Uttarakhand** are given below:

Unutilised building of SDH, Nirmali in Supaul district, Bihar

10 bedded MCH wing at PHC Komakhan, Chhattisgarh not being utilised despite its completion

SHC, Bodsara under construction in the vicinity of PHC, Bodsara lying incomplete in Chhattisgarh

Building of SC, Mohalel-2, Gujarat not being utilised

Photograph showing non-utilization of CHC, Bharno in Gumla district, Jharkhand handed over in August 2014

Unutilised institutional building, PHSC, Sadim, Manipur

Unutilised building of PHSC, Makui, Manipur

Unutilized ANM trainees hostel building at district Rajsamand, Rajasthan

Unutilised building of PHC, Velvarthy, Telangana

Unutilized building of PHC, Chandrapuri, Haridwar district, Uttarakhand

In six States (**Assam, Maharashtra, Odisha, Rajasthan, Tripura** and **West Bengal)**, 14 instances of misuse of the completed health facilities *viz.* unauthorized occupation by Gram Panchayats, anti-social elements, private persons, etc. were also observed.

3.4.6 Upgradation of infrastructure

NRHM framework envisaged upgradation of existing health infrastructure at par with IPHS. The targets for upgradation of facilities and the achievement in selected districts of the following States, was as given in the **Table-3.7** below:

Table-3.7: Targets for upgradation of facilities and the achievement

Sl. No.	Target	Achievement
1.	Upgradation of health facilities to IPHS by 2010.	In 79 selected districts of 15 States (**Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Madhya Pradesh, Maharashtra, Meghalaya, Odisha, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh** and **Uttarakhand**), only 1,096 (23 *per cent*), 607 (53 *per cent*) and 204 (50 *per cent*) out of 4,868 SCs, 1,150 PHCs and 404 CHCs, were upgraded to IPHS respectively.
2.	The SCs where the delivery load was high, to be upgraded to Type 'B' SC.	In 60 selected districts of nine States (**Arunachal Pradesh, Assam, Bihar, Jharkhand, Madhya Pradesh, Maharashtra, Rajasthan, Tripura** and **Uttar Pradesh**), only 1,933 SCs (39 *per cent*) out of 4,970 SCs targeted for upgradation from Type 'A' to Type 'B' during 2011-16, could be converted to Type 'B'. Further, 785 out of 1,933 upgraded Type 'B' SCs, could not conduct any deliveries due to lack of manpower, equipment, etc.
3.	PHC where CHC is away and has more than one hour of journey should be upgraded to 24 x 7 service.	In 67 districts of 15 States (**Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Haryana, Jharkhand, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Tamil Nadu, Tripura, Uttar Pradesh, Uttarakhand** and **West Bengal)**, only 1,537 (61 *per cent*) out of 2,512 PHCs targeted for upgradation to 24 x 7 delivery facility during 2011-16, were upgraded.

Sl. No.	Target	Achievement
4.	CHCs to be upgraded as FRU[13].	In 77 selected districts of 14 States (**Arunachal Pradesh, Assam, Chhattisgarh, Gujarat, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh** and **West Bengal**), only 249 (40 *per cent*) out of 618 CHCs targeted for upgradation to FRU during 2011-16, were upgraded to FRU.

In **Kerala**, during 2011-16, 175 PHCs were identified for upgradation in the State to provide 24x7 hours emergency service but none of the PHCs was upgraded.

In six States, out of 345 health facilities upgraded, 301 did not provide the required services due to shortage of manpower, lack of infrastructure, etc. as detailed below in **Table-3.8**.

Table-3.8: Details of Health Facilities upgraded but not functional

Sl. No.	State	Number of health facilities and type of upgradation	Number of upgraded Health facilities not functional	Reasons for non-functionality
1.	**Assam**	40 PHCs upgraded to 24 x 7 facility	12	Lack of manpower, equipment, etc.
2.	**Himachal Pradesh**	6 CHCs declared FRU	3	Lack of infrastructure and shortage of required manpower.
3.	**Jammu and Kashmir**	46 SCs upgraded as NTPHCs[14]	46	Lack of human resources and infrastructural facilities.
4.	**Maharashtra**	55 PHCs upgraded to 24 x 7 facility	55	Lack of manpower, equipment, etc.
5.	**Manipur**	15 PHCs upgraded to 24 x 7 facility	2	Shortage of required manpower, lack of emergency services and facility open for only five hours daily.
6.	**Odisha**	183 PHCs upgraded to 24 x 7 facility	183	Shortage of manpower, equipment, etc.
		Total	**301**	

3.5 Position of staff quarters at health facilities

IPHS prescribe that staff quarters be provided at the health facilities. At SCs (Type 'B'), residential facility for a minimum of two Health Workers should be provided. At PHCs, accommodation should be provided for Medical Officer, nursing staff, pharmacist, laboratory technician and other staff. At CHCs, minimum eight quarters for doctors, minimum eight quarters for staff

[13] An existing facility (DH, Sub-divisional Hospital, CHC, etc.) can be declared a fully operational First Referral Unit (FRU) only if it is equipped to provide round-the-clock services for emergency obstetric and new born care, in addition to all emergencies that any hospital is required to provide.

[14] New Type Primary Health Centres.

nurses/ paramedical staff, minimum two quarters for ward boys and minimum one quarter for driver. The shortages of staff quarters in health facilities in the selected districts in some States as of March 2016 are given in **Annexure-3.4**.

The reasons for low/non-occupancy of staff quarters were attributed by States[15] to non-availability of basic amenities like toilets, electricity, and water supply in the quarters, dilapidated condition of quarters, unwillingness of staff to occupy the quarters due to their inconvenient location and non-posting of doctors, etc. The dilapidated condition of staff quarters are depicted in the following photographs:

Staff quarters in dilapidated condition in PHC, Baravhi, District Betul, Madhya Pradesh

Conclusion

Deficiency and non-availability of infrastructural facilities continue to hamper the delivery of health care services. Instances of unhygienic and inaccessible health care facilities are a cause for concern. Civil works were plagued by delays and instances of delayed works, non-commencement of works, abandoned works, were common. The occupancy of staff quarters continued to be poor due to dilapidated condition of the buildings and inadequate amenities.

Recommendations:

- Ministry may ensure that all civil works are reviewed by concerned authorities in all States in the light of extant rules for removing the delays/impediments and ensure faster completion of the same and commissioning of the completed buildings.
- Ministry may ensure that steps are taken by States to address the shortage of staff quarters and provide all the required amenities.

[15] Andaman and Nicobar Islands, Assam, Bihar, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Sikkim, Tripura and West Bengal.

CHAPTER IV : AVAILABILITY OF MEDICINE AND EQUIPMENT

4.1 Introduction

Financial support is provided to States under NRHM to strengthen the health system including supply of drugs. States are being incentivized up to five *per cent* of their total outlay under NRHM to prepare policy and establish systems for free distribution of essential drugs, robust procurement system, etc.

4.2 Non-availability of equipment

NRHM framework envisages availability of essential functional equipment in all facilities to extend the assured health care facilities. As per IPHS, for SCs - the equipment necessary for conducting safe deliveries at SC Type 'B', home deliveries (for both Type 'A' and Type 'B'), immunisation, contraceptive services, etc. should be available. For PHC, the necessary equipment viz. normal delivery kit, equipment for assisted deliveries, standard surgical set, etc., to deliver the assured services should be available. For CHC, standard surgical set of various types, normal delivery kit, imaging equipment, etc., should be available. While equipment norms are different for each grade of DH, certain essential equipment *viz.* imaging equipment, SNCU[1] equipment, blood storage unit, etc. are required to be available in all the DHs.

Equipment is procured by State Health Society or any Corporation established for the purpose by the State.

Surveys of selected health facilities across 29 States/UT revealed that the following equipment essential for RCH services were not available as per details tabulated below in **Table 4.1**.

[1] Special Newborn Care Unit

Table 4.1: Non-availability of equipment for RCH services

Sl. No.	Name of the equipment not available	Number of health facilities where equipment not available	Percentage of total health facilities where equipment not available	Number of States/ UT involved
		SC		
1.	Labour table (for Type 'B' SCs)	38	31	10
		PHC		
2.	Normal delivery kit	163	32	22
		CHC		
3.	Emergency obstetric care equipment	209	70	29
4.	ECG facility[2]	190	63	26
5.	X-ray facility	142	47	26
		DH		
6.	ECG facility	31	23	12
7.	X-ray facility	14	10	6
8.	Blood storage unit	28	21	10

Some State-wise findings are discussed below:

In **Meghalaya**, OT was available in all the three DHs, but remained unutilised, due to non-availability of anaesthetist and surgeon. New born stabilization unit (NBSU) was not available in Umsning and Riangdo CHCs. In the NBSU of Bhoirymbong CHC, radiant warmer, though available was not functioning.

In **Sikkim**, all the DHs were functioning without ICUs. Even the State Referral Hospital at Gangtok did not have the ICU facility. Consequently, critically ill patients requiring major surgical and medical intervention were referred to the nearest private hospital, i.e., either to Manipal Central Referral Hospital at Gangtok or outside the State. No CHCs had essential equipment *viz.* ultrasound, ECG, sterile leak proof containers, etc.

4.3 Idle equipment

In 17 States (**Andhra Pradesh, Assam, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Karnataka, Meghalaya, Punjab, Rajasthan, Tamil Nadu, Telangana, Tripura, Uttarakhand** and **West Bengal**), 428 equipment (ultrasound, X-ray, ECG, cardiac monitors, auto analyzer, incinerator, OT equipment, blood storage unit etc.) valued at ₹ 30.39 crore were lying idle/unutilised due to non-availability of required doctors and trained manpower to operate them, lack of adequate space for their installation, etc. (State-wise details are given in **Annexure-4.1**).

Some State-wise instances are discussed below:

[2] This includes facilities where equipment was available but not functional.

In **Gujarat**, the Biosafety Cabinet[3] for Microbiology laboratory worth ₹ 4.00 lakh was lying idle since October 2013 at the General Hospital[4], Godhra. CDMO/Godhra stated (July 2016) that due to non-availability of space, the machine was not put to use. Similarly, two ultrasound scanners costing ₹ 11.00 lakh were lying idle in two GHs, Nadiad (since March 2013) and Godhra (since March 2011) due to absence of radiologist and impaired condition of the equipment (photograph given below).

Ultrasound machine lying idle at GH, Nadiad, Gujarat due to vacant post of Radiologist

In **Jharkhand**, in five selected districts, 26 machines/equipment costing ₹ 3.05 crore were lying idle since their purchase in March 2011, due to lack of trained manpower, reagents or kits (photographs given below).

Auto analyzer and Path Fast lying idle in store of DH, Jamtara, Jharkhand

USG machines lying idle in store of DH, Jamtara, Jharkhand

In **Karnataka**, in one DH, seven Taluka Hospitals and two CHCs, 10 ultrasound scanners costing ₹ 1.30 crore supplied were not put to use as posts of radiologists were vacant. Operation tables costing ₹ 2.39 lakh also remained unused in three CHCs as posts of General Surgeon were not sanctioned in these CHCs.

[3] Biosafety Cabinet is designed to protect the operator, the laboratory environment and work materials from exposure to infectious aerosols and splashes that may be generated when manipulating materials containing infectious agents, such as primary cultures, stocks and diagnostic specimen, etc.

[4] Government Hospital equivalent to DH.

Unutilised ultra sound scanner at Taluk Hospital Challakere, Karnataka

Operation table lying un-utilised at CHC Maradihalli, Karnataka

In **Manipur**, equipment like autoclave, x-ray machine, blood bank refrigerator, baby incubator, suction pump, incinerator, freezer, ice lined refrigerator and portable ultrasound machine had been lying unutilised in the DH, Ukhrul, DH, Senapati, CHC, Kamjong, CHC, Mao, and PHC, Phungyar, from the date of receipt of the equipment (photograph given below). The non-utilization of the equipment was attributed to lack of power supply, non-installation of equipment and non-posting of technician, etc.

Incinerator lying uninstalled in DH, Ukhrul, Manipur

Unused baby incubator in DH, Ukhrul, Manipur

In **Meghalaya**, blood storage equipment costing ₹ 10.01 lakh was lying idle in DHs of Nongstoin and Nongpoh, as there was no blood storage facility in these hospitals. Due to this, patients requiring blood transfusion were referred to other hospitals. Radiant warmers costing ₹ 1.50 lakh in CHCs Riangdo and Umsning were also not functional.

Blood storage equipments lying idle in DH Nongstoin, Meghalaya

Radiant warmers not functional in CHC Umsning, Meghalaya

In **Andaman and Nicobar Islands**, the main operation theatres in both the DHs (i.e., BJR Hospital and Dr. RP Hospital) and two CHCs of Nancowry and Rangat remained unutilised for want of surgical specialists and qualified medical professionals. As a result, all the surgical cases were referred to the FRU, namely GB Pant Hospital, situated in the capital town of Port Blair.

Idling of equipment not only resulted in depriving the patients of basic health care facilities but also led to blocking of funds.

4.4 Deficiencies in utilisation of funds for procurement of drugs and supplies

In three States of **Jammu and Kashmir, Jharkhand** and **Uttar Pradesh**, discrepancies regarding procurement of drugs/medicines were noticed as discussed below:

a) Tendering procedure not followed

- In **Jammu and Kashmir**, medicines/drugs/surgical items/etc. worth ₹ 6.38 crore were purchased during 2013-14 without following tendering procedure.
- In **Jharkhand**, Jharkhand Rural Health Mission Society and Civil Surgeon-cum-Chief Medical Officer approve rate contract for various medicines which is applicable across state/district respectively. The hospitals and district health societies are supposed to procure the listed drugs at the rates specified by the respective authorities only. Two DHs[5] and one DRHS[6] ignored the approved rate contracts and purchased medicines/consumables by calling quotations or on nomination basis during 2011-16 resulting in excess payment of ₹ 39.99 lakh to the agencies/suppliers.

Discrepancies in procurement of drugs in Uttar Pradesh

In seven selected districts, absorbent cotton wool was procured (October 2012 to December 2015) from M/s Om Surgical Ltd at the cost of ₹ 5.30 crore without ascertaining the credentials of the firm. The firm had been blacklisted by Tamil Nadu Medical Services Corporation Limited from May 2012 to May 2017 for supplying sub-standard quality of the same item. The CMOs of the selected districts intimated that they were not aware of the blacklisting of the firm. The State Government replied (November 2016) that action would be taken against erring officials after investigation.

[5] Sadar Hospital, Dumka & West Singhbhum.
[6] West Singhbhum.

In another case, in Uttar Pradesh, in contravention of orders of State Programme Management Unit[7] (September 2012 and December 2014) for procurement of AYUSH drugs from the firms authorised by it, CMOs of seven districts procured drugs worth ₹ 1.25 crore from unauthorized firms. The drugs were issued to the patients without ensuring the required quality checks.

4.5 Non-availability of drugs in health facilities

IPHS prescribe certain types of drugs/medicines for each type of health facility depending upon its requirement. Some States have also devised their own Essential Drugs Lists (EDL) containing drugs/medicines suited to their own requirement. NRHM aims to strengthen the capacity of the States in ensuring quality assurance of drugs, preferably through the establishment of a state level autonomous corporation/body which is incharge not only of transparent and efficient procurement of drugs, but also of quality assurance and logistics.

Survey of selected healthcare facilities in 29 States/UT revealed that prescribed types of allopathic drugs were not available as per IPHS and as per State essential list in many health facilities in many States as shown in the **Table-4.2** given below:

Table-4.2

Sl. No.	Type of health care facility	Number of health facilities where deficiency observed	Percentage of total health facilities surveyed	Number of States/ UT involved
1.	SC	502	35	27
2.	PHC	104	20	19
3.	CHC	47	16	14
4.	DH	25	19	10

In 24 States/UT (**Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Jammu and Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Odisha, Punjab, Rajasthan, Sikkim, Tamil Nadu, Telangana, Tripura, Uttar Pradesh, Uttarakhand** and **West Bengal**), audit noticed instances of non-availability of drugs – essential/required as per IPHS such as Paracetamol, B-complex, Albendazole, etc. Out of these 24 States/UTs, in eight States[8], essential medicines/ consumables such as Vitamin-A, contraceptive pills, ORS packets, RTI/STI[9]

[7] In Uttar Pradesh, State Programme Management Unit executes the day-to-day activities of NRHM.

[8] Chhattisgarh, Karnataka, Kerala, Madhya Pradesh, Punjab, Rajasthan, Uttar Pradesh and Uttarakhand.

[9] RTI-Reproductive Tract Infection, STI-Sexually transmitted infection.

drugs, essential obstetric kits, etc., required for RCH services, were not available in selected health facilities.

4.6 Quality testing of drugs and expired medicines

In 14 States (**Assam, Bihar, Haryana, Jharkhand, Karnataka, Kerala, Maharashtra, Manipur, Odisha, Punjab, Telangana, Tripura, Uttar Pradesh** and **West Bengal**), medicines were issued to patients without ensuring the prescribed quality checks and without observing the expiry periods of drugs, thus exposing the patients to grave risks as detailed in **Annexure-4.2**. During the exit conference, the Ministry stated that it is now actively promoting use of IT software at the facilities for controlling such practices.

4.7 Mobile Medical Units

One major initiative under the NRHM was operationalization of Mobile Medical Units (MMUs) to provide a range of health care services for population living in remote, inaccessible, un-served and under-served areas, mainly with the objective of taking healthcare service delivery to the doorsteps of these populations. MMUs comprise one/two or three vehicles varying from State to State and carry required medical and paramedical personnel, diagnostic equipment such as X-Ray, ultrasound machine, ECG machine and generator. Depending on distances, the MMU make upto one visit a day to distant villages, with every area being visited on the same day in each month and preceded by active mobilization with a well-publicized monthly schedule of visits through loudspeakers, announcements, etc.

MMUs were not operational in four States (**Chhattisgarh, Himachal Pradesh, Mizoram** and **Uttar Pradesh**), while in ten States of **Bihar, Gujarat**, **Haryana, Jammu and Kashmir, Jharkhand, Kerala, Madhya Pradesh, Maharashtra, Odisha** and **Tripura,** MMUs were partially operational. Audit observed that services provided by MMUs were largely deficient in nine States of **Assam, Gujarat, Haryana, Jammu and Kashmir, Jharkhand, Meghalaya, Rajasthan, Tamil Nadu** and **Uttarakhand**.

4.8 National Ambulance Service

One of the components under NRHM is patient transport ambulances operating under Dial 108/102 ambulance services. 108 is predominantly an emergency response system, primarily designed to attend to patients of critical care, trauma and accident victims, etc. 102 services essentially consist of basic transport aimed to cater to the needs of pregnant women and children,

mainly under free transport facility (transfer from home to health facility, inter-facility transfer in case of referral and drop back) under Janani Shishu Suraksha Karyakram (JSSK).

4.8.1 Utilisation of funds allotted for National Ambulance Service

In eight States[10], out of ₹ 175.26 crore allotted for procurement of ambulances, ₹ 155.93 crore remained un-utilized. Some of the irregularities observed by Audit in this regard were administrative delays, tendering process for procurement process not being initiated, diversion of funds for other purposes etc. resulting in non fulfilment of the intended objectives. Audit further observed deficiencies in services rendered by the ambulances such as delayed response time, not attending to calls, etc. in five States of **Assam, Jammu and Kashmir, Madhya Pradesh, Odisha** and **Uttarakhand**.

Good practice

In **Chhattisgarh**, as an emergency response system, the State government had provided ambulance services which were available on call (108) for dropping the patient to any public health institution and Mahtari express (Ambulance) to pick and drop the pregnant mothers to public health institution. Audit observed that there were a total of 239 ambulances (on call) and 300 Mahtari expresses available in the State and these were available round the clock.

4.9 Availability of ASHA kit and timely replenishment of items of ASHA kits

Every ASHA is to be provided with a drug kit containing a set of drugs, equipment and products[11]. The kit enables her to provide basic level care to the community. Surveys of 3,588 ASHAs in 29 States/UT revealed the following shortfalls as given below in **Table-4.3**.

[10] Bihar, Haryana, Jammu and Kashmir, Jharkhand, Kerala, Maharashtra, Meghalaya and Tripura.

[11] These include disposable delivery kits, pregnancy kit, paracetamol tablets, IFA tablets, ORS packets, deworming pills, condoms, etc. and basic equipment such as thermometer, BP monitor, weighing scale (for newborn), baby blanket, etc.

Table-4.3: Shortfalls in availability of items/medicines with ASHAs

Sl. No.	Name of item	ASHAs not in possession of the item/medicine	
		Number	*Per cent* of total ASHAs surveyed
1.	Disposable delivery kit	3,249	83
2.	Blood pressure monitor	3,170	81
3.	Thermometer	1,060	27
4.	Pregnancy kit	1,428	28
5.	Weighing scale (for newborns)	887	23
6.	Deworming pills	1,299	33
7.	Paracetamol tablets	1,006	26
8.	Iron pills	878	22

The items such as disposable delivery kit, blood pressure monitor, thermometer, pregnancy kit and weighting scale and medicines like deworming pills, paracetamol tablets and iron pills are essential for providing basic RCH services by the ASHA.

In 10 States **(Bihar, Chhattisgarh, Himachal Pradesh, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Rajasthan, Sikkim** and **West Bengal)**, delays in replenishment of drug kits, non-availability of ASHA kits, etc. were noticed.

Conclusion

Surveys of selected health facilities across 29 States/UT disclosed that even the basic equipment required for RCH services such as labour table, normal delivery kit, emergency obstetric care equipment, X-ray facility were not available in various health facilities. Non-availability of essential drugs and idling of equipment deprived the patients of the intended health care under NRHM. In 14 States, medicines were issued to patients without ensuring the prescribed quality checks and without observing the expiry period of drugs. MMUs were not operational in four States and were partially operational in 10 States.

Recommendations:

- Availability of all essential drugs and equipment should be ensured at all health facilities.
- It must be ensured that all the prescribed drugs are validated by quality testing before being provided to the health facilities.
- MMUs and ambulances should be made fully operational and equipped with the required manpower and equipment.
- ASHAs need to be provided with prescribed kits that are replenished on time.

CHAPTER V : AVAILABILITY OF HUMAN RESOURCES

5.1 Introduction

The Mission aimed at ensuring uninterrupted and quality health care by increasing the availability of doctors, specialists, paramedical staff, ANMs and ASHAs. State Governments were to fill up the existing vacancies by new contractual appointments for which Government of India provides funds. Audit analysis of the staffing requirements as per IPHS/sanctioned strength *vis-à-vis* the actual position across various facilities is given in **Table-5.1** below:

Table-5.1: Health Personnel at rural health facilities as on 31 March 2016

Sl. No.	Facility	Staff	Number of facilities audited	Number of States covered[1]	Essential Number of staff as per IPHS Norms	Sanctioned Strength	Men in position	Shortage (-)/Excess (+) against IPHS and its percentage	Shortage (-)/ Excess (+) against sanctioned strength and its percentage
1	**District Hospitals (DHs)**	**Doctors/ specialists**	111	23	3,445	3,503	2,298	-1,147(33)	-1,205(34)
		Staff Nurse	111	23	5,878	5,379	4,405	-1,473(25)	-974(18)
		Paramedical staff	111	23	3,653	2,315	1,679	-1,974(54)	-636 (27)
2	**Sub-District/Sub-Divisional Hospitals(SDHs)**	**Doctors/ specialists**	43	10	810	580	369	-441(54)	-211(36)
		Staff Nurse	43	10	734	869	587	-147(20)	-282(32)
		Paramedical staff	43	10	1,132	716	437	-695(61)	-279(39)
3	**Community Health Centres(CHCs)**	**Doctors**	238	25	1,234	817	305	-929(75)	-512 (63)
		Staff Nurse	236	24	2,360	1,540	1,303	-1,057(45)	-237 (15)
		Paramedical staff	236	24	1,413	1,143	861	-552 (39)	-282 (25)
4	**Primary Health Centres(PHCs)**	**Doctors**	295	15	295	369	235	-60(20)	-134(36)
		Staff Nurse	421	22	1,281	665	466	-815(64)	-199(30)
		Paramedical staff	458	25	2,290	2,059	1,506	-784(34)	-553 (27)
5	**Sub-centres (SCs)**	**Auxiliary Nurse and Mid-wife (ANM)/ Health Worker (Female)**	560	10	608	575	519	-89 (15)	-56 (10)
		Health Worker (Male)	1,376	26	1,376	1,032	453	-923(67)	-579 (56)

[Source: Data compiled from the records of selected districts]

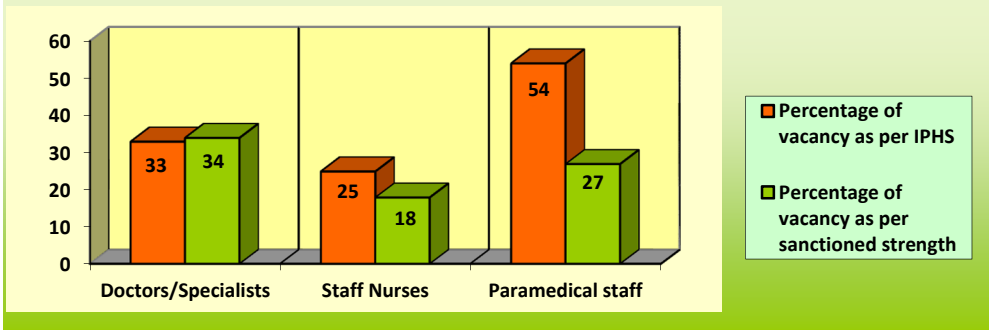
[1] Information in respect of remaining States was either not received or were incomplete.

While shortages of doctors and support staff were observed across all facilities, a few significant cases are discussed below:

5.2 District Hospitals

The shortage of manpower in 111 DHs audited in 23 States is depicted in **Chart-5.1** below:

Chart-5.1: Shortage of manpower



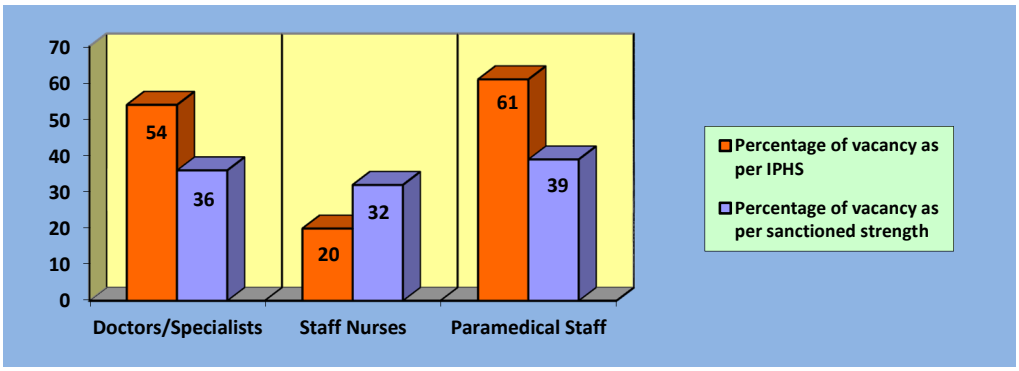
(State-wise details are given in **Annexure-5.1.1 to 5.1.3).**

In **Mizoram**, in the selected two DHs, shortage of doctors/specialists and Nurses/Paramedical staff was as high as 75 and 80 *per cent* respectively as of March 2016, against IPHS. Similarly, in **West Bengal**, in two selected Medical College & Hospitals[2], the shortage of doctors was 56 *per cent*.

5.3 Sub-District/Sub-Divisional Hospital

The shortage of manpower in 43 SDHs audited in 10 States is depicted in **Chart-5.2** below:

Chart-5.2: Shortage of manpower



Position was extremely poor in **Bihar, Karnataka** and **Maharashtra**. State-wise details are given in **Annexure-5.2.**

[2] Equivalent to District Hospital

5.4 Community Health Centre (CHCs)

In the selected CHCs of 27 States, the average shortfall of five types of Specialists (General Surgeon, General Physician, Obstetrician/Gynaecologist, Paediatrician and Anaesthetist) ranged between 77 to 87 *per cent*. State-wise details are given in **Annexure-5.3**.

One CHC in **Odisha** and two CHCs in **Tripura** were functioning without any doctor (Allopathic/AYUSH).

The position of CHCs without paramedical staff consisting of Laboratory Technician, Pharmacist, Health Worker (Female) etc. is given in **Table- 5.2** below:

Table- 5.2: CHCs functioning without paramedical staff

Sl. No.	Name of the Post (Para-medical staff)	Number of States	Status of para-medical staff in CHCs	
			Number of CHCs audited	Number of CHCs without paramedical staff and its percentage to total CHCs audited
1.	Pharmacist	12	151	30 (20)
2.	Laboratory Technician	11	144	28 (19)
3.	Statistical Assistant/Data Entry Operator	17	191	70 (37)
4.	Health Worker (Female)	12	151	78 (52)
5.	Health Worker (Male)	17	190	116 (61)
6.	Health Assistant (Female)/ Lady Health Visitor	19	199	91 (46)

The State wise detail of CHCs functioning without para-medical staff at test checked CHCs is given in **Annexure-5.4.**

The percentage of shortage of Staff Nurses was more than 50 in eight States **(Jharkhand, Karnataka, Maharashtra, Odisha, Sikkim, Tamil Nadu, Uttar Pradesh** and **Uttarakhand).** State wise details are given in **Annexure-5.5.**

5.5 Primary Health Centres (PHCs)

Each PHC is to be manned by a Medical officer supported by 13 paramedical and other staff, as per the IPHS. Audit of 305 PHCs in 13 States **(Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Haryana, Himachal Pradesh, Karnataka, Madhya Pradesh, Odisha, Punjab, Rajasthan, Uttar Pradesh** and **Uttarakhand),** disclosed that as of March 2016, in 67 PHCs no doctor was posted **(Annexure-5.6).**The position was worse in **Uttar Pradesh**, where about 50 *per cent* of the selected PHCs were running without any doctor.

In 10 States **(Andhra Pradesh, Bihar, Haryana, Himachal Pradesh, Maharashtra, Manipur, Rajasthan, Tamil Nadu Telangana** and **Tripura),** doctors posted in the selected PHCs were more than the requirement as per IPHS.

In 22 States, in 421 PHCs, the shortage of Nurse-midwife (Staff-Nurse) against the IPHS and sanctioned strength as of March 2016 was 64 and 30 *per cent* respectively. Further out of 421 PHCs audited in 22 States, 121 PHCs in nine States **(Chhattisgarh, Himachal Pradesh, Jammu and Kashmir, Madhya Pradesh, Maharashtra, Odisha, Sikkim, Uttar Pradesh** and **Uttarakhand),** were functioning without Staff Nurse (Details are given in **Annexure-5.7**). In 448 PHCs of 24 States, the percentage of PHCs running without Laboratory Technician, Pharmacist, Accountant cum Data Entry Operator, Health Worker (Female), Health Worker (Male), Health Assistant (Female)/Lady Health Visitor ranged between 24 and 75 *per cent*. Details are given in **Annexure-5.8.**

5.6 Sub-centres (SCs)

As per IPHS, each SC should have one Auxiliary Nurse and Mid-wife (ANM)/ Health Worker (Female) and one Health Worker (Male). In 13 States, ANM/Health Worker (Female) was not posted in 80 SCs (10 *per cent*). Similarly, Health Workers (Male) were not posted in 749 SCs (65 *per cent*) in 22 States. State wise details are given in **Annexure-5.9.**

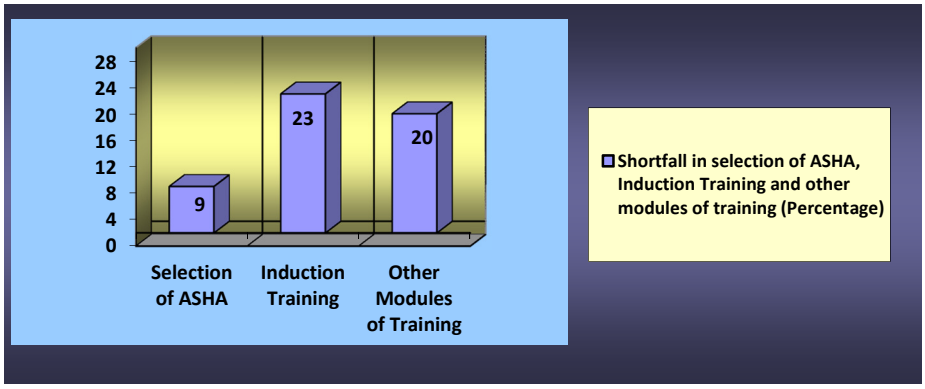
The Ministry admitted that the shortage is due to overall inadequate availability of personnel and even irrational deployment of doctors and specialists by the State Government.

5.7 Engagement of ASHA and Training

Under the Mission, a trained female community health worker called Accredited Social Health Activist (ASHA) is to be provided in each village in the ratio of one per population of 1,000 (or less, for large isolated habitations). States were given the freedom to relax the population norms prescribed for ASHA, so as to suit their local conditions. Each ASHA was to be provided induction and other modules of training for skill enhancement.

Test check of records of 88 districts in 19 States during 2011-16 revealed shortfalls in selection and training of ASHAs as indicated in the **Chart-5.3** below:

Chart-5.3: Shortfall in engagement of ASHA, Induction training and other modules of training



State wise details are given in **Annexure-5.10.**

5.8 Training to other health care professionals

5.8.1 Training to ANMs, Nurses and Medical Officers

In selected districts, the status of training to ANM, Staff Nurse and Medical Officers during 2011-16 is given in **Table-5.3** below:

Table-5.3: Shortfall in training to ANMs, Nurses and Medical Officers

Sl. No.	Name of post	Number of States involved	Number of districts audited	Targets	Number actually trained	Shortfall	*Per cent*
1	ANM	11	57	50,329	35,642	14,687	29
2	Staff Nurse	10	56	22,638	14,388	8,250	36
3	Medical Officer	13	73	16,602	11,902	4,700	28

State wise details are given in **Annexure-5.11** and state specific findings are given in **Annexure-5.12**.

5.8.2 Skilled Birth Attendant (SBA) training to ANM

ANMs posted in the SCs are required to conduct deliveries at homes/SCs, hence she should mandatorily receive specific training in this regard. In 29 States, in 789 of the 1,443 SCs audited, ANM did not have SBA training.

Conclusion

Significant shortfalls in the availability of doctors, health care support staff, technicians, etc. were observed across all health facilities viz. DHs, SDHs, CHCs, PHCs and SCs countrywide. 77 to 87 *per cent* CHCs were functioning without specialist doctors such as obstetrician/gynaecologist and paediatricians. Thus, the aim of the Mission to ensure uninterrupted and quality health care in all health facilities by increasing the availability of doctors, specialists, paramedical staff remained unfulfilled compromising the quality of health care being administered. Shortfalls in training of ASHA, ANM, doctors and staff nurse were also noticed.

Recommendations:

- The Ministry should scrupulously follow up with States to ensure that sanctioned posts of health care professionals are filled up to meet the NRHM requirements. Release of further grants under the Mission Flexible pool may be linked with achievements/progress on this count.
- The Ministry should ensure that the States provide complete training to all ASHAs, ANMs etc., as per norms to make their services more effective.

CHAPTER VI : QUALITY OF HEALTH CARE

6.1 National Quality Assurance Programme

The National Quality Assurance Programme (NQAP) launched by the Ministry in November 2013, and the underlying Quality Assurance guidelines are intended to create an inbuilt and sustainable quality for public health facilities that deliver quality health services. The guidelines define relevant quality standards, system of measuring these standards and institutional framework for its implementation. The Ministry, *inter-alia*, provides support to the States to establish the required institutional framework and to monitor the programme.

6.1.1 Institutional Framework

The quality assurance guidelines prescribe the setting up of organizational arrangements at National, State, District and Health Facility levels with defined roles and responsibilities for each level. The progress in this regard is discussed below:

A) National Level

➢ In terms of the quality assurance guidelines, the Ministry constituted a quality assurance team in December 2015 comprising of representatives from the programme divisions of the Ministry and National Health Systems Resource Centre[1] (NHSRC) to provide overall guidance, mentoring and monitoring the efforts for providing quality health services in the States. However, the team is yet to meet till date (February 2017).

➢ Audit observed that the quality assurance team had not made any visit to States to monitor the quality of services. The Ministry stated that such visits were undertaken by NHSRC. The reply is unacceptable. The tour and related records reveal that these visits of NHSRC during 2014-16 related to the conducting of training in the States, and not for the purpose of monitoring the quality of services in the States.

➢ Audit also observed that NHSRC did not review the quarterly reports sent by the state quality teams and submit reports to National Health Mission

[1] NHSRC was established in 2007 with the mandate to assist in policy and strategy development in the provision and mobilization of technical assistance to the States and in capacity building at the Centre and the States.

division incorporating recommendations for improvement. The Ministry accepted the facts.

B) State Level

(i) State Quality Assurance Committee

The guidelines require each State to constitute State Quality Assurance Committee (SQAC) for providing overall guidance, mentoring and monitoring of quality assurance efforts in the State. Though SQACs have been constituted in all States/UT (except the **Andaman and Nicobar Islands),** they failed to perform mandated activities like holding of half yearly review meetings, monitoring of Key Performance Indicators (KPIs)[2] etc., as discussed below:

SQACs did not hold any review meeting between 2013-16 in seven States (**Assam, Jammu and Kashmir, Jharkhand, Manipur, Punjab, Telangana** and **Tripura**). The shortfall ranged between 25 and 80 *per cent* in 12 States ((**Andhra Pradesh, Arunachal Pradesh** (80 *per cent*)**; Chhattisgarh, Meghalaya, Mizoram** (75 *per cent*)**; Bihar, Karnataka, Kerala** (50 *per cent*)**; Himachal Pradesh** (33 *per cent*) and **Madhya Pradesh, Odisha** and **Sikkim** (25 *per cent*)).

(ii) State Quality Assurance Unit

State Quality Assurance Unit[3] (SQAU) provides support to the SQAC for implementation of quality assurance activities in the State. Its main activities are to conduct six monthly independent/joint visits for assessment of health facilities, compile and collate monthly data on KPIs received from the districts, hold half-yearly review meetings and prepare reports.

State specific findings are discussed below:

- SQAU was not constituted in three States (**Assam, Meghalaya** and **Odisha**).

- In 12 States (**Andhra Pradesh, Arunachal Pradesh, Gujarat, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Manipur, Telangana, Tripura, Uttarakhand** and **West Bengal**), SQAU was constituted but no review meetings were conducted during 2013-16.

---

[2] KPIs pertaining to Reproductive and Child Health include, Infant Mortality Rate, Maternal Mortality Ratio, Ante Natal care, Institutional Deliveries, Post Natal Care, Immunisation coverage etc.

[3] SQAU is headed by the SQAC member secretary and includes other state programme officers.

- In five States (**Jharkhand, Rajasthan, Telangana, Uttarakhand** and **West Bengal**), no field visits for assessment of facilities were made. However, few visits were made in eight States (**Andhra Pradesh** (3), **Arunachal Pradesh** (2), **Chhattisgarh** (8), **Himachal Pradesh** (7), **Karnataka** (8), **Kerala** (21), **Tamil Nadu** (5) and **Tripura** (21). In Tripura, 21 field visits were made, but no reports were prepared.

- The SQAUs in **Jharkhand** and **West Bengal** were non-functional due to non-appointment of members.

Non-assessment of facilities by SQAU

- In **Bihar** out of 10,391 facilities[4], only 69, 13 and 65 facilities were assessed during 2013-14, 2014-15 and 2015-16 respectively.
- Though **Chhattisgarh** has 27 internal Quality Assurance Assessors, they assessed only four District Hospitals (Korba, Kanker, Durg and Raipur) during the entire audit period.
- In **Tamil Nadu**, the facilities in the selected Districts were not assessed.

Absence of functional quality committees /units implies that services delivered at the health facilities were not assessed. This meant that no monitoring of quality assurance activities particularly relating to Reproductive and Child Health (RCH) like Ante-natal care, Post-natal care and immunization were being undertaken for remedial action.

C) District Level

(i) District Quality Assurance Committee

The District Quality Assurance Committee (DQAC) is responsible for monitoring the quality assurance efforts at District levels. Test check of 96 selected districts in 23 States/UT revealed the following:

- DQAC was constituted in 75 districts (78 *per cent*) only.
- Only 211 out of required 692 review meetings during 2013-16 were conducted with a shortfall of 70 *per cent*.
- DQAC was not constituted in any of the selected districts of two States (**Jharkhand** and **Meghalaya**).

[4] HSC: 9696; PHC: 534; CHC/RH: 70; SDH: 55 and DH: 36.

- No required quarterly review meeting was conducted in seven States (**Himachal Pradesh, Karnataka, Manipur, Odisha, Tamil Nadu, Tripura** and **West Bengal**), though DQAC was constituted.

- The reports were not shared with SQAC in four States (**Andhra Pradesh, Assam, Jharkhand** and **Sikkim**).

(ii) District Quality Assurance Unit

District Quality Assurance Unit (DQAU) provides support to DQAC and is responsible for undertaking various[5] activities, which among others, are to assess the facilities on quarterly basis and share the findings with SQAU.

Test check of 61 selected districts in 17 States/UT revealed the following:

- DQAU was not constituted in any of the 21 selected districts of six States/UT (**Andaman and Nicobar Islands, Assam, Jammu and Kashmir, Manipur, Meghalaya** and **Uttarakhand**).

- In the remaining 40 selected districts of 11 States (**Andhra Pradesh, Arunachal Pradesh, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Kerala, Mizoram, Odisha** and **Tamil Nadu**), DQAU was not constituted in 10 districts (25 *per cent*).

- Though DQAU was constituted in 18 selected districts of seven States (**Arunachal Pradesh, Jharkhand, Karnataka, Kerala, Mizoram, Odisha** and **Tamil Nadu**), no assessment was done in any of the facilities during 2013-16.

- In three States, substantial shortfalls against the prescribed assessments (**Andhra Pradesh:** 85 *per cent*, **Haryana:** 88 *per cent* and **Himachal Pradesh:** 98 *per cent*) were observed.

- In **Andhra Pradesh**, 35 field visits were conducted during 2015-16, but no reports were prepared. As a result, there was no follow-up action on the findings of field visits.

[5] Roll-out of standard protocols for RCH services, conduct independent and joint visits to the health facilities; prepare draft report and recommendations based on the field visits, mentor the facility in-charge at the districts for implementing quality improvement measures, compile and collect monthly data received from facilities on outcome level indicators.

(iii) Formation of District Quality Team at District Hospitals

The quality assurance guidelines provide for constitution of District Quality Team (DQT) at the District Hospitals (DHs). It was however, noticed that out of 1,151 DHs, DQT was constituted in only 723 DHs resulting in shortfall of 33 *per cent* (March 2016).

- In seven States (**Assam, Karnataka, Nagaland, Meghalaya, Tamil Nadu, Kerala** and **Uttar Pradesh**), the shortfall was between 50 *per cent* and 76 *per cent* whereas in another seven States (**Andhra Pradesh, Gujarat, Haryana, Punjab, Sikkim, Uttarakhand** and **West Bengal**), the shortfall ranged between 20 *per cent* and 45 *per cent*.

- DQT was not constituted in any of the DHs in four States/UT (**Andaman and Nicobar Islands, Jammu and Kashmir, Telangana** and **Tripura)**

- The DHs in various States were in different stages of implementation of Quality Assurance Programme. 306 DHs were reporting KPIs, 250 DHs had implemented Standard Operating Procedures and 268 DHs had conducted periodic Patient Satisfaction Surveys (March 2016). The percentage of DHs reporting on all these three indicators was low ranging from 22 to 27 *per cent* indicating that the work of assessment of quality assurance was in the initial phase.

D) Facility Level

(i) Formation of Quality Assurance Team

The in-charge of each health facility is required to form an internal quality assurance team (IQAT), having representation from all departments, nursing staff, laboratory and support staff. The team is to meet periodically to discuss the status of quality initiative in their area of work.

It was noticed that out of 716 facilities in 19 States, IQAT was constituted in only 308 facilities (43 *per cent*). State-wise analysis revealed that the shortfall was between 75 to 95 *per cent* in 11 States (**Arunachal Pradesh, Chhattisgarh, Haryana, Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan** and **Tamil Nadu**). In three States (**Andhra Pradesh, Gujarat** and **Tripura**), the shortfall was between 53 to 67 *per cent*.

IQAT was not constituted in any of the selected 171 facilities in the six States/UT (**Andaman** and **Nicobar Islands, Assam, Jammu and Kashmir, Meghalaya, Telangana** and **West Bengal**). Thus, no activities under quality assurance programme were carried out in these States/UT.

(ii) Periodic internal assessment

In 541 selected health facilities of 15 States, the system of periodic internal assessment was formulated only in 114 (21 *per cent*) facilities.

In five States (**Arunachal Pradesh, Jharkhand, Telangana, Uttar Pradesh** and **Uttarakhand**), none of the 205 selected facilities had the system of internal assessment. Thus, due to absence of internal assessment at the facility level, there was no mechanism to identify the gaps in the services provided and their quality by the facility.

In 114 facilities of 15 States, the regular quarterly assessment was not done by IQAT. Against 1,368 quarterly assessments due to be carried out during 2013-16, only 574 (42 *per cent*) assessments were made.

As a result of shortfall in quarterly assessments, the lowest performing areas of the facilities remained unidentified for further analysis and corrective action.

(iii) Patient Satisfaction Survey

The quality assurance guidelines provide for a feedback (OPD – 30 patients, and IPD – 30 patients in a month, separately) to be taken on a structured format by the hospital manager. This feedback was to be analysed to see which are the low performing attributes and further action be planned accordingly. It was noticed that in 737 facilities of 20 States, only 8,167 feedbacks (0.5 *per cent*) against 15.92 lakh patient feedbacks were taken during 2013-16. In 11 States (**Arunachal Pradesh, Himachal Pradesh, Jharkhand, Mizoram, Rajasthan, Tamil Nadu, Telangana, Tripura, Uttar Pradesh, Uttarakhand** and **West Bengal**), no feedback was taken from the patients. Whereas, in the remaining nine States (**Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Haryana, Karnataka, Madhya Pradesh, Odisha** and **Punjab**), the feedback taken from the patients was insignificant ranging from 0.01 to 6 *per cent*.

In the absence of patients' satisfaction surveys, gaps in the quality of service provided by the health facility could not be identified and addressed.

(iv) Monitoring of Key Performance Indicators

Hospital Managers are required to collate critical data from the departments and calculate KPIs to monitor them on monthly basis and report these indicators to DQAC and SQAC. It was, however, noticed that:

- KPIs were not monitored in 267 facilities of eight States (**Arunachal Pradesh, Andhra Pradesh, Himachal Pradesh, Jharkhand, Mizoram, Telangana, Uttarakhand** and **Uttar Pradesh**).
- Out of 411 facilities in 10 States, only 79 facilities (19 *per cent*) monitored the KPIs.

Since KPIs were not captured at the facility level, the monitoring of indicators pertaining to RCH viz., mothers receiving antenatal care, institutional deliveries, safe delivery, mothers receiving post natal care and immunisation coverage could not be monitored by DQAC and SQAC for evaluation and remedial measures. State wise details of monitoring of KPIs are given in **Annexure-6.1**.

(v) Standard Operating Procedures and Work Instructions

For standardizing the clinical and management processes at facility level, each facility is required to document and implement the standard operating procedures (SOPs). Appropriate training is also to be provided to the staff on SOPs. Audit noticed that:

- Out of 746 facilities in 20 States, SOPs were documented in only 219 facilities (29 *per cent*).
- In five States (**Andhra Pradesh, Himachal Pradesh, Jharkhand, Telangana** and **Uttarakhand**), SOPs were not documented in any of the selected facilities.
- In 10 States (**Arunachal Pradesh, Bihar, Chhattisgarh, Gujarat, Haryana, Karnataka, Odisha, Punjab, Rajasthan** and **Tripura**), shortfall of facilities having SOPs ranged between 75 and 96 *per cent* whereas in three States (**Madhya Pradesh, Mizoram** and **Tamil Nadu**), shortfalls ranged between 40 and 70 *per cent*.
- Out of 219 facilities where the SOPs were documented, staff of only 125 facilities was oriented/trained for SOPs. State wise details are given in **Annexure-6.2**.

6.1.2 Review of maternal and infant death cases in the selected districts

(i) Maternal death review

Maternal death review is an important strategy to improve the quality of obstetric care and reduce maternal mortality. Every health facility is required to conduct death audit for all deaths happening in the facility. The facility should also report the data relating to maternal and infant deaths to DQAU on monthly basis.

In 66 selected districts of 13 States/UT, it was noticed that maternal death review was not carried out by the facilities in respect of all the death cases occurring therein during 2013-16. Out of 4,846 maternal death cases reported at facilities, records on 2,917 cases (60 *per cent*) were examined in audit. It was revealed that no maternal death review was conducted by facilities in **Himachal Pradesh**, while in eight States (**Andhra Pradesh**, **Assam, Bihar, Jharkhand, Rajasthan, Tamil Nadu, Uttar Pradesh** and **West Bengal**), seven to 87 *per cent* cases were reviewed. In three States (**Chhattisgarh, Maharashtra** and **Sikkim**), all the cases were reviewed.

Further, only 315 cases of death (7 *per cent*) in the 66 selected districts were reported to DQAU. Four States (**Andhra Pradesh, Telangana, Uttar Pradesh** and **West Bengal**), did not report any death case to DQAU, while in the six States (**Assam**, **Chhattisgarh**, **Jharkhand**, **Maharashtra, Rajasthan** and **Tamil Nadu**), four to 52 *per cent* cases were reported to DQAU.

From the death review reports, it was noticed that the main causes of maternal deaths were anaemia, delay in transportation, non-availability of blood for emergency transfusion, improper ante-natal check up, post-partum haemorrhage, insufficient equipment and inadequate knowledge of ANM/ASHA, etc.

(ii) Infant death review

In 52 selected districts of 11 States/UT, out of 10,930 infant death cases reported at the facilities, only 2,320 cases (21 *per cent*) were reviewed. State-wise analysis revealed that no case was reviewed in **Himachal Pradesh** and **Sikkim** whereas, in eight States (**Andhra Pradesh, Assam, Bihar, Chhattisgarh, Jharkhand, Rajasthan, Tamil Nadu** and **Telangana**), only one to 88 *per cent* death cases were reviewed. It was noticed that the majority of infant deaths occurred due to low birth weight and respiratory problems indicating poor quality of ante and post natal services delivered at the public health facilities and failure to take appropriate action on time.

6.1.3 Results of facility survey

The facility survey conducted in 134 DHs, 300 CHCs, 514 PHCs and 1,425 SCs revealed shortfall in the quality indicators as detailed in **Table-6.1** below:

Table-6.1: Availability of quality indicators in the health facilities

Sl. No	Quality Indicator	*Per cent* of selected health facilities where the quality indicators was not available			
		DH	CHC	PHC	SC
1.	Prominent display board with name of the facility in local language which is readable at night.	15	19	26	44
2.	Citizen Charter displayed at OPD and Entrance in local language including patient's rights and responsibilities.	32	25	43	69
3.	Suggestion/complaint box.	13	19	51	82

The Ministry admitted that though many States made provision for Quality consultant position under National Health Mission (NHM), the recruitment process was slow because there were not enough trained quality professionals available.

6.1.4 State and National level certification of health facilities

Quality assurance guidelines have a provision for state and national certification of public health facilities. Once a health facility complies with National Quality Standards for Public Health, the state level certification can be granted and thereafter the national certification.

Only a few health facilities have been granted quality certification. Out of 42,503 Public Health facilities (DH, CHC and PHC), 106 facilities have received State level Quality Assurance certification (**Gujarat-90, Haryana-7, Kerala-4, Mizoram-1, Odisha-1, Rajasthan-1** and **Sikkim-2**) and four facilities have received national certification (**Haryana-2, Kerala-1** and **Odisha-1**) (March 2016).

Thus, implementation of quality assurance programme is deficient even after three years of its commencement.

6.1.5 Allocation of funds for Quality Assurance and its utilisation

States are responsible for including the requirement of funds for Quality Assurance Programme in the annual state Programme Implementation Plan.

In 18 States, against the requirement of ₹ 132.83 crore, reflected in State Programme Implementation Plans during 2013-16, ₹ 85.64 crore was allocated. States were not able to utilize even the allocated amount with the spending remaining low at ₹ 42.89 crore. It was noticed that the reasons for low utilization of funds were delay in constitution of Quality Assurance Committees/Units, Non-recruitment of Human Resources; Inactive quality assurance Committees/Units and Non-organizing of training for health personnel on Quality Assurance.

The Ministry stated that the initial two years' time was introduction phase where efforts were invested in spreading awareness, instituting the policy and organizational framework in States and it was expected that in coming years, the program will multiply its dividends in terms of number of quality certified facilities and better quality and safe care at public health facilities.

6.2 Monitoring

Successful implementation of the Mission greatly depends on proper monitoring and evaluation whereby, elaborate organisational arrangements have been prescribed at Central, State, District, and Gram Panchayat level with clearly defined roles and responsibilities at each level. The following was observed:

- At the Central level, the Mission Steering Group (MSG), headed by the Union Minister of Health and Family Welfare is the highest policy making and steering institution under NHM. Audit observed considerable delays, up to 248 days, in conducting the meetings of MSG raising important issues of governance.

- Common Review Mission (CRM) is one of the important mechanisms under NHM. Teams were constituted comprising Government Officials, Public Health Experts, Representatives of the Development Partners and Civil Society Organisations. Although the CRM team has been pointing out various deficiencies in the functioning of health centres subsequent to their field visits, these have not been effectively addressed.

- At the State level, the Mission functions under the overall guidance of State Health Mission (SHM) with Chief Minister as Chairperson, the State Health Society (SHS) headed by Chief Secretary, and the State Project Management Unit headed by the Mission Director. Audit evidenced large shortfalls, ranging from 29 to 100 *per cent,* in holding

of meetings by the committees of SHM and SHS as detailed in **Annexure-6.3**.

- At the district level, the District Health Mission (DHM) is headed by the head of the local self-government i.e. Chairperson Zila Parishad/ Mayor and every district has a District Health Society (DHS), headed by the District Collector. The monitoring at district level is mainly undertaken by the District/ City Level Vigilance and Monitoring Committees (D/CLVMC), headed by the local Member of Parliament. The committees were required to meet quarterly. In **Arunachal Pradesh** and **Himachal Pradesh**, no meetings of DHM and DHS (Governing Body) or DHS (Executive Committee) were held in any of the selected districts during 2011-16. Significantly, in three States/UT (**Andaman and Nicobar Islands, Jammu and Kashmir** and **Meghalaya**), no meetings of D/CLVMC was held in any of the districts during 2015-16.

- As per the IPHS, Monitoring Committee, comprising Panchayati Raj Institutions (PRIs), representatives of user groups, community based organizations, NGOs etc., needs to be formed at village, block and district levels. The Committee is required to monitor and validate the data sent to higher authorities by the ANM and other functionaries of the public health system. These committees were not constituted in the selected districts of four States (**Assam, Odisha, Sikkim** and **Uttarakhand**). In **Haryana,** PRIs were not involved in these committees.

- The shortcomings in respect of Village Health Sanitation and Nutrition Committees (VHSNC) are as detailed below:

  a. In **Himachal Pradesh** and **West Bengal** shortfall of 81 *per cent* and 35 *per cent* respectively was noticed in formation of VHSNC.
  b. In **Sikkim**, monitoring of PHCs was not being done through PRIs/VHSNC
  c. In **Tripura** none of the VHSNCs in two selected districts had prepared Village Health Action Plans during 2011-16

- The framework for implementation of NHM 2012-17 provides for establishing an accountability and governance framework that includes Social audit. Under this, community members are to assess, review and suggest recommendations in the implementation of health programmes, which will enhance participation of people in planning, implementing,

monitoring and evaluation of public health programmes. In the selected districts of eight States (**Andhra Pradesh**, **Arunachal Pradesh**, **Assam, Himachal Pradesh, Odisha, Sikkim, Telangana**, and **Uttar Pradesh**), social audit of the health facilities was not conducted. In **West Bengal**, records related to social audit, were not provided to Audit.

6.3 Evaluation

The erstwhile Planning Commission (now NITI Aayog) was to evaluate the implementation of the programme. An evaluation study on NRHM in seven States (**Assam, Jammu and Kashmir, Jharkhand, Madhya Pradesh, Orissa, Tamil Nadu** and **Uttar Pradesh**), was conducted by it in February 2011 i.e. during the 11th Plan period. However, no evaluation study was conducted subsequently.

6.4 Beneficiary Survey

Sampled beneficiaries were interviewed during the course of audit to ascertain the quality of health services offered and difficulties faced by them during their visit to government health facilities i.e. District Hospital (DH), Community Health Centre (CHC), Primary Health Centre (PHC) and Sub-Centre (SC).

Within each SC, 10 women beneficiaries, who had their deliveries during the last 24 months, were selected by Systematic Random Sampling without Replacement (SRSWOR) method from the consolidated list of beneficiaries prepared using records maintained at the SC, records maintained by ASHA and JSY database of each selected SC. 13,835 beneficiaries were interviewed in 28 States and one UT. The sample size of beneficiaries varied from 71 in Mizoram to 1,650 in Uttar Pradesh. The beneficiaries were interviewed through a structured questionnaire which apart from capturing basic information about the beneficiaries (age, education level, etc.) also sought to capture information on their awareness about ASHA and ANM, antenatal care, delivery, postnatal care, quality of services etc. The results of Beneficiary Survey are detailed in **Annexure-6.4**.

Conclusion

The institutional framework for implementation of National Quality Assurance Programme was either not in place or if present, was not effective in assuring quality of services across all levels viz. national, state, district and facility. Low number of internal and external assessments of health facility, inadequate reporting, non-evaluation of key performance indicators, absence of periodic review meetings, non-conducting of field visits indicated that quality

assurance and monitoring systems were not in place. Non- availability of staff and lack of capacity building through training and orientation on quality assurance activities were other impediments. Utilisation of funds under the programme continued to be poor. Thus, even after a lapse of almost three years, the implementation of Quality Assurance Programme was in a nascent stage.

The inspections and monitoring system devised for successful implementation of the Mission were not being wholly implemented at the Central, State and District levels.

The beneficiary survey brought out lower awareness levels among the beneficiaries about various services delivered under NRHM and its access to the people. The results of the survey indicated moderate level of satisfaction among the beneficiaries with respect to programme delivery.

Recommendations:

- The Ministry and the States should secure compliance with the operational guidelines for quality assurance at all levels.
- Assessment of health facilities on the defined parameters should be documented and reviewed on a consistent basis for taking appropriate follow up action.
- Provision for monitoring the implementation of National Quality Assurance Programme may be made in the Health Management Information System.
- The Ministry/State governments need to strengthen the monitoring mechanism at all levels.
- To achieve the objective of NRHM to deliver reliable and efficient health care to the needy rural population, the Government should strengthen the institutional and quality control systems. The Ministry in coordination with the State governments also needs to address the systemic inefficiencies pointed out in this Report.

CHAPTER VII : SERVICES UNDER REPRODUCTIVE AND CHILD HEALTH (RCH)

7.1 Introduction

Reproductive and Child Health Programme-II (RCH-II) was launched in 2005 as a part of the Mission as the principal vehicle for reducing Infant Mortality Rate (IMR), Maternal Mortality Ratio (MMR) and Total Fertility Rate (TFR). Some of the main components of the programme are: care in pregnancy including identification of complications, but excluding management of complications requiring surgery or blood transfusion, all aspects of essential newborn care, care for common illnesses of newborn and children – identify, stabilize and refer life threatening conditions beyond the approved skill sets of the mid- level care provider, immunization, all aspects of prevention and management of malnutrition, excepting those that require institutional care, all family planning services, provision of safe abortion services-medical and surgical and identification and management of anaemia.

7.2 Institutional Deliveries

7.2.1 Target and achievement

As per Framework of Implementation (2005-12), one of the expected outcomes of NRHM at community level was improved facilities for institutional deliveries. In order to motivate women to deliver at health facilities, Janani Suraksha Yojana (JSY) was launched in April 2005 under NRHM as a scheme with the provision for conditional cash transfer to a pregnant woman for institutional care during delivery and the immediate postpartum period. Audit observed:

a) In the 28 States, the percentage of registered pregnant women opting for institutional delivery[1] during 2011-16 ranged from 34 to 98. In six States (**Arunachal Pradesh, Jammu and Kashmir, Manipur, Meghalaya, Uttar Pradesh** and **Uttarakhand**), this percentage was less than 50 with the lowest percentage being recorded in **Manipur** (38) and **Meghalaya** (34). State-wise details are in **Annexure-7.1**.

b) In 14 States of **Andhra Pradesh, Arunachal Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jammu and Kashmir, Jharkhand[2], Madhya**

[1] Institutional delivery includes deliveries at public and private health facilities.
[2] Figures for 2014-15 only.

Pradesh, Manipur, Meghalaya, Odisha, Punjab, Rajasthan and **Uttarakhand**, there was shortfall against the targets set out for institutional delivery during 2011-16. Shortfalls ranged from 4 to 54 *per cent*, with the highest percentage being recorded in two States of **Arunachal Pradesh (54) and Uttarakhand (52)**. In **Andaman** and **Nicobar Islands, Bihar, Kerala, Mizoram, Sikkim, Tripura** and **West Bengal,** no targets for institutional deliveries were fixed by the respective State Health Societies. During the exit conference, the Ministry stated that though some States have not fixed targets, overall institutional deliveries have significantly increased on account of NRHM.

Audit attempted to ascertain the adequacy of physical infrastructure and service delivery facilities through surveys. It was observed that 161 of the 514 PHCs surveyed under facility survey, did not have the facility for delivery. In **Kerala**, all the selected 12 PHCs and more than 50 *per cent* PHCs in six States of **Himachal Pradesh, Odisha, Tripura, Uttar Pradesh, Uttarakhand,** and **West Bengal,** did not have facility for delivery.

The reasons for shortfall in the institutional delivery as gathered during facility survey were distance of the health facilities from villages, lack of access by public transport, unhygienic surroundings of the centres, etc.

7.2.2 Antenatal Care

One of the major interventions under NRHM is to register all the pregnant women within 12 weeks or 1st trimester of pregnancy and provide them services, such as four antenatal check-ups (ANC)[3], 100 Iron Folic Acid (IFA) tablets, two doses of Tetanus Toxoid (TT) vaccine, proper diet and vitamin supplements. Audit observed:

(a) Registration and Checkups

In twenty States **(Andhra Pradesh, Arunachal Pradesh, Bihar, Chhattisgarh, Haryana, Himachal Pradesh, Jharkhand, Karnataka, Madhya Pradesh, Manipur, Meghalaya, Mizoram, Punjab, Rajasthan, Sikkim, Telangana, Tripura, Uttar Pradesh, Uttarakhand,** and **West Bengal),** complete data of ANCs was not maintained.

[3] 1st ANC - at the time of registration during first trimester, 2nd ANC - during 20-24 weeks of pregnancy, 3rd ANC – during 28-32 weeks of pregnancy, 4th ANC – during 34-36 weeks of pregnancy.

In four States viz. **Assam, Gujarat, Jammu and Kashmir** and **Tamil Nadu,** registered pregnant women received lesser number of ANCs as given in **Annexure-7.2**.

In **Arunachal Pradesh**, as per the information provided by SHS, all the 1,56,905 registered pregnant women in the State during 2011-16, received the first ANC at the time of registration. However, in four selected districts, Audit observed that only 8,694 (20 *per cent*) of the 42,701 registered pregnant women, got ANC at the time of registration.

In **West Bengal**, as of March 2016, 18 *per cent* of PHCs were yet to start ANC clinics.

Facility survey by Audit disclosed:

Out of 2,380 health facilities (DH-123, CHC-300, PHC-514, and SC-1,443) in 29 States/UT, 167 facilities (DH-1 CHC-9, PHC-86 and SC-71), did not have the facility for ANC. The percentage of health centres which did not have facility for ANC was significantly higher in five States - **Arunachal Pradesh** (SC-65 and DH-25), **Nagaland** (SC-17), **Odisha** (CHC-19 and PHC-53), **West Bengal** (PHC-41) and **Tripura** (PHC-29).

Proper documentation of this vital component was non-existent in 20 out of 28 States/UT. Resultantly, the facilities were unable to track the actual administration of ANCs vis-à-vis the requirements or take corrective measures. Audit observed that shortage of ANM and Health Workers and staff nurses in SCs, PHCs and CHCs were one of the major limiting factors in this regard.

(i) Iron Folic Acid

Under NRHM, 100 IFA tablets are to be provided to all the registered pregnant women. Audit observed shortfalls in the range of 3 to 75 *per cent* in all the 28 States/UT during 2011-16. In 11 States/UT **(Andaman and Nicobar Islands, Andhra Pradesh, Gujarat, Haryana, Jammu and Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Meghalaya, Rajasthan** and **Tamil Nadu),** more than two *per cent* of the registered pregnant women were found to have severe anaemia[4], with the highest in **Jammu and Kashmir** (6.11), **Haryana** (3.92) and **Karnataka** (3.6), as given in **Annexure-7.3.**

[4] In severe anaemia, the haemoglobin count is less than 7 g/dl whereas in anaemia, it is less than 11 g/dl.

In **Andaman and Nicobar Islands**, records indicated that more than 100 IFA tablets had been given to registered pregnant women during 2013-14, 2014-15 and 2015-16 which ranged between 204 and 664 *per cent*. Importantly, the cases of severe anaemia increased from 1.33 *per cent* in 2014-15 to 2.75 *per cent* in 2015-16.

In **Tripura**, 21 to 62 *per cent* pregnant women did not receive 100 IFA tablets during 2011-12 to 2015-16. Audit observed that 54.4 *per cent* pregnant women were suffering from anaemia in **Tripura**, the highest (60.6 *per cent*) being recorded in North Tripura District.

The Ministry replied that the issue of shortfall of IFA distribution is an implementation issue and pertains to the concerned State governments as Ministry merely allocates funds as per state demand/request as per the prescribed guidelines. However, the fact remains that the guidelines of giving 100 IFA tablets was not being always adhered to and there were large number of cases of anaemia.

(ii) Tetanus Toxoid Immunisation

In four states (**Arunachal Pradesh, Jammu and Kashmir, Manipur** and **Meghalaya**), less than 50 *per cent* of pregnant women were immunized with both TT1 and TT2 while in six states (**Chhattisgarh, Haryana, Jharkhand, Rajasthan, Tripura** and **West Bengal**), the figure ranged between 50 to 80 per cent.

In **Haryana,** in the selected district of Bhiwani, the percentage of pregnant women receiving both doses of TT vaccine decreased from 94 to 57 during 2015-16 as compared to 2011-12. In **Uttarakhand**, in Pauri district, 39 *per cent* and 40 *per cent* of pregnant women were not immunized by TT1 and TT2 respectively.

Separate data for each of the two doses of TT immunization was not maintained by **Mizoram**, and, therefore the actual number of pregnant women, who had not received both the doses, remained unascertainable.

The Ministry stated that a single dose of TT is sufficient to provide complete immunization against tetanus in a pregnant woman provided that she has been vaccinated with TT within past three years and most of the pregnant women fall in this category. The contention of the Ministry is not correct in the absence of verifiable data at the facility level in this regard.

(b) Home deliveries attended to by Skilled Birth Attendant (SBA)

Since any pregnancy can develop complications at any stage, timely provision of obstetric care services is extremely important for management of such cases and as such, every pregnant woman needs to be taken care of by SBA during pregnancy, childbirth and the post-partum period.

Test check of records of selected Type 'A' Sub Centres of 120 districts of 28 States/UT revealed that in ten States of **Assam, Bihar, Chhattisgarh, Jharkhand, Odisha, Punjab, Rajasthan, Sikkim, Tripura and Uttar Pradesh,** 50 to 80 *per cent* home deliveries were not attended to by SBAs. In four other States **(Haryana, Kerala, Meghalaya** and **West Bengal),** more than 80 *per cent of* home deliveries were not attended to by SBAs. In 38 selected SCs of **Jammu and Kashmir**, none of the home delivery cases were attended to by SBAs during 2011-16 due to their shortage. The Ministry replied that the States are being continuously advised through video conferences, monitoring visits, etc., to address these issues.

7.2.3 Post-natal care

As per guidelines of RCH-II, most obstetric complications and maternal deaths occur during delivery and in the first 48 hours after childbirth. This makes the intra-partum period (defined as labour, delivery and the following 24 hours) a particularly critical time for recognising and responding to obstetric complications and seeking emergency care to prevent maternal deaths. The best way to do so is to maximise facility based deliveries or skilled attendance during home births in 'difficult to reach areas', referring women to emergency care in case of complications and monitoring mothers in the postpartum period.

(a) New-borns visited by Health Worker/ASHA within 24 hours

Test check of records of selected Type 'A' Sub centres of the 120 districts of 28 States/UT revealed that more than forty *per cent* of new-borns were not visited by health worker within 24 hours of the home delivery in **Jharkhand, Madhya Pradesh, Manipur, Mizoram, Odisha, Rajasthan, Sikkim** and **Uttar Pradesh**. In **Sikkim,** the figure was significantly higher at 85 *per cent*. Data relating to visits to new-borns was not maintained in Muzaffarnagar, Budaun and Jaunpur districts of **Uttar Pradesh**.

7.2.4 Referral Services

To ensure accountable health delivery, NRHM aims to establish referral chain from village to hospital i.e. assured referral linkages either through Government/public-private partnership model for timely and assured referral

to functional PHCs/FRUs in case of complications during pregnancy and child birth.

In four States of **Arunachal Pradesh, Assam, Manipur, and Meghalaya**, audit observations in providing referral services, are given in **Table-7.1** below:

Table-7.1: State-wise audit observations in providing referral services

Sl No.	Name of State	Comments
1.	Arunachal Pradesh	In none of the selected 31 SCs, 11 PHCs and 6 CHCs of the selected districts, register for referral cases were maintained.
2.	Assam	In only 67 *per cent* of complicated cases referred, ambulance was provided.
3.	Manipur	In all the five selected PHCs, vehicles were not provided for referral service depriving the beneficiaries of the intended benefits.
4.	Meghalaya	Only four out of seven functional FRUs in six districts were equipped with blood bank/storage facility.

7.2.5 Deliveries with obstetric complications

In Tamil Nadu and **Kerala,** deliveries with obstetric complications were observed in 21 and 19 *per cent* cases respectively. In nine other States of **Assam, Chhattisgarh** (position for selected districts only), **Haryana, Jammu and Kashmir, Meghalaya, Odisha, Punjab, Sikkim,** and **West Bengal,** more than ten *per cent* of such deliveries were observed. Data for the same was not provided by the states of **Gujarat** and **Tripura.** In 13 States/UT (**Andaman and Nicobar Islands, Haryana, Jammu and Kashmir, Jharkhand, Karnataka, Kerala, Madhya Pradesh, Meghalaya, Odisha, Punjab, Sikkim, Uttarakhand** and **West Bengal),** audit observed an increasing trend of obstetric complications over the years. Details are given in the **Annexure-7.4**.

7.2.6 Infant Mortality Rate, Maternal Mortality Ratio and Total Fertility Rate

The Ministry in its documents 'Framework of Implementation (2005-2012)' and 'Framework of Implementation' of the Mission (2012-17)' laid down the outcome indicators including IMR, MMR and TFR and framed time specific targets for their achievement. Similarly, targets with respect to these outcome indicators have also been specified in the Millennium Development Goals (MDG) outlined by the United Nations in the year 2000. A comparison of the outcome indicators in both documents is given below in **Table-7.2**:

Table-7.2 : Outcome indicators

Sl. No.	Framework of Implementation (2005-2012)	Framework of Implementation (2012-17)	Millennium Development Goals (2015)
1.	Infant Mortality Rate (IMR) reduced to 30/1,000 per 1,000 live births by 2012.	Reduce IMR to 25/1,000 live births	Reduce IMR to 27 per 1,000 live births
2.	Maternal Mortality Ratio (MMR) reduced to 100 per 1,00,000 live births by 2012.	Reduce MMR to 100/1,00,000 live births	Reduce MMR to 109 per 1,00,000 live births
3.	Total Fertility Rate (TFR) to 2.1 by 2012.	Reduce TFR to 2.1	

The data of Statistical Reports of Sample Registration System (SRS) 2013 and 2014 of Office of the Registrar General of India shows the following position[5]:

- **IMR** - Against the target for reduction of IMR to 27 per 1,000 live births by 2015, as per MDG, the IMR was 39 deaths per 1,000 live births as per data of SRS 2014. IMR was higher than 40 in six States of **Assam** (49), **Bihar** (42), **Chhattisgarh** (43), **Madhya Pradesh** (52). **Odisha** (49) and **Uttar Pradesh** (48).

- **MMR** – Against the target for reduction of MMR to 109 per 1,00,000 live births, the MMR was at 167 in 2011-13 as per SRS 2013. MMR was higher than 200 in nine States of **Assam** (300), **Bihar** (208), **Chhattisgarh** (221)**, Jharkhand** (208), **Madhya Pradesh** (221), **Odisha** (222), **Rajasthan** (244), **Uttar Pradesh** (285) and **Uttarakhand** (285).

- **TFR** - Against the target of reduction of TFR to 2.1 by 2012, TFR was beyond 2.1 in nine States of **Assam** (2.3), **Bihar** (3.2), **Chhattisgarh** (2.6), **Gujarat** (2.3), **Haryana** (2.3), **Jharkhand** (2.8), **Madhya Pradesh** (2.8), **Rajasthan** (2.8) and **Uttar Pradesh** (3.2), as per SRS 2014.

Thus, the goals have only been partially achieved.

[5] As per para 1.4 of Chapter-I of India Country Report 2015 of Ministry of Statistics and Programme Implementation, the difficulties faced while statistically tracking the MDGs in the country, are mainly a) Issues of data gaps, b) non-availability of annual data updates, c) irregular periodicity of National Family Health Survey and d) incomplete coverage of the population.

7.3 Janani Suraksha Yojana

To encourage institutional delivery, a scheme 'Janani Suraksha Yojana (JSY)' was launched to provide all pregnant women with cash assistance ranging from ₹ 500 to ₹ 1400. The cash assistance[6] was to be provided to the mother in one go at the health centre immediately on arrival and registration for delivery. In the case of home delivery, disbursement was to be done at the time of delivery or around seven days before the delivery by ANM/ASHA/any other link worker. Audit observed:

7.3.1 Payment of cash assistance to beneficiaries

In six States **(Himachal Pradesh, Karnataka, Punjab, Rajasthan, Sikkim,** and **West Bengal),** 40 *per cent* or more of the beneficiaries did not receive cash assistance under JSY**.** In six States (**Assam, Haryana, Jammu and Kashmir, Manipur, Odisha** and **Uttarakhand**), cases of delayed payments of cash assistance for the period 2011-16, ranging up to 11 to 1,366 days were observed. In **Bihar**, 12,925 cheques amounting to ₹ 1.73 crore were not delivered to beneficiaries. Similarly, in **West Bengal**, 37 to 59 *per cent* of beneficiaries did not receive payments made by cheque as many of them did not have bank accounts. The state level data relating to the eligible women under JSY and payments made to them, was not maintained/provided by 10 States of **Andhra Pradesh, Assam, Chhattisgarh, Gujarat, Haryana, Jammu and Kashmir, Jharkhand, Meghalaya, Mizoram** and **Odisha.**

In **Bihar**, out of 10 selected DHSs, in one DHS of Munger, the number of mothers to whom cash assistance was paid was more than the number of institutional deliveries (including C-section) carried out each year. During 2011-16, against 1,05,980 deliveries, cash incentives were paid to 1,18,703 beneficiaries, indicating possible misappropriation of funds.

In **Uttarakhand**, in four health facilities at (a) DH Chamoli, (b) Government Combined Hospital, Kotdwar, (c) CHC, Joshimath, Chamoli and (d) PHC, Narayanbagar, payment of JSY cash assistance was made to unauthorized persons in 6,648 (47 *per cent*) cases. In **Assam** 3,863 cases of payment of JSY money to persons other than the beneficiaries, were observed.

[6] Direct Benefit Transfer (DBT) mode of payment has been started with effect from 1.1.2013

7.3.2 Other financial irregularities

The target group of JSY aimed to cover all pregnant women belonging to the BPL household to enable them to deliver in health institutions. As per the scheme guidelines, the cash assistance of ₹ 700 under JSY is admissible only to mothers of BPL families who were from rural areas in High Performing States like **Kerala**. SHS, Kerala had extended (March 2012) the benefit of ₹ 700 to "all women who are delivering in government hospitals" irrespective of their BPL/APL status. SHS made changes in the scope and targeted group for JSY cash assistance without obtaining the approval of State and Central Governments.

The Ministry accepted the audit observation and stated that the State has been asked to explain the reason for this irregular practice.

7.4 Immunization

7.4.1 Vitamin A solution

RCH-II programme advocated providing Vitamin A solution for all children less than three years of age. In most states however, the administration of Vitamin A solution was erratic with shortfalls of more than 50 *per cent*.

7.4.2 Short supply/wastage of vaccines

In **Assam**, during November 2014, 55,000 vials (5,50,000 doses) of Pentavalent vaccine were shipped by Serum Institute of India Ltd., Pune. The shipment was received at Guwahati in December 2014 in a damaged condition. However, the damaged vials (12000 doses) costing ₹ 15.51 lakh had not been replaced till August 2016.

In **Uttar Pradesh**, vaccines to various districts were in short supply by 17 to 72 *per cent*. The major shortfalls in supply were in the case of BCG[7] (20-57 *per cent*) and Hepatitis (33 to 95 *per cent*). Significant excess consumption of Hepatitis (68 *per cent*), DPT (54 *per cent*) and BCG (43 *per cent*) vaccines over the prescribed norms with the possibility of their mis-utilisation was observed.

[7] Bacillus Calmette–Guérin

7.4.3 Availability of cold chain equipment

All vaccines are very sensitive either to heat or freezing. To maintain these vaccines at the prescribed range of temperature, cold chain equipment like Ice Lined Refrigerator (ILR), Deep Freezers (DF), vaccine carriers, etc., are provided from time to time by Government of India to the State.

Audit observed that the cold chain facility was inadequate in the selected districts in the four states as detailed below**:**

- In **Arunachal Pradesh**, in all the selected four DHs, six CHCs and 11 PHCs, walk-in-coolers and walk-in-freezers were not available. Ice Lined Refrigerators were not available in two out of 11 PHCs. In one CHC and two PHCs, out of six CHCs and 11 PHCs respectively, deep freezers were not available.

- In **Assam**, in 11 out of 30 PHCs of the state, no cold chain equipment was found to store vaccines and in four out of these 11 PHCs, vaccine carrier was also not found available. In three PHCs, though freezer and logistics were available but generator facility was not available.

- In **Himachal Pradesh**, in four, out of 12 selected PHCs, facility of cold chain was not available.

- In **Uttar Pradesh**, in eight, out of the 28 selected CHCs, the required temperature record book to record the temperature maintained in deep freezer and ice lined refrigerator was not maintained.

7.4.4 Infant diseases

Audit observed increasing trend in the incidence of infant diseases like diptheria, neonatal tetanus and whooping cough cases in the seven States as detailed below:

- Increasing trend of diphtheria cases from 70, 26 and 32 in 2011-12 to 6,795, 171, and 600 in 2015-16 was seen in the States of **Andhra Pradesh, Rajasthan and Telangana** respectively**. In Madhya Pradesh**, out of 762 cases of diphtheria during the period 2011-16, 486 cases pertained to 2012-13.
- 46, 45 and 52 cases of neonatal tetanus were seen in the state of **Madhya Pradesh** during the year 2011-12, 2012-13 and 2013-14 respectively.

- An increasing trend of whooping cough was seen from 'nil' case in 2011-12 to 463 cases in 2014-15 in the state of **Haryana**, from 137 in 2013-14 to 756 cases in 2015-16 in the state of **Karnataka,** from 25 in 2011-12 to 152 in 2015-16 in **Rajasthan.** Out of the 72 cases of whooping cough during 2011-16 in **Meghalaya**, 43 pertained to 2015-16.

7.5 Family Planning

As per framework for implementation of NHM (2012-17) meeting unmet needs for contraception through provisioning of a range of family planning methods was to be prioritized.

7.5.1 Availability of facility for sterilisation

As per facility survey of 300 CHCs, 121 (40 *per cent*) did not have the facilities for tubectomy and vasectomy. In **Andaman and Nicobar Islands, Kerala, Manipur, Meghalaya, Nagaland** and **Tripura,** none of selected CHCs had the facility for tubectomy and vasectomy. In **Arunachal Pradesh** (83 *per cent*), **Assam** (62 *per cent*), **Chhattisgarh** (75 *per cent*)**, Gujarat** (62 *per cent*), **Haryana** (57 *per cent*), **Himachal Pradesh** (50 *per cent*), **Madhya Pradesh** (67 *per cent*) and **Punjab** (50 *per cent*), did not have the facilities for tubectomy and vasectomy.

7.5.2 Poor participation of male sterilization in terminal methods

The proportion of male sterilisation (vasectomy) to total sterilization was only 2.3 *per cent* in 28 States/UT indicating gender imbalances. State wise performance showed that in **Mizoram**, only one vasectomy had been performed out of total 9,251 sterilization operations. Percentage of vasectomy to the total sterilization was less than one *per cent* in seven States/UT of **Andaman and Nicobar Islands, Arunachal Pradesh, Bihar, Gujarat, Karnataka, Meghalaya** and **Tamil Nadu,** it was between one to four *per cent* in 10 States (**Andhra Pradesh, Kerala**, **Maharashtra, Odisha, Rajasthan, Telangana, Tripura, Uttar Pradesh, Uttarakhand** and **West Bengal**). State-wise details are in **Annexure-7.5**.

7.5.3 Payment of incentive for sterilization cases and cash compensation for failure/death cases following sterilization

The guidelines provide for payment of incentive as compensation for loss of wages to persons who undergo sterilisation in the range of ₹ 600 to ₹ 1,100. Audit observations relating to two states are given below in **Table-7.3**:

Table-7.3: Discrepancies in payment of incentive for sterilisation

Sl. No.	Name of State	Comments
1.	Chhattisgarh	In the DH Bilaspur, though the rates for compensation for female and male sterilization were revised from ₹ 600 and ₹ 1,100 to ₹ 1,400 and ₹ 2,000 respectively with effect from November 2014, the compensation at revised rates were not paid to the beneficiaries which led to short payment of ₹ 2.91 lakh.
2.	Uttar Pradesh	In 10 selected districts, 2,462 beneficiaries who had undergone sterilization operation during 2015-16, were not paid cash incentive of ₹ 40.57 lakh.

Compensation on account of failure of sterilization/major complications/ death following sterilization

Under the Family Planning Indemnity Scheme, States/UTs would process and make payment of the claims to the beneficiaries of sterilization in the event of death ₹ 50,000 (in case of death within 8-30 days from the date of discharge from the hospital) and ₹ 2.00 lakh (in case of death within 7 days from the date of discharge from the hospital inclusive of death during process of sterilization)/ failure (₹ 30,000)/ complications (₹ 25,000). Audit observations in respect of three states of **Bihar, Jammu and Kashmir** and **Odisha** are given below in **Table-7.4**:

Table 7.4: Compensation on account of failure of sterilization/major complications/death following sterilization

Sl. No.	Name of State	Comments
1.	Bihar	During 2011-15, in 106 cases, compensation to the beneficiaries was not paid.
2.	Jammu and Kashmir	Against 157 cases of failure of male and female sterilization during 2011-16, 29 cases for compensation were recommended

Sl. No.	Name of State	Comments
		by the committee constituted for the purpose. Out of these 29 cases, compensation was paid in only seven cases.
3.	Odisha	Out of 6.44 lakh sterilization cases (Tubectomy, Vasectomy/NSV) conducted during 2011-16 (up to February 2016), 3,964 cases of failure/major complication/death were reported. As of August 2016, compensation of ₹ 2.98 crore had been paid to only 1,038 cases (26 *per cent*).

7.6 Rashtriya Bal Swasthya Karyakram (RBSK)

7.6.1 Introduction

RBSK was launched in February 2013, with the aim of screening over 27 crore children from 0 to 18 years for 4 'D's *viz.* Defects at birth, Diseases, Deficiencies and Development delays including disability. The children diagnosed with illnesses shall receive follow up including surgeries at tertiary level free of cost under NRHM. Examination of records in the Ministry showed the following:

7.6.2 Partial establishment of DEICs

The programme envisaged establishment of District Early Intervention Centre (DEIC) at the District Hospital to provide referral support to the children detected with health problems during health screening. Overall 393 DEICs had been approved in 675 districts in the country. Of this, only 92 DEICs were in position as of 2015-16. State-wise analysis of this data revealed the following position:

1) In 325 districts in 10 non-NE high focus States[8], only 18 DEICs (6 *per cent*) were approved and were in position. Six States of **Bihar, Chhattisgarh, Himachal Pradesh, Jharkhand, Rajasthan and Uttar Pradesh** did not have DEICs.

2) Similarly, against 95 districts in eight NE States[9] of **Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim** and **Tripura**, 52 DEICs were approved and only three DEICs (3 *per cent*) were in position. Six States of **Arunachal Pradesh, Assam, Manipur, Meghalaya, Nagaland** and **Tripura** had no DEICs.

[8] Bihar, Chhattisgarth, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Madhya Pradesh, Odisha, Rajasthan, Uttar Pradesh and Uttarakhand.

[9] Aruanchal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura.

3) In 232 districts in 11 non-high focus States[10], only 69 DEICs (3 *per cent*) out the total approved were in position. Four States of **Karnataka, Punjab, Tamil Nadu** and **Telangana,** did not have DEICs.

7.6.3 Inadequate Mobile Health Teams

As per scheme guidelines, for children in the age group 6 to 18 years, at least three dedicated Mobile Health Teams in each Block will be engaged to conduct screening of children. Out of 17,016 mobile health teams required (5,672 x 3) for 5,672 blocks in the country (except **Kerala**), only 12,036 teams were approved, against which 9,315 teams (55 *per cent*) were in position during 2015-16 as detailed below:

- In respect of 10 non-NE high focus States (excluding **Himachal Pradesh**), out of 8,439 mobile teams required for covering 2,813 blocks, 5,823 teams were approved and 4,432 teams (53 *per cent*) were in position during 2015-16. In **Rajasthan**, no team was in position. Shortage of more than 50 *per cent* in availability of mobile health teams was noticed in **Chhattisgarh** and **Jharkhand**.

- In respect of eight NE States, out of 1,587 mobile teams required for covering 529 blocks, 581 teams were approved and 540 teams (34 *per cent*) were in position during the year 2015-16. Shortage of more than 50 *per cent* in availability of mobile health teams was noticed in **Arunachal Pradesh, Assam, Manipur, Mizoram, Nagaland, Sikkim** and **Tripura**.

- The position in 11 non high focus States (except **Telangana**) was better as against requirement of 6,870 mobile teams required for covering 2,290 blocks, 6,385 teams were approved and 5,406 teams (79 *per cent*) were in position during the year 2015-16. In **Andhra Pradesh**, no team was in position.

7.6.4 Incomplete coverage of anganwadi centres and schools

As per scheme guidelines, the screening of children in the age group of 6 weeks to 6 years in the anganwadi centres should be conducted at least twice a year and at least once a year for school children to begin with by the dedicated Mobile Health Teams.

[10] Andhra Pradesh, Goa, Gujarat, Haryana, Karnataka, Kerala, Maharashtra, Punjab, Tamil Nadu, Telangana and West Bengal.

Out of 16,21,258 anganwadi centres in the country as of August 2016, screening was conducted once only in 9,80,178 (60 *per cent*) of the anganwadi centres.

Out of 14,71,189 Government and Government aided schools in the country, only 6,93,174 schools (47 *per cent*) were covered.

Conclusion

The assessment of delivery of services under various parameters under RCH such as antenatal care, institutional deliveries, administration of Iron and Folic Acid tablets, vitamin supplements, immunization, etc., revealed shortfalls. 161 of the 514 PHCs surveyed under facility survey, did not have the facility for delivery. The reasons for shortfall in the institutional delivery were distance of the health facilities from villages, lack of access by public transport, unhygienic surroundings of the centres, etc. In selected Sub Centres of 120 districts of 28 States/UT, in ten States, 50 to 80 per cent home deliveries were not attended to by Skilled Birth Attendants. All these deficiencies translate into higher IMR, MMR and TFR. The data of services provided at various facilities was poorly maintained. Deficiencies were also noticed in the implementation of JSY. All point to lack of internal controls at all levels.

Recommendations:

- IEC activities should be improved, so that the public is encouraged to adopt institutional delivery.
- Data for all type of services should be maintained at all healthcare facilities.
- Adequate distribution of IFA tablets and complete administration of TT vaccine to all pregnant women should be ensured by each healthcare facility.
- Attendance of SBAs should be ensured in all home deliveries.
- Timely payment of JSY incentive to each entitled beneficiary should be ensured.

CHAPTER VIII : DATA COLLECTION, MANAGEMENT AND REPORTING

8.1 Introduction

The interventions to ensure fundamental corrections in the existing health care delivery system have increased the demand for data on population and health for use in both micro-level planning and programme implementation. A continuous flow of good quality information on inputs, outputs and outcome indicators facilitate monitoring of the objectives of National Rural Health Mission (NRHM).

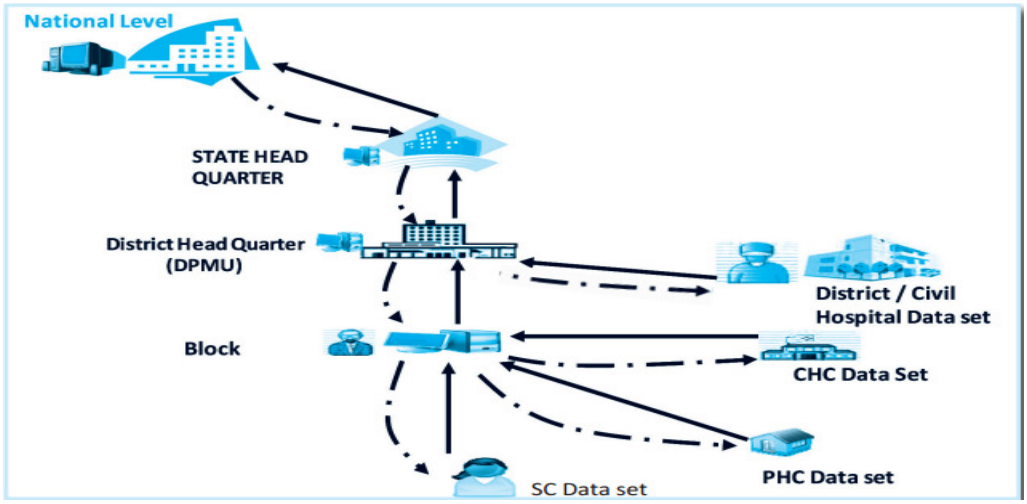
8.2 Health Management Information System

Health Management Information System (HMIS) was conceptualized as a continuous flow of quality information on inputs, outputs and outcome indicators to facilitate monitoring of the objectives of NRHM. The Ministry launched HMIS, a Geographical Information System[1] enabled web-based monitoring system in October 2008 with the objective to record information on health events[2] and check the quality of services at different levels of health care. NRHM framework envisages intensive accountability structures based on internal monitoring through HMIS. The HMIS comprises data relating to the parameters of service delivery and infrastructure (both physical and manpower) at different levels of the health facilities. The flow of data in HMIS from sub-Centre (SC) to national level is as given in **Diagram-8.1**:

[1] Geographical Information System is a computer based tool that analyses, stores, manipulates and visualizes geographic information on a map.

[2] **Antenatal Care Services** : number of pregnant women registered and received 3rd& 4th check up etc., **Deliveries**: deliveries conducted at home; deliveries conducted at public health facility etc, **Pregnancy outcome and Details of new born**: live birth; still birth; weight of newborn etc., **Post Natal Care**: women receiving post-partum check up, **Child Immunisation** etc.

Diagram-8.1[3]: Information flow from SC to national level



(Source: 'Service Providers Manual - Understanding HMIS (Volume-I)'

In part A of this chapter, Audit has compared the data in HMIS with the data in the basic records available at the health facilities. In part B, Audit has analysed the HMIS database provided by the Ministry using IT tools.

PART-A

Comparison of HMIS data with the data in the basic records

8.3 Quality of Data in HMIS

Data quality refers to the extent to which data measures what the stakeholders intend to measure. Data should be checked for quality to minimize errors so that it can be used for decision making. Quality of data in HMIS in terms of completeness, timeliness and accuracy has been discussed in succeeding paragraphs:

8.3.1 Data completeness

For a complete picture of health indicators, all health facilities should report data. Audit noticed that all the facilities were not reporting on the HMIS as explained below:

(i) Reporting by health facilities

The position of health facilities reporting data through HMIS during 2011-16 is depicted in **Table-8.1** below:

[3] In the diagram, straight lines represent upward flow of information and the dotted lines represent downward flow of information

Table-8.1: Details of health facilities not reporting on HMIS

Sl. No.	Year	Total facilities	Facilities reporting	Facilities not reporting	*Per cent* facilities not reporting
1.	2011-12	2,03,245	48,655	1,54,590	76
2.	2012-13	2,03,245	1,07,605	95,640	47
3.	2013-14	2,03,245	1,67,786	35,459	17
4.	2014-15	2,04,449	1,79,676	24,773	12
5.	2015-16	2,09,964	1,96,976	12,988	6

(Source: Month wise status of Data Reporting - Standards Reports on HMIS)

The States with major shortfall as on March 2016 were **Arunachal Pradesh** (32 *per cent*), **Chhattisgarh** (25 *per cent*), **Gujarat** (17 *per cent*), **Manipur** (11 *per cent*) and **Meghalaya, Mizoram** (19 *per cent*).

(ii) Incomplete reporting by health facilities

Even in cases where the health facilities were reporting on HMIS, the data was not complete. While such issues were observed in a number of states like **Bihar, Chhattisgarh, Gujarat, Madhya Pradesh, Meghalaya and Uttar Pradesh**, the case of **Bihar** is discussed in **Table-8.2** below:

Table-8.2: Details of data item/services reported by PHC[4]s in Bihar during 2014-15

Sl. No.	Item code	Data Item/Service	Number of PHCs in the State	Number of PHCs reporting			Number of PHCs not reporting data
				Service available	Number	Total PHCs	
1.	1.2.b	Emergency services (24 Hours)	1,883	No	915	1,515	368
				Yes	600		
2.	1.2.d	In-patient Services		No	837	1,512	371
				Yes	675		
3.	1.6.1.a	Ante-natal care		No	129	1,290	593
				Yes	1161		
4.	1.6.1.d	New born Care		No	647	1,277	606
				Yes	630		
5.	4.1	Routine urine, stool and blood tests		No	774	1,034	849
				Yes	260		
6.	4.7	Rapid tests for pregnancy		No	576	1,025	858
				Yes	449		
7.	5.17.a	Labour room available		No	433	909	974
				Yes	476		
8.	9.1	Citizen's charter (Yes/No)		No	436	814	1069
				Yes	378		

[4] Primary Health Centre

Sl. No.	Item code	Data Item/Service	Number of PHCs in the State	Number of PHCs reporting			Number of PHCs not reporting data
				Service available	Number	Total PHCs	
9.	9.3	Internal monitoring (Social audit through PRI/RKS etc.)		No	267	821	1062
				Yes	554		

It can thus be seen that PHCs were not uniformly reporting on the availability of services making further analysis and taking corrective action difficult. The Ministry stated that it had highlighted the cases of non-reporting or incomplete reporting on various platforms like National level workshops, Regional workshops, National Programme Coordination Committee meetings, visits of senior officials of Ministry etc.

However, incomplete reporting by facilities would have huge bearing on the assessment of outcome indicators and taking remedial measures based on such assessment.

8.3.2 Timeliness of data

The Ministry rolled out the concept of data freezing on HMIS in December 2014, when the data of 2008-09 to 2011-12 was frozen for the first time. The Ministry specified the dates for year wise data freezing as given in **Table-8.3** below**:**

Table-8.3: Year wise details of HMIS data freezing

Year	Date of data freezing
Upto 2011-12	31 December 2014
2012-13	12 January 2015
2013-14	15 February 2015
2014-15	31 August 2015
2015-16	20 August 2016

Audit noted that HMIS remained open for modification/addition by the users which resulted in delay of finalization or freezing of data for use by the stakeholders prior to 2014-15.

The Ministry stated that HMIS does not permit users to modify data after freezing. The reply of the Ministry is not tenable because our concern is on delayed freezing.

8.3.3 Accuracy of data in HMIS

Accuracy refers to the correctness of data reported such as actual number of services provided, health events organised etc.

Audit observed significant discrepancies in the data as reported in HMIS *vis-à-vis* the information available as per basic records/registers in the selected health facilities of 14 States. These are discussed State wise in the succeeding paragraphs:

(a) Assam

The discrepancies were noticed under various parameters *viz.*, pregnant women receiving antenatal care (ANC) and postnatal care (PNC), pregnant woman and infants receiving immunization, etc., as per the details given in **Table-8.4** below:

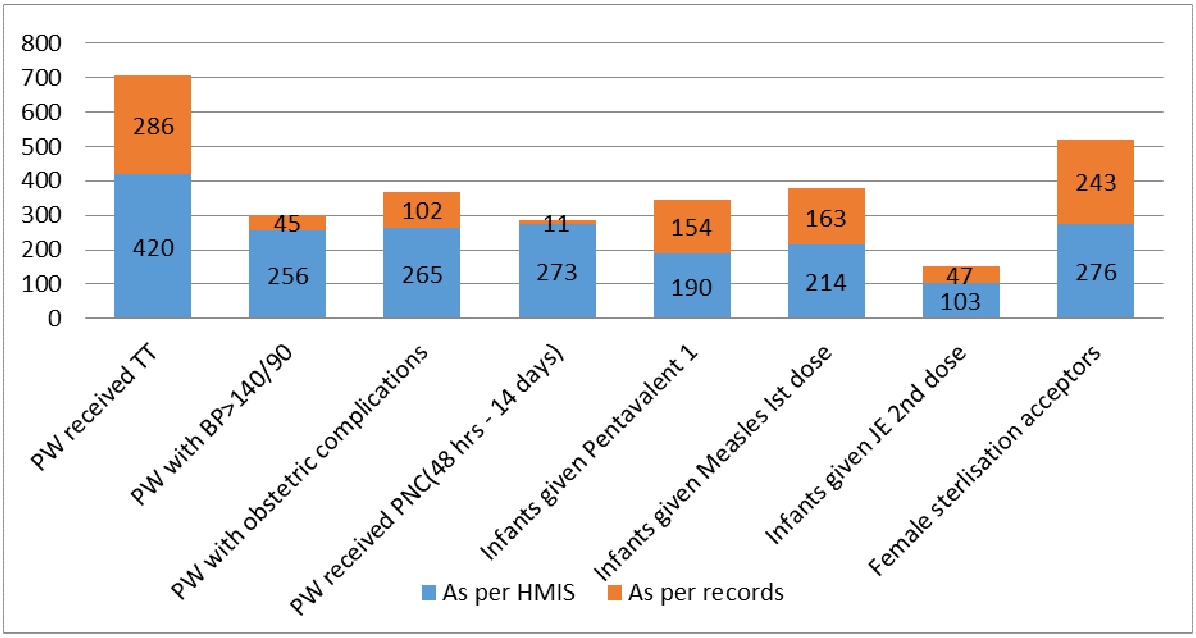
Table-8.4: Discrepancy in data as per HMIS and basic records, Assam for March 2016

Sl No.	Facility type (Number of facilities)	Data as per	Pregnant women receiving 1st ANC	Pregnant women given TT Immunization		Pregnant women with Haemoglobin less than 11 grams/dl	Pregnant women receiving PNC between 48 hours and 14 days after delivery	Infants (0 to 11 months old) immunized	Total number of condom pieces distributed
				TT1	TT2				
1.	CHC[5](8)	HMIS	260	241	219	110	69	7	1,060
		Register	251	217	204	185	57	47	285
2.	PHC (30)	HMIS	340	279	191	226	125	199	1,660
		Register	367	231	134	358	129	179	1,535
3.	SC (41)	HMIS	362	296	278	128	114	299	2,726
		Register	341	285	222	152	104	296	2,488

Audit observed similar discrepancies in the seven selected District Hospitals (DHs) as depicted in **Chart-8.1** below:

[5] Community Health Centre

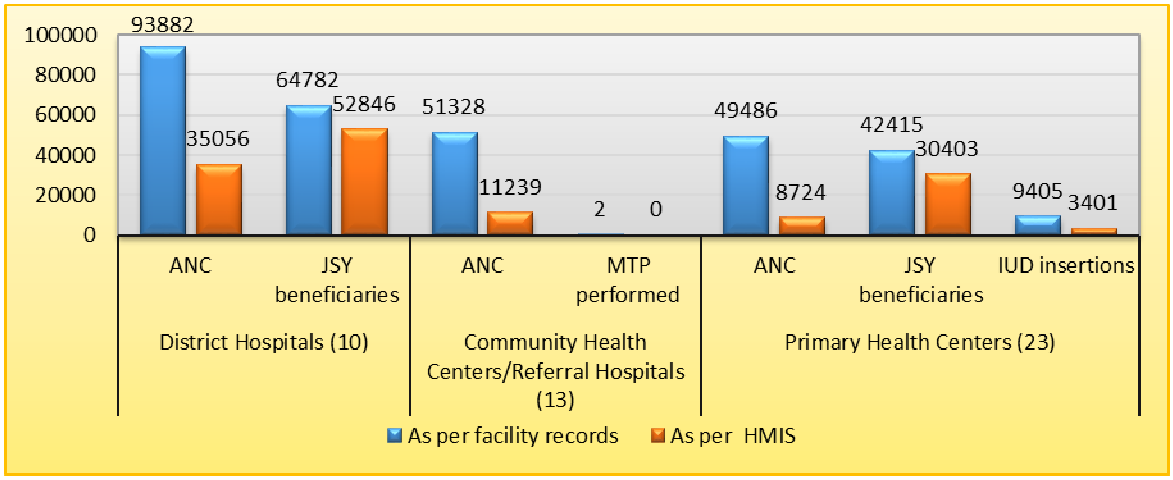
Chart- 8.1: Discrepancy between the data as per HMIS and records in DHs Assam, March 2016



(b) Bihar

Discrepancy in the data on services provided by the selected facilities is depicted in **Chart-8.2** below:

Chart-8.2: Discrepancy in data of services delivery in Bihar, during 2015-16



(MTP: Medical Termination of Pregnancy, IUD: Intra Uterine Device)

(c) Chhattisgarh

(i) The discrepancy in data in the selected SCs in four districts is detailed in **Table-8.5** below:

Table-8.5: Difference in the figures as per HMIS and records in Chhattisgarh, during 2015-16

Sl. No.	District(Number of SCs)	Institutional Delivery			Home Delivery		
		As per Records	As per HMIS	Difference (+/-)	As per Record	As per HMIS	Difference (+/-)
1.	Bilaspur(12)	103	59	(-) 44	254	334	(+)80
2.	Jashpur(12)	92	105	(+)13	159	141	(-)18
3.	Mahasamund(12)	966	379	(-)587	52	102	(+)50
4.	Rajnandgaon(12)	270	282	(+)12	90	261	(+)171

(ii) As per the guidelines of HMIS, number of pregnant woman is to be reported when the number of Iron Folic Acid (IFA) tablets given to her exceeds 100. However, audit found that total available IFA tablets as per records was insufficient for the number of pregnant women shown to have been given such tablets. **Table-8.6** below illustrates the point:

Table-8.6: Details of Pregnant women registered and IFA tablets provided

Sl. No.	Period	(State/ Block)	Number of pregnant women registered	Number of pregnant women shown given IFA tablets as per HMIS	Number of IFA tablets available	Number of pregnant women for whom the available IFA tablets were sufficient	Excess number of pregnant women shown in the data
1	2013-16	State (Chhattisgarh)	20,18,614	17,86,063	5,45,40,000	5,45,400	12,40,663
2	2014-16	Bagbahra	9,547	9,250	2,10,600	2,106	7,144
3	2012-16	Belha	45,015	37,813	5,72,100	5,721	32,092
4	2011-16	Ghumka	23,473	15,708	1,96,700	1,967	13,741
5	2011-16	Khairagarh	22,107	13,731	12,49,672	12,497	1,234
6	2015-16	Lodam	1,649	1,406	1,06,800	1,068	338

(iii) In 20 SCs, auxiliary nurse and mid-wife (ANMs) were not trained as skilled birth attendant (SBA) but HMIS data showed that delivery was conducted by SBA trained ANMs.

(iv) Mismatch was observed in the data on retaining of women after delivery for 48 hours as per Delivery register and HMIS as detailed in **Table-8.7** below:

Table-8.7 Discrepancy in data as per HMIS and Records in CHC Khairagarh, Chattisgarh

Sl. No.	Month	Total deliveries	Discharged within 48 hours	
			As per Delivery register	As per HMIS
1.	June 2015	62	34	21
2.	July 2015	62	40	23
3.	August 2015	66	36	26
4.	September 2015	78	52	17

Sl. No.	Month	Total deliveries	Discharged within 48 hours	
			As per Delivery register	As per HMIS
5.	October 2015	91	56	27
6.	November 2015	81	62	22
7.	December 2015	93	55	20
8.	January 2016	61	44	19
9.	February 2016	54	31	9
10.	March 2016	61	39	31

(d) Himachal Pradesh

As per records, number of pregnant women registered in the State under JSY during 2011-12 and 2014-15 was 21,811 and 36,493 whereas the corresponding numbers reported in HMIS was 28,966 and 39,416 respectively. Similar variations were noticed in the selected districts as detailed in **Table-8.8** below:

Table-8.8: Details of difference in data, Himachal Pradesh

Sl. No.	Year	Hamirpur		Kullu		Sirmour	
		Records	HMIS	Records	HMIS	Records	HMIS
1.	2011-12	1,788	1,517	997	Data not available	873	1,818
2.	2012-13	2,143	1,531	2,009	876	1,932	1,932
3.	2013-14	2,061	1,325	2,537	1,629	2,902	2,902
4.	2014-15	1,939	1,185	2,469	1,612	3,271	3,538
5.	2015-16	2,065	1,231	2,611	1,477	3,219	3,219

The State Mission Director stated that the discrepancy in HMIS might be due to error in compilation. The Ministry stated that facility in charge was expected to look into the data regularly. Block MIS officer and district MIS officers were also expected to monitor the data quality on regular basis.

The reply was however silent on the corrective action to be taken to resolve the issues.

(e) Jharkhand

Discrepancy in the selected health facilities of five selected districts[6] are given in the **Table-8.9** below:

[6] Dumka, Giridih, Gumla, Jamtara and West Singhbhum.

Table-8.9: Difference in data as per HMIS and records in Jharkhand during 2015-16

Sl. no.	Name of Service	DH		CHC		PHC		SC	
		As per records	As per HMIS	As per records	As per HMIS	As per records	As per HMIS	As per records	As per HMIS
1.	ANC Registration	8,795	6,383	18,736	15,854	2,443	2,652	6,317	6,364
2.	Deliveries	34,207	34,341	10,932	13,612	597	1,105	869	678
3.	JSY beneficiaries	59,220	59,163	14,368	10,894	1,254	2,108	5,303	5,616
4.	Maternal Deaths	43	0	113	23	1	0	113	14
5.	Infant Deaths	69	18	40	8	2	0	127	4

(f) Maharashtra

Instances of discrepancy in respect of a few indicators are given in the **Table-8.10** below:

Table-8.10: Difference in data in HMIS and records in Maharashtra during 2015-16

Sl. no	District	Institutional Delivery		Number of live births		Number of Pregnant women given IFA tablets	
		HMIS	Records	HMIS	Records	HMIS	Records
1.	Bhandara	16,826	19,967	19,599	19,617	8,939	8,943
2	Buldhana	19,203	42,491	29,882	42,246	37,776	40,055
3	Nanded	57,642	29,313	84,295	29,094	22,166	25,404
4.	Ratnagiri	7,885	20,334	20,164	20,163	13,909	21,540
5.	Yavatmal	24,168	44,977	32,098	44,333	30,555	32,781

Similar differences were noticed during 2011-15 (**Annexure-8.1**).

Inconsistent data in Rajasthan

For online tracking of pregnant women, infant and children, monitoring of immunization and institutional deliveries *etc*, Pregnancy, Child Tracking and Health Services Management System (PCTS) was implemented in Rajasthan from September 2009. Cross examination of data on activities as per PCTS and HMIS with records maintained at facilities revealed differences in selected districts as given in the **Table- 8.11** below:

Table-8.11: Discrepancy in data as per PCTS, HMIS and Records in Rajasthan

Sl. no	Name of Service	2013-14			2014-15			2015-16		
		Records	PCTS	HMIS	Records	PCTS	HMIS	Records	PCTS	HMIS
1.	Pregnant women registered for ANC	2,75,961	2,74,656	2,74,820	2,77,576	2,76,473	2,76,485	2,76,286	2,77,642	2,62,371
2.	Pregnant women received 3 ANCs	2,10,574	2,09,663	2,09,771	2,09,308	2,07,891	2,07,892	1,91,096	1,90,321	1,84,101

3.	Pregnant women given 100 IFA tablets	2,07,954	2,06,085	2,49,598	2,13,651	2,11,913	2,63,390	2,03,474	2,01,524	2,53,955
4.	Institutional Deliveries	2,25,529	2,31,893	2,33,542	2,19,768	2,22,549	2,23,337	2,23,532	2,23,703	2,17,853
5.	Women discharged within 48 hours of Delivery	44,273	42,645	95,783	44,981	38,525	24,708	65,923	44,200	27,721
6	Newborn having weight less than 2.5 kg	62,632	74,367	74,402	58,737	58,390	58,491	33,271	30,797	59,137

(g) Tripura

Comparison of HMIS data with records maintained in the selected facilities revealed difference as given in **Table-8.12** below:

Table-8.12: Difference in data as per HMIS and records during 2011-16

Sl. No.	Name of Service	SC		PHC		CHC		DH	
		HMIS	Records	HMIS	Records	HMIS	Records	HMIS	Records
1.	Pregnant women registered for ANC	8,194	6,951	4,597	5,562	1,601	21,491	No difference	
2.	Pregnant women registered under JSY	NA	NA	2,764	3,185	173	5,980	806	2,017
3.	Pregnant women received 3 ANCs	4,919	2,355	2,284	3,766	270	8,272	No difference	
4.	Pregnant women given 100 IFA tablets	4,355	3,270	2,982	4,199	1,106	8,061	No difference	
5.	Pregnant women discharged under 48 hours of delivery	NA	NA	983	714	2,798	1,926	No difference	

(h) Uttarakhand

Comparison of data on various activities in HMIS and the records revealed mismatches between the two as mentioned in **Table-8.13** below**:**

Table-8.13: Difference in data as per HMIS and records in Uttarakhand, during 2015-16

Sl. No.	Data Item	HMIS	Records
1.	Pregnant women Registered for ANC	2,21,686	2,20,273
2.	Pregnant women given100 IFA tablets	59,841	59,018
3.	Institutional deliveries	95,812	95,664
4.	Home deliveries	29,058	28,991
5.	Deliveries with obstetric complications	9,419	9,346
6.	Live Birth Male	77,547	77,454
7.	Live Birth Female	70,264	70,184
8.	Administration of Vitamin A	74,798	51,743
9.	Vasectomy	1,143	1,176
10.	Third ANC	1,77,171	1,76,213
11.	Maternal Death	54	123

(i) Discrepancy of data in a few other States

Table-8.14: Discrepancy of data in States

Sl. No.	State	Details of discrepancy
1.	Gujarat	➢ Two maternal deaths took place at PHC, Hadiyol during 2015-16. However, HMIS showed no such data. ➢ Number of infant deaths during 2015-16 was 23, 1, 17 and 56 at PHC, Hadiyol, Jaswantgadh, Nava Revas and Nadiad respectively. HMIS showed no such data.
2.	Madhya Pradesh	➢ Number of First Referral Units (FRUs) in HMIS ranged from 979 in 2011-12 to 3,082 in 2015-16, whereas only 148 FRUs were functional in 2015-16. ➢ As per HMIS, number of functional 24x7 PHCs in 2015-16 was 4,778, while only sixty-eight 24x7 PHCs were functional. ➢ As per HMIS, number of functional Sick New Born Care units (SNCUs) was 2,566 in 2015-16, whereas only 54 SNCUs were functioning in the State. ➢ SHS stated (August 2016) that data entry in the HMIS portal was carried out at field level where some of the operators did not take action on the error after data entry, hence wrong data was exhibited in the HMIS reports.
3.	Manipur	➢ As per Delivery Register of DH, Ukhrul, 361 deliveries were conducted during 2015-16. However, as per HMIS, 314 deliveries were reported. ➢ 4 and 3 C-Section deliveries were conducted in June and July 2015 at DH, Ukhrul however, HMIS showed five C-Section deliveries in June 2015 and none during July 2015.
4.	Meghalaya	➢ There was discrepancy in data on various data elements *e.g.* Total number of pregnant woman registered for ANC, number of pregnant woman registered under Janani Suraksha Yojana (JSY), number of pregnant woman who received Tetanus Toxoid1 (TT1) *etc.* during 2015-16 (**Annexure-8.2).**
5.	Odisha	➢ Data Discrepancy was noticed under various services *viz.*, ANC/PNC, number of deliveries, maternal/infant deaths etc. as per HMIS and as per records of the facility during 2015-16 (**Annexure-8.3).**

8.4 Validation checks

For maintaining data accuracy, various validation checks had been incorporated in HMIS so that the user is highlighted with probable cases of

data issues at the time of data entry itself. Some examples of validation[7] issues are given in the **Table-8.15** below:

Table-8.15: Details of validation issues in HMIS

Sl. No.	Year	State	District	Number of issues[8]
1.	2011-12	Bihar	Aurangabad	54
2.	2012-13	Chhattisgarh	Bastar	32
3.	2013-14	Meghalaya	East Garo Hills	11
4.	2014-15	Madhya Pradesh	Tikamgarh	45
5.	2015-16	Uttar Pradesh	Allahabad	49

However, these issues had not been resolved. The Ministry stated that Probable Outliers and Validation Reports identify the probable cases where there might be a data discrepancy. However, the cases which get highlighted in the report may not be an error and could be actual performance for that particular state/UT.

Audit however observed that the data in HMIS inconsistent with the prescribed validation checks remained unresolved. Some examples are given in **Annexure-8.4.**

Thus the data reported in HMIS did not tally entirely with the data available in the records of health facilities. This indicates that the data was not verified at appropriate level before being uploaded on HMIS portal. The variations and mismatch in two sets of data indicates the need for institutionalizing a mechanism for reliable data capture and reporting.

The Ministry stated that more than 1.96 lakh facilities across country upload monthly performance data and annual infrastructure data on HMIS portal. On the basis of a small sample drawn from few districts (that too on random basis, which may not be proper representative of the National scenario), the judgment on reliability or lack of integrity cannot be drawn. Such a huge system is bound to have some challenges related to monitoring but on the basis of some pitfalls the integrity of the system should not be doubted. Further, during exit conference, Ministry stated that data from different sources viz. registers and HMIS have variations as data entry is a cause of concern everywhere.

[7] In HMIS, validation report discrepancy is highlighted on the basis of certain pre-defined rules and logic.

[8] As per the standard report viz. "Outlier and Validation issues" on HMIS portal

The reply of the Ministry is not tenable as samples are selected on a scientific basis and inferences based on them, to a large extent, represent the entire population.

8.5 Computerisation and networking

NRHM envisaged accountability through computer based HMIS. A robust information system which could provide accurate, up to date and timely information was needed at every level. Accordingly, network facility was required at the ground level to transmit data. It was, however, observed that there was no adequate computerization, networking and human resources in the selected facilities. As a result, the facilities had to upload the reports on HMIS portal from the district headquarters or the nearest internet accessible area. This resulted in delayed availability or non-availability of data. State wise observations are given in **Annexure-8.5**.

These observations were also supported by the facility survey conducted in 134 DHs, 300 CHCs and 514 PHCs as detailed in **Table 8.16** below:

Table-8.16: DHs, CHCs and PHCs

Sl. No.	Facility	*Per cent* of selected health facilities where the facility was not available		
		DHs	CHCs	PHCs
1.	Computer	2	8	54
2.	Internet connection	13	12	64
3.	Data Entry Operator	18	35	76

8.6 Non-maintenance of records

Proper maintenance of records at the health facility was necessary for assessing the health situation in the area. IPHS 2012 envisaged maintenance of 12 registers[9] across all health facilities. These registers are primary records and help in taking corrective actions for improvement of the healthcare facilities. Hence, these records are required to be maintained and preserved.

[9] Eligible Couple Register (including contraception), (2) Maternal and Child Health Register (a. Antenatal, intra-natal, postnatal b. Under-five register: i. Immunization ii. Growth monitoring c. Above Five Child immunization d. Number of HIV/STI screening and referral), (3) Births and Deaths Register, (4) Drug Register, (5) Equipment, Furniture and other Accessory Register, (6) Communicable diseases/Epidemic Register/Register for Syndromic Surveillance, (7) Passive Surveillance Register for malaria cases, (8) Register for records pertaining to Janani Suraksha Yojana, (9) Register for maintenance of accounts including untied funds, (10) Register for water quality and sanitation, (11) Minor Ailments Register, (12) Records/Registers as per various National Health Programme guidelines (National Leprosy Eradication Programme, Revised National TB Control Programme, National Vector Borne Disease Control Programme, etc.)

It was observed that the required registers/records were not maintained or were incomplete in the selected health facilities. This also calls into question the integrity of data reported by the facilities in the HMIS. State wise details on non-maintenance of registers/records are given in **Annexure-8.6**.

PART-B

Data analysis of HMIS database provided by the Ministry

8.7 HMIS data-dump

The Ministry furnished data-dump of HMIS for service delivery for 2012-16 in August 2016 and for 2011-12 in September 2016 with the certificate that 'the data dump shared by the Ministry for 2011-12 to 2015-16 was complete and consistent across all the financial years'. However, Audit observed that the data for 2015-16 were not available for five States/UT (**Andaman and Nicobar Islands, Andhra Pradesh, Odisha, Puducherry** and **Telangana),** in the Table[10] analysed. In addition, the data-dump on infrastructure was missing for the period 2011-12 to 2015-2016 which was subsequently provided in February 2017. Audit analysed HMIS database for the period 2011-2016 by using Computer Assisted Audit Techniques (CAATs). Audit also compared the data provided by the Ministry with the data of facility survey conducted during Audit.

8.8 Service delivery data

The Service delivery data contains, inter alia, data on various RCH interventions *viz.* ANC, immunization, administration of IFA tablets etc. Comparative analysis between the data derived from HMIS database[10] and similar data collected during field audit revealed substantial variations (from -911 *per cent* to 100 *per cent*) for the 11 major/significant selected RCH indicators/parameters on either side (positive as well as negative) across the years (2011-2016) countrywide (**Annexure-8.7**). Only in a few cases did the figures for both the datasets matched.

Ministry replied (December 2016) that in the district consolidated table (which was used for data analysis by audit), information of all health facilities for a particular district may not be there, as some facilities might not have started reporting in that year or the "Compile" button was not pressed to incorporate the same in the district consolidated table. Hence, the Ministry's reply implied that the data in the District Consolidated transaction table may be under-reported. The reply of the Ministry is not tenable as the comparison of the

[10] District Consolidated Table (MISCONSOLIDATED_LIVE_TRN_RAW_DATA)

data derived from the district level table in HMIS with the data collected by the States shows substantial number of instances of over-reporting also.

The Ministry also stated that the data dump provided to audit was raw data and a process/algorithm/program/application/software is run on this data dump to generate the reports which are used by the Ministry for decision making and for use by all the stakeholders. In response, audit requisitioned (December 2016) the data tables which were being used for preparation of standard reports/decision making. The Ministry provided (February 2017) a fresh data-dump with a disclaimer that "Standard Report may not match with the summary of data-dump provided because of ongoing essential activities in HMIS such as migration, upgradation of facilities, Blocks etc. as requested by States/UTs". Thus, the data dump that was later provided by the Ministry could not be compared with the standards reports of the Ministry.

Analysis of the earlier data dump by Audit revealed instances of missing data, as mentioned earlier, even though the data dump was provided by the Ministry along with a certificate stating the said data dump was complete. The Ministry attributed this deficiency to "inadvertent error".

8.8.1 Outliers: abnormal variations

In order to check internal data inconsistencies, common validation rules as envisaged in HMIS were referred to. Data analysis revealed that for some major RCH parameters, the achievement shown was more than hundred *per cent* in a number of instances, which was beyond normal range such as number of pregnant women who availed the benefit of ANC, immunisation, JSY etc. was more than the pregnant women registered etc., as detailed in (**Annexure-8.8**).

These instances relate to HMIS data for 2011-2016, the data for which had already been frozen by the Ministry except for 2015-16. It implies that the Ministry did not take any remedial steps to address the data discrepancies which may result in incorrect MIS reports being generated through the system.

8.8.2 Blank fields in data

Twelve test checked fields of District Consolidated Transaction Table (2011-2016), contained 'Blank fields' as given in **Table 8.17** below:

Table-8.17: Cases of blank fields in HMIS database

Sl. No.	Indicators	Blank fields (Out of 37,850)
1.	Total number of pregnant women Registered for ANC	54
2.	Number of pregnant women received 3 ANC check-ups during pregnancy	59
3.	Deliveries conducted at Private Institutions (Including C-Sections)	10,871
4.	Deliveries conducted at Public Institutions (Including C-Sections)	164
5.	Number of ASHAs paid JSY Incentive for deliveries conducted at accredited Private Institutions	16,164
6.	Number of ASHAs paid JSY Incentive for deliveries conducted at Public Institutions	585
7.	Number of female live births	137
8.	Number of male live births	137
9.	Total number of male and female live births	29
10.	Number of Pregnant women registered under JSY	230
11.	Total number of pregnant women given 100 IFA tablets	101

Presence of major 'Blank fields' in important fields viz. 'Deliveries conducted at Private Institutions' and 'Number of ASHAs paid JSY Incentive for deliveries conducted at accredited Private Institutions' of service deliveries renders the Ministry's key Management Information System unreliable.

8.9 Human and physical infrastructure

The database of Human and physical infrastructure contains data on availability of manpower and physical infrastructure *viz.* building, electricity, water, doctors, paramedical staff etc. at health facilities. Findings of data analysis on the same have been discussed below:-

8.9.1 Reporting status of health facilities

All the health facilities (DH, SDH, CHC, PHC and SC) have to report data inputs in the HMIS database. Audit noticed that 14 to 64 *per cent* of the health facilities were not reporting infrastructure data on HMIS for 2015-16 as given in **Table-8.18** below:

Table-8.18: Reporting status of health facilities

Sl. No.	Name of facility	Total number of facilities			Facilities not Reporting			Facilities not reporting (*per cent*)		
		Public	Private	Total	Public	Private	Total	Public	Private	Overall
1.	DH	1,092	175	1,267	348	161	509	32	92	40
2.	SDH	1,745	1,105	2,850	797	1,031	1,828	46	93	64
3.	CHC	6,550	5,135	11,685	1,224	4,816	6,040	19	94	52
4.	PHC	33,379	496	33,875	7,266	355	7,621	22	72	22
5.	SC	1,75,816	280	1,76,096	24,492	195	24,687	14	70	14
Total		**2,18,582**	**7,191**	**2,25,773**	**34,127**	**6,558**	**40,685**	**16**	**91**	**18**

Thus, due to non-reporting by substantial number of health facilities, the MIS reports failed to present a comprehensive picture.

8.9.2 Incomplete reporting

The details of count of total entries to be filled and count of blank fields during 2015-16 are given in **Table-8.19** below:-

Table-8.19: Details of blank fields

Sl. No.	Details	DH	SDH	CHC	PHC	SC
1.	Total number of data field	2,71,955	3,06,627	16,07,139	48,94,659	1,34,38,379
2.	Number of data field left blank	32,545	32,204	1,84,939	4,53,915	11,15,211
3.	Percentage of number of blank field to total number of data field	12	11	12	9	8

It is evident from the above table that 8 to 12 *per cent* of data field were not filled up by various health facilities making the data reporting under MIS reports unreliable.

8.9.3 Unrealistic data on men-in-position

(i) Community Health Centre

IPHS provides for deployment of one Obstetrician/Gynaecologist, Paediatrician, Physician and General Surgeon each at CHC. Audit noticed that the men-in-position was abnormally high in 462 cases in 370 CHCs during 2015-16, as given in **Table-8.20** below:

Table-8.20: Discrepancy in data of Personnel

Sl. No.	Category of Personnel	Number of Personnel in position shown in database			
		2 to 4	5 to 10	More than 10	Total
1.	General Surgeon	84	11	-	95
2.	Obstetrician/ Gynaecologist	130	5	1	136
3.	Paediatrician	57	-	-	57
4.	Physician	155	19	-	174
Grand total					**462**

Audit further analysed that out of these 370 CHCs, 16 cases in 15 CHCs pertained to sampled CHCs. The comparison of men-in-position of 16 test checked cases revealed that in only one case, HMIS data matched with the records of the health facilities.

(ii) Primary Health Centre

IPHS provides for deployment of one medical officer for type A and two for type B, one Laboratory Technician and one Pharmacist each for PHC. Audit noticed that the men-in-position was abnormally high in 2,732 cases in 2,038 PHCs, during 2015-16, as given in **Table-8.21** below:

Table-8.21: Discrepancy in data of Personnel

Sl. No.	Category of Personnel	Number of Personnel in position shown in database			
		2 to 4	5 to 10	More than 10	Total
1.	Medical Officer	855[11]	247	11	1,113
2.	Pharmacist	990	37	6	1,033
3.	Laboratory Technician	574	11	1	586
Grand Total					**2,732**

Audit further analysed that out of these 2,038 PHCs, 70 cases in 55 PHCs pertained to sampled PHCs. The comparison of men-in-position of 70 test checked cases revealed that only in 24 cases, HMIS data matched with the records of the health facilities.

(iii) Sub-Centre

IPHS provides for deployment of one female health worker for Type-A and two for Type-B, and one male health worker at each sub-Centre. Data analysis of HMIS revealed that 1,238 and 840 SCs respectively reported abnormally higher number of health worker (both female/male) in position against the provision during 2015-16 as given in **Table-8.22 and Table-8.23** below:

Table-8.22: Discrepancy in data of female health workers

Sl. No.	Number of Female Health workers in position shown in database	Number of SCs	State (Number of SCs)
1.	3 to 10	1,123	Assam (77), Haryana (174), Jharkhand(160), Madhya Pradesh (77), Rajasthan (89), Uttar Pradesh (160) and 26 other States (386).
2.	11 to 20	20	Andhra Pradesh (3), Arunachal Pradesh (1), Bihar (1), Delhi (2), Haryana (1), Karnataka (2), Rajasthan (1), Tamil Nadu (2) and Uttar Pradesh (7).
3.	21-25	35	Andhra Pradesh (1), Bihar (1), Chhattisgarh (1), Delhi (2), Madhya Pradesh (1), Puducherry (1), Punjab (2) and Uttar Pradesh (26).
4.	26	21	Uttar Pradesh (21)

[11] Since IPHS provide for at most two Medical Officers, the figure depicts number of PHCs having three to four Medical Officers.

Sl. No.	Number of Female Health workers in position shown in database	Number of SCs	State (Number of SCs)
5.	38	1	Nagaland (1)
6.	54	36	Kerala (2) and Uttar Pradesh (34)
7.	222	1	Jammu & Kashmir (1)
8.	259	1	Uttar Pradesh (1)
Total		**1,238**	

Audit further analysed that out of these 1,238 PHCs, 13 SCs pertain to sampled SCs. The comparison of men-in-position of 13 test checked SCs revealed that only in three cases, HMIS data matched with the records of the health facilities.

Table-8.23: Discrepancy in data of male health workers

Sl. No.	Number of Male Health workers in position shown in database	Number of SCs	State (Number of SCs)
1.	2 to 10	769	Assam (63), Jammu and Kashmir (131), Meghalaya (32), Odisha (37), Tamil Nadu (34), Tripura (50), Uttar Pradesh (143), West Bengal (30) and 20 other States (249).
2.	11 to 14	29	Gujarat (1), Jammu and Kashmir (1), Kerala (1), Maharashtra (3), Tamil Nadu (2) and Uttar Pradesh (21).
3.	54	3	Andhra Pradesh (1), Kerala (1) and Telangana (1)
4.	100	34	Uttar Pradesh (34)
5.	111	1	Jammu & Kashmir (1)
6.	114	1	Tripura (1)
7.	154	3	Kerala (1) and Tamil Nadu(2)
Total		**840**	

Audit further analysed that out of these 840 SCs, 14 SCs pertain to sampled SCs. The comparison of men-in-position of 14 test checked SCs revealed that only in three cases, HMIS data matched with the records of the health facilities.

The unrealistic data on availability of human resources at different levels of health facilities reflected inadequate monitoring of data entry.

8.9.4 Comparison of HMIS data and survey sheet

Comparison of data for availability of various infrastructure facilities in CHCs, PHCs and SCs as per HMIS for 2015-16 and the data collected during the survey conducted by Audit revealed mismatch of figures, as given in **Table-8.24, Table-8.25 and Table-8.26** below:

Table-8.24: Community Health Centre

Sl. No.	Type of Service	Total Number of CHCs	Number of CHCs where the service was not available as per	
			HMIS	Survey
1.	Blood storage facility	227	186	184
2.	New-born care	227	25	29
3.	Personal computer	222	21	14
4.	Referral transport service	227	14	22
5.	Separate wards for male and female	224	28	44
6.	X-ray facility	224	82	76

Table-8.25: Primary Health Centre

Sl. No.	Type of Service	Total Number of PHCs	Number of PHCs where the service was not available as per	
			HMIS	Survey
1.	Ante natal care	471	41	69
2.	New-born care	471	153	220
3.	Operation theatre	458	271	284
4.	Personal Computer	457	199	196
5.	Separate wards for male and female	458	236	292

Table-8.26: Sub-Centres

Sl. No.	Type of Service	Total number of SCs	Number of SCs where the service was not available as per	
			HMIS	Survey
1.	Ante Natal Care	1,371	50	61
2.	Child care including immunization	1,371	51	52

It is evident from the above tables that the data of HMIS was not consistent with the results of the survey conducted by Audit.

The Ministry stated that strengthening of HMIS is an ongoing process due to inclusion of new data items as per requirement of NHM and other programmes of the Ministry. Moreover, it is the only portal which is having access to all public health facilities and provides facility wise information of about 1.96 lakh facilities. The system is bound to have some issues related to lack of registers, incomplete reporting etc. at some places. Further, lack of computerization or integrated MIS in the facilities leads to human/ typographical/manual compilation errors.

Conclusion:

The primary objective of HMIS i.e., continuous flow of quality information on inputs, outputs and outcome indicators for monitoring of objectives of NRHM remained only partially fulfilled. Inconsistent data, incomplete reporting and unrealistic values in HMIS are likely to influence the decision making. Non-

maintenance of basic records/data in the prescribed manner and absence of data verification system resulted in misreporting and discrepant data in HMIS. Deficient computerization and networking compounded the problem preventing timely and smooth flow of data.

Recommendations:

- The Ministry should formulate a clearly documented organizational structure with identified positions for data management responsibilities.
- A documented and structured training programme for the personnel involved in data recording, reporting, aggregation, verification and feeding should be put in place.
- Improve the reliability of data in HMIS by providing for proper validation controls at all levels.
- Evolve and implement a mechanism for verification of data before uploading on the HMIS.

New Delhi
Dated: 17 June 2017

(MUKESH PRASAD SINGH)
Director General of Audit
Central Expenditure

Countersigned

New Delhi
Dated: 21 June 2017

(SHASHI KANT SHARMA)
Comptroller and Auditor General of India

ANNEXURES

Annexure-2.1
(Refer para-2.5)

Outstanding Advances[1]

Sl. No.	State	Outstanding advances	Amount (₹ in crore)
1.	**Jharkhand**	Advances amounting to ₹ 22.90 crore were outstanding for the period ranging one to four years with the Implementing agencies	22.90
2.	**Himachal Pradesh**	➢ In test-checked Sirmour district, ₹ 1.69 crore was deposited with HPSCSCL for purchase of medicines during 2011-15 which was lying unadjusted (as of June 2016) for periods ranging between 18 and 52 months. ➢ Between 2013-15, three test-checked districts deposited ₹ 61.64 lakh with Post Graduate Institute (PGI), Chandigarh for treatment of children suffering from various diseases. It was observed that an amount of ₹ 17.07 lakh was adjusted as of June 2016, leaving outstanding advance of ₹ 44.57 lakh with PGI. No record was available with the concerned Chief Medical Officers whether recommended patients actually availed treatment at PGI Chandigarh.	1.69 0.44
3.	**Odisha**	➢ At the State level, audit found that advance of ₹ 94.55 crore was outstanding against districts, other agencies and staff as of March 2016. This included ₹ 64.02 crore relating to execution of civil works. ₹ 20.92 crore[2] was lying unadjusted for periods ranging from three to more than 60 months against 31 other agencies as of March 2016. ➢ In seven test checked districts, CDMOs sanctioned advance of ₹ 20.57 crore[3] as of 31 March 2016 which were lying unadjusted for a period ranging from three to 96 months. Audit noticed that CDMOs did not maintain advance register to review the outstanding advances and did not enforce timely adjustment. In response to audit, the CDMOs stated (July 2016) that instructions had been issued either to adjust or to refund the unutilised fund lying with them.	20.92 20.57
4.	**Rajasthan**	M/s Rajasthan Medical Service Corporation Ltd., (RMSCL) was given advance during 2011-16 without adjustment of previous advances, which resulted in unadjusted/unspent advance accumulation of ₹ 181.75 crore as of March 2016, of which, ₹ 131.45 crore was outstanding for periods ranging from more than 3 to 44 months. State Institute of Health and Family Welfare (SIHFW) was also given advances for providing training to SHS staff. Due to continuous release of advances without adjustment of previous advance to SIHFW, ₹ 16.86 crore remained unadjusted/unspent as of March 2016, of which ₹ 12.69 crore was outstanding for periods ranging from more than 3 to 101 months.	131.45 12.69
5.	**Tamil Nadu**	The procurement and supply of drugs, equipment, etc., was entrusted with Tamil Nadu Medical Service Corporation Ltd (TNMSC) a state	83.35

[1] In terms of para 6.91 of the operational guidelines for financial management, advances are to be settled within a period of 90 days

[2] More than five years: ₹ 0.07 crore, One year to five years : ₹ 6.02 crore, Three months to one year : ₹ 7.35 crore and upto three months: ₹ 7.48 crore.

[3] Balasore: ₹ 3.30 crore (12 to 48 months), Bargarh : ₹ 4.74 crore (3 to 96 months), Boudh: ₹ 1.48 crore (3 to 60 months), Kandhamal: ₹ 0.59 crore (3 to 12 months), Keonjhar : ₹ 0.05 crore (3 months), Nuapada : ₹ 2.65 crore (13 to 28 months) and Puri : ₹ 7.76 crore (23 to 47 months)

Sl. No.	State	Outstanding advances	Amount (₹ in crore)
		public sector under taking. ₹ 123.93 crore was neither utilized nor refunded by the Corporation to NRHM as of March 2016, of which an amount of ₹ 83.35 crore was outstanding for 12 to 96 months.	
6.	**Uttar Pradesh**	Advances amounting to ₹ 843.64 crore given for construction of buildings, procurement of equipment etc. were outstanding as on March 2016, with various agencies of these, ₹ 578.46 crore were outstanding for periods ranging from more than 3 to 36 months. SHS was paying advances very liberally to the construction agencies much beyond the contractual norms used by state/central government in award of works.	578.46
7.	**West Bengal**	Advance was given from RCH and Mission Flexible Pool fund (NRHM additionalities) to different government and non-government agencies for construction of health facilities and implementation of various programmes. Against total advances of ₹ 363.50 crore to 298 agencies (Government/Non-government) age-wise breakup was not available for ₹ 141.65 crore (35 agencies). Out of the remaining ₹ 221.85 crore (263 agencies), as of March 2016, ₹ 37.49 crore was lying for more than two years with 91 agencies.	37.49
		Total	**909.96**

Annexure-3.1
(Refer para-3.1)

Availability of SCs, PHCs and CHCs in States/UT

Sl. No.	State/UT	Number of SCs required as per population norms as on 31st March 2016	Number of SCs available as on 31st March 2016	Shortfall	Number of PHCs required as per population norms as on 31st March 2016	Number of PHCs available as on 31st March 2016	Shortfall	Number of CHCs required as per population norms as on 31st March 2016	Number of CHCs available as on 31st March 2016	Shortfall
1.	**Andaman and Nicobar Islands**	123	123	0	22	22	0	4	4	0
2.	**Andhra Pradesh**	7,142	7,626	-484	1,182	1,157	25	296	192	104
3.	**Arunachal Pradesh**	461	588	-127	69	143	-74	17	63	-46
4.	**Assam**	6,817	4,621	2,196	1,112	1,014	98	278	151	127
5.	**Bihar**	20,760	9,696	11,064	3,460	533	2,927	865	70	795
6.	**Chhattisgarh**	5,533	5,186	347	870	790	80	217	155	62
7.	**Gujarat**	9,066	9,156	-90	1,490	1,342	148	366	331	35
8.	**Haryana**	3,006	2,630	376	501	486	15	125	119	6
9.	**Himachal Pradesh**	2,288	2,071	217	343	518	-175	86	79	7
10.	**Jammu and Kashmir**	2,918	2,450	468	444	398	46	97	84	13
11.	**Jharkhand**	8,813	3,958	4,855	1,376	330	1,046	344	188	156
12.	**Karnataka**	7,805	9,332	-1,527	1,300	2,353	-1,053	325	206	119
13.	**Kerala**	6,847	5,781	1,066	1,141	924	217	285	234	51
14.	**Madhya Pradesh**	11,780	9,192	2,588	2,000	1,172	828	487	334	153
15.	**Maharashtra**	15,390	10,580	4,810	2,461	1,811	650	596	363	233
16.	**Manipur**	690	421	269	109	85	24	27	17	10
17.	**Meghalaya**	759	431	328	114	109	5	28	27	1
18.	**Mizoram**	364	370	-6	54	57	-3	14	9	5

Sl. No.	State/UT	Number of SCs required as per population norms as on 31st March 2016	Number of SCs available as on 31st March 2016	Shortfall	Number of PHCs required as per population norms as on 31st March 2016	Number of PHCs available as on 31st March 2016	Shortfall	Number of CHCs required as per population norms as on 31st March 2016	Number of CHCs available as on 31st March 2016	Shortfall
19.	**Odisha**	9,983	6,688	3,295	1,597	1,305	292	399	377	22
20.	**Punjab**	3,468	2,950	518	578	427	151	144	150	-6
21.	**Rajasthan**	10,995	14,408	-3413	1,800	2,080	-280	450	571	-121
22.	**Sikkim**	203	147	56	30	24	6	7	2	5
23.	**Telangana***	4708	4863	-155	768	668	100	192	114	78
24.	**Tripura**	1054	1033	21	125	94	31	30	20	10
25.	**Tamil Nadu**	10920	8712	2208	1,812	1,368	444	538	385	153
26.	**Uttaranchal**	3372	1847	1525	505	257	248	126	59	67
27.	**Uttar Pradesh**	32017	20,521	11,496	5,183	3,621	1,562	1,555	818	737
28.	**West Bengal**	18,280	10,369	7911	3,046	909	2,137	914	340	574
Total		**2,05,562**	**1,55,750**	**49,812**	**33,492**	**23,997**	**9,495**	**8,812**	**5,462**	**3,350**

* Data as on 31 March 2015

Annexure-3.2
(Refer para-3.4)

Details of construction of SCs, PHCs and CHCs in States/UT

Sl. No.	State	Number of Health Centres established								
		Construction of SCs			Construction of PHCs			Construction of CHCs		
		T	A	S	T	A	S	T	A	S
1.	**Andhra Pradesh**	318	233	85	249	163	86	3	3	0
2.	**Arunachal Pradesh**	129	129	0	3	3	0	0	0	0
3.	**Assam**	626	165	461	65	4	61	55	9	46
4.	**Bihar**	119	5	114	90	1	89	0	0	0
5.	**Chhattisgarh**	158	75	83	1	0	1	0	0	0
6.	**Gujarat**	458	141	317	142	51	91	94	75	19
7.	**Haryana**	245	214	31	78	72	6	22	19	3
8.	**Himachal Pradesh**	167	45	122	100	36	64	14	10	4
9.	**Jammu and Kashmir**	198	101	97	99	57	42	75	36	39
10.	**Jharkhand**	665	416	249	16	2	14	4	2	2
11.	**Karnataka**	654	463	191	67	41	26	3	1	2
12.	**Kerala**	100	89	11	0	0	0	0	0	0
13.	**Madhya Pradesh**	310	231	79	12	5	7	13	9	4
14.	**Maharashtra**	285	142	143	107	33	74	0	0	0
15.	**Manipur**	109	60	49	11	2	9	0	0	0
16.	**Meghalaya**	49	46	3	6	2	4	0	0	0
17.	**Mizoram**	60	60	0	1	1	0	0	0	0
18.	**Odisha**	1,323	831	492	100	70	30	123	120	3
19.	**Rajasthan**	927	580	347	109	55	54	2	2	0
20.	**Sikkim**	1015	735	280	150	120	30	35	10	25
21.	**Telangana**	192	134	58	101	90	11	4	0	4
22.	**Tamil Nadu**	178	167	11	215	151	64	129	108	21
23.	**Uttaranchal**	6	5	1	1	1	0	3	3	0
24.	**Uttar Pradesh**	659	505	154	28	26	2	32	4	28
25.	**West Bengal**	613	517	96	79	38	41	122	84	38
Total		**9,563**	**6,089**	**3,474**	**1,830**	**1,024**	**806**	**733**	**495**	**238**

T: Target
A: Achievement
S: Shortfall

Annexure-3.3
(Refer para-3.4.4)

Abandoned/dropped works

Sl. No.	State	Number of works	Cost of the work (₹ in crore)	Expenditure incurred (₹ in crore)	Remarks
1.	**Assam**	1	1.31	0.53	The work of Rural Health Block Pooling Complex at Pandu FRU costing ₹ 130.70 lakh was started in December 2011, but after the fence was constructed, the Railway Authorities alleged illegal grabbing of Railway land and asked to stop the work immediately, which did not happen. Ultimately after completion of 40 *per cent* of work and paying ₹ 26.27 lakh leaving committed liability of another amount ₹ 26.27 lakh against the value of work done, the work was stopped (November 2014) on the basis of an interim order of Hon'ble Gauhati High Court. This resulted in abandoned infrastructure after incurring an amount of ₹ 52.54 lakh (including liability amount).
2.	**Gujarat**	1	0.61	0	The work of construction of Staff Quarters at PHC, Moyad (Taluka Prantij) for the year 2012-13 was awarded (August 2013) to an agency at a cost of ₹ 0.61 crore with stipulated date of completion in May 2014. Due to non-availability of approach road, the site was not found (January 2016) suitable for the purpose. The agency was relieved (July 2016) from the work and finally the work was dropped. The acquisition of suitable land was stated to be in progress. (August 2016).
3.	**Jammu and Kashmir**	1	0.50	0.44	Construction of SC Charat in Udhampur district was taken up (2010-11) at an estimated cost of ₹ 49.50 lakh without accord of administrative approval and without proper acquisition and transfer of title of land in favour of the Department. After incurring expenditure of ₹ 43.50 lakh and execution upto plinth level as of 2014-15 through R&B Division Udhampur, the construction work was abandoned due to land dispute and subsequent court stay (July 2014).
4.	**Karnataka**	17	3.42	0.40	In respect of 586 SCs approved during 2011-13, 17 works were dropped due to site problems.
5.	**Manipur**	2	Not furnished	Not furnished	The construction of retaining wall on the eastern side of CHC Mao, Senapati district has remained abandoned since 2011. The construction work for Institutional Building (IB) at PHSC Maram Khullen had been left incomplete without any care and as such, the building had started to deteriorate. Currently, this PHSC is working from the old wooden building as the new building had not been completed.
	Total	**22**			

Annexure-3.4
(Refer para-3.5)
Shortages of staff quarters in health facilities

Sl. No.	Type of Health facility	Availability of Staff Quarters
1.	**Sub-Centre**	➢ In 68 SCs (Type 'B') of eight States (Chhattisgarh, Haryana, Jharkhand, Madhya Pradesh, Rajasthan, Tamil Nadu, Tripura and Uttarakhand), no staff quarters were available. ➢ In 248 SCs (Type 'B') of ten States (Chhattisgarh, Haryana, Himachal Pradesh, Jharkhand, Madhya Pradesh, Rajasthan, Tamil Nadu, Uttarakhand and Uttar Pradesh), against the requirement of 538 staff quarters, 182 quarters were available (shortfall of 66 *per cent*). ➢ Out of 182 staff quarters available, 81 staff quarters were vacant in seven States (Chhattisgarh, Himachal Pradesh, Jharkhand, Rajasthan, Tamil Nadu, Tripura and Uttarakhand).
2.	**Primary Health Centre**	➢ In 125 PHCs of 15 States (Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Jammu and Kashmir, Jharkhand, Maharashtra, Punjab, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh and West Bengal), no staff quarters were available. ➢ In 441 PHCs of 22 States (Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Tripura, Uttar Pradesh and West Bengal) against the requirement of 4,109 quarters, only 1,087 were available (shortfall of 74 *per cent*). ➢ Out of 1,087 staff quarters available, 274 staff quarters were vacant in 20 States (Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Madhya Pradesh, Maharashtra, Manipur, Mizoram, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Tripura and West Bengal).
3.	**Community Health Centre**	➢ In 36 CHCs of 10 States (Andhra Pradesh, Assam, Gujarat, Jammu and Kashmir, Jharkhand, Maharashtra, Odisha, Rajasthan, Telangana, and Uttar Pradesh), no staff quarters were available. ➢ In 241 CHCs of 21 States (Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Madhya Pradesh, Maharashtra, Manipur, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Tripura, Uttarakhand, Uttar Pradesh and West Bengal), against the requirement of 7,588 quarters, 2,542 were available (shortfall of 66 *per cent*). ➢ Out of 2,542 staff quarters available, 451 staff quarters of CHCs were vacant in 18 States (Andhra Pradesh, Assam, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Telangana, Tripura, Uttarakhand and West Bengal).
4.	**District Hospital**	➢ In 10 DHs of six States (Assam, Bihar, Chhattisgarh, Madhya Pradesh, Telangana and Uttar Pradesh), no staff quarters were available. ➢ In 111 DHs of 21 States (Andhra Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Odisha, Punjab, Rajasthan, Telangana, Tripura, Uttarakhand, Uttar Pradesh and West Bengal), against the requirement of 13,315 quarters, 2,846 were available (shortfall of 79 *per cent*). ➢ Out of 2,846 staff quarters available, 229 staff quarters were vacant in 15 States (Andhra Pradesh, Assam, Chhattisgarh, Gujarat, Haryana, Jammu and Kashmir, Jharkhand, Manipur, Odisha, Punjab, Rajasthan, Telangana, Uttarakhand, Uttar Pradesh and West Bengal).

Annexure-4.1
(Refer para-4.3)

State-wise details of equipment lying idle/unutilised in health centres

Sl. No.	State	Details of equipment lying idle/ unutilised	Number of equipment lying idle	Expenditure incurred (₹ in crore)
1.	**Andhra Pradesh**	Equipment in district hospital, Eluru	50	0.22
2.	**Assam**	USG Colour Doppler machines and Single Puncture Laparascopic set	26	1.99
3.	**Chhattisgarh**	Nine equipment	9	0.47
4.	**Gujarat**	Biosafety Cabinet[4] for Micro Biology Laboratory, Multipara Cardiac Monitor and Automated External Defibrillator, Easy Diagnostic Machine, X-ray machine, dental chair, etc.	13	0.27
5.	**Haryana**	Medical Equipment, X-ray machines	49	3.76
6.	**Himachal Pradesh**	Ultrasound Machine, X-ray machine, Digital ECG machine, chest stand dryer	4	0.19
7.	**Jammu and Kashmir**	Ultrasound Machine, Ultrasound, scanner accessories with thermal printer and Whole Body Multi Slice Scanner	5	5.21
8.	**Jharkhand**	Auto Analyzer, Path Fast, Three Channel ECG Machines, etc.	26	3.05
9.	**Karnataka**	X-ray equipment, ECG machines, blood storage units, etc.	18	0.29
10.	**Meghalaya**	Incinerator, OT equipment and surgical set	2	0.19
11.	**Punjab**	Laparoscope for Sterilization	1	0.12
12.	**Rajasthan**	Eye equipment, ventilators, equipment of ICU ward, etc.	8	1.34
13.	**Tamil Nadu**	X-ray equipment	2	0.04
14.	**Telangana**	Transport Incubator in SNCU in DH, Nalgonda	1	0.02
15.	**Tripura**	Laparoscope machine	5	0.35
16.	**Uttarakhand**	CT Scan Machine, Electromagnetic Shock Wave, Radio Meter, etc.	14	8.79
17.	**West Bengal**	New Born Stabilisation Unit, Blood Storage Units, etc.	195	4.09
Total			**428**	**30.39**

[4] Biosafety Cabinet is designed to protect the operator, the laboratory environment and work materials from exposure to infectious aerosols and splashes that may be generated when manipulating materials containing infectious agents, such as primary cultures, stocks and diagnostic specimen, etc.

Annexure-4.2
(Refer para-4.6)

State-wise details of distribution of expired/sub-standard medicines to patients

Sl. No.	State	Audit observation
1.	**Assam**	➢ 6.22 crore IFA tablets(small) supplied to central store, Guwahati during April 2014 and June 2014, had a shelf-life up to February 2016. Of these, 1.94 crore tablets valued at ₹ 48.52 lakh expired due to non-issue of tablets within shelf-life. It was observed that procurement was made on the basis of projected estimate of beneficiaries at the State level without obtaining requirements from the districts. ➢ In 16 health centres[5] 67 medicines costing ₹ 51.15 lakh expired during 2011-16. ➢ The health centres stated that medicines got expired due to excess supply against requirement without indent and due to supply of short lifespan medicines.
2.	**Bihar**	There was no proper system of quality testing of drugs and medicines were distributed to the patients without ensuring the quality of drugs.
3.	**Haryana**	➢ 17 samples of medicines were sent to laboratory for testing during September and October 2014. However, the test reports of 13 samples were received late or not received. However, these 13 samples were released for distribution due to shortage. ➢ 26 batches of medicines received between June 2013 and December 2015 were declared not of standard quality. ➢ Out of samples of eight drugs costing ₹ 38.21 lakh declared not of standard quality by the empanelled laboratory, medicines worth ₹ 6.99 lakh had already been distributed by the warehouses for dispensing to the patients. ➢ Expired medicines worth ₹ 2.33 crore were lying across the state in the drug warehouses for a period ranging between 19 to 811 days (as of July 2016). As per policy the supplier should have been intimated six months before expiry but no action had been initiated to get the drugs replaced resultantly the cost of these expired drugs had to be borne by the Department.
4.	**Jharkhand**	➢ Out of 14,052 bottles of Paracetamol Syrup 125 mg/5 ml (60 ml each bottle) costing ₹ 1.54 lakh received in Dumka in June 2015 for distribution to 2,813 Sahiyas[6] (five bottles/Sahiya) in test checked CHCs (Jama and Shikaripara), 9,028 bottles were found substandard as per the test report of State Drug Testing Laboratory, Ranchi (November 2015). These medicines were supplied during June-July 2015 i.e., 4-5 months before obtaining test certificate.

[5] Kamrup DH, KarbiAnglong DH, Golaghat DH; Ligiripukhuri SDCH, Hamren SDCH, Azara CHC, Sipajhar CHC, Sualkuchi CHC, Bokota PHC, Gorol MPHC, Geleky PHC, Hazarikapara PHC, Joljoli PHC, Jharbari SD, Kulshi SD and Rangamati MPHC

[6] In Jharkhand, an alternate name devised for ASHA is Sahiya.

Sl. No.	State	Audit observation
5.	**Karnataka**	Out of 8,356 batches of drugs received from warehouses during the period 1 April 2014 to 31 March 2016, only 4,444 batches (53 *per cent*) were tested. Random test check of 105 batches of drugs revealed that by the time the samples were sent for testing, more than 20 *per cent* of the stock had already been issued to health facilities in respect of 10 batches.
6.	**Kerala**	➢ During 2011-16, out of 30,767 batches of drugs sent to empanelled laboratories for quality testing, 364 were declared not of standard quality. Though the NSQ drugs were frozen subsequently based on the lab report, the possibility of administration and distribution of such NSQ drugs to patients could not be ruled out as these medicines had already been supplied to the health facilities. ➢ During 2014-16, out of 2,017 batches sent for quality test, the empanelled labs failed to submit the test result within the stipulated time and in respect of 248 batches, there were delays ranging from one month to 318 days.
7.	**Maharashtra**	In two test checked districts (Bhandara and Nanded), 14 drugs (quantity 1.71 lakh) were declared substandard about six to seven months after they were supplied to RHs and SDHs. As a result, the medicines might have been issued to patients also.
8.	**Manipur**	Joint physical verification of the store of DHS, Ukhrul, revealed that medicines were kept inside the store room without proper labeling (batch number and expiry date). It was found that nine types of medicines (3,285 units) were found beyond expiry date.
9.	**Odisha**	➢ During 2011-16, in five out of seven DHHs and four out of 21 sample CHCs, due to delay in testing and receipt of test reports from SDMU, 29 types of NSQ drugs worth ₹ 11.79 lakh were administered to the patients during September 2011 to December 2015. ➢ Medicines worth ₹ 70.93 lakh from nine suppliers received during 2006-16 were declared NSQ. Though SDMU intimated the suppliers for replacement of these medicines within 15 to 243 days, drugs were not replaced as of July 2016. ➢ Similarly, in six out of seven sample districts, NSQ drugs worth ₹ 53.83 lakh were lying unused as of July 2016 in central store of districts and CHCs without replacement. The SDMU had not instructed CDMOs to return the NSQ drugs to the suppliers. Due to lapses on the part of SDMU to enforce provisions of the drugs management policy, ₹ 53.83 lakh became wasteful.
10.	**Punjab**	During Physical verification of SC, Budh Singh Wala, District Moga showed (May 2016) it was noticed that 'Erythromycinstarate' tablets IP 250 mg (batch no BT 40,180) having expiry date of April 2016 were lying in the drug tray used for administering/ distributing medicines to patients. The MD while admitting the facts stated (September 2016) that the expired medicines had been ordered to be disposed of under relevant provisions of Drugs and Cosmetics Act and rules/guidelines of the Punjab Pollution Control Board.
11.	**Telangana**	➢ 5,200 Injections of "Hydrocortisone Succinate" was issued during 2015 to health institutions in Nalgonda district by TSMSIDC. However, subsequently on failure of quality control test, the injections were rejected. It was observed that only 712 injections were returned by the health institutions. The remaining 4,488 injections were neither received back nor the details of their disposal available. In view of this, it could not be

Sl. No.	State	Audit observation
		verified whether the injections were consumed by beneficiaries or destroyed. ➢ Quality control tests conducted on a batch of Rantac 150 mg tablets (10,000) failed after they were distributed to patients.
12.	**Tripura**	2.18 crore IFA (large) and 1.84 crore IFA (Small) tablets supplied between July 2012 to December 2012 by a firm were issued for distribution to the school children during September 2012 to November 2012. However, subsequently the sample quality check revealed that these medicines did not conform to the prescribed standard. Orders were issued (December 2013) to all CMOs, SDMOs and MoICs, not to use and withdraw the tablets from the schools and educational institutions. Accordingly, 12.16 lakh tablets were returned back in the Central store during December 2013 to February 2014. It was further noticed that, 14.20 lakh tablets were distributed to the school children and probably consumed.
13.	**Uttar Pradesh**	In the test checked districts (except Jalaun and Muzaffarnagar), drugs and consumables worth ₹ 62.32 crore were procured during 2011-16, however, these were not tested for quality. Thus, the drugs and consumables were issued to the patients without ensuring their quality. CMOs replied that RC firms had presented quality test reports of NABL in respect of supplies made by them. However, no quality test reports were found on record of the sampled districts.
14.	**West Bengal**	During 2011-16, in two selected districts, seven batches (Paschim Medinipur District-four, Murshidabad Medical College and hospital-three) of sub-standard medicines had been administered to the patients by the time the test report was received. Further, District Reserve Stores at Murshidabad did not send any of the batches for testing during 2011-14.

Annexure-5.1.1
(Refer para-5.2)

Position of Doctors/Specialist in District Hospital

Sl. No.	State/UT	District Hospitals audited	Essential number of staff as per IPHS-2012	Sanctioned strength of the facility	Men in Position	Shortage(-)/ Excess(+) against IPHS	Shortage(-)/ Excess(+) against sanctioned strength
1.	**Andaman and Nicobar Islands**	2	58	39	21	-37	-18
2.	**Andhra Pradesh**	3	113	72	78	-35	6
3.	**Bihar**	10	290	299	133	-157	-166
4.	**Chhattisgarh**	4	116	119	101	-15	-18
5.	**Gujarat**	3	110	90	71	-39	-19
6.	**Haryana**	2	58	97	67	9	-30
7.	**Himachal Pradesh**	3	118	112	92	-26	-20
8.	**Jammu and Kashmir**	4	116	158	102	-14	-56
9.	**Jharkhand**	5	145	86	62	-83	-24
10.	**Karnataka**	5	145	127	80	-65	-47
11.	**Kerala**	2	87	63	57	-30	-6
12.	**Madhya Pradesh**	10	290	547	307	17	-240
13.	**Maharashtra**	3	127	150	106	-21	-44
14.	**Manipur**	2	58	100	41	-17	-59
15.	**Meghalaya**	3	87	48	36	-51	-12
16.	**Odisha**	7	254	272	171	-83	-101
17.	**Punjab**	3	87	76	63	-24	-13
18.	**Rajasthan**	7	203	329	164	-39	-165
19.	**Sikkim**	2	58	58	65	7	7
20.	**Tamil Nadu**	3	97	122	83	-14	-39
21.	**Telangana**	3	103	76	55	-48	-21
22.	**Uttar Pradesh**	20	580	396	286	-294	-110
23.	**Uttarakhand**	5	145	67	57	-88	-10
Total:		**111**	**3,445**	**3,503**	**2,298**	**-1,147**	**-1,205**

Annexure-5.1.2
(Refer para-5.2)

Position of Staff Nurses in District Hospital

Sl. No.	State/UT	District Hospitals audited	Essential number of staff as per IPHS-2012	Sanctioned strength of the facility	Men in Position	Shortage(-)/ Excess(+) against IPHS	Shortage(-)/ Excess(+) against sanctioned strength
1.	**Andaman and Nicobar Islands**	2	90	76	33	-57	-43
2.	**Andhra Pradesh**	3	270	154	132	-138	-22
3.	**Bihar**	10	450	483	259	-191	-224
4.	**Chhattisgarh**	4	180	164	136	-44	-28
5.	**Gujarat**	3	153	158	135	-18	-23
6.	**Haryana**	2	90	75	67	-23	-8
7.	**Himachal Pradesh**	3	315	118	130	-185	12
8.	**Jammu and Kashmir**	4	180	102	68	-112	-34
9.	**Jharkhand**	5	45	22	39	-6	17
10.	**Karnataka**	5	225	333	233	8	-100
11.	**Kerala**	2	225	201	197	-28	-4
12.	**Madhya Pradesh**	10	450	1026	844	394	-182
13.	**Maharashtra**	3	235	356	317	82	-39
14.	**Manipur**	2	90	68	29	-61	-39
15.	**Meghalaya**	3	135	99	98	-37	-1
16.	**Odisha**	7	630	252	268	-362	16
17.	**Punjab**	3	135	159	103	-32	-56
18.	**Rajasthan**	7	315	552	482	167	-70
19.	**Sikkim**	2	90	90	37	-53	-53
20.	**Telangana**	3	225	164	158	-67	-6
21.	**Tamil Nadu**	3	225	175	169	-56	-6
22.	**Uttar Pradesh**	20	900	467	402	-498	-65
23.	**Uttarakhand**	5	225	85	69	-156	-16
Total:		**111**	**5,878**	**5379**	**4405**	**-1473**	**-974**

Annexure-5.1.3
(Refer para-5.2)

Position of Paramedical staff in District Hospitals

Sl. No.	State/UT	District Hospitals audited	Essential number of staff as per IPHS-2012	Sanctioned strength of the facility	Men in Position	Shortage(-)/ Excess(+) against IPHS	Shortage(-)/ Excess(+) against sanctioned strength
1.	**Andaman and Nicobar Islands**	2	62	29	23	-39	-6
2.	**Andhra Pradesh**	3	139	51	51	-88	0
3.	**Bihar**	10	310	190	82	-228	-108
4.	**Chhattisgarh**	4	124	57	63	-61	6
5.	**Gujarat**	3	134	49	41	-93	-8
6.	**Haryana**	2	62	79	33	-29	-46
7.	**Himachal Pradesh**	3	150	88	76	-74	-12
8.	**Jammu and Kashmir**	4	124	126	109	-15	-17
9.	**Jharkhand**	5	31	26	25	-6	-1
10.	**Karnataka**	5	155	135	81	-74	-54
11.	**Kerala**	2	97	34	37	-60	3
12.	**Madhya Pradesh**	10	310	232	171	-139	-61
13.	**Maharashtra**	3	111	100	70	-41	-30
14.	**Manipur**	2	62	76	52	-10	-24
15.	**Meghalaya**	3	93	20	34	-59	14
16.	**Odisha**	7	312	176	154	-158	-22
17.	**Punjab**	3	93	63	54	-39	-9
18.	**Rajasthan**	7	217	232	87	-130	-145
19.	**Sikkim**	2	62	62	69	7	7
20.	**Tamil Nadu**	3	115	107	62	-53	-45
21.	**Telangana**	3	115	56	41	-74	-15
22.	**Uttar Pradesh**	20	620	257	205	-415	-52
23.	**Uttarakhand**	5	155	70	59	-96	-11
	Total:	**111**	**3653**	**2315**	**1679**	**-1974**	**-636**

Annexure-5.2
(Refer para-5.3)
Position of Doctors/Specialists, Staff Nurse and Paramedical staff in Sub-District/Sub-Divisional Hospital

Sl. No.	State	Sub-District Hospitals audited	Essential number of staff as per IPHS-2012	Sanctioned strength of the facility	Men in Position	Shortage(-)/ Excess(+) against IPHS	Shortage(-)/ Excess(+) against sanctioned strength
Doctors/Specialists							
1	**Andhra Pradesh**	4	80	36	38	-42	2
2	**Bihar**	6	120	147	50	-70	-97
3	**Gujarat**	1	20	25	15	-5	-10
4	**Himachal Pradesh**	6	72	33	25	-47	-8
5	**Jharkhand**	1	20	11	6	-14	-5
6	**Karnataka**	10	200	120	59	-141	-61
7	**Maharashtra**	8	160	121	102	-58	-19
8	**Tamil Nadu**	1	18	10	8	-10	-2
9	**Telangana**	4	80	47	47	-33	0
10	**Uttarakhand**	2	40	**30**	**19**	-21	-11
	Total:	**43**	**810**	**580**	**369**	**-441**	**-211**
Staff Nurse							
1	**Andhra Pradesh**	4	80	36	38	-42	2
2	**Bihar**	6	108	260	82	-26	-178
3	**Gujarat**	1	18	78	53	35	-25
4	**Himachal Pradesh**	6	60	28	31	-29	3
5	**Jharkhand**	1	18	6	3	-15	-3
6	**Karnataka**	10	180	176	130	-50	-46
7	**Maharashtra**	8	144	153	134	-10	-19
8	**Tamil Nadu**	1	18	6	5	-13	-1
9	**Telangana**	4	72	91	81	9	-10
10	**Uttarakhand**	2	36	35	30	-6	-5
	Total:	**43**	**734**	**869**	**587**	**-147**	**-282**
Paramedical Staff							
1	**Andhra Pradesh**	4	180	104	91	-89	-13
2	**Bihar**	6	162	153	51	-111	-102
3	**Gujarat**	1	27	15	10	-17	-5
4	**Himachal Pradesh**	6	66	42	30	-36	-12
5	**Jharkhand**	1	27	12	4	-23	-8
6	**Karnataka**	10	270	162	66	-204	-96
7	**Maharashtra**	8	216	153	122	-94	-31
8	**Tamil Nadu**	1	22	7	3	-19	-4
9	**Telangana**	4	108	44	39	-69	-5
10	**Uttarakhand**	2	54	24	21	-33	-3
	Total:	**43**	**1,132**	**716**	**437**	**-695**	**-279**

Annexure-5.3
(Refer para-5.4)

CHCs functioning without specialist doctors

Sl. No.	State/UT	Number of CHC audited	General Surgeon	*Per cent*	General Physician	*Per cent*	Obstetrician Gynaecologist	*Per cent*	Paediatrician	*Per cent*	Anaesthetist	*Per cent*
1.	**Andaman and Nicobar Islands**	2	2	100	2	100	2	100	2	100	2	100
2.	**Andhra Pradesh**	5	4	80	2	40	3	60	2	40	2	40
3.	**Arunachal Pradesh**	6	4	66.66	4	66.66	5	83.33	5	83.33	4	66.66
4.	**Assam**	9	8	88.88	8	66.66	6	66.66	8	88.88	6	66.66
5.	**Bihar**	13	8	61.53	8	61.53	10	76.92	10	76.92	11	84.61
6.	**Chhattisgarh**	8	8	100	8	100	8	100	7	87.5	8	100
7.	**Gujarat**	12	10	83.33	10	83.33	10	83.33	10	83.33	10	83.33
8.	**Himachal Pradesh**	6	6	100	6	100	6	100	6	100	5	83.33
9.	**Jammu and Kashmir**	8	3	37.5	6	75	3	37.5	3	37.5	4	50
10.	**Jharkhand**	12	11	91.66	10	83.33	11	91.66	10	83.33	12	100
11.	**Karnataka**	19	19	100	17	89.47	10	52.63	17	89.47	16	84.21
12.	**Kerala**	9	8	88.88	8	88.88	8	88.88	8	88.88	8	88.88
13.	**Madhya Pradesh**	21	20	95.23	18	85.71	18	85.71	19	90.47	21	100
14.	**Maharashtra**	9	9	100	8	88.88	7	77.77	8	88.88	8	88.88
15.	**Manipur**	3	3	100	3	100	3	100	3	100	3	100
16.	**Meghalaya**	3	3	100	2	66.66	3	100	3	100	3	100
17.	**Mizoram**	2	2	100	2	100	2	100	2	100	2	100
18.	**Odisha**	21	9	43.00	17	80.95	12	57.14	18	85.71	21	100
19.	**Punjab**	8	7	87.5	8	100	8	100	8	100	8	100
20.	**Rajasthan**	15	10	66.66	8	53.33	11	73.33	12	80	13	86.66
21.	**Sikkim**	1	1	100	1	100	1	100	1	100	0	0
22.	**Tamil Nadu**	6	6	100	6	100	6	100	6	100	6	100

Sl. No.	State/UT	Number of CHC audited	General Surgeon	*Per cent*	General Physician	*Per cent*	Obstetrician Gynaecologist	*Per cent*	Paediatrician	*Per cent*	Anaesthetist	*Per cent*
23.	**Tripura**	2	2	100	2	100	2	100	2	100	2	100
24.	**Uttar Pradesh**	28	24	85.71	26	92.85	20	71.42	25	89.28	24	85.71
25.	**Uttarakhand**	4	3	75	4	100	4	100	3	75	4	100
26.	**West Bengal**	11	11	100	11	100	8	72.72	11	100	11	100
27.	**Telangana**	5	5	100	3	60	3	60	2	40	2	40
	Total	**248**	**206**	83.06	**208**	83.06	**190**	76.61	**211**	85.08	**216**	87.09

Annexure-5.4
(Refer para-5.4)

CHCs functioning without paramedical staff

Laboratory Technician				Pharmacist			
Sl. No.	State	Number of CHCs audited	Number of CHCs functioning without Lab. Technician	Sl. No.	State	Number of CHCs audited	Number of CHCs functioning without Pharmacist
1.	**Gujarat**	12	3	1.	**Arunachal Pradesh**	6	2
2.	**Haryana**	7	3	2.	**Gujarat**	12	3
3.	**Himachal Pradesh**	6	3	3.	**Haryana**	7	2
4.	**Jharkhand**	12	1	4.	**Himachal Pradesh**	6	2
5.	**Karnataka**	19	1	5.	**Jammu and Kashmir**	8	1
6.	**Maharashtra**	9	2	6.	**Maharashtra**	9	1
7.	**Odisha**	21	3	7.	**Jharkhand**	12	4
8.	**Rajasthan**	15	3	8.	**Karnataka**	19	2
9.	**Uttar Pradesh**	28	6	9.	**Madhya Pradesh**	21	2
10.	**Uttarakhand**	4	1	10.	**Rajasthan**	15	5
11.	**West Bengal**	11	2	11.	**Uttar Pradesh**	28	5
	Total:	**144**	**28**	12.	**Punjab**	8	1
					Total:	**151**	**30**

Health Worker (Male)				Statistical Assistant/Data Entry Operator			
Sl. No.	State	Number of CHCs audited	Number of CHCs functioning without HW(M)	Sl. No.	State	Number of CHCs audited	Number of CHCs functioning without Statistical Assistant/Data Entry Operator
1.	**Assam**	9	9	1.	**Arunachal Pradesh**	6	2
2.	**Gujarat**	12	12	2.	**Assam**	9	2
3.	**Haryana**	7	2	3.	**Chhattisgarh**	8	3
4.	**Himachal Pradesh**	6	1	4.	**Gujarat**	12	3
5.	**Jammu and Kashmir**	8	2	5.	**Haryana**	7	4
6.	**Jharkhand**	12	12	6.	**Himachal Pradesh**	6	2
7.	**Karnataka**	19	19	7.	**Jammu and Kashmir**	8	4
8.	**Madhya Pradesh**	21	9	8.	**Jharkhand**	12	2
9.	**Maharashtra**	9	3	9.	**Karnataka**	19	16
10.	**Manipur**	3	2	10.	**Madhya Pradesh**	21	1
11.	**Meghalaya**	3	1	11.	**Maharashtra**	9	4
12.	**Mizoram**	2	2	12.	**Manipur**	3	1
13.	**Odisha**	21	9	13.	**Meghalaya**	3	3
14.	**Rajasthan**	15	7	14.	**Odisha**	21	13
15.	**Uttar Pradesh**	28	13	15.	**Rajasthan**	15	6
16.	**Uttarakhand**	4	4	16.	**Uttar Pradesh**	28	3
17.	**West Bengal**	11	9	17.	**Uttarakhand**	4	1
	Total:	**190**	**116**		**Total:**	**191**	**70**

Health Worker (Female)				Health Assistant (Female)/ Lady Health Visitor			
Sl. No.	State	Number of CHCs audited	Number of CHCs functioning without HW(Female)	Sl. No.	State/UT	Number of CHCs audited	Number of CHCs functioning without HA(F)/LHV
1.	**Assam**	9	7	1.	**Andaman and Nicobar Islands**	2	2
2.	**Gujarat**	12	12	2.	**Assam**	9	5
3.	**Haryana**	7	2	3.	**Chhattisgarh**	8	2
4.	**Himachal Pradesh**	6	2	4.	**Gujarat**	12	12
5.	**Jharkhand**	12	11	5.	**Haryana**	7	2
6.	**Karnataka**	19	19	6.	**Himachal Pradesh**	6	4
7.	**Maharashtra**	9	2	7.	**Jammu and Kashmir**	8	1
8.	**Mizoram**	2	2	8.	**Jharkhand**	12	11
9.	**Odisha**	21	3	9.	**Karnataka**	19	19
10.	**Rajasthan**	15	4	10.	**Madhya Pradesh**	21	2
11.	**Uttar Pradesh**	28	8	11.	**Maharashtra**	9	2
12.	**West Bengal**	11	7	12.	**Meghalaya**	3	2
	Total:	**151**	**78**	13.	**Mizoram**	2	2
				14.	**Odisha**	21	2
				15.	**Rajasthan**	15	6
				16.	**Tripura**	2	1
				17.	**Uttar Pradesh**	28	8
				18.	**Uttarakhand**	4	1
				19.	**West Bengal**	11	7
					Total:	**199**	**91**

Annexure-5.5
(Refer para-5.4)

Availability of Staff Nurses in CHCs

Sl. No.	State/UT	Number of CHC audited	Essential number of staff as per IPHS-2012	Sanctioned strength of the facility	Men in Position	Shortage(-)/ Excess(+) against IPHS	Shortage(-)/ Excess(+) against sanctioned strength
1.	**Andaman and Nicobar Islands**	2	20	16	25	5	9
2.	**Andhra Pradesh**	5	50	37	26	-24	-11
3.	**Bihar**	13	130	114	80	-50	-34
4.	**Chhattisgarh**	8	80	80	47	-33	-33
5.	**Gujarat**	12	120	88	78	-42	-10
6.	**Haryana**	7	70	58	35	-35	-23
7.	**Himachal Pradesh**	6	60	28	31	-29	3
8.	**Jammu and Kashmir**	8	80	63	42	-38	-21
9.	**Jharkhand**	12	120	52	35	-85	-17
10.	**Karnataka**	19	190	119	89	-101	-30
11.	**Kerala**	9	90	65	63	-27	-2
12.	**Madhya Pradesh**	21	210	81	118	-92	37
13.	**Maharashtra**	9	90	51	44	-46	-7
14.	**Manipur**	3	30	24	22	-8	-2
15.	**Meghalaya**	3	30	19	28	-2	9
16.	**Odisha**	21	210	79	77	-133	-2
17.	**Punjab**	8	80	58	50	-30	-8
18.	**Rajasthan**	15	150	160	155	5	-5
19.	**Sikkim**	1	10	10	1	-9	-9
20.	**Tamil Nadu**	6	60	24	24	-36	0
21.	**Telangana**	5	50	28	27	-23	-1
22.	**Uttar Pradesh**	28	280	139	105	-175	-34
23.	**Uttarakhand**	4	40	30	16	-24	-14
24.	**West Bengal**	11	110	117	85	-25	-32
	Total:	**236**	**2360**	**1540**	**1303**	**-1057**	**-237**

Annexure-5.6
(Refer para-5.5)

Position of manpower in audited PHCs

Sl. No.	State	Number of PHCs audited	Number of PHCs where neither allopathic doctor nor AYUSH doctor posted during the year (contractual/permanent)
1.	**Andhra Pradesh**	18	1
2.	**Arunachal Pradesh**	11	2
3.	**Assam**	30	8
4.	**Chhattisgarh**	16	6
5.	**Haryana**	12	2
6.	**Himachal Pradesh**	12	1
7.	**Karnataka**	20	2
8.	**Madhya Pradesh**	40	9
9.	**Odisha**	38	1
10.	**Punjab**	12	1
11.	**Rajasthan**	30	4
12.	**Uttar Pradesh**	55	27
13.	**Uttarakhand**	11	3
Total		**305**	**67**

Annexure-5.7
(Refer para-5.5)

Position of Nurse-midwife (Staff Nurse) in PHCs

Sl. No.	State	Number of PHCs audited	Essential number of staff as per IPHS-2012	Sanctioned strength of the facility	Men in Position	Shortage(-)/ Excess(+) against IPHS	Shortage(-)/ Excess(+) against sanctioned strength
1.	**Andhra Pradesh**	18	70	25	23	-47	-2
2.	**Chhattisgarh**	16	48	48	9	-39	-39
3.	**Gujarat**	12	36	29	18	-18	-11
4.	**Haryana**	12	38	46	36	-2	-10
5.	**Himachal Pradesh**	12	36	6	9	-27	3
6.	**Jammu and Kashmir**	16	48	17	12	-36	-5
7.	**Jharkhand**	23	69	51	38	-31	-13
8.	**Karnataka**	20	60	31	30	-30	-1
9.	**Kerala**	12	36	25	24	-12	-1
10.	**Madhya Pradesh**	40	120	37	27	-93	-10
11.	**Maharashtra**	26	78	19	7	-71	-12
12.	**Manipur**	5	15	5	11	-4	6
13.	**Odisha**	38	114	13	7	-107	-6
14.	**Punjab**	12	36	25	26	-10	1
15.	**Rajasthan**	30	90	55	49	-41	-6
16.	**Sikkim**	4	12	12	2	-10	-10
17.	**Tamil Nadu**	12	36	36	32	- 4	-4
18.	**Telangana**	18	54	29	26	-28	-3
19.	**Tripura**	7	21	49	22	1	-27
20.	**Uttar Pradesh**	55	165	45	20	-145	-25
21.	**Uttarakhand**	11	33	6	4	-29	-2
22.	**West Bengal**	22	66	56	34	-32	-22
Total		**421**	**1,281**	**665**	**466**	**-815**	**-199**

Annexure-5.8
(Refer para-5.5)

PHCs functioning without paramedical staff

Sl. No.	State/UT	Number of PHC s audited	PHCs functioning without					
			Lab Technician	Pharmacist	Accountant cum Data Entry Operator	Health Worker (Female)	Health Worker (Male)	Health Assistant (Female)/ Lady Health Visitor
1.	**Andaman and Nicobar Islands**	6	0	0	6	0	4	4
2.	**Andhra Pradesh**	18	11	7	13	12	8	1
3.	**Arunachal Pradesh**	11	3	4	9	3	3	8
4.	**Assam**	30	5	6	6	15	26	20
5.	**Chhattisgarh**	16	7	4	5	0	15	6
6.	**Gujarat**	12	1	1	0	1	2	7
7.	**Haryana**	12	3	2	10	4	3	5
8.	**Himachal Pradesh**	12	4	3	5	5	5	3
9.	**Jammu and Kashmir**	16	7	0	15	6	14	16
10.	**Jharkhand**	23	23	23	23	23	23	23
11.	**Karnataka**	20	9	4	18	5	5	13
12.	**Madhya Pradesh**	40	26	13	32	16	31	22
13.	**Maharashtra**	26	8	1	23	9	13	4
14.	**Meghalaya**	8	1	0	0	0	2	2
15.	**Mizoram**	7	0	3	0	7	7	7
16.	**Odisha**	38	38	2	38	5	35	25
17.	**Punjab**	12	1	1	12	6	9	4
18.	**Rajasthan**	30	11	27	21	8	17	12
19.	**Sikkim**	4	0	0	1	1	2	0
20.	**Tamil Nadu**	12	8	0	12	0	0	0
21.	**Tripura**	7	4	4	3	4	2	6
22.	**Uttar Pradesh**	55	33	3	52	15	47	35
23.	**Uttarakhand**	11	8	0	10	4	9	4
24.	**West Bengal**	22	15	0	22	22	22	22
	Total	**448**	**226**	**108**	**336**	**171**	**304**	**249**

Annexure-5.9
(Refer para-5.6)

Availability of Staff at SCs

Sl. No.	State	Number of SCs audited	Number of Sub Centres where no ANM /Health Worker (Female) posted		Sl. No.	State	Number of Sub-centres audited	Number of Sub Centres where no ANM /Health Worker (Female) posted	
			Number	*Per cent*				Number	*Per cent*
1	**Andhra Pradesh**	54	6	11.11	8	**Maharashtra**	78	5	6.41
2	**Chhattisgarh**	48	3	6.25	9	**Rajasthan**	88	5	5.68
3	**Gujarat**	36	2	5.56	10	**Sikkim**	15	1	6.67
4	**Himachal Pradesh**	34	6	17.65	11	**Tripura**	17	12	70.59
5	**Jammu and Kashmir**	38	9	23.68	12	**Uttar Pradesh**	165	6	3.64
6	**Karnataka**	57	15	26.32	13	**Uttarakhand**	33	1	3.03
7	**Madhya Pradesh**	114	9	7.89		**Total**	**777**	**80**	

Availability of Health Worker-Male at SCs

Sl. No.	State/UT	Number of Sub-centres audited	Number of Sub Centres where no Health Worker (Male) posted.		Sl. No.	State	Numbe r of Sub-centres audited	Number of Sub Centres where no Health Worker (Male) posted.	
			Number	*Per cent*				Number	*Per cent*
1	**Andaman and Nicobar Islands**	24	17	70.83	12	**Maharashtra**	78	19	24.36
2	**Andhra Pradesh**	54	25	46.30	13	**Meghalaya**	24	24	100.00
3	**Arunachal Pradesh**	31	20	64.52	14	**Mizoram**	18	4	22.22
4	**Chhattisgarh**	48	14	29.17	15	**Odisha**	114	56	49.12
5	**Gujarat**	36	11	30.56	16	**Punjab**	18	12	66.67
6	**Haryana**	18	7	38.89	17	**Rajasthan**	88	70	79.55
7	**Himachal Pradesh**	34	19	55.88	18	**Sikkim**	15	6	40.00
8	**Jammu and Kashmir**	38	27	71.05	19	**Tripura**	17	2	11.76
9	**Jharkhand**	69	69	100.00	20	**Uttar Pradesh**	165	160	96.97
10	**Karnataka**	57	25	43.86	21	**Uttarakhand**	33	33	100.00
11	**Madhya Pradesh**	114	69	60.53	22	**West Bengal**	66	60	90.91
						Total:	**1,159**	**749**	

Annexure-5.10
(Refer para-5.7)

Engagement of ASHA and their training

Sl. No.	State/UT	Number of districts audited	Number of ASHAs					
			Selection		Induction training		Other modules of training	
			T	A	T	A	T	A
1.	**Andaman and Nicobar Islands**	2	232	232	232	232	0	0
2.	**Arunachal Pradesh**	4	3,692	3,300	4	0	4,349	3,262
3.	**Bihar**	10	75,122	72,429	37,666	15,447	73,796	35,267
4.	**Chhattisgarh**	4	64,473	64,332	19,854	18,858	53,898	51,613
5.	**Gujarat**	3	23,522	21,633	4,500	3,889	24,391	18,876
6.	**Haryana**	3	13,294	11,904	9,896	8,496	4,926	3,762
7.	**Himachal Pradesh**	3	1,587	1,584	1,586	1,584	1,586	1,584
8.	**Jammu and Kashmir**	4	670	670	791	640	2,295	1,887
9.	**Jharkhand**	5	54,911	41,412	0	0	51,429	42,677
10.	**Karnataka**	5	13,964	12,364	12,233	11,488	15,178	13,864
11.	**Kerala**	2	2,906	3,055	106	106	0	6,262
12.	**Madhya Pradesh**	10	32,586	29,263	14,399	12,845	28,943	22,591
13.	**Maharashtra**	5	38,910	38,105	8,316	6,094	36,679	31,595
14.	**Meghalaya**	2	8,444	7,768	0	0	7,953	3,596
15.	**Odisha**	7	19,457	18,530	8,730	8,539	38,043	34,258
16.	**Punjab**	3	14,373	13,932	5,134	4,632	11,157	11,031
17.	**Rajasthan**	7	26,141	19,137	12,523	7,626	18,549	19,668
18.	**Uttar Pradesh**	10	26,324	23,071	21,829	21,038	45,080	27,180
19.	**Uttarakhand**	3	141	640	94	94	4,045	9,106
Total:		**92**	**4,20,749**	**3,83,361**	**1,57,893**	**1,21,608**	**4,22,297**	**3,38,079**

(T: Target, A: Achievement)

Annexure-5.11
(Refer para-5.8.1)

Training to ANMs, Staff Nurses and Medical Officers

Sl. No.	State	Number of districts audited	Number targeted to be trained	Number actually trained	Shortfall	*Per cent*
Training to ANMs						
1.	**Bihar**	10	8,537	6,122	2,415	28.29
2.	**Chhattisgarh**	4	3,267	2,958	309	9.46
3.	**Gujarat**	3	5,133	2,334	2,799	54.53
4.	**Haryana**	3	3,610	3,269	341	9.45
5.	**Karnataka**	5	4,894	3,911	983	20.09
6.	**Kerala**	2	1,050	1,016	34	3.24
7.	**Odisha**	7	7,124	6,136	988	13.87
8.	**Punjab**	3	1,327	1,256	71	5.35
9.	**Rajasthan**	7	6,895	3,044	3,851	55.85
10.	**Tamil Nadu**	3	3,153	1,724	1,429	45.32
11.	**Uttar Pradesh**	10	5,339	3,872	1,467	27.48
Total		**57**	**50,329**	**35,642**	**14,687**	
Training to Staff Nurses						
1.	**Bihar**	10	1,330	558	772	58.05
2.	**Gujarat**	3	4,015	1,314	2,701	67.27
3.	**Haryana**	3	2,323	1,977	346	14.89
4.	**Karnataka**	5	5,954	4,503	1,451	24.37
5.	**Madhya Pradesh**	10	875	732	143	16.34
6.	**Maharashtra**	5	1,660	1,461	199	11.99
7.	**Odisha**	7	2,258	1,849	409	18.11
8.	**Punjab**	3	687	586	101	14.70
9.	**Rajasthan**	7	1,588	363	1,225	77.14
10.	**Tamil Nadu**	3	1,948	1,045	903	46.36
	Total:	**56**	**22,638**	**14,388**	**8,250**	
Training to Medical Officers						
1.	**Arunachal Pradesh**	4	907	786	121	13.34
2.	**Bihar**	10	1,952	858	1,094	56.05
3.	**Chhattisgarh**	4	690	543	147	21.30
4.	**Gujarat**	3	665	518	147	22.11
5.	**Haryana**	3	1,223	756	467	38.18
6.	**Karnataka**	5	1,228	989	239	19.46
7.	**Madhya Pradesh**	10	455	401	54	11.87
8.	**Maharashtra**	5	3,536	2,826	710	20.08
9.	**Odisha**	7	1,330	1,143	187	14.06
10.	**Rajasthan**	7	653	487	166	25.42
11.	**Tamil Nadu**	3	3,114	1,937	1,177	37.80
12.	**Tripura**	2	140	116	24	17.14
13.	**Uttar Pradesh**	10	709	542	167	23.55
Total		**73**	**16,602**	**11,902**	**4,700**	

Annexure-5.12
(Refer para-5.8.1)

State specific findings on training of ASHA and ANM

Sl. No.	State	Audit Observations
1.	**Himachal Pradesh**	Shortfall in training to ASHAs in round 1 to 4 of Module 6-7 ranged between 22 and 100 *per cent* which indicated that the ASHAs were not fully conversant with the various health activities/ programme being implemented at grass root level. Besides, against the available funds of ₹ 6.49 crore received for training, the Department could utilise only ₹ 3.54 crore, leaving unspent funds to the extent of ₹ 2.95 crore due to non-conducting of complete training programme. The MD NRHM while confirming the facts stated (July 2016) that induction training was not imparted to ASHAs who left the job and training in module 6 and 7 could not be imparted well in time due to delay in procurement process of Home Based New born Care (HBNC) kits , required for training under Module 6 and 7.
2.	**Madhya Pradesh**	During the period 2011-12 to 2015-16, training could not be imparted as planned, as 42 *per cent* shortfall was noticed in number of batches as well as participant/trainees. As a result only ₹ 46.80 crore (47 *per cent*) were utilised under training component against the available funds of ₹ 99.86 crore.
3.	**Jharkhand**	Out of 3,824 HSC[7]s, SBA trained ANMs were posted in 2,292 HSCs while remaining 1,532 HSCs (40 *per cent*) with SBA un-trained ANMs.

[7] Equivalent to a sub-centre.

Annexure-6.1
{Refer para-6.1.1 (D) (iv)}

Details of monitoring of Key Performance Indicators (KPIs) at the health facilities

Sl. No.	State	Number of selected health facilities	Facilities where Monitoring of Key Performance Indicators was done		*Per cent* of health facilities where monitoring of KPIs was not done
			Number	Reporting Key Outcome indicators to DQAC and SQAC	
1.	**Andhra Pradesh**	30	0	0	100
2.	**Arunachal Pradesh**	19	0	0	100
3.	**Bihar**	55	55	55	0.00
4.	**Chattisgarh**	28	3	1	89.29
5.	**Gujarat**	28	7	8	75
6.	**Haryana**	22	2	2	90.91
7.	**Himachal Pradesh**	21	0	0	100
8.	**Jharkhand**	41	0	0	100
9.	**Karnataka**	54	4	3	94
10.	**Madhya Pradesh**	71	17	15	76.06
11.	**Maharashtra**	46	12	24	73.91
12.	**Mizoram**	11	0	0	100
13.	**Odisha**	66	20	13	69.70
14.	**Punjab**	23	3	0	86.96
15.	**Rajasthan**	52	8	4	84.62
16.	**Tamil Nadu**	21	3	1	85.71
17.	**Telangana**	30	0	0	100
18.	**Tripura**	13	13	13	0.00
19.	**Uttar Pradesh**	93	0	0	100
20.	**Uttarakhand**	22	0	0	100
Total		**746**	**147**	**139**	**80.29**

Annexure-6.2
{Refer para-6.1.1 (D) (v)}

Details of availability of Standard Operating Procedures (SOPs) and Orientation of Staff

Sl. No.	State	Number of selected health facilities	Availability of SOPs		Staff oriented	
			Number of health facilities	*Per cent* shortfall	Number of health facilities	*Per cent* shortfall
1.	**Andhra Pradesh**	30	0	100	0	100
2.	**Arunachal Pradesh**	19	1	94.74	0	100
3.	**Bihar**	55	7	87.27	7	87.27
4.	**Chhattisgarh**	28	7	75	7	75
5.	**Gujarat**	28	6	78.57	18	35.71
6.	**Haryana**	22	1	95.45	1	95.45
7.	**Himachal Pradesh**	21	0	100	0	100
8.	**Jharkhand**	41	0	100	0	100
9.	**Karnataka**	54	10	81.5	8	85
10.	**Madhya Pradesh**	71	21	70.42	12	83.09
11.	**Maharashtra**	46	29	36.95	22	52.17
12.	**Mizoram**	11	5	54.55	11	0.00
13.	**Odisha**	66	15	76.92	15	77.27
14.	**Punjab**	23	1	95.65	1	95.65
15.	**Rajasthan**	52	8	84.62	8	84.62
16.	**Tamil Nadu**	21	12	42.86	12	42.86
17.	**Telangana**	30	0	100	0	100
18.	**Tripura**	13	3	76.92	3	76.92
19.	**Uttar Pradesh**	93	93	0	0	100
20.	**Uttarakhand**	22	0	100	0	100
Total		**746**	**219**	**70.64**	**125**	**83.24**

Annexure-6.3
(Refer para-6.2)

Shortfall in holding the meetings by the committees of SHM and SHS during 2011-16

Sl. No.	State	Year	Name of the committee	Number of meetings required as per norms	Number of meetings actually held	Shortfall (*Per cent*)
1.	**Arunachal Pradesh**	2011-16	SHM[8]	7	2	71
			SHS[9] GB[10]	7	0	100
2.	**Gujarat**	2011-16	SHS GB	7	4	43
			SHS EC[11]	33	20	39
3.	**Himachal**	2011-16	SHM	7	4	43
4.	**Karnataka**	2011-16	SHM	7	2	71
5.	**Kerala**	2011-16	SHM	7	1	86
			SHS GB	7	5	29
			SHS EC	33	9	73
6.	**Madhya Pradesh**	2011-16	SHS GB	7	2	71
7.	**Meghalaya**	2011-16	SHM	7	0	100
			SHS GB	7	5	29
8.	**Mizoram**	2011-16	SHM	7	1	86
			SHS GB	7	1	86
			SHS EC	33	6	82
9.	**Rajasthan**	2011-16	SHM	7	0	100
			SHS GB	7	2	71
			SHS EC	33	22	33
10.	**West Bengal**	2011-15	SHFWS-EC	48	11	77

[8] State Health Mission
[9] State Health Society
[10] GB: Governing Body
[11] Executive Committee

Annexure-6.4
(Refer para-6.4)

Results of Beneficiary Survey

Sl. No.	Findings
1.	96.28 *per cent* and 97.94 *per cent* of the beneficiaries were aware about the ASHA and ANM respectively. In relation to response of ASHA, 4.7 *per cent* beneficiaries said that ASHA did not respond quickly while 11.56 *per cent* beneficiaries said some times the response was quick.
2.	78.47 *per cent* beneficiaries registered their pregnancy with AWW/ANM/ASHA/Doctor within 12 weeks of pregnancy. Significantly, in the three States of **Bihar, Meghalaya** and **Uttarakhand**, 54 *per cent* to 73 *per cent* of the beneficiaries did not register their names within 12 weeks of pregnancy.
3.	Home delivery was preferred by only 7.51 *per cent* beneficiaries. However, in three States **Manipur, Meghalaya and Nagaland**, 64 *per cent* to 79 *per cent* of the beneficiaries preferred home delivery.
4.	While, 78 *per cent* beneficiaries stated that, food was provided free of cost under the scheme Janani Shishu Suraksha Karyakram (JSSK), 19.53 *per cent* beneficiaries stated that food was not provided.
5.	26.58 *per cent* beneficiaries stated that the ambulance did not arrive on time when called by them. The percentage was higher (42 *per cent* to 47 *per cent)* in three States of **Karnataka, Rajasthan and Uttar Pradesh**
6.	The delay in receipt of JSY cash assistance by 20 *per cent* beneficiaries ranged between 31 to 869 days.
7.	11.08 *per cent* beneficiaries reported that no health worker visited them at home within seven days after delivery in line with IPHS.
8.	22.89, 19.27 *and* 21.66 *per cent* of the beneficiaries reported non- receipt of paediatric IFA tablets/syrups, Vitamin-A dose and de-worming tablets/syrup respectively.
9.	In **Sikkim**, out of 145 beneficiaries surveyed, 113 beneficiaries (78 *per cent*) reported payment of money for availing delivery services.
10.	In response to the questions on problems/difficulties faced by the beneficiaries, the reasons/answers were Place is far away (20.46 *per cent*), Service not good (13.88 *per cent*), Service not available (17.94 *per cent*). Mode of transportation not available (21.88 *per cent*), Facility overcrowded (20.82 *per cent*).

Annexure-7.1

{Refer para-7.2.1 (a)}

Institutional deliveries during 2011-16

Sl. No.	State/UT	Total number of pregnant women registered	Number of pregnant women registered opting for Institutional delivery	*Per cent* of pregnant women registered opting for Institutional delivery	Reasons for not opting for institutional delivery
1.	**Andaman and Nicobar Islands**	30,030	22,876	76	Not willing
2.	**Andhra Pradesh**	47,05,896	40,09,452	85	Not furnished
3.	**Arunachal Pradesh**	1,56,905	63,362	40	Not mentioned
4.	**Assam**	38,85,118	25,40,188	82	Not furnished
5.	**Bihar**	127,70,674	76,07,461	60	Not furnished
6.	**Chhattisgarh**	33,19,466	16,92,487	51	Not furnished
7.	**Gujarat**	70,87,861	55,66,206	79	Pregnant women were not opted for institutional deliveries due to various customs.
8.	**Haryana**	29,23,650	21,42,725	73	Not furnished
9.	**Himachal Pradesh**	6,47,711	3,79,620	59	Area from which women belong is land locked due to snow or other reasons. In some pockets, the cultural belief is such that they opt home delivery.
10.	**Jammu and Kashmir**	19,98,896	8,49,984	43	Due to tough and difficult terrain.
11.	**Jharkhand**	37,51,047	22,35,097	60	Not furnished
12.	**Karnataka**	67,16,166	42,60,879	63	Not furnished
13.	**Kerala**	25,45,009	24,98,313	98	Not furnished
14.	**Madhya Pradesh**	93,72,406	60,87,160	65	Lack of referral transport, hard to reach areas, delayed network problem to connect call centre delayed call to call centre for referral transport, etc.
15.	**Maharashtra**	1,09,11,869	84,18,096	77	Lack of awareness, knowledge, illiteracy, superstitions, poverty, belief, traditions etc.
16.	**Manipur**	3,95,640	1,49,992	38	Not furnished
17.	**Meghalaya**	6,37,351	2,13,701	34	Not furnished
18.	**Mizoram**	1,24,686	93,621	75	Not furnished
19.	**Odisha**	40,93,249	30,98,355	76	Not furnished
20.	**Punjab**	24,25,932	17,64,957	73	Not furnished
21.	**Rajasthan**	95,31,052	67,03,450	70	Not furnished
22.	**Sikkim**	46,963	32,026	68	Not furnished
23.	**Tamil Nadu**	55,66,427	48,40,948	87	Not furnished
24.	**Telangana**	40,05,365	22,63,105	56	Not furnished
25.	**Tripura**	3,81,530	2,23,166	58	Not furnished
26.	**Uttar Pradesh**	2,68,09,476	1,16,10,806	43	Not furnished
27.	**Uttarakhand**	10,89,506	4,50,277	42	Not furnished
28.	**West Bengal**	94,26,292	56,70,434	60	Lack of awareness/ desired home delivery

Annexure-7.2
{Refer para-7.2.2 (a)}

Detail of the antenatal checkups received by pregnant women during 2011-16

Sl. No.	State/UT	Total number of pregnant women registered	Number of registered pregnant women received antenatal; check-ups			
			At the stage of registration	First Visit: 20-24 weeks	Second Visit: 28-32 weeks	Third Visit: 34-36 weeks
1.	**Andaman and Nicobar Islands**	30,030	30,030	30,030	22,358	24,032
2.	**Andhra Pradesh**	47,05,896	47,05,896	33,76,703	NA	44,27,748
3.	**Arunachal Pradesh**	1,56,905	1,56,905	NA	NA	58,119
4.	**Assam (2012-16)**	30,83,543	30,16,003	26,47,372	24,66,138	21,47,237
5.	**Bihar**	1,30,10,357	1,30,10,357	1,30,10,357	NA	79,11,162
6.	**Chhattisgarh**	33,19,466	17,79,981	NA	NA	NA
7.	**Gujarat**	70,87,861	70,87,861	51,63,719	62,10,657	54,61,946
8.	**Haryana**	29,23,650	29,23,650	14,82,561	NA	20,12,834
9.	**Himachal Pradesh**	6,47,711	NA	4,11,156	NA	5,32,646
10.	**Jammu and Kashmir**	19,98,896	19,98,896	7,48,746	6,43,087	12,94,845
11.	**Jharkhand**	37,51,047	37,51,047	10,69,325	NA	26,50,537
12.	**Karnataka**	67,16,166	45,10,198	NA	NA	NA
13.	**Kerala**	25,45,009	25,45,009	20,43,967	23,14,461	23,14,461
14.	**Madhya Pradesh**	93,72,406	NA	NA	NA	74,27,958
15.	**Maharashtra (2012-16)**	86,15,037	53,74,074	72,21,738	63,88,474	60,60,774
16.	**Manipur**	3,95,640	3,95,640	2,24,843	NA	2,20,461
17.	**Meghalaya**	6,37,351	NA	NA	NA	NA
18.	**Mizoram**	1,24,686	1,24,686	80,174	NA	87,607
19.	**Odisha**	40,93,118	40,93,118	23,11,400	24,87,246	36,01,422
20.	**Punjab**	24,25,932	24,25,932	16,75,126	NA	21,67,041
21.	**Rajasthan**	95,31,052	51,36,326	NA	NA	NA
22.	**Sikkim**	46,963	NA	33,148	NA	39,626
23.	**Tamil Nadu**	55,66,427	55,66,427	0	0	51,40,664
24.	**Telangana**	40,05,365	NA	NA	NA	36,21,545
25.	**Tripura**	3,81,530	NA	NA	NA	2,42,980
26.	**Uttar Pradesh**	2,68,09,476	NA	1,42,00,649	NA	1,91,62,821
27.	**Uttarakhand**	10,89,506	6,23,954	NA	NA	8,34,557
28.	**West Bengal**	94,26,292	63,66,258	NA	NA	73,50,113

NA: Not available

Annexure-7.3
{Refer para-7.2.2 (a) (i)}

Detail of the pregnant women given 100 IFA tablets during 2011-16

Sl. No.	State/UT	Total number of pregnant women registered	Number of pregnant women given100 IFA tablets	*Per cent* of pregnant women given100 IFA tablets	Number. of pregnant women who had been detected with severe anaemia	*Per cent* of pregnant women who had been detected with severe anaemia
1.	**Andaman and Nicobar Islands**	30,030	82,192	273.70	981	3.27
2.	**Andhra Pradesh**	47,05,896	45,47,676	96.64	1,42,064	3.02
3.	**Arunachal Pradesh**	1,56,905	76,141	48.53	2,683	1.71
4.	**Assam (2012-16)**	30,83,543	25,62,087	83.09	28,270	0.92
5.	**Bihar**	1,30,10,357	65,59,191	50.42	68,788	0.53
6.	**Chhattisgarh**	33,19,466	26,45,906	79.71	NA	NA
7.	**Gujarat**	70,87,861	61,43,535	86.68	1,52,716	2.15
8.	**Haryana**	29,23,650	21,39,014	73.16	1,14,501	3.92
9.	**Himachal Pradesh**	6,47,711	4,63,245	71.52	4,158	0.64
10.	**Jammu and Kashmir**	19,98,896	7,39,241	36.98	1,22,086	6.11
11.	**Jharkhand**	37,51,047	21,12,355	56.31	24,852	0.66
12.	**Karnataka**	67,16,166	59,38,257	88.42	2,52,581	3.76
13.	**Kerala**	25,45,009	21,38,592	84.03	12,013	0.47
14.	**Madhya Pradesh**	93,72,406	89,96,236	95.99	2,20,498	2.35
15.	**Maharashtra**	1,09,11,869	77,10,613	70.66	2,60,470	2.39
16.	**Manipur**	3,95,640	1,00,258	25.34	701	0.18
17.	**Meghalaya**	6,37,351	2,59,197	40.67	13,256	2.08
18.	**Mizoram**	1,24,686	81,062	65.01	840	0.67
19.	**Odisha**	40,93,118	29,63,741	72.41	25,007	0.61
20.	**Punjab**	24,25,932	19,98,668	82.39	22,738	0.94
21.	**Rajasthan**	95,31,052	64,58,792	67.77	2,07,284	2.17
22.	**Sikkim**	46,963	38,007	80.93	134	0.29
23.	**Tamil Nadu**	55,66,427	39,69,211	71.31	1,48,939	2.68
24.	**Telangana**	40,05,365	38,88,854	97.09	68,675	1.71
25.	**Tripura**	3,81,530	2,29,215	60.08	2,295	0.60
26.	**Uttar Pradesh**	2,68,09,476	2,03,15,500	75.78	3,81,353	1.42
27.	**Uttarakhand**	10,89,506	5,37,151	49.30	21,382	1.96
28.	**West Bengal**	94,26,292	71,51,349	75.87	25,970	0.28

Annexure-7.4
(Refer para-7.2.5)

Increasing trend in deliveries with obstetric complications between 2011-12 and 2015-16

Sl. No.	State/UT	Year	Total number of institutional deliveries	Number of deliveries with obstetric complications	*Per cent* of deliveries with obstetric complications
1.	**Andaman and Nicobar Islands**	2011-12	4,870	527	10.8
		2012-13	4,856	799	16.5
		2013-14	4,411	701	15.9
		2014-15	4,649	418	9.0
		2015-16	4,090	1,178	28.8
		Total	**22,876**	**3,623**	**15.8**
2.	**Haryana**	2011-12	4,34,144	27,823	6.4
		2012-13	3,90,153	34,477	8.8
		2013-14	4,27,375	97,236	22.8
		2014-15	4,59,284	106,334	23.2
		2015-16	4,56,411	34,040	7.5
		Total	**21,67,367**	**2,99,910**	**13.8**
3.	**Jammu and Kashmir**	2011-12	1,52,998	12,545	8.2
		2012-13	1,69,012	2,206	1.3
		2013-14	1,76,738	20,859	11.8
		2014-15	1,79,191	23,983	13.4
		2015-16	1,72,045	27,721	16.1
		Total	**8,49,984**	**87,314**	**10.3**
4.	**Jharkhand**	2011-12	3,72,229	11,247	3.0
		2012-13	4,35,668	13,514	3.1
		2013-14	5,04,644	16,328	3.2
		2014-15	5,00,177	27,179	5.4
		2015-16	5,55,785	34,123	6.1
		Total	**23,68,503**	**1,02,391**	**4.3**
5.	**Karnataka**	2011-12	7,88,977	35,017	4.4
		2012-13	8,37,707	44,581	5.3
		2013-14	8,53,689	56,283	6.6
		2014-15	8,84,610	60,609	6.9
		2015-16	8,95,896	67,739	7.6
		Total	**42,60,879**	**2,64,229**	**6.2**
6.	**Kerala**	2011-12	5,33,260	60,192	11.3
		2012-13	4,94,504	94,112	19.0
		2013-14	4,96,257	102,873	20.7
		2014-15	4,93,636	110,922	22.5
		2015-16	4,80,656	97,662	20.3
		Total	**24,98,313**	**4,65,761**	**19**
7.	**Madhya Pradesh**	2011-12	2,51,357	7,468	3.0
		2012-13	2,33,869	7,939	3.4
		2013-14	2,26,946	13,550	6.0
		2014-15	2,33,131	26,527	11.4
		2015-16	2,34,631	29,174	12.4
		Total	**11,79,934**	**84,658**	**7.2**
8.	**Meghalaya**	2011-12	38,511	4,782	12.4
		2012-13	41,266	4,122	10.0
		2013-14	43,541	6,123	14.1
		2014-15	44,369	7,283	16.4
		2015-16	46,014	7,701	16.7
		Total	**2,13,701**	**30,011**	**14**

Sl. No.	State/UT	Year	Total number of institutional deliveries	Number of deliveries with obstetric complications	*Per cent* of deliveries with obstetric complications
9.	**Odisha**	2011-12	6,23,299	35,394	5.7
		2012-13	6,03,831	56,475	9.4
		2013-14	6,29,106	69,494	11.0
		2014-15	6,27,484	84,529	13.5
		2015-16	6,14,635	1,05,732	17.2
		Total	**30,98,355**	**3,51,624**	**11.3**
10.	**Punjab**	2011-12	3,25,642	20,828	6.4
		2012-13	3,48,514	21,862	6.3
		2013-14	3,59,582	26,425	7.3
		2014-15	3,69,008	50,793	13.8
		2015-16	3,62,211	71,802	19.8
		Total	**17,64,957**	**1,91,710**	**10.9**
11.	**Sikkim**	2011-12	6,780	768	11.3
		2012-13	6,593	405	6.1
		2013-14	6,518	522	8.0
		2014-15	6,205	746	12.0
		2015-16	6,011	1,156	19.2
		Total	**32,107**	**3,597**	**11.2**
12	**Uttarakhand**	2011-12	78,590	5,809	7.39
		2012-13	84,930	7,823	9.21
		2013-14	92,425	8,447	9.13
		2014-15	98,520	9,581	9.72
		2015-16	95,812	9,419	9.83
		Total	**4,50,277**	**41,079**	**9.12**
13.	**West Bengal**	2011-12	10,71,509	77,634	7.2
		2012-13	10,71,312	94,185	8.8
		2013-14	11,86,842	1,19,158	10.0
		2014-15	11,53,207	1,52,398	13.2
		2015-16	12,05,967	2,42,518	20.1
		Total	**56,88,837**	**6,85,893**	**12.1**

Annexure-7.5
(Refer para-7.5.2)

Proportion of Vasectomy, in total sterilization cases during 2011-16

Sl No.	State/UT	Number of Vasectomy/ NSV cases	Number of Tubectomy cases	Number of Laparoscopy cases	Total	*Per cent* of Vasectomy/ NSV to total sterilisation
1.	**Andaman and Nicobar Islands**	14	535	3,538	4,087	0.34
2.	**Andhra Pradesh**	14,724	11,37,736	80,815	12,33,275	1.19
3.	**Arunachal Pradesh**	13	5,925	3,499	9,437	0.14
4.	**Assam**	26,225	2,55,428	NA	2,81,653	9.31
5.	**Bihar**	23,521	27,39,877	NA	27,63,398	0.85
6.	**Chhattisgarh**	22,542	2,45,094	2,47,308	5,14,944	4.38
7.	**Gujarat**	11,806	8,32,274	8,42,726	16,86,806	0.70
8.	**Haryana**	23,146	3,36,498	85,401	4,45,045	5.20
9.	**Himachal Pradesh**	9,669	94,580	NA	1,04,249	9.27
10.	**Jammu and Kashmir**	3,594	78,597	0	82,191	4.37
11.	**Jharkhand**	34,290	5,37,873	43,195	6,15,358	5.57
12.	**Karnataka**	10,422	7,79,589	8,16,024	16,06,035	0.65
13.	**Kerala**	8,261	3,82,012	92,041	4,82,314	1.71
14.	**Madhya Pradesh**	82,775	0	15,89,437	16,72,212	4.95
15.	**Maharashtra**	85,372	23,52,887	7,45,205	31,83,464	2.68
16.	**Manipur**	553	4,686	1,769	7,008	7.89
17.	**Meghalaya**	121	12,832	220	13,173	0.92
18.	**Mizoram**	1	8,636	614	9,251	0.01
19.	**Odisha**	11,865	6,32,121	2,47,958	8,91,944	1.33
20.	**Punjab**	23,387	2,86,119	1,32,000	4,41,506	5.30
21.	**Rajasthan**	23,304	3,24,557	11,78,528	15,26,389	1.53
22.	**Sikkim**	263	496	71	830	31.69
23.	**Tamil Nadu**	7,036	14,12,432	1,61,440	15,80,908	0.45
24.	**Telangana**	34,178	8,41,949	2,28,589	11,04,716	3.09
25.	**Tripura**	416	0	19,108	19,524	2.13
26.	**Uttar Pradesh**	33,845	14,65,477	0	14,99,322	2.26
27.	**Uttarakhand**	7,259	1,10,692	1,10,474	2,28,425	3.18
28.	**West Bengal**	25,353	8,81,468	72,646	9,79,467	2.59
	Total	**5,23,955**	**1,57,60,370**	**67,02,606**	**2,29,86,931**	**2.27**

Annexure-8.1
{Refer para-8.3.3(f)}

Difference in data as per HMIS and as per Records (Maharashtra)

Bhandara District			Ratnagiri District		Buldhana District		Nanded District		Yavatmal District	
Year	Institutional Deliveries		Institutional Deliveries		Institutional Deliveries		Institutional Deliveries		Institutional Deliveries	
	HMIS Data	Records	HMIS Data	Records	HMIS Data	Records	HMIS Data	Records	HMIS Data	Records
2011-12	15,860	17,994	7,929	22,745	26,109	0	38,912	36,358	24,524	42,131
2012-13	16,407	18,505	8,616	20,781	20,568	0	51,070	45,157	25,396	43,961
2013-14	16,756	19,542	8,341	19,583	21,879	48,626	43,734	35,194	21,724	39,581
2014-15	16,436	19,536	8,068	13,656	22,581	34,731	43,802	29,146	25,148	45,448
2015-16	16,826	19,967	7,885	20,334	19,203	42,491	57,642	29,313	24,168	44,977

Bhandara District			Ratnagiri District		Buldhana District		Nanded District		Yavatmal District	
Year	Total No. of live birth M/F		Total No. of live birth M/F		Total No. of live birth M/F		Total No. of live birth M/F		Total No. of live birth M/F	
	HMIS Data	Records	HMIS Data	Records	HMIS Data	Records	HMIS Data	Records	HMIS Data	Records
2011-12	17,609	17,609	24,067	22,449	46,285	0	73,582	35,719	41,597	41,415
2012-13	82	18,173	17,592	20,623	51,204	0	83,033	44,636	43,300	43,282
2013-14	19,191	19,105	15,753	19,452	47,851	47,851	64,821	34,705	35,112	39,059
2014-15	19,101	19,110	13,581	13,581	40,769	34,400	64,415	28,901	44,918	44,942
2015-16	19,599	19,617	20,164	20,163	29,882	42,246	84,295	29,094	32,098	44,333

Bhandara District			Ratnagiri District		Buldhana District		Nanded District		Yavatmal District	
Year	No. of pregnant woman given IFA tables		No. of pregnant woman given IFA tables		No. of pregnant woman given IFA tables		No. of pregnant woman given IFA tables		No. of pregnant women given IFA tables	
	HMIS Data	Records	HMIS Data	Records	HMIS Data	Records	HMIS Data	Records	HMIS Data	Records
2011-12	7,827	7,827	14,638	25,040	13,248	0	37,323	24,948	30,388	37,844
2012-13	13,353	13,353	17,181	21,664	14,819	0	42,300	31,443	26,840	27,236
2013-14	12,111	12,317	14,424	19,432	37,240	37,282	54,698	45,572	43,221	37,871
2014-15	9,876	9,876	14,094	20,155	39,369	39,369	41,844	36,553	36,588	36,616
2015-16	8,939	8,943	13,909	21,540	37,776	40,055	22,166	25,404	30,555	32,781

Bhandara District			Ratnagiri District		Buldhana District		Nanded District		Yavatmal District	
Year	**No. of IUD insertion**		**No. of IUD insertion**		**No. of IUD insertion**		**No. of IUD insertion**		**No. of IUD insertion**	
	HMIS Data	**Records**	**HMIS Data**	**Records**	**HMIS Data**	**Records**	**HMIS Data**	**Records**	**HMIS Data**	**Records**
2011-12	3,427	3,404	7,246	7,252	4,357	5,822	5,998	6,347	9,259	8,809
2012-13	2,955	3,012	7,509	5,934	5,484	5,778	6,122	6,085	8,159	7,973
2013-14	2,697	2,468	6,969	6,667	6,483	6,419	6,445	6,193	7,440	8,279
2014-15	2,976	2,267	6,030	5,928	6,356	6,953	6,857	6,492	6,980	7,273
2015-16	2,964	2,956	6,504	6,439	5,618	6,668	8,708	8,597	6,975	7,746

Annexure-8.2
{Refer para-8.3.3(i) (4)}

Variation in data as per HMIS and data as per records of the selected health facilities, 2015-16 (Meghalaya)

Sl. No.	Data element	As per HMIS	As per Records
	Selected District Hospitals (3)		
1.	Number of pregnant women registered for ANC	1,540	2,002
2.	Out of above, number registered within first trimester (within 12 weeks)	399	522
3.	Number of women registered under JSY	1,159	1,621
4.	Number of pregnant women who received 3 ANCs	1,190	1,543
5.	Number of pregnant women who received TT1	641	953
6.	Number of pregnant women who received TT2 or Booster	1,270	1,598
7.	Number of pregnant women having Haemoglobin level < 11	1,601	2,373
8.	Number of women getting post partum check up between 48 hours and 14 days	892	1,012
9.	Number of PNC maternal complications attended	315	217
10.	Number of children given BCG	1,260	1,625
11.	Number of children given DPT1	643	821
12.	Number of children given DPT2	740	946
13.	Number of children given DPT3	892	1,115
14.	Number of children given hepatitis B3	870	1,093
15.	Number of children given DPT booster	641	797
	Selected Community Health Centres (3)		
16.	Number of pregnant women who received TT2 or booster	1,171	960
17.	Number of pregnant women having Haemoglobin level < 11	1,165	1,066
18.	Number of children between 9 to 12 months who received JE 1st dose	148	269
19.	Number of children suffering from diarrhoea and dehydration	815	573
20.	Number of children admitted with respiratory infection	439	319

	Selected Primary Health Centres (8)		
21.	Number of pregnant women given 100 IFA tablets	624	795
22.	Number of pregnant women having Haemoglobin level < 11	1,405	1,232
23.	Number of condom pieces distributed	3,730	2,735
24.	Number of children given OPV1	1,765	1,880

Annexure-8.3
{Refer para-8.3.3 (i) (5)}

Difference of data between HMIS and records of selected health faculties (Odisha)

(1) District Hospitals (Seven)

Data Item	Data as per		
	Record	HMIS	Difference
Obstetrics and Gynaecology	7	4	3
Maternity care			
Number of JSY beneficiaries	36,686	19,915	16,771
Number of maternal death	58	42	16
Number of infant deaths	1,037	1,032	5

(2) Community Health Centres (21)

Data Item	Data as per		
	Record	HMIS	Difference
Obstetrics and Gynaecology	15	16	1
Paediatric	7	1	6
Antental care	16	11	5
New born care	19	13	6
Postnatal care	19	15	4
Deliveries	21	17	4
Maternity care			
Number of ANC Registration	25,083	21,862	3,221
Number of Deliveries	15,817	15,031	786
Number of maternal deaths	31	2	29
Number of infant deaths	411	96	315

(3) Primary Health Centres (38)

Data Item	Data as per		
	Record	HMIS	Difference
Antenatal care	18	11	7
Post Natal care	14	13	1
New born care	10	3	7
Services under JSY and JSSK	11	14	3
Maternity care			
Number of deliveries	1,130	1,122	8
Number of JSY beneficiaries	807	513	294

(4) Sub-Centres (114)

Data Item	Data as per		
	Record	HMIS	Difference
Antenatal care	107	78	29
New born care	80	40	40
Post Natal care	104	78	26
Services under JSY	83	50	33
Maternity care			
Number of ANC Registration	12,833	12,134	699
Number of deliveries	3,923	495	3,428
Number of JSY beneficiaries	7,070	3,072	3,998
Number of infant deaths	257	142	115
Number of maternal deaths	18	10	8

Annexure-8.4
(Refer para-8.4)

Cases of data in HMIS defying the prescribed validation description/checks

(1) **Data item**: New women registered under JSY

Validation description: Number of women registered under JSY **<** Total number of women registered for ANC

Sl. No.	State	Year	Month	District	Total Number	Total number of women registered for ANC
1.	**Uttar Pradesh**	2015-16	May	**Allahabad**	10,547	10,545
2.	**Madhya Pradesh**	2012-13	August	**Bastar**	2,026	2,024
			December		2,229	2,126

(2) **Data item**: No. of women given TT1 (Vaccine)

Validation description: Number of pregnant women given TT1 **<=** Total number of PW Registered for ANC

Sl. No.	State	Year	Month	District	Total Number	Total number of women registered for ANC
1.	**Uttar Pradesh**	2015-16	April	**Allahabad**	12,007	10,908
			May		12,261	10,545
			June		12,865	11,866

(3) **Data item**: **Number of Infants 0 to 11 months old who received BCG**

Validation description: Number of infants (0-11 months) immunized for BCG

Sl. No.	State	Year	Month	District	Total Number	Live Birth Male + Live Birth female
1.	**Madhya Pradesh**	2014-15	July	**Tikamgarh**	2623	2,577
2.	**Uttar Pradesh**	2015-16	April	**Allahabad**	11,145	4,248
			May		10,498	5,041
			June		10,649	5,391
			July		11,277	6,288
			August		11,811	9,447
			September		12,706	9,537
			October		14,021	9,900
			November		13,569	8,537
			December		13,340	7,430
			January		12,904	7,894
			February		12,529	6,822
			March		14,467	7,545
3.	**Meghalaya**	2013-14	April	**East Garo Hills**	657	623
			May		869	690
			June		657	566
			July		659	465
			August		640	494
			October		734	514
			November		644	533
			December		419	408
			January		636	594
			February		757	629
			March		737	620

Annexure-8.5
(Refer para-8.5)

State wise observations on Computerization and Networking

<table>
<tr><th>Sl. No.</th><th>State</th><th>Audit Observation</th></tr>
<tr><td>1.</td><td>Arunachal Pradesh</td><td>Connectivity to the HMIS was available only at the level of districts as 54 out of 84 blocks did not have internet connectivity. The blocks without internet connectivity were uploading the reports on the portal from the district headquarter or the nearest internet accessible area. The data uploading by the blocks without internet connectivity and adequate manpower was delayed and not available in time in HMIS.</td></tr>
<tr><td>2.</td><td>Assam</td><td>In the test health facilities, the computer, internet connection and data entry operator were not available in all the health centres as detailed below:
<table>
<tr><th>Number in which Data entry operator available</th><th>Category of health centres</th><th>Number of health centres selected</th><th>Number in which functional computer available</th><th>Number in which internet available</th></tr>
<tr><td>08</td><td>PHC</td><td>30</td><td>18</td><td>07</td></tr>
<tr><td>03</td><td>CHC/SDCH</td><td>13</td><td>10</td><td>09</td></tr>
<tr><td>04</td><td>DH</td><td>07</td><td>07</td><td>06[12]</td></tr>
</table></td></tr>
<tr><td>3.</td><td>Himachal Pradesh</td><td>Out of 12 test-checked PHCs, only one PHC at Bhota (Hamirpur) had computer and internet facility whereas 11 PHCs had no computer with printer/ internet facility and as such the data was being maintained manually.</td></tr>
<tr><td>4.</td><td>Maharashtra</td><td>Details of maintenance of data in selected PHCs and SDHs/CHCs is given below:
<table>
<tr><th>Type of health facility</th><th>Number of health facilities selected</th><th>Number in which functional computer available</th><th>Number in which internet available</th><th>Number in which Data entry operator available</th></tr>
<tr><td>PHC</td><td>26</td><td>25</td><td>18</td><td>20</td></tr>
<tr><td>CHC/SDCH</td><td>17</td><td>16</td><td>15</td><td>2</td></tr>
</table></td></tr>
<tr><td>5.</td><td>Manipur</td><td>SHS, Manipur as well as both the sampled districts upto PHC level were computerized with standalone computers without networking. However, internet connection was provided either through cables or dongles.</td></tr>
<tr><td>6.</td><td>Mizoram</td><td>Reporting from the block/main centres was not done in the audited districts due to internet connectivity problem. Consolidation in the District/State Level was also not fully inclusive due to non-updating of data from the centres.</td></tr>
<tr><td>7.</td><td>Rajasthan</td><td>A provision of ₹ 2.45 crore (for procurement of laptops - ₹ 2.25 crore, data card and rental - ₹ 0.20 crore) was made in 2014-15 under Rashtriya Bal Swasthya Karyakram for Mobile Health Teams to upload data in MIS. However, only ₹ 5.99 lakh was released to the districts for purchase of data card/rental, whereas no sanction for procurement of laptops was issued.</td></tr>
<tr><td>8.</td><td>Sikkim</td><td>Physical verification revealed that the computer networking in most of the PHCs was not satisfactory. None of the 15 PHCs (selected) had any computer or internet facility. No data entry operator was appointed in two PHCs (Dentam in West District and Hee-Gyathang in North Sikkim).</td></tr>
<tr><td>9.</td><td>West Bengal</td><td>In the selected 22 PHCs of four districts, it was noticed that 21 PHCs did not have computer whereas one PHC [13] had computer with internet connection but no DEO/statistical assistant.</td></tr>
</table>

[12] Internet facility was not available at DH, Sivasagar.
[13] PHC, Godapiasal in Salboni block of Paschim Medinipur.

Annexure-8.6
(Refer para-8.6)

Status of maintenance of Registers/records at the facilities

<table>
<tr><th>Sl. No.</th><th>State</th><th>Audit Observation</th></tr>
<tr><td>1.</td><td>Arunachal Pradesh</td><td>In four selected districts, none of the 30 selected SCs maintained the full set of 12 registers. The number of registers not maintained ranged from 2 to 10.</td></tr>
<tr><td>2.</td><td>Assam</td><td>Registers not maintained/updated regularly in the selected health facilities
<table>
<tr><th>Health facility (Number)</th><th>Types of register</th><th>Number of health facilities not maintaining/updating registers</th><th>Remarks</th></tr>
<tr><td rowspan="9">SC (45)</td><td>Eligible Couple register</td><td>16</td><td>Not maintained</td></tr>
<tr><td>Ante Natal/Pregnancy register</td><td>13</td><td>Not updated</td></tr>
<tr><td>Birth and Death Register</td><td>10</td><td>Not maintained</td></tr>
<tr><td>Drug Register</td><td>14</td><td>-do-</td></tr>
<tr><td>Equipment/furniture registers</td><td>25</td><td>-do-</td></tr>
<tr><td>Communicable/epidemic register</td><td>41</td><td>-do-</td></tr>
<tr><td>Register for Surveillance/Malaria</td><td>31</td><td>-do-</td></tr>
<tr><td>JSY Register</td><td>38</td><td>-do-</td></tr>
<tr><td rowspan="2">CHC (12)</td><td>Vaccine Stock Register</td><td>01</td><td>Not updated</td></tr>
<tr><td>Temperature Monitoring Register</td><td>3</td><td>-do-</td></tr>
<tr><td rowspan="3">DH (7)</td><td>Vaccine Stock Register</td><td>02</td><td>-do-</td></tr>
<tr><td>Temperature Monitoring Register</td><td>01</td><td>-do-</td></tr>
<tr><td>Immunization register</td><td>6</td><td>-do-</td></tr>
</table>
Due to non-maintenance/ updating of registers, source of data submitted in the monthly report was not verifiable leaving possibilities of misreporting as well.</td></tr>
<tr><td>3.</td><td>Gujarat</td><td>Nine out of 36 selected SCs, maintained the mandatory 12 registers. Non-maintenance of mandatory registers ranged from 6 to 11 in five SCs. No register was maintained by Bhuvar SC.</td></tr>
<tr><td>4.</td><td>Haryana</td><td>In the selected 18 SCs, 2 to 5 registers were not being maintained.</td></tr>
<tr><td>5.</td><td>Himachal Pradesh</td><td>In the selected SCs, one to seven registers were not maintained during 2011-16.</td></tr>
<tr><td>6.</td><td>Jharkhand</td><td>In 69 selected SCs of five test checked districts[14] four to nine registers were not being maintained.</td></tr>
<tr><td>7.</td><td>Kerala</td><td>Out of the nine selected CHCs, Outbreak report and Routine Immunization chart were not maintained at Mundakkayam CHC and Weekly Surveillance report was not maintained at Sachivothamapuram CHC.
In the 36 selected SCs, only five maintained all the 12 registers and the remaining 31 SCs maintained nine to 11 registers only.</td></tr>
<tr><td>8.</td><td>Manipur</td><td>None of the 17 selected SCs maintained all the prescribed 12 registers. Two to 10 registers were not maintained at these SCs.</td></tr>
<tr><td>9.</td><td>Meghalaya</td><td>In 24 selected SCs, two registers viz. Communicable diseases/epidemic register/ Syndromic surveillance register and Water quality and sanitation were not found maintained.</td></tr>
<tr><td>10.</td><td>Odisha</td><td>In 71 selected SCs of six districts, one to nine registers had not been maintained.</td></tr>
</table>

[14] Dumka, Giridih, Gumla, Jamtara and West Singhbhum.

Sl. No.	State	Audit Observation
11.	**Rajasthan**	Nine out of 88 selected SCs did not maintain any register, 29 SCs were not maintaining five to 11 registers and 50 SCs were not maintaining one to four registers
12.	**Sikkim**	15 selected SCs in South and West Districts maintained only four to seven registers.
13.	**Telangana**	In two districts, Medak and Nalgonda, Register for water quality and sanitation was not maintained in the selected facilities.
14.	**Tripura**	In 17 selected SCs, only three to eight were maintained. As a result, information pertaining to JSY, minor ailments, water quality and sanitation, communicable/ epidemic diseases, etc. was not found available at SC level.
15.	**Uttar Pradesh**	In the selected SCs, three to 10 registers were not maintained. The registers *viz.,* Eligible couple register, Drug register, Communicable disease/epidemic register/register for Syndromic surveillance, birth and death register *etc.*, were not maintained.

Annexure-8.7
(Refer para-8.8)

RCH Indicators/Parameters showing abnormal variations

Sl. No.	Indicator Name	Range variation of HMIS data with data collected from States (in *per cent*)*
1.	Total number of pregnant women Registered for ANC	-74 to 75
2.	Number of pregnant women given TT2 or Booster during current pregnancy	-911 to 70
3.	Total number of pregnant women given100 IFA tablets	-874 to 78
4.	Number of Pregnant women having severe anaemia (Hb<7) treated at institution	-285 to 91
5.	Number of Eclampsia cases managed during delivery	-57 to 96
6.	Deliveries_Total_Institutional_ Public_Private (calculated field)	-77 to 73
7.	Number of cases of pregnant women with Obstetric Complications and attended at Public facilities i.e. PHC, CHC, SDH, DH and other public Institutions	-774 to 94
8.	Total number of women received JSY incentive money (calculated field)	-2,89,270 to 10,04,978 (in numbers)
9.	Total number of male and female live births (4.1.1.a and 4.1.1.b)	-75 to 75
10.	Still Births	-31 to 90
11.	Total Number of NSV or Conventional Vasectomy conducted at Public facilities i.e. PHC, CHC, SDH, DH and other State owned public institution	-197 to 100

** (-) variation represents data collected from States is less than the data extracted from HMIS and (+) variation represents data collected from States is more than the data extracted from HMIS data.*

Annexure-8.8
(Refer para-8.8.1)

RCH Parameters showing achievements more than 100 *per cent*)

Sl. No.	RCH parameter (Calculated Field)	Description	Exceptions (Out of 3,218 records)
1.	ANC Ratio	Ratio of number of pregnant women (PW) received 3 ANC Vs check-ups to number of PW Registered	In 115 records, the ratio of Number of PW received 3 ANC check-ups to Number of PW registered for ANC was more than 105 *per cent.*
2.	TT1 ratio	Ratio of No. of PW given TT1 Vs number of PW Registered	In 52 records, the ratio of Number of PW given TT1 to Number of PW registered for ANC was more than 105 *per cent.*
3.	TT2 ratio	Ratio of number of PW given TT2 Vs Number of PW Registered	In 77 records, the ratio of Number of PW given TT2 to Number of PW registered for ANC was more than 105 *per cent.*
4.	100 IFA tablets ratio	Ratio of number of PW given 100 IFA Tablets Vs number of PW Registered	In 213 records, the ratio of Number of PW given 100 IFA tablets to Number of PW registered for ANC was more than 105 *per cent.*
5.	Total deliveries at Public/Private/ Home	Ratio of total deliveries at Public/Private/Home Vs number of PW registered for ANC	In 120 records, the ratio of total deliveries at Public/Private/Home to total Number of PW registered for ANC was more than 105 *per cent.*
6.	Total Deliveries including abortions	Ratio of Total deliveries including abortions Vs number of PW registered for ANC	In 215 records, the ratio of total deliveries including abortions to Number of PW registered for ANC was more than 105 *per cent.*
7.	JSY ratio	Ratio of number of PW given JSY benefits Vs number of PW Registered under JSY	In 147 records, the ratio of PW given JSY benefits to number of PW registered under JSY was more than 105 *per cent.*
8.	New-born weighed Vs Total Births	Ratio of No. of New-born weighed Vs Total Births (Live + Still)	In 10 records, the ratio of number of new-born weighed Vs Total Births (Live+Still) was more than 105 *per cent.*
9.	New-born breast-fed within one hour	Ratio of number of New-born breast-fed within 1 hour of birth Vs Total number of Births	In 13 records, the ratio of number of new-born breastfed to the number of total live births (males and females) was more than 105 *per cent.*
10.	OPV-0 cases	Ratio of number of infants given OPV-0 Vs total number of Institutional deliveries	In 899 records, ratio of number of infants given OPV-0 to total number of Institutional deliveries was more than 105 *per cent.*
11.	New-born visited within 24 hours of delivery	Ratio of number of new-born visited within 24 hours of delivery Vs Total number of deliveries conducted at Home and attended to by trained or non-trained SBA	In 71 records, the ratio of number of new-born visited within 24 hours of delivery to total number of deliveries conducted at Home and attended to by trained or non-trained SBA was more than 105 *per cent.*
12.	Percent Immunisation cases	Ratio of number of Immunisation sessions held during the month where ASHAs were present Vs Number of Immunisation sessions held during the month	In 23 records, the ratio of Number of Immunisation sessions held during the month where ASHAs were present to number of Immunisation sessions held during the month was more than 100 *per cent.*

Sl. No.	RCH parameter (Calculated Field)	Description	Exceptions (Out of 3,218 records)
13.	JSY paid against total deliveries in Private Institutions	Ratio of number of mothers paid JSY Incentive for deliveries conducted at accredited Private Institutions Vs Deliveries conducted at Private Institutions (Including C-Sections)	In 35 records, the ratio of number of mothers paid JSY Incentive for deliveries conducted at accredited Private Institutions to Deliveries conducted at Private Institutions (Including C-Sections) was more than 100 *per cent.*
14.	Asha paid JSY (Institutional Delivery)/Total Institutional Delivery	Ratio of number of Asha workers paid JSY incentive for deliveries conducted at Public and Private Institutions Vs Total institutional deliveries	In 98 records, the ratio of number of Asha workers paid JSY incentive for deliveries conducted at Public and Private Institutions Vs Total institutional deliveries was more than 100 *per cent*.
15.	Asha paid JSY (Institutional Delivery)/Total deliveries	Ratio of number of Asha workers paid JSY incentive for deliveries conducted at Public and Private Institutions Vs Total institutional deliveries including Home	In 53 records, the ratio of number of Asha workers paid JSY incentive for deliveries conducted at Public and Private Institutions Vs Total institutional deliveries including home was more than 100 *per cent*.
16.	JSY beneficiaries Vs PW registered for ANC ratio	Ratio of JSY beneficiaries Vs PW registered for ANC	In 39 records, JSY beneficiaries were more than PW registered.

LIST OF ABBREVIATIONS AND GLOSSARY OF TERMS

LIST OF ABBREVIATIONS AND GLOSSARY OF TERMS

List of Abbreviations and Glossary of Terms

Term	Details
ANC	Ante Natal Checkup
ANM	Auxiliary Nurse and Midwife
ASHA	Accredited Social Health Activist
AYUSH	Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy
Biosafety Cabinet	Biosafety Cabinet is designed to protect the operator, the laboratory environment and work materials from exposure to infectious aerosols and splashes that may be generated when manipulating materials containing infectious agents, such as primary cultures, stocks, diagnostic specimen, etc.
CHC	Community Health Centre
CMO	Chief Medical Officer
CRM	Common Review Mission
DEIC	District Early Intervention Centre
DH	District Hospital
DHM	District Health Mission
DHS	District Health Society
DQAC	District Quality Assurance Committee
DQAU	District Quality Assurance Unit
DQT	District Quality Team
EDL	Essential Drugs List
EPC	Empowered Programme Committee
EPoD	Evidence for Policy Design
FRU	First Referral Unit
GH	General Hospital
Geographical Information System	Geographical Information System is a computer based tool that analyses, stores, manipulates and visualizes geographic information on a map.
GoI	Government of India
HMIS	Health Management Information System
IFA	Iron Folic Acid
IFMR	Institute for Financial Management and Research
IMR	Infant Mortality Rate is the number of deaths in children under one year of age per 1,000 live births.
IPD	In Patient Department
IPHS	Indian Public Health Standards
IQAT	Internal Quality Assurance Team
JE	Japanese Encephalitis
JSSK	Janani Shishu Suraksha Karyakram
JSY	Janani Suraksha Yojana
KPI	Key Performance Indicators pertaining to Reproductive and Child Health include, Infant Mortality Rate, Maternal Mortality Ratio, Ante Natal care, Institutional Deliveries, Post Natal Care, Immunisation coverage, etc.
LHV	Lady Health Visitor
MD	Mission Director
MDG	Millennium Development Goals
MHW	Male Health Worker

MIS	Management Information System
MMR	Maternal Mortality Ratio is the number of women who die from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes) during pregnancy and childbirth or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, per 1,00,000 live births.
MMU	Mobile Medical Unit
MoHFW	Ministry of Health and Family Welfare
MSG	Mission Steering Group
MTP	Medical Termination of Pregnancy
NBSU	New Born Stabilisation Unit
NHM	National Health Mission
NHSRC	National Health Systems Resource Centre
NPCC	National Programme Coordination Committee
NRHM	National Rural Health Mission
NUHM	National Urban Health Mission
OPD	Out Patient Department
ORS	Oral Rehydration Salt
OT	Operation Theatre
PAC	Public Accounts Committee
PHC	Primary Health Centre
PIP	Programme Implementation Plan
PNC	Post Natal Care
QA	Quality Assurance
RCH	Reproductive and Child Health
RKS	Rogi Kalyan Samiti
RTI	Reproductive Tract Infection
SBA	Skilled Birth Attendant
SC	Sub Centre
SDH	Sub-District/Sub-Divisional Hospital
SHM	State Health Mission
SHS	State Health Society
SNCU	Sick Newborn Care Unit
SOP	Standard Operating Procedures
SQAC	State Quality Assurance Committee
SQAU	State Quality Assurance Unit
SRS	Sample Registration System
STI	Sexually Transmitted Infection
TFR	Total Fertility Rate is the average number of children expected to be born per woman during her entire span of reproductive period.
TT	Tetanus Toxoid
UC	Utilization Certificate
UT	Union Territory
VHSNC	Village Health Sanitation and Nutrition Committee