सत्यमेव जयते

Report of the Comptroller and Auditor General of India on Impact of National Rural Health Mission on Reproductive and Child Health in Assam for the year ended 31 March 2016

भारतीय लेखापरीक्षा और लेखा विभाग INDIAN AUDIT AND ACCOUNTS DEPARTMENT

Government of Assam

Report No. 4 of 2017

15 September 2017

Presented in the Legislature on : .....

Report of the

Comptroller and Auditor General of India

on

Impact of National Rural Health Mission on Reproductive and Child Health in Assam

for the year ended 31 March 2016

Government of Assam

(Report No. 4 of 2017)

TABLE OF CONTENTS

SUBJECT		PAGE
Preface		iii
Executive Summary		v-viii
Chapter I	Overview of National Rural Health Mission and Audit Approach	1-6
Chapter II	Planning	7-9
Chapter III	Financial Management	11-22
Chapter IV	Availability of Health Infrastructure	23-39
Chapter V	Availability of Health Care Professionals	41-45
Chapter VI	Quality of Health Care in Health Centres	47-53
Chapter VII	Reproductive and Child Health	55-67
Chapter VIII	Monitoring and Evaluation	69-73
Chapter IX	Impact of NRHM on MMR, IMR and TFR	75-78
Chapter X	Impact on beneficiaries	79-84
Chapter XI	Conclusion and Recommendations	85-87
	Appendices	89-106
	Glossary of abbreviations	107-109

Preface

Preface

1. This Report of the Comptroller and Auditor General of India contains the results of performance audit of Impact of National Rural Health Mission (NRHM) on Reproductive and Child Health (RCH) in Assam. The Report has been prepared for submission to the Governor of Assam under Article 151 of the Constitution of India.

2. The audit was conducted through test-check of the records of the Mission Director, NRHM, Assam and the Director of Health Services, Family Welfare and field level implementing agencies covering the period from the year 2011-12 to 2015-16.

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

Executive Summary

Purpose of Audit

National Rural Health Mission (NRHM) was launched in India in April 2005 with a view to providing accessible, affordable and quality health care to the rural population, especially the vulnerable sections. In Assam, NRHM became operational in November, 2005.

Reproductive and Child Health (RCH) is the most important programme under NRHM for improvement of Maternal and Child Health care. Considering the substantial expenditure (₹ 4,461.92 crore) incurred by the State under the programme during 2011-16 and with a view to assess the impact of NRHM on RCH, the Performance Audit (PA) of the programme was taken up. In the PA, efforts of the State Health Mission (SHM) on improving RCH in terms of availability of infrastructure, health care personnel, the quality of health care provided, achievement relating to Infant Mortality Rate (IMR), Maternal Mortality Rate (MMR) and Total Fertility Rate (TFR) and related health information and management system under the programme were reviewed highlighting the areas of concern which need to be addressed for achieving the intended goals.

Results in brief

It was noticed in audit that 98.13 *per cent* children up to one year of age were immunised and 98.57 *per cent* of the target for pulse polio administration was achieved under the programme which was high but 100 *per cent* immunisation to eradicate Polio from the State was yet to be achieved. Increase in institutional deliveries and providing Post Natal Care facility was also seen. The percentage of Pregnant Women (PW) who received 3rd Ante Natal Care (ANC) in the 28 to 32 weeks of pregnancy increased from 71 to 87 *per cent* during 2012-16. The rate of still birth had also reduced simultaneously and came down from 2.55 to 2.05 *per cent*. There were, however, areas of concern like shortfall in infrastructure and health care professionals, 85 *per cent* of home deliveries remained unattended by Skilled Birth Attendant (SBA), PW/mothers had to spend their own money for conducting deliveries in government health centres against the norm of free and no expense delivery, non-achievement of target of reduction in MMR, IMR and TFR and some other related issues which would require action on the part of the NRHM, Assam on priority basis.

Principal findings

- Annual Plans were not prepared by following bottom-up decentralised approach during the period 2011-16. Perspective Plan (PP) identifying gaps in health care facilities, areas of interventions and year-wise resource and activity needs, had not been prepared by the districts test checked and SHM during the Mission period (2005-17).

(Paragraphs: 2.2 and 2.3)

- There was shortfall in yearly utilisation of available funds during 2011-16 (ranged between 21 to 50 *per cent*) under the programme in the State. GoI short released ₹ 2,166.37 crore (₹3,648.03 crore released out of ₹ 5,814.40 crore approved) during 2011-16 due to less utilisation of funds by the State.

(Paragraphs: 3.1 and 3.3)

- There were instances of short release and delay in release of funds by the Government of Assam (GoA). Other financial irregularities such as cases of misappropriation, undue financial aid to contractors, idle expenditure on abandoned works and equipment *etc.*, were also noticed.

(Paragraphs: 3.4, 3.5.6, 3.5.7, 3.6 and 3.7)

- There were shortage of health centres against the requirement as per norms, instances of delay in construction, non-handing over of new health centres were noticed. Health care infrastructure was unevenly distributed with instances of concentration of facilities within the same premises against the norms. In some areas, overburdening of health centres was also observed.

(Paragraphs: 4.1, 4.2 and 4.4)

- Nearly 37 to 70 *per cent* of Maternal and Child Health related calls were attended by '108' Ambulance Service beyond the stipulated time of 30 minutes. Cases of deaths caused due to delay in arrival of Ambulance, were also noticed.

(Paragraphs: 4.8)

- In the outreach areas of Char[1], there was significant shortage of health care facilities. MMR in Upper Assam, predominantly populated with Tea Gardens[2] population, was significantly higher at 404 compared to 301 of State as a whole. In the test checked six blocks covering Tea Garden areas, 38 *per cent* of maternal deaths were from Tea Garden population.

(Paragraphs: 4.10.2 and 4.10.3)

- Instances of shortage of equipment and essential drugs, idle machineries, expiry of drugs, prescribing medicines in brand name *etc.,* were noticed in health centres.

(Paragraphs: 4.11.1, 4.11.3, 4.12.2, 4.12.3, 4.12.4 and 4.12.5)

[1] The riverine areas of the river Brahmaputra are locally known as Char areas.
[2] Inhabitants/ workers of Tea Gardens of the State.

- There was shortage of health care professionals which was coupled with irrational deployment of manpower. There was overall shortage of 567 doctors, 786 Specialist Doctors and 2833 Staff Nurses in the State with reference to Indian Public Health Standards (IPHS).

(Paragraphs: 5.1 and 5.2)

- In the selected health centres, deficiencies were noticed in providing laboratory services, functional health care and other support services besides deficiency in ensuring the infection control practices.

(Paragraphs: 6.2)

- During 2011-16, out of the total deliveries, 16 *per cent* home deliveries were reported and 85 *per cent* of the home deliveries were not attended by the Skilled Birth Attendants (SBA). Besides, numbers of Sub-centres (SCs) were found without availability of SBA and labour table for conducting deliveries.

(Paragraphs: 7.1 and 7.4)

- Complete four ANC check-ups could only be provided to 69.64 *per cent* Pregnant Women (PW) under the programme. There were shortfall in distributing Iron Folic Acid (IFA) tablets and providing Tetanus Toxide (TT) injections to PW. In 35 to 56 *per cent* cases of institutional deliveries, mothers were discharged from hospitals before 48 hours' of mandatory stay under the programme during 2011-16 in the State Government.

(Paragraphs: 7.2 and 7.5)

- PW/mothers had to spend their own money[3] for conducting deliveries in government health centres against the norm of free and no expense delivery. Cases of Adverse Event Following Immunisation[4] were found to be on an increasing trend during 2011-16.

(Paragraphs: 7.7.2 (ii) and 7.10)

- The Health Management Information System (HMIS) which serve as a tool of monitoring the performance of the health systems, was found containing inconsistent and erroneous data and thus, did not represent actual status of implementation for proper monitoring of the programme.

(Paragraphs: 8.4)

[3] ₹ 950 to ₹ 8,100 per delivery.

[4] A medical incidence that takes place after an immunisation, causes concern and is believed to be caused by immunisation.

- The State was lagging behind in achieving the national targets in respect of MMR, IMR and TFR. Instances have been noticed where less reporting of number of maternal and infant deaths was made by the selected districts to the State.

(Paragraphs: 9.2 and 9.3)

Principal Recommendations

- Annual plans should be prepared by following bottom-up decentralised and community-owned approach in order to address the gaps and needs in health care at grass root levels.
- Health centres should be evenly located equipped with rational deployment of health care professionals at easily accessible places to cover the populace in equitable manner.
- Emphasis should be given for improving the health care facilities in Char and Tea Garden areas.
- Quality Assurance Activities by the concerned State level and District level Committees needs to be reviewed as per guidelines and by conducting patient satisfaction survey to ascertain the quality of health care to beneficiaries.
- Effective system of data maintenance and its validation with basic records should be put in place before uploading in the Health Management Information System to make it reliable to monitor the actual progress of performance indicators under the programme.

Chapter I

Overview of National Rural Health Mission and Audit Approach

Chapter I: Overview of National Rural Health Mission and Audit Approach

1.1 Background

India had registered significant progress in improving life expectancy at birth, reducing infant and maternal mortality as well as reducing mortality due to communicable and non-communicable preventable diseases over the last few decades. However, a high proportion of the population especially in rural areas, continued to suffer from preventable diseases, pregnancy and child birth related complications as well as malnutrition. The National Rural Health Mission (NRHM)[5] was launched on 12 April 2005 throughout the country to provide accessible, affordable and quality health care to the rural population, especially the vulnerable sections of the Society. NRHM was conceived as an umbrella programme subsuming the programmes of health and family welfare, including the Reproductive and Child Health, Phase-II (RCH-II)[6] and National Disease Control Programmes (NDCPs)[7]. It, *inter-alia*, seeks to reduce the Maternal Mortality Rate (MMR)[8], Infant Mortality Rate (IMR) and the Total Fertility Rate (TFR). In Assam, NRHM was launched in November 2005.

1.1.1 Salient features

The salient features of NRHM include, *inter-alia*:

- Reduction in child and maternal mortality;
- Universal access to public services for sanitation and hygiene, public health care services with emphasis on services addressing women's and children's health, universal immunisation and food and nutrition;
- Prevention and control of communicable and non-communicable diseases, including locally endemic diseases;
- Access to integrated comprehensive primary health care;
- Population stabilisation, gender and demographic balance;
- Revitalise local health traditions and AYUSH[9]; and
- Promotion of healthy life styles.

---

[5] The National Urban Health Mission (NUHM) as a Sub-mission of an over-arching National Health Mission (NHM) was launched on 20th January 2014, with NRHM being the other Sub-mission of NHM.

[6] RCH-I was launched in October 1997 with the main aim of reducing infant, child and maternal mortality rates. At the time of introduction of NRHM, RCH became part of NRHM as RCH-II.

[7] NDCP includes Iodine Deficiency Disorders, Blindness, Tuberculosis, Leprosy eradication, Vector borne diseases *etc*.

[8] MMR- Maternal Mortality Rate, IMR- Infant Mortality Rate and TFR- Total Fertility Rate.

[9] Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy.

1.2 Organizational Structure

At the State level, the NRHM, Assam functions under the overall guidance of the State Health Mission (SHM), Assam headed by the Chief Minister, Assam.

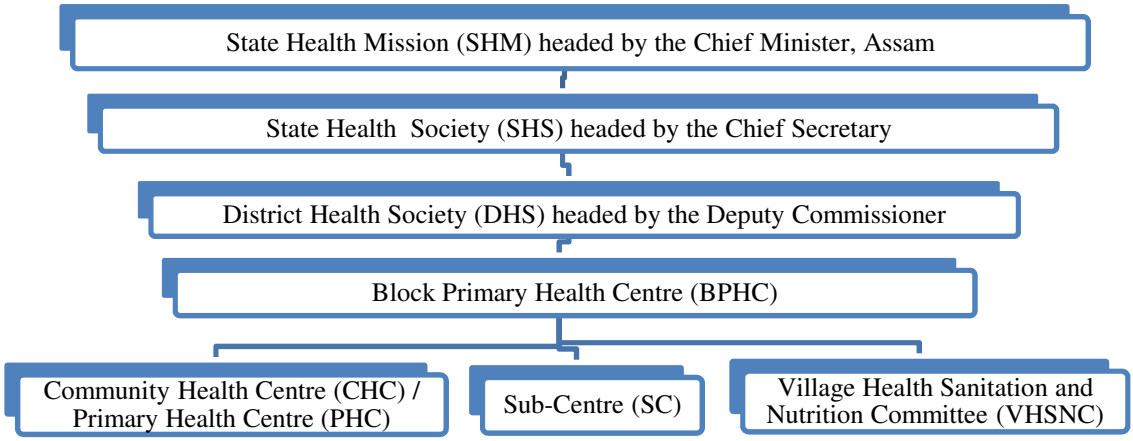
The functions under the Mission are carried out through the State Health Society (SHS), Assam headed by the Chief Secretary, GoA.

The State Programme Management Support Unit (SPMSU) acts as the Secretariat to SHM as well as SHS and is headed by the Mission Director (MD), NRHM, Assam. The SPMSU provides technical support to the SHM through logistics, financial management, Management Information System (MIS) etc.

At the district level, every district has a District Health Mission supported by an integrated District Health Society (DHS) headed by the Deputy Commissioner of the district.

The organizational structure of NRHM in the State is shown in **Chart-1**:

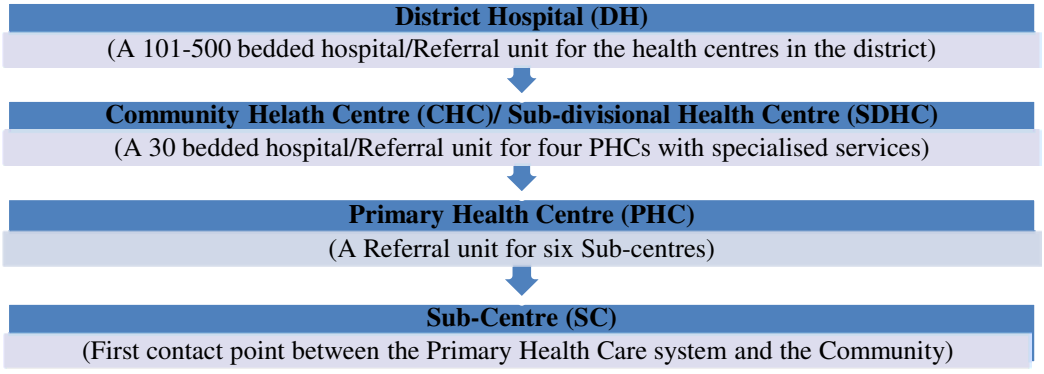
Chart–1
Organisational structure of 'NRHM'



Source: Departmental records.

The health care infrastructure in a district is as shown in **Chart-2:**

Chart–2
Health Care infrastructure in the district



Source: Departmental records.

1.3 Audit Approach

1.3.1 Introduction

The Reproductive and Child Health (RCH) programme under NRHM emphasised, *inter-alia*, early detection and registration of pregnant mothers followed by providing the services like administration of Tetanus Toxide injection, distribution of Iron & Folic Acid Tablets to prevent anaemia and minimum three periodical check-ups with a referral services to high risk mothers, well equipped hospital services to meet the emergency care during pre-natal, natal and post-natal period etc. For the child, provisions were made for neonatal care with administration of prescribed doses to protect the child from polio, tuberculosis, measles, acute respiratory infection (ARI) and diarrhea etc. For couples, contraceptive services were provided under the programme. Besides, two welfare schemes for mothers and child *viz.,* Janani Suraksha Yojana (JSY) and Janani Sishu Suraksha Karyakram (JSSK) were also implemented to promote institutional deliveries. Under JSY, provision for cash incentive to mothers delivering at government health centres and under JSSK provision of free diagnostic services, drugs and consumables, free diet and free transport services to mothers and new born child were made under the programme.

For the implementation of the above activities under RCH, the NRHM Framework (2005-12) underlined for upgradation of Community Health Centres (CHCs) as First Referral Units (FRUs) for dealing with Emergency Obstretic Care, 24x7 delivery services at the Primary Health Centres (PHCs), operationalising of Sub Centres (SCs), contractual appointment of medical officers, training of doctors/Auxiliary Nurse Midwife/Nurse as Skilled Birth Attendants *etc*., for this purpose.

As per NRHM Framework (2012-17), the NRHM seeks to reduce the Maternal Mortality Rate (MMR) in the country from 407 to 100 per 1,00,000 live births, Infant Mortality Rate (IMR) from 60 to 25 per 1,000 live births and the Total Fertility Rate (TFR) from 3.0 to 2.1 per woman.

Before the launch of NRHM in Assam in November 2005, the health indicators were poor with MMR of 480 per 1,00,000 live births, IMR of 68 per 1,000 live births and TFR of 2.9, as compared to the National health indicators. Government of Assam (GoA) has achieved MMR of 301 (2012-13)[10], IMR of 48 (2015-16) and TFR of 2.3 (2015-16).

NRHM, Assam has aimed at reducing MMR, IMR and TFR by the year 2017 to achieve the national targets for these performance indicators.

[10] Survey Report on MMR published upto the year 2012-13 only.

In order to improve RCH, several measures were taken by the State under NRHM responding to challenges in terms of huge rural population, geographical adversities, Char areas (the riverine areas of the river Brahmaputra are locally known as Char areas), Tea Garden areas (areas inhabited by workers of Tea Gardens) *etc*.

1.4 Audit Objectives

The objective of the PA was to assess:-

(1) The impact of NRHM on improving Reproductive and Child Health in the State by examining:

   (a) the extent of availability of health infrastructure;

   (b) the extent of availability of health care professionals;

   (c) the quality of health care provided; and

   (d) the achievement made in reduction of MMR, IMR and TFR.

(2) The mechanism of data collection, management and reporting which serve as indicators of performance.

1.5 Scope of Audit

In order to assess the implementation of the RCH under NRHM by the implementing agencies in addressing health issues relating to maternal and child health, the PA was conducted during March to November 2016 covering the period 2011-16[11]. It involved scrutiny of records maintained by the NRHM, Assam at the State level. At the field level, seven districts[12] covering District Hospitals (DHs), CHCs/First Referral Units (FRUs)/SDCHs, PHCs/State Dispensaries/Mini PHCs and SCs of 15 Blocks were selected. Physical verification of health centres was carried out to assess the infrastructural gaps with reference to terms of Indian Public Health Standards (IPHS)/State norms, wherever prescribed. Under the selected SCs, interviews with 125 ASHA workers and beneficiary survey of 418 beneficiaries who gave birth to children during the previous two years (2014-15 and 2015-16) were also conducted. Besides, the status of health facilities at the outreach areas *viz.,* Chars and Tea Gardens of the selected districts were also assessed by visiting two Boat Clinics[13] and six[14] Tea Garden Hospitals[15].

[11] Prior to this, PA on NRHM was carried out covering the period 2005-06 to 2007-08; the audit findings were incorporated in the C&AG's Report for the year 2009-10. The PA has been discussed by the Public Accounts Committee but recommendations are awaited.

[12] Darang, Golaghat, Kokrajhar, Karbi-Anglong, Kampur (R), Sivasagar and Sonitpur covering seven District Hospitals (DHs), 13 CHCs/First Referral Units (FRUs)/SDCHs, 30 PHCs/State Dispensaries/Mini PHCs and 45 SCs of 15 Blocks.

[13] In Kamrup (Rural) and Sonitpur districts.

[14] Darrang, Golaghat, Kokrajhar, Karbi Anglong, Sivasagar and Sonitpur.

[15] Operating under the Public Private Partnership (PPP) mode.

1.6 Audit Sampling

Based on the health indices, the districts in Assam were stratified into three categories *viz.*, low, medium and high performing. Seven districts were selected from these strata by using Simple Random Sampling Without Replacement (SRSWOR) method as detailed in **Table-1**:

Table – 1
Category-wise number of selected districts based on the health indices

Category of the district	Number of districts[16] in the category	Number of the selected districts
I : Low performing districts	9	3
II : Medium performing districts	9	2
III : High performing districts	8	2
Total	**26**[17]	**7**[18]

In each selected district, the DH, District Health Society (DHS), two to three BPHCs[19]were selected. In each of the BPHCs, one CHC/SDCH, two PHCs and three SCs were selected by using SRSWOR method. The list of selected health centres covered in audit is given in **Appendix-1.**

1.7 Audit Criteria

The criteria for the PA were benchmarked against the following sources:

- NRHM Framework for Implementation (2005-12 and 2012-17);
- NRHM Operational Guidelines for Financial Management;
- Indian Public Health Standards (IPHS) – Guidelines (2007) and Revised Guidelines (2012) for SCs, PHCs, CHCs, Sub-District/Sub-Divisional Hospital and District Hospital;
- Operational guidelines for Quality Assurance (QA) in public health facilities 2013, Assessor's Guidebook for QA in District Hospitals 2013, QA in Community Health Centres (First Referral Unit) 2014 and QA in Primary Health Centres (24 x7) 2014;
- Central Public Works Department (CPWD) Manual/Assam Public Works Department (APWD) Code , Central Vigilance Commission (CVC) guidelines; and
- Performance indicators prescribed by the Ministry of Health and Family Welfare (MoHFW).

[16] The sampling restricted to only the rural districts.
[17] Kamrup (M) district has been excluded, being an urban district.
[18] Darrang, Golaghat, Kokrajhar, Kamrup (Rural), Karbi Anglong, Sivasagar and Sonitpur.
[19] 2 BPHCs where total Block is upto 10 and 3 BPHC where total Block is more than 10.

1.8 Audit Methodology

Audit commenced with an Entry Conference held (26 February 2016) with the Joint Secretary to GoA, Health and Family Welfare Department, Sr. Programme Manager, NRHM, Assam and other departmental officers, wherein the audit objectives, scope of audit and criteria were discussed. The audit involved examination of records/documents of the selected units and analysis of information/data collected from the audited entity through questionnaires/requisitions, physical verification and beneficiary surveys.

At the conclusion of audit, the findings were discussed in the Exit Conference held (10 November 2016) with the Secretary, Health & Family Welfare Department, wherein the Mission Director (MD), NRHM was also present. Based on the discussion held and the replies to the observations received, the responses of the department have been appropriately incorporated in the Report, wherever applicable.

1.9 Acknowledgement

Indian Audit and Accounts Department acknowledges the co-operation and assistance extended by the Government of Assam, Health and Family Welfare Department, State Health Society and District Health Missions at all levels during the course of audit.

Chapter II

Planning

Chapter II: Planning

2.1 Baseline survey and Annual Facility survey

The framework for implementation of National Rural Health Mission (NRHM) (2005-12) envisages accountability through a three-pronged process of community-based monitoring, external surveys and stringent internal monitoring. Facility and Household Survey, National Family and Health Survey-II [20](NFHS-II) and Rural Health Statistics-2002 (RHS) would act as the baseline for NRHM against which the progress would be measured.

The Baseline survey and subsequent periodical surveys help to measure the improvement achieved and identify existing gaps. State Health Society (SHS), Assam conducted two surveys in 2007-08 and 2010-11 by engaging a third party *viz.,* Advent Healthcare Group, which identified the gaps existing in the health facilities. However, the gap relating to requirement of new health centres keeping in view the increased population or geographical remoteness remained to be identified by the two surveys. SHS, Assam and all the selected health centres stated that Baseline and Annual Facility surveys, to measure the periodical improvements in quality and serves as the benchmark for assessing the functional status of health facilities, had not been conducted during the period covered by Audit.

Thus, in the absence of any baseline and periodical follow up assessment, extent of improvement made, through NRHM, remained unmeasured.

2.2 Perspective Plan

NRHM envisaged a bottom-up, decentralised and community-owned approach to public health planning. As per the framework for implementation of NRHM 2005-12, the Perspective Plan (PP) for the entire Mission period, was to be prepared by the district based on Village Health Action Plan, after identifying gaps in health care facilities, areas of interventions and year-wise resource and activity needs. The PPs submitted by the districts were to be consolidated at the State level by NRHM, Assam for effective implementation of the Scheme. The Annual Work Plan (AWP), budgets and the PP were to be sent by the districts to State Health Mission (SHM) for its appraisal. Besides, SHM needed to determine planning norms and suggestive interventions and monitor the progress against the set benchmarks through PP.

The PP, however, had not been prepared by the test checked districts for the NRHM Framework period 2012-17. The State PP for the corresponding period was also not prepared. Thus, in the absence of the State and district Plans, proper identification of gaps and needs, required to be addressed on a priority basis was not done by SHM.

[20] NFHS-II –2nd National Family Health Survey conducted in 1998-99.

It was also noticed that SHM had met once in a year during 2011-14 and had not met since July 2013. As such, involvement of SHM in the planning and monitoring of the Scheme was found absent during 2014-15 and 2015-16.

2.3 Annual Project Implementation Plans (APIP)

The State APIP is to be prepared by the SHS and approved by the SHM headed by the Chief Minister from District Health Action Plans (DHAPs) prepared by the District Health Societies (DHSs). The DHAPs are to be prepared on the basis of Block Health Action Plans (BHAPs) which are prepared by BPHCs consolidating the Village level Health Action Plans (VHAPs) and Facility Development Plans (FDPs). Before submission of BHAP to DHS, this plan is to be reviewed by Block level Monitoring and Planning Committee consisting of Panchayat Members, health care service providers and members from civil societies. VHAPs are prepared by the Village Health, Sanitation and Nutrition Committees (VHSNC), a sub-committee of the Gram Panchayat, while concerned health centres prepare the FDPs. Thus, a bottom up decentralised approach is prescribed in preparation of APIP.

It was observed in audit that Village level Health Action Plans and Facility Development Plans were not prepared during the entire period of 2011-16. As such, the DHAP and State APIPs were also not prepared by following the bottom-up approach to ensure the actual need of the grass-root level giving rise to gaps in infrastructure, human resources, drugs and equipment *etc.*, as discussed in succeeding paragraphs.

Further, in the selected blocks of test-checked districts, it was seen that though BHAPs were prepared annually but Block level Monitoring and Planning Committee, to review the BHAP, was not formed in any of the test checked Blocks. Similarly, DHAPs in the selected districts were also not found approved by the respective DHMs. As such, BHAPs and DHAPs were not reviewed by the prescribed Committees before submission to districts and State authority.

Thus, the bottom-up decentralised and community-owned approach to public health planning was not ensured and preparation of Annual Plans appeared to have been a routine exercise without being monitored and guided by the appropriate authority to focus on achieving the goal of the Mission in a planned manner.

Further, deficiencies observed in planning are summarised below which have been discussed in details in the succeeding chapters:

- There was shortage of 2196 Sub Centres (SCs), 98 Primary Health Centres (PHCs) and 127 Community Health Centres (CHCs) in the State in terms of population norms, out of which only 626 SCs, 65 PHCs and 55 CHCs were planned for construction (March 2016). Of these, 209 SCs, 24 PHCs and 22 CHCs could only be completed till March 2017.

- Out of 4621 SCs in the State, only 20 SCs were planned for upgradation (2011-16) from Type-'A'[21] to Type-'B'[22]. However, upgradation of PHCs to Indian Public Health Standards (IPHS) norms of 24 x 7 facilities, and CHCs to First Referral Unit (FRU) had not been planned at all.

- The State could utilise only 21 to 23 *per cent* funds during 2014-16 approved for procurement of equipment despite non-availability/shortage of basic equipment in the test checked (June - July 2016) health centres, indicating deficient planning.

- Shortage/non-availability of essential drugs in health centres *vis-a-vis* instances of expiry of medicines due to their excess procurement were noticed during audit, highlighting poor planning in the procurement of medicines, under NRHM.

It was thus, revealed that there were deficiencies in the process of planning by the NRHM, Assam for effective implementation of the programme.

[21] Type-'A' SC will provide all recommended services except that the facilities for conducting delivery.

[22] Type-'B' SC, will provide all recommended services including facilities for conducting deliveries at the SC itself.

Chapter III

Financial Management

Chapter III: Financial Management

3.1 Receipt and expenditure of funds

For the implementation of various programmes under NRHM, funds are pooled together under a "Mission Flexi Pool". The Mission Flexi Pool is divided into four key components:

Part A-Reproductive and Child Health (RCH): includes funds for RCH related components such as maternal health, child health, family planning, Janani Suraksha Yojana (JSY), Janani Sishu Suraksha Karyakram (JSSK), RCH camps and compensation for sterilisation.

Part B- Additionalities under NRHM: Any additional activities which are essential for improvement in the health system but cannot be funded from any other programme are funded from this pool. Some such activities include Accredited Social Health Activist (ASHA), Rogi Kalyan Samiti (RKS), Untied Funds, Annual Maintenance Grants *etc.*

Part C- Immunisation: Includes funds for routine immunisation and pulse polio activities.

Part D[23]**-**: Inter-sectoral convergence and National Disease Control Programme (NDCP).

The position of receipt and expenditure of funds during the period 2011-16 in the State under RCH, Additionalities and Immunisation were as shown in **Table-2**:

Table-2
Position of Receipt and expenditure during the year 2011-16

(₹ in crore)

Name of Component	Opening Balance as on April 2011	Fund received from the GoI	State Share received	Other receipts and adjustments*[24]	Total fund available (Col. Nos. 2+3+4+5)	Expenditure incurred during the year	Closing Balance (Col. Nos. 6-7) (*per cent*)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2011-12							
RCH Flexi Pool	264.07	331.90	-	-	595.97	369.23	226.74
Immunization	4.71	23.34	-	0.27	28.32	21.02	7.30
Additionalities under NRHM	119.23	391.32	238.00[25]	32.72	781.27	317.91	463.36
Total	**388.01**	**746.56**	**238.00**	**32.99**	**1405.56**	**708.16**	**697.40 (50)**
2012-13							
RCH Flexi Pool	226.74	310.46	-	-	537.20	418.47	118.73
Immunization	7.30	21.84	-	-1.00	28.14	23.83	4.31
Additionalities under NRHM	463.36	382.32	144.00	7.10	996.78	404.00	592.78
Total	**697.40**	**714.62**	**144.00**	**6.10**	**1562.12**	**846.30**	**715.82 (46)**
2013-14							
RCH Flexi Pool	118.73	367.55	42.18	-	528.46	454.02	74.44
Immunization	4.31	22.28	1.42	-	28.01	32.07	- 4.06
Additionalities under NRHM	592.78	470.80	113.06	11.76	1188.40	411.12	777.28
Total	**715.82**	**860.63**	**156.66**	**11.76**	**1744.87**	**897.21**	**847.66 (49)**

[23] As the scope of the PA is RCH, expenditure under Part D has not been taken into account.
[24] Includes receipt and refund of loan, bank interest, fund in transit *etc*.
[25] Out of ₹238.00 crore, State share for 2011-12 was ₹192.00 crore only.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2014-15							
RCH Flexi Pool	74.44	298.24	33.14	18.00	423.82	465.83	- 42.01
Immunization	-4.06	19.92	2.21	-	18.07	25.15	-7.08
Additionalities under NRHM	777.28	297.68	20.41	-13.27	1082.10	374.36	707.74
Total	**847.66**	**615.84**	**55.76**	**4.73**	**1523.99**	**865.34**	**658.65 (43)**
2015-16							
RCH Flexi Pool	-42.01	351.05	74.89	-51.14	332.79	525.60	-192.81
Immunization	-7.08	23.95	4.78	-2.21	19.44	34.49	-15.05
Additionalities under NRHM	707.74	335.38	64.10	-13.28	1093.94	584.82	509.12
Total	**658.65**	**710.38**	**143.77**	**-66.63**	**1446.17**	**1144.91**	**301.26 (21)**
Grand Total		**3648.03**	**738.19**	**-11.05**		**4461.92**	

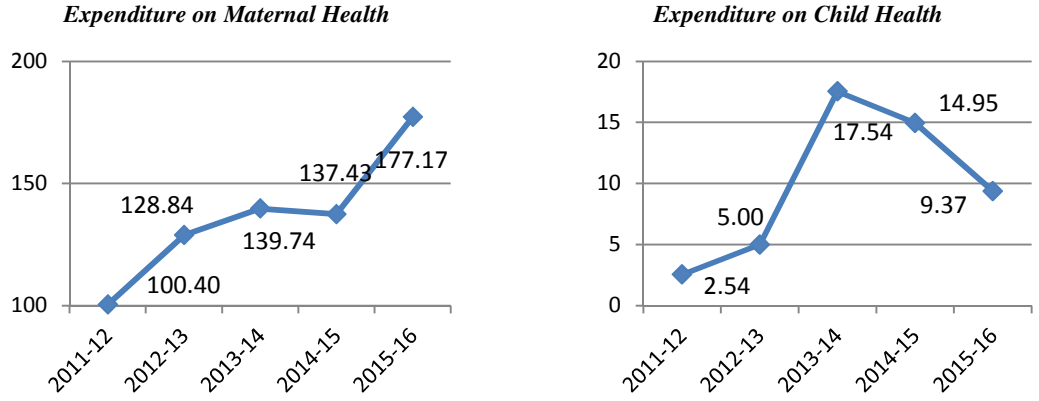
Source: Departmental records.

As can be seen from the table above, the State did not release its share of funds in 2011-12 and 2012-13 under RCH Flexi pool and Immunisation. The year-wise utilization was poor and ranged between 50 to 79 per cent only. On this being pointed out, the NRHM, Assam in reply (March 2017) stated that funds were released by Government of India (GoI) at the fag end of the financial year and hence remained unutilised. The reply was, however, not tenable as even the funds available with the NRHM, Assam could also not be utilised fully during these years under the programme.

Thus unspent balances resulted only in partial achievement of targeted goals, including fund cuts by the GoI, which have been discussed in the succeeding chapters.

It was also observed that expenditure on maternal health showed an increasing trend during 2011-16 except in the year 2014-15, while on child health, expenditure incurred depicted a decreasing trend after 2013-14, as shown in **Chart-3**:

Chart-3
Position of funds utilised under Maternal Health and Child health
(₹ in crore)



Source: Departmental records.

NRHM, Assam demanded ₹ 135.64 crore of which GoI approved ₹ 92.00 crore during 2011-16 under Child Health, but only ₹ 49.40 crore (36.42 *per cent*) of the demanded amount could be utilised. Thus, inspite of having Infant Mortality Rate

(IMR) of 48 against the target of 25 as per NRHM Framework, there was decreasing trend of expenditure under Child Health after 2013-14.

The specific reasons for less utilisation of funds were neither found on record nor stated to Audit, though called for (March 2017).

3.2 Delay in submission of approved annual accounts and utilisation certificates

As per Operational Guidelines for Financial Management, utilisation certificate (UC) along with audited accounts of the funds released during the preceding year needs to be submitted for releasing second instalment of funds by GoI. As per the norms, NRHM, Assam shall appoint the statutory auditor by 31st March of the financial year. Preparation of annual accounts along with UC by the statutory auditor shall be completed by 30th June and shall be submitted to GoI by 31st July of the succeeding year. The UCs need to be signed by the Mission Director (MD), NRHM, Assam and countersigned by the statutory auditor appointed by NRHM, Assam for submission to GoI.

Scrutiny in audit revealed that NRHM, Assam had delayed the appointment of statutory auditor for periods ranging from 49 to 79 days during 2011-16. Besides, there were delays ranging between 155 to 208 days for completion of annual accounts by the statutory auditor and between 125 to 185 days for submission of UC along with the approved accounts to GoI, during 2011-16 by the NRHM, Assam.

The delays stated above, ultimately resulted in delay in release of the second installment for each of the five years (2011-16) by GoI. For instances, 2nd instalments of 2014-15 and 2015-16 were released in March 2015 and July 2016 respectively, *i.e.*, only after submission of UCs along with Audited statement for the preceding year.

Thus, NRHM, Assam could not ensure timely receipt of funds from GoI besides inability to utilise the available funds as discussed above, ultimately affected the health care service delivery in the State.

3.3 Unspent balances with the State led to short release of funds by GoI

As per the Operational Guidelines for Financial Management, funds are released by GoI in two installments *i.e.,* up to 75 *per cent* of approved amount in first installment and the balance in the second installment after taking into account the unspent balance available with the State at the beginning of the financial year and subject to submission of UC for the funds released during the preceding year. It was observed that due to huge unspent balances, as shown in Table 2, GoI did not release the approved amount to the State owing to non-submission of UCs for the funds released during the preceding year. The position of short releases is shown in **Table-3**:

Table-3
Position of approved and released amount under RCH, Additionalities and Immunisation parts by GoI during 2011-12 to 2015-16

(₹ in crore)

Financial Year	Amount approved by GoI	Amount released by GoI	Short release (*per cent*)
2011-12	846.63	746.56	100.07(11.82)
2012-13	1,361.20	714.62	646.58(47.50)
2013-14	1,107.54	860.63	246.91(22.29)
2014-15	1,225.91	615.84	610.07(49.76)
2015-16	1,273.12	710.38	562.74(44.20)
Total	**5,814.40**	**3,648.03**	**2,166.37(37.25)**

Source: Information furnished by NRHM, Assam.

Thus, the State was deprived of funds to the extent of ₹ 2166.37 crore during 2011-16 due to under utilisation of funds by the State Mission thereby depriving the people of the State from the benefits of the scheme.

3.4 Delay in release of funds by GoA

GoI released funds directly to NRHM, Assam during 2011-14 and thereafter routed the funds through the State exchequer from 2014-15 onwards. The Operational Guidelines for Financial Management, 2012 stipulates that States should transfer funds to the SHS within seven days of their receipt from the GoI.

Out of ₹ 616.03 crore and ₹ 710.82 crore released[26] by GoI during 2014-15 and 2015-16 respectively, the State released ₹ 244.48 crore and ₹ 506.76 crore during the same year while ₹ 371.55 crore and ₹ 203.65 crore respectively were released during subsequent years and ₹ 0.41 crore pertaining to 2015-16 had not been released (February 2017).

Besides the short release stated above, it was also noticed in audit that there had been delay in release of funds by GoA to SHS ranging from 37 to 240 days during the two years.

3.5 Procurement of drugs and consumables, equipment

NRHM Framework (2012-17) stipulated for strengthening services on account of policies on drugs, equipments, procurement system and logistics management to ensure the regular need assessment of drugs, consumables, functional equipments etc., their availability in all facilities and smooth supply chain including competitive and transparent bidding process.

Further, Rule 137 of General Financial Rule (GFR) 2005 provided that every authority delegated with the financial powers of procuring goods in public interest shall have the responsibility and accountability to bring efficiency, economy, transparency in matters relating to public procurement and for fair and equitable treatment of suppliers and promotion of completion in public procurement.

[26] Included funds (₹ 0.19 crore and ₹ 0.44 crore respectively) for National Iodine Deficiency Disorder Control Programme (NIDDCP).

Scrutiny however, revealed deficiencies in the procurement system which led to financial irregularities as discussed in the succeeding paragraphs.

3.5.1 Utilisation of funds for procurement of drugs/consumables

Year-wise allocation and utilisation of funds for procurement of drugs by the State was as shown in **Table-4:**

Table-4
Utilisation of funds for procurement of drugs

(₹ in crore)

Year	Approved amount as per APIP/Records Of Proceedings (ROP)	Purchase order issued	Pay-ment made	Committed liabilities	Total utilisation of funds	Less utilisation of funds against approved amount due to short releases by GoI (in percentage)
2011-12	51.09	40.26	29.23	11.03	40.26	10.83 (21)
2012-13	148.47	132.51	132.51	0	132.51	15.96 (11)
2013-14	125.40	122.46	86.77	35.69	122.46	2.94 (02)
2014-15	155.49	143.79	134.90	8. 89	143.79	11.70 (08)
2015-16	97.96	73.73	44.67	29.06	73.73	24.23 (25)

Source: Departmental records.

Thus, against approved funds for the procurement of drugs, substantial amount ranging between ₹ 2.94 crore to ₹ 24.23 crore (2 to 25 *per cent*) could not be utilised during the period 2011-16 due to short release of funds by GoI. This resulted in shortage of medicines at health centres (para 5.12.2) depriving needy patients from health care under NRHM.

3.5.2 Avoidable expenditure due to payment at higher rates

MD, NRHM procured 30.55 crore numbers of Iron Folic Acid (IFA) large tablets from two Central Public Sector Units (CPSUs)[27] on the basis of limited tenders, for ₹ 8.55 crore (@ ₹ 0.28 per tablet) for two interventions *viz.,* Adolescent Reproductive and Sexual Health Programme (ARSH) and Weekly Iron-Folic Acid Supplementation (WIFS) between March 2013 and April 2014 under NRHM.

Scrutiny revealed that NRHM, Assam procured in another case, (April 2013) 20,24,000 IFA large tablets of the same composition at the rate of ₹ 0.20 only from a local supplier[28] at a lesser rate than the rate (₹ 0.28/tablet) of procurement made through two CPSUs above. The rate was finalised in January 2012, with validity upto January 2014 on the basis of an open tender.

Had the NRHM, Assam procured the tablets from the approved local supplier mentioned above, the extra expenditure of ₹ 2.44 crore[29] incurred towards the procurement of IFA tablets could have been avoided. On this being pointed out, the NRHM Assam noted the audit comment for future compliance.

---

[27] (i) M/s HLL Lifecare, Thiruvananthapuram and (ii) M/s Karnataka Antibiotics & Pharmaceuticals Ltd., Bengaluru.
[28] M/s ITAS G Pharma.
[29] [(₹ 0.28 - ₹ 0.20) x 30,55,00,000].

3.5.3 Excess payment due to short supply

Rule 187 (iii) of GFR 2005 stipulated that material once received should be counted, measured or weighed as the case may be and entered in the appropriate stock register. The Officer-in-charge of the store should certify that he has actually received the material and recorded it in the appropriate stock registers.

- MD, NRHM paid ₹ 1.89 crore to M/s HLL Life care for supply of entire quantity of 8.36 crore numbers of IFA small tablets during October 2013 and April 2014. During verification of records[30] in audit, it was revealed that 6.22 crore tablets only were actually recorded to have been received during the period. Thus, there was short receipt of 2.14 crore (8.36 – 6.22 crore tablets) numbers of tablets valued at ₹ 53.48 lakh. This resulted in overpayment to the contractor to the extent without verification of actual quantity of receipt of tablets by NRHM.

- Similarly, during March and December 2013, in respect of procurement of 30.55 crore IFA large tablets from two Central PSUs, there was also short receipt of 15.19 lakh numbers of IFA large tablets valued at ₹ 4.25 lakh for which payment had been made without ensuring the receipt of entire quantity of tablets by NRHM.

Thus, NRHM, Assam did not verify the stock entry to ensure the quantity actually supplied by suppliers before making the payment. This resulted in overpayment of ₹ 57.73 lakh towards short supply of materials indicating lack of monitoring and internal control on the part of the NRHM.

On these being pointed out, NRHM, Assam stated (March 2017) that the audit observations had been noted for necessary follow up corrective action by them.

3.5.4 Excess Expenditure on procurement of Disposable Delivery Kits

NRHM, Assam invited tender (2015-16) for procurement of Disposable Delivery (DD) Kits (Normal)[31] and DD Kits (Episiotomy)[32] valuing ₹ 19.17 crore. Only two out of four bidders were declared eligible in the technical bidding. The rates offered by the two eligible bidders were as under:

Name of items	Rate of Itas G Pharma for each kit (₹)	Rate of Agam Pharmaceuticals for each kit (₹)
DD kit (Normal)	451.92	429.1875
DD kit (Episiotomy)	685.52	765.8175

Clause 4 (ii) of General Conditions of the tender stated that "each kit consisting of drugs and surgical equipment as per indicated specifications and quantity shall be considered as an individual unit and the bidder shall quote for the complete list of items forming a kit".

[30] Stock register and bin-cards maintained by NRHM store.
[31] Kit containing medicines and consumables used for conducting normal delivery.
[32] Kit containing medicines and consumables used for episiotomy i.e. a surgical cut made at the opening of the vagina during child birth, to aid difficult delivery and prevent rupture of tissues.

NRHM, Assam however, selected M/s Itas G. Pharma for both the kits on the ground that total rate for the two kits was less than the other firm and placed supply order (July 2015) for 2,10,978 DD Kits (normal) and 1,40,652 DD Kits (Episiotomy) at its offered rate.

Thus, non-purchasing of the Kits separately from both the suppliers at their lowest rate in compliance with the agreement clause resulted in excess expenditure of ₹ 36.02 lakh[33] on account of 1,58,466 DD kit (normal) supplied as of June 2016 .

3.5.5 Utilisation of funds for procurement of equipment

During 2011-16, NRHM, Assam utilised ₹ 109.12 crore (70 *per cent*) of the total approved allocation of ₹ 156.14 crore towards procurement of equipment. The year-wise position of utilisation of funds was as given in **Table-5**:

Table-5
Utilisation of funds for procurement of equipment (2011-16)

(₹ in crore)

Year	Approved amount as per APIP/ROP	Purchase order issued	Payment made	Committed liabilities	Total utilisation of funds	Less utilisation of funds against approved amount (in percentage)
2011-12	23.51	23.39	23.39	0	23.39	0.12 (0.51)
2012-13	31.78	31.26	21.81	9.45	31.26	0.52 (1.64)
2013-14	46.37	42.30	3.38	38.92	42.30	4.07 (8.77)
2014-15	10.99	2.26	0.24	2.02	2.26	8.73 (79.44)
2015-16	43.48	9.91	3.01	6.90	9.91	33.57 (77.20)
Total	**156.13**	**109.12**	**51.83**	**57.29**	**109.12**	**47.01**

Source: Departmental figures.

Thus, there was short utilisation of funds amounting to ₹ 47.01 crore. Besides, the trend of utilisation of funds for the procurement of equipment decreased year after year with the percentage of non-utilisation of approved funds during 2014-15 and 2015-16 ranging between 79 and 77 *per cent* respectively.

3.5.6 Idle investment on procurement of Ultrasound Sonography machines

NRHM, Assam procured 35 Ultrasound Sonography (USG) Colour Doppler machines (used for Pre-conception and Pre-natal Diagnosis and sex determination) @ ₹ 9,42,000 each during 2012-13. The machines were delivered by the supplying firm[34] in February 2013 to the State Drugs Store, Guwahati. Of these, 25 machines were installed in different health centres during the period between March 2013 and July 2016. The balance 10 machines lying in the District Drug Stores since the date of supply (March 2013) could not be installed due to non-availability of Pre-conception and Pre-natal Diagnostic Techniques (PCPNDT) Certificate[35] which was not issued due to non-posting of trained manpower in the concerned health centres**.**

[33] 1,58,466 DD kits (Normal) x ₹ 22.73 (₹ 451.92 - ₹ 429.19).
[34] M/s Synchronic Medical Systems, Guwahati.
[35] Statutory certificate under the Pre-conception and Pre-natal Diagnostic Techniques (PCPNDT) (Prohibition of Sex Selection) Act, 1994 which provides for the prohibition of sex detection of foetus.

The supplier, in August 2015 intimated that the warranty (two years) would not be extended by the manufacturer for delays in installation.

Thus, procurement of machines without ensuring the availability of trained manpower denying registration of health centres under PCPNDT Act resulted in delay in installation leading to idle investment of ₹ 94.20 lakh (cost of 10 machines @ ₹ 9.42 lakh) besides losing the benefit of the warranty period and depriving the target population of this equipment.

3.5.7 Unfruitful expenditure on laparoscopic machines

NRHM procured 30 Maxer brand Single Puncture Laparoscopic set (15 in 2011-12 and 15 in 2012-13) on the basis of open tendering, at the cost of ₹ 196.66 lakh (@ ₹ 6,55,535 per set). The procurement was made without obtaining the opinion of the experts of Laparoscopic Surgery. The machines were supplied during March 2012 to June 2013 to different health centres of 20 districts.

It was seen in audit that the doctors from concerned health centres reported difficulties in using the machine due to which the machines were lying idle. The expert committee formed in this regard opined (January 2014) that the Karl Storz brand Laparoscopic Machines were more comfortable to operate. Subsequently, during 2013-14, 11 Single Puncture Laparoscopic sets of Karl Storz brand were procured and provided to 11 DHs.

Maxer brand Laparoscopic machine lying idle in Lakhimpur (30.06.2016)

NRHM, Assam however, stated that two Maxer brand Single Puncture Laparoscopic machines were in use in two districts[36] and 16 machines remained unutilised. Status of other 12 machines was not given. It was also stated that training of doctors to operate those machines had not been imparted.

Thus, the 16 machines procured, were lying in packed condition in the store of district offices. This led to an unfruitful expenditure to the tune of ₹ 104.89 lakh (₹ 6,55,535 x 16), while utilisation status of usage of balance 12 machines remained un-ascertained in audit.

3.6 Cases of suspected misappropriation of funds

As per Operational Guidelines for Financial Management (March 2012), monthly concurrent audit of NRHM by the Chartered Accountants are to be done both at State and district levels to depict a true and fair picture of financial position under the programme. Chartered Accountants are appointed by State NRHM for the conduct of monthly concurrent audit prior to the start of the financial year and reports should be submitted to State Health Society (SHS) by 15th of next month.

[36] KarbiAnglong (operated 170 patients) and Darrang (operated five patients).

However, it was observed that there had been delay in appointing Chartered Accountants ranging from 69 to 338 days for District Health Societies (DHSs) and 136 to 279 days for SHS during 2011-16. Thus, regular monthly concurrent audit of accounts was absent leaving scope for financial irregularities remaining undetected. Significantly, during Compliance Audit of DHS, Nagaon district conducted in March 2015, cases of suspected misappropriations were noticed as stated below:

- A sum of ₹ 51.76 lakh was misappropriated by transferring NRHM funds to the accounts of a third person[37] who was neither an employee nor a supplier. A further scrutiny in this regard revealed that the entire amount was withdrawn subsequently from the accounts of the concerned person. The DHS, Nagaon had lodged an FIR in the case and the case was under investigation by the District Administration (March 2017).

- Further, a sum of ₹ 75.45 lakh, releasable to the health institutions under salary, Janani Suraksha Yojana (JSY), NSV and Rogi Kalyan Samiti, were released to different firms/parties in the form of Demand Drafts during May 2012 to November 2013 by the DHS, Nagaon. To an audit query with regards to payments made, the Member Secretary cum DHS, Nagaon stated (March 2015) that the reason/purpose of such payments through Demand Drafts and account transfer could not be ascertained due to non-availability of any record in this regard. Thus, in the absence of records in support of payments made by the DHS, Nagaon, the possibility of misappropriation of funds amounting to ₹ 75.45 lakh could not be ruled out in audit.

Had Concurrent Audit been conducted regularly, such type of serious financial irregularities could have been avoided.

3.7 Other financial irregularities in implementation of the programme

3.7.1 Undue financial aid to contractors

NRHM, Assam followed Assam Public Works Department (APWD) Code for execution of all works taken up by it. However, no provision for granting of Mobilisation Advance (MA) exists in the APWD Code. CVC[38] vide OM (October 1997) stated that MA, if required, should be interest-bearing so that contractors could not take undue benefit. Para 32.5 of CPWD Manual (2012) provides for release of MA to contractors for certain specialised and capital intensive works with tendered estimated cost of ₹ two crore and above, limited to 10 *per cent* of the tendered amount, at the rate of 10 *per cent* simple interest. As per provisions, the recovery should commence after 10 *per cent* of work is completed by the contractor and the entire amount together with interest shall be recovered by the time 80 *per cent* of the work is completed.

[37] Smti Chinu Bala Devi.
[38] Central Vigilance Commission.

- NRHM, Assam however, granted interest free MA of ₹ 7.43 crore to six contractors during 2013-14 for construction of nine Maternal and Child Health Wings (MCH)/CHCs/PHCs. Scrutiny revealed that though the entire amount of MA was recovered/adjusted in subsequent bills, the NRHM, Assam suffered a loss on account of interest to the tune of ₹ 0.86 crore due to grant of interest-free MA as detailed in **Appendix-2.**

- Similarly, NRHM, Assam granted interest free MA of ₹ 4.42 crore to 16 contractors during the period March 2011 to June 2011 for construction of 17 CHCs (details in **Appendix–3**). The mobilisation advance given was fully recovered (March 2017). However, the loss of interest in these cases could not be assessed in audit due to non furnishing of detailed records in this regard by NRHM, Assam.

- Besides the above instances, the NRHM granted and released excess MA beyond the admissible limit to one contractor giving undue financial aid as shown in **Table-6**:

Table-6
Excess MA released to the contractors

(₹ in crore)

Sl. No.	Name of the work	Contract Price	Admissible amount @ 10 *per cent*	MA released
1.	Construction of CHC at Uriamghat, Golaghat	5.06	0.51	1.00
2.	Construction of CHC (MH) including quarters at Nobera, Jorhat	5.30	0.53	1.04

Source: Departmental records.

Grant of interest free MA thus, not only resulted in loss on account of interest, but also led to extending undue financial benefit to the contractors in these cases at the cost of the NRHM, Assam.

3.7.2 Loss due to non-imposition of penalty

As per Clause 49 of the Agreement between the contractor and NRHM, Assam, the contractor shall pay liquidated damages for each day of delay at the rate of ₹ 0.25 lakh for each day of delay, subject to a maximum of 10 *per cent* of the cost of whole work/contract value.

Detailed scrutiny in case of construction of two health centres (out of 54) revealed that there were delays in completion of construction works. However, no liquidated damage for the delay had been imposed by NRHM, as shown in **Table-7**:

Table -7
Liquidated damage due but not levied for delay in construction

(₹in crore)

Sl. No.	Name of the work	Value of work	Due date of completion	Actual date of completion	Up to date payment made	Delay in completion	Liquidated damages due for recovery
1	Construction of CHC (MH) including residential quarters (Phase-I), Ghoramari, Sonitpur	3.97	30.06.13	07.11.14	3.97	492 days	0.38*
2	Construction of CHC (MH) including residential quarters, Bhaktardoba, Barpeta	3.28	30.01.14	14.10.14	3.16 (the work was withdrawn)	280 days	0.31*

Source: Information furnished by NRHM, Assam
*Initial tendered value was ₹ 3,77,12,690 and ₹ 3,08,52,746 respectively.

On this being pointed out, NRHM Assam stated (March 2017) that the delay was on the part of contractor and penalty of ₹ 0.13 crore (₹ 0.06 crore *plus* ₹ 0.07 crore) was imposed on account of delay. However, due to non-imposition of liquidated damages at the prescribed rate, NRHM, Assam suffered loss of ₹ 0.56 crore (₹ 0.69 crore *minus* ₹ 0.13 crore) towards delay in completion of works.

3.7.3 Non-recovery of dues from contractors

As per financial rules, the statutory deductions such as Security Deposit (SD) money, Forest Royalty (FR), Value Added Tax (VAT), Income Tax (IT) *etc*., were required to be deducted at the time of passing bills. During test check of records of NRHM, Assam, it was however, observed that in case of three works[39] allotted between March and June 2011, an amount of ₹ 0.31 crore being the deduction on account of SD, FR, VAT, IT *etc*., remained unrecovered though the works had been withdrawn (November 2013 to February 2014) from the contractors after achieving 32 to 90 *per cent* physical progress.

On this being pointed out, NRHM, Assam stated (May 2016) that the defaulting contractors had been debarred from further contracts being awarded under NRHM.

NRHM, Assam however, failed to deduct the statutory deductions from the contractors Bill.

Delay caused due to negligence on the part of contractor, non-imposition of liquidated damage for such delay, release of interest free and excess MA, non-recovery of statutory deductions etc., discussed above, indicated laxity on the part of the State Mission in handling contracts which ultimately resulted in loss to the government and in slow progress of infrastructural development for assured health care in the State under NRHM.

[39] Construction of CHC including residential quarters (Phase-I) at Kachua, Construction of CHC at Fakirganj and Construction CHC (Model hospital) including residential quarters (Phase-I) at Kohora.

3.7.4 Idle expenditure on abandoned/suspended works

Four storey RCC building of General Nursing Midwifery (GNM) School-cum-Hostel at Nagaon (30.06.2016)

Scrutiny revealed that three works [40] for enhancing infrastructural facilities at tendered value of ₹ 6.33 crore due for completion between December 2009 and June 2012 had been abandoned after incurring an expenditure of ₹ 4.01 crore and physical progress of 40 to 76 *per cent* due to problems with the contractor and poor site selection.

Thus, the expenditure of ₹ 4.01 crore incurred on the abandoned/ suspended works, proved idle. This also deprived the targeted beneficiaries from facilities as planned under NRHM

It was thus revealed that, NRHM, Assam failed to utilise its resources for the effective implementation of the programme. Delays in submission of UC and unspent balances lying with the NRHM, Assam led to fund cuts by GoI. Cases of misappropriation, excess expenditure, undue benefit to contractors, unproductive expenditure etc., further highlighted the financial mismanagement in NRHM, Assam.

[40] Construction of CHC at Fakirganj, Construction of four storey RCC building of GNM School cum Hostel at Nagaon and Rural Health Block Pooling Complex at Pandu FRU.

Chapter IV

Availability of Health Infrastructure

Chapter IV: Availability of Health Infrastructure

4.1 Availability of health centres against requirement

The Sub centre (SC) is the first point of contact between the community and the health care system. Primary Health Centres (PHCs) is a referral unit for six SCs with 4-6 beds. Community Health Centre (CHC) is a 30 bedded Hospital/Referral Unit for four PHCs with specialised services.

As per the Indian Public Health Standards (IPHS) norms prescribed by GoI, the requirement of SC, PHC and CHC are based on population as below:

Category of health centre	Population norms	
	General areas	Tribal/Hilly/Desert areas
SC	5,000	3,000
PHC	30,000	20,000
CHC	1,20,000	80,000

As per Rural Health Statistics (2015-16), SC, PHC and CHC in the State covered average population of 5,801, 26,437 and 1,77,530 respectively against the national average of 5,377, 32,884 and 1,51,316. Thus, comparatively the health centres in the State (except PHC) were overburdened.

The position relating to availability of health centres *vis-a-vis* requirement as on 31 March 2016,considering the State population of 3,12,05,576 (as per 2011 Census) and a decadal growth of (+) 17.07 *per cent* (*i.e;* increase in population by 1.707 *percent* per annum during the five year period 2011-16)is shown in **Table-8**:

Table-8
Availability of health centres against requirement and shortfall

Category of health centre	Numbers required as per population as on 31 March 2016	Numbers available as on 31March 2016	Shortfall (in *per cent*)
SC	6,817	4,621	2,196 (32.21)
PHC	1,112	1,014	98 (8.81)
CHC	278	151	127 (45.68)

Source: Information furnished by NRHM, Assam.

Thus, there was shortfall in respect of all the three tiers of health centres to provide accessable health care facilities to the population at large. On this being pointed out, NRHM in its reply (March 2017) admitted the shortage and stated that the construction of 626 SCs, 90 PHCs and 74 CHCs would be completed shortly and the balance health centres would be proposed soon.

As a result of shortage of institutions/infrastructure, a sizeable section of the population remained outside the purview of easy access to the health care system, besides resulting in extra pressure on the existing health infrastructure and manpower.

4.2 Target and achievement for construction of health centres

The construction of health centres were taken up centrally by the NRHM, Assam. Scrutiny revealed that as per the Records of Proceedings (ROP) 2012-13, GoI

approved construction of 14 Mother and Child Health wings (MCHs), 626 SCs, 65 PHCs and 55 CHCs. The status of construction, taken up since its inception, is shown in **Table-9:**

Table-9
Status of construction of health centres in the State

Year of approval	Category of health Centres	Number of works					Physical progress of incomplete works	
		Proposed and approved	Commenced	Not commenced	Completed (as of March 2017)	Commenced but incomplete	Upto 90 *per cent*	90 to 99 *per cent*
2012-13	SC	626	480	146	209	271	162	109
	PHC	65	56	09	24	32	21	11
	CHC	55	46	09	22	24	12	12
	100 bedded MCH	14	13	01	03	10	06	04
Total		**760**	**595**	**165**	**258**	**337**	**201**	**136**

Source: Information furnished by NRHM, Assam.

From the above table, it would be seen that only 258 (34 *per cent*) out of total 760 health centres approved by GoI could be completed. Test check of records further revealed that there was delay in completion of works ranged between 30 to 1465 days as detailed in **Appendix-4.** Moreover, construction of 165 works related to SC, PHC, CHC and MCH had not yet commenced even after a lapse of more than three years. The reasons for delay were attributable to non-finalisation/allotment of Government land (54 works), delay in allotment of works (eight works), negligence on the part of the contractors (77 works) and Court cases (26 works).

Incomplete building of Long-eh Luboi SC in Karbi Anglong (31.05.2016)

Further, NRHM Assam, failed to make 136 health centres functional although 90 to 99 *per cent* of works were completed.

On being pointed out, NRHM, Assam admitted (March 2017) that the health centres remained incomplete due to various reasons and assured that necessary action would be initiated to expedite the progress of work.

It was further noticed that the completed works were taken over after delays ranging between 29 and 289 days in case of seven CHCs and five PHCs. Additionally, six PHCs and five CHCs could not be made functional due to not-posting of requisite manpower despite a lapse of one to 18 months from the date of handing over(August 2016)of the building. This contributed to the deprivation of the targeted population of the intended benefits of the health facilities.

4.3 Location of health centres

As per the IPHS norms, SC needs to be located for providing easy access to the people so that no person has to travel more than three Kms to reach the SC. Due to shortage of the health centres, a large number of population remained out of easy

access to health care facilities. Scrutiny of data on habitations *vis-a-vis* geographical locations of health centres provided by NRHM, Assam revealed the actual distances between SCs and habitations, as given in **Table-10**:

Table-10
Distance of habitations from SCs in the selected districts

Number of habitations covered by seven selected districts	Distance of SCs from habitations				
	Within 3 Kms	More than 3 Kms	More than 5 Kms	More than 10 Kms	More than 20 Kms
25,800	20,172 (78 *per cent*)	3,653 (14 *per cent*)	1,414 (5.5 *per cent*)	456 (2 *per cent*)	105 (0.5 *per cent*)

Source:Data furnished by NRHM & National Informatics Centre.

Maximum distance of SC from the remotest habitations ranged between eight and 87 Kms in the selected districts. Besides, in the test checked districts, 14 PHCs were not found accessible by all-weather roads whereas public transport facility was not found available for reaching one Sub Divisional Health Centre (SDCH) and 18 PHCs.

Scrutiny of records of selected health centers also revealed that 25 (56 *per cent*) out of 45 test checked SCs were situated beyond three Kms from the remotest village covered by such SC. Two DHs were far away from CHCs and required more than four hour journey by local mode of transport to reach the health care facility. Distance from remotest village to SC, PHC, CHC and SC to PHC, SC to CHC, District Hospital (DH) to PHC, DH to CHC etc., in the selected districts is shown in **Table-11**:

Table –11
Distance of selected health centres (in Kms)

Distance	Number of SCs			Number of PHCs			Number of SDCHs/CHCs	Maximum distance (in Km)	
	From remotest village	From nearest PHC	From nearest CHC	From nearest CHC	From nearest DH	To remotest SC linked to the PHC	To nearest DH		
4 to 10 kms	19	24	16	13	4	13	0	SC to village	40
11 to 25 kms	5	9	19	12	7	7	5	SC to PHC	45
More than 25 kms	1	3	7	4	19	4	8	SC to CHC	55
								DH to CHC	220
								DH to PHC	200

Source: Compilation of Information collected from selected health centres.

The above position indicated that Mission could not ensure easy access to health centres by people staying at far flung areas.

4.4 Coverage by existing health centres

As per norms, PHC is a referral unit for six SCs and CHC/SDCH is the referral unit covering four PHCs.

Scrutiny however, revealed that 10 out of 30 test-checked PHCs were catering to the health needs of seven to 38 SCs *i.e.*, more than the stipulated norms of six SCs.

Similarly, four CHCs (out of nine test-checked CHCs) were found linked with PHCs ranging from six to 13 PHCs whereas three CHCs/SDCHs did not cover any PHC.

Alternately, 79 PHCs in the State were running in the same campus with CHCs/MHs while 62 SCs were co-existing with nine CHCs/Model Hospitals (MHs) and 53 PHCs, for want of required building/ infrastructure. Physical verification of 95 selected health centres also revealed that 10 health centres (eight SCs and two PHCs)[41] were functioning from the same campus of other 10 health centres (eight PHCs and two CHCs).

Dampur SD[42] (PHC) and Dampur SC functioning in the same campus in Kamrup (R) district (25.07.2016)

Simalguri SC functioning in a room of Simalguri PHC in Sivasagar district (24.06.2016)

As a result of the co-existence of two health institutions in the same campus, both the institutions were catering to the health needs of the same section of the population. On the other hand, PHCs/CHCs were also found overburdened due to extra coverage by those because of uneven distribution and location of health centres beyond the prescribed norms.

On this being pointed out, NRHM, Assam stated (March 2017) that the shortfall in infrastructure would be proposed in the APIP, in due course.

4.5 Deficient infrastructure in Sub Centres, Primary Health Centres, Community Health Centres

In test-checked health centers, it was observed that seven SCs had been operating from other government buildings like Gram Panchayat, Anganwadi Centre buildings etc., one SC was operating from a rented building and another from an incomplete building and one SC was operating from a kutcha house while six SCs, 10 PHCs, two CHCs, one SDCH and two DHs had partial boundary wall. It was noticed that delivery could not be conducted in four PHCs due to non-availability of labour room. Similarly, Caesarean delivery could not be conducted in two CHCs due to non-availability of OT room.

Joint physical inspection of the test checked 95 health centers by audit in the presence of departmental officials revealed the following deficiencies as shown in **Table-12**:

[41] Dampur SC, Kulshi SC, Bhoksong SC, Tekelangjun SC, Bhawraguri SC, Rupshi SC, Suffry SC, Simalguri SC, Sipajhar PHC and Kalabari SD (PHC).
[42] State Dispensary (SD) is equivalent to PHC.

Table-12
Lack of infrastructure in test checked health centres

Selected Health facility level (numbers)	Without electric supply		Compound wall		Water supply		Toilet		Fire protection measures		Separate male and female ward		New Born Care Corner (NBCC)	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
DH (7)	7	0	7	0	7	0	7	0	5	2	7	0	7	0
CHC/SDCH (13)	13	0	11	2	13	0	13	0	9	4	11	2	12	1
PHC (30)	30	0	21	9	30	0	30	0	NA	NA	26	4	18	12
SC (45)	15	30	18	27	22	23	37	8	0	45	NA	NA	0	45

Source: Joint physical verification of health centres. ***NA: Not Available***

Details of non-availability and poor infrastructure in health centers are shown in**Appendices-5** and **6** respectively.

Dilapidated condition of toilet at Uttar Borbil SC, Karbi Anglong district(27.05.2016)

Dilapidated condition of Rangamati SC, Kamrup(R) district(02.06.2016)

Water logging at Agchia SC, Kamrup(R) district (30.07.2016)

Water logging in Dakhinhengera PHC, Golaghat district (30.07.2016)

Thus, both deficient and poor infrastructural facilities in the health centres deprived the patient of basic services to be made available through NRHM in the State.

4.6 Non-upgradation of infrastructure

As per IPHS norms, SCs had been categorised into two types *viz.*, Type-'A'(provides OPD services only) and Type-'B'. Type-'B' SC provides for 24x7 delivery services at the centre's labour room assisted by Skilled Birth Attendant (SBA) and trained Auxiliary Nurse Midwives (ANMs). The ANMs are to be provided with residential quarters attached with Type-'B' SC. As approved by GoI, NRHM, Assam targeted 20 SCs (out of 4621)only for upgradation to Type-'B' during 2011-16 but the same could not be completed (March 2017).

Similarly, a PHC of Type 'A' which was at a distance of more than one hour journey from the nearest CHC/FRU was required to be upgraded to a Type 'B' PHC with a delivery load of 20 or more deliveries per month as per norms which was not planned by the NRHM, Assam during 2011-16.In the seven selected districts, 119 PHCs (as of March 2016) were located at a distance of more than one hour journey. Scrutiny however, revealed that against the target of 56 PHCs to be upgraded to Type 'B', 40 (71*per cent*) PHCs were upgraded to 24x7 PHCs during 2011-16, of which 12 PHCs could not provide 24 x 7 services due to lack of manpower and equipment etc.

Thus, the NRHM, Assam was unable to achieve the goals set by itself to upgrade the Type 'A' health centres to Type 'B' to ensure facility of 24 x 7 delivery services.

Labour room 24x7 at Garal MPHC, Kamrup(R) district remained non-functional due to non-posting of manpower (30.07.2016)

Labour room at Dakhinhengera PHC, Golaghat district remained non-functional due to want of trained staff (30.07.2016)

4.7 Undue benefit to private hospital

It was observed that an Information Centre and Tele Clinic of Apollo Hospital (a private nursing home) had been operating in the building of Kokrajhar RNB Civil Hospital since 2012 without paying any rent/share money to the Hospital Management Society of the Civil Hospital though the centre had been collecting fees from its patient @ ₹ 200 to ₹ 2,000 per patient. The said Centre did not have any link with the Civil Hospital and it was completely a profit earning private institute.

Apollo Hospital Tele Clinic running in RNB Civil Hospital, Kokrajhar DH (16.06.2016)

The Director of Health Services, Bodoland Autonomous Council had executed an agreement for 10 years with the owner of the Centre who was allowed to use the infrastructure including electricity and water of the Civil Hospital. But in the said agreement, no clause was incorporated for providing free service or services at reduced rates to any patient.

Audit observed that the Civil Hospital could not install and operate X-ray machine since 2013-14 for want of space. As such, use of the health infrastructure by the private party not only extended undue benefit to the party but also caused inconvenience to the Civil Hospital for providing the committed service to its patients.

Thus, the private Tele Clinic of Apollo Hospital was operating its own business without benefiting the Civil Hospital or its patients.

4.8 Emergency response system (Ambulance service)

As per NRHM Framework, the Emergency Response System (ERS)/ Patient Transport Systems (PTS) would respond within a time interval of 30 minutes of each call. Assured free transport in the form of ERS and PTS was an essential requirement for a public hospital as it reduced the cost barrier to institutional care. The ERS catered to all medical emergencies and delivery cases while the PTS was primarily used to ensure entitlements for mothers and sick infants under Janani-Shishu Suraksha Karyakram (JSSK), and shifting of patients (non-critical) to higher health facilities.

World Health Organisation (WHO) recommended to have at least one ambulance per one lakh population in plain areas. In Assam, against the requisite number of 333 Ambulances (against the rural population of 333.64 lakh), there were 380 Ambulances ('108'Emergency Service), 238 of which were equipped with Basic Life Support (BLS) and 142 had Advanced Life Support (ALS).

Analysis of data regarding '108'Emergency Ambulance Services as furnished by NRHM, Assam revealed that 93 to 95 *per cent* emergency calls (17,58,322 out of 18,70,981 calls) were attended to during 2011-16which was a positive indication.

However, further scrutiny of data relating to Maternal and Child Health (MCH) calls revealed that 37 to 70 *per cent* calls were attended to, beyond the stipulated time of 30 minutes while three to 18 *per cent* of calls were attended to after one hour as shown in **Table-13**:

Table-13
Time taken to reach the patient by '108'Ambulance during 2011-16

Year	MCH related calls			Less than 30 minutes		More than 30 minutes but less than 1 hour		More than 1 hour	
	Registered	Attended	Percentage attended	Attended	Percentage attended	Attended	Percentage attended	Attended	Percentage attended
2011-12	1,37,887	1,30,451	95	81,948	63	45,041	34	3,462	3
2012-13	1,22,119	1,16,380	95	73,030	63	39,421	34	3,929	3
2013-14	1,54,719	1,48,209	96	58,274	39	63,024	43	26,911	18
2014-15	1,70,089	1,62,495	96	52,787	33	90,106	55	19,602	12
2015-16	1,55,913	1,48,856	95	45,273	30	80,278	54	23,305	16

Source: Compiled figure as per database of NRHM, Assam.

The reasons for delay were attributed to frequent break down of vehicles, non-availability of vehicle due to maintenance works *etc.*

Besides, it was observed that absence of motorable roads also affected the ERS/PTS.As per Rural Health Statistics (RHS) data (2016), 53 PHCs and 414 SCs in the State did not have motorable roads to facilitate ease of access to the health centres. During field visit of selected 30 PHCs, it was also observed that 18 PHCs were lacking '108' Ambulance services for want of motorable roads. This highlighted absence of inter departmental convergence to ensure smooth transport services for effective ERS/PTS. The State Government may consider introduction of 24x7 Bike Ambulance Service in such areas as adopted in some States.

Cases of death due to late arrival of Ambulance

Test check of 265 numbers of Maternal Death Report (MDR) of the sampled districts revealed that in four death cases, the cause of death was attributed to delay/non attending by '108' Ambulance Service as shown below:

Position of four cases of maternal death

Name of Deceased PW	Address	Date of Death	Remarks of the reviewing Medical Officer in the MDR
Mofida Khatun	Bauriabita, Chayagaon, Kamrup	01-05-14	'108' Ambulance was called by the husband of the pregnant woman who was informed by the driver that due to lack of fuel, the patient could be picked up only after 2 hours. Delivery had to be done by the local *Dhai* and due to excessive bleeding; the woman expired after half an hour of delivery.
Narmada Das	3 No. Titkuri, Rangia, Kamrup	14-11-14	Late arrival of '108' Ambulance by more than one hour contributed to the death of the woman during transportation to the health centre.
Minuwara Khatun	Iaskatodiya, Chamaria, Kamrup	10-11-15	'108' Ambulance did not respond to the call made by the patient family and as such, delivery of the first child was done by an untrained Dhai. In the meantime, the health condition of the woman deteriorated and the woman was admitted in the nearby PHC with the help of ASHA worker in a rented car where she delivered the second child. On the next day, the woman was shifted to Gauhati Medical College on the advice of the attending doctor from the PHC where she died. Doctor opined that delay in transportation hastened her death.
Numali Gogoi	Kachupathar, Patsaku BPHC, Sivasagar	08-09-13	'108' Ambulance was called by an ASHA. The Ambulance reached one and a half hour late. The pregnant woman delivered in the Ambulance during transportation to CHC. The patient died due to excessive bleeding before reaching the CHC.

Source: MDR Reports

4.9 Vacant staff quarters at SCs, PHCs, CHCs & DH

As per the IPHS, the health care workers were to be provided with quarters in the vicinity of the health centres to enable them to respond to calls during emergency.

Scrutiny of records regarding availability of staff quarters in the selected health centres revealed that out of 95 health centres, only five had adequate number of

quarters whereas 34 health centres (35 *per cent*) did not have any quarters. Although, 53 health centres (55 *per cent*) had less number of quarters, three health centres had excess number of quarters over the actual requirement. Moreover, in 34 health centres, 78 quarters were lying vacant due to inhabitable conditions. Further, in Kokrajhar district, it was noticed that though nine PHCs were upgraded at a cost of ₹ 48.30 lakh to provide 24x7 delivery services during 2006-09, they failed to provide the same as doctors did not reside in the vicinity of the health centres despite availability of staff quarters. As a result, the NRHM, Assam failed to ensure 24x7 delivery/medical services.

On this being pointed out, NRHM, Assam stated (March 2017) to have noted the audit observation for necessary action.

4.10 Adequacy of health care in outreach areas

4.10.1 Mobile Medical Units

NRHM Framework stipulated provision of Mobile Medical Units (MMUs) to provide health services to remote, far flung, difficult to reach areas and urban slums. The pattern of MMUs will depend upon the geographical location and could provide a package of services equivalent to a primary health centre, and have the necessary HR, equipment and supplies. The status of functioning of MMUs in the seven test checked districts during 2011-16 were, as stated in **Table-14**:

Table-14
Status of MMUs in the seven selected districts

Name of the district	Number of MMUs	Target of Camps	Number of Camps Held	Shortfall		Number of X Ray	Number of USG	Number of ECG	Number of Blood tests	Number of urine tests
				Number of camps	Percentage					
KarbiAnglong	3	2,880	1,587	1,293	45	393	0	5	5,213	223
Darrang	1	1,296	1,048	248	19	169	0	363	12,329	2,692
Kokrajhar	2	2,640	2,250	390	15	162	69	91	6,957	377
Sivasagar	2	2,302	1,246	1,056	46	656	0	0	12,127	1,508
Kamrup Rural	2	2,316	2,030	286	12	2,944	73	2,460	41,244	4,017
Sonitpur	3	2,928	2,435	493	17	0	0	0	0	0
Golaghat	3	3,600	1,668	1,932	54	448	0	622	8,741	2,703

Source: Information furnished by DHS.

MMU lying idle at Nazira SHC, Sivasagar district since December 2015 due to non availability of doctors (21.06.2016)

From the details above, it was observed that there was shortfall in holding of camps which ranged between 12 and 54 *per cent*. The reasons for shortfall in holding of camps by MMU was attributed to frequent break down of vehicles, non-posting of required two doctors and non-posting of doctors for seven to 16 months at a stretch. Further, USG and ECG

were not at all conducted in five and two districts respectively whereas in Sonitpur district MMU, none of the diagnostic tests were carried out during the aforesaid period.

The reason for not providing X-Ray, USG, ECG and blood/urine tests etc., was due to non-posting of regular manpower.

In the State, where there was acute shortage of health centres, MMU being equivalent to the PHC, was expected to cover underserved people (areas or populations having too few primary care providers, high infant mortality, high poverty or a high elderly population)but due to non-posting of requisite manpower, the very objective of taking the health care to the door step of the people in far flung areas under NRHM was defeated.

4.10.2 Health care in Char areas

The Char areas are geographically alienated from the mainland and follow a peculiar pattern of migration. They are subjected to erosion on their upstream and deposition on the downstream, due to which the populace migrate downstream. This affects the topography of the Chars during floods almost every year. In 14 districts of the State through which river Brahmaputra flows, there are inhabited Char areas on the river banks. As per Socio Economic Survey Report of Char Areas (2003-04), there were 2251 Char villages having 24.90 lakh population in the State. NRHM, Assam, could not furnish the present position of availability of SCs/PHCs in Char areas as well as number of Char population covered by any of the existing health centres. Besides, information on the number of maternal and infant deaths in Char areas was also not found maintained by NRHM, Assam for follow up action.

NRHM, Assam however, arranged to provide health care to the populace of Char areas by operating Boat Clinics since 2005. It was seen that altogether 15 Boat Clinics were under operation as of March 2016 which covered only 433 Char villages (19*per cent*) having population of 2.26 lakh. Thus, 1818 Char villages (81 *per cent*) having population of 22.64 lakh remained out of coverage under the umbrella of NRHM. Moreover, the villages covered by Boat Clinics, also did not get adequate health care. Physical verification of two Boat Clinics which covered 28 Char villages each, revealed inadequacy in delivering health care services as outlined below:

- Boat Clinics basically provide services of Ante Natal Check up (ANC), Post Natal Check up (PNC) and immunisation with two doctors, two ANMs, one laboratory technician and one pharmacist. There was no service of sterilisation *viz.,* Intra Uterine Contraceptive Device (IUCD), abortion etc. except for distributing condoms and oral pills.

- There was no provision of treating patients inside the Boats, rather these were used for transporting medical staff to the Char villages. It had no Out Patient

Department (OPD) and labour room. During the period 2011-16, no delivery was conducted by the Boat Clinics. Medical camps were held in open areas like under trees, school campuses, open fields etc., without having provision for any examination tables.

- Boat Clinics conducted 18-20 camps only in a month for 3-4 hours per day. Besides, it visited only one Char village once in a month. This resulted in the Char inhabitants not being provided adequate medical aid during emergencies or at times of need. During visit of five Char villages and interaction with 50 mothers who had given birth during the last two years, it was noticed that 28 out of 50 deliveries (56*per cent*) were done at home due to difficulties in transportation and remoteness of health centres in the mainland.

- There was no facility of ERS/PTS available for transporting patients from the Char area to the mainland during the hour of emergency in the selected districts.

The matter was reported to the Government; their reply had not been received (31 May 2017).

Thus, Boat Clinics having many deficiencies were not able to provide adequate health care to Char inhabitants in the hour of need. Also, high morbidity could not be ruled out due to inadequate health care services in these areas.

Boat clinic at Kamrup (R) district (21.11.2016)

Camp held in the school by boat clinic staff in Kamrup (R) district (21.11.2016)

4.10.3 Health Care in Tea Garden areas

Anaemia, hypertension, malnutrition and diarrheal diseases are major contributing factors to morbidity resulting in high maternal and infant deaths. The State is facing a high Maternal Mortality Rate (MMR) and the districts with the high Tea Garden population (covering 23.91 *per cent* of State's population) contribute to higher MMR. Analysis of Annual Health Survey (AHS) revealed that Upper Assam districts[43], where maximum tea gardens were located, accounted for maximum maternal deaths. As per AHS 2012-13, MMR in Upper Assam (inclusive of Tea Garden areas) was 404 against the State's MMR of 301.

[43] Dibrugarh, Jorhat, Golaghat, Sivasagar and Tinsukia.

Again, as per APIP 2016-17, there were altogether 793 Tea Estates (TEs) in the State. As per Survey Report of 2014-15 conducted by Regional Resource Centre for North Eastern States (RRC-NE), Ministry of Health and Family Welfare (MoHFW), GoI, 649 TEs (out of 758 surveyed) had hospitals run by the TE management. However, the status of health care in Tea Garden hospitals was not satisfactory. The following deficiencies were observed in tea garden hospitals:

- 'In Patient Department' (IPD) service were not available in 45 *per cent* tea garden hospitals and functional labour room were not available in 54 *per cent* Tea Garden hospitals.
- Functional New Born Care Corner (NBCC), laboratory service and doctors were not available in 82, 78 and 38 *per cent* of Tea Garden hospitals respectively.
- NRHM, Assam, covered 150 TE hospitals (as of 2015-16) under Public-Private Partnership (PPP) mode and thus, the populace of remaining 643 TEs (81 *per cent*) were deprived of the benefit of health care under NRHM.
- In the test checked six Blocks under the selected districts of Upper Assam having tea garden population, only 57 out of 82 TEs were having hospitals, of which only 17 were operating under PPP mode with the Mission. Thus, functioning of 40 TE hospitals was dependent only on the TE management while 25 TEs had no hospitals.

Mornai Tea Estate Hospital under PPP mode in Kokrajhar district (09.12.016)

Labour room in the Mornai Tea Estate Hospital in Kokrajhar district (09.12.2016)

As such, population of tea garden areas was lacking adequate health care system which contributed high maternal and infant death. Scrutiny of records of the said six blocks also revealed that 37.69 *per cent* of maternal deaths (49 out of total 130 reported during 2013-14 to 2015-16) were from tea garden population.

The matter was reported to the Government; their reply had not been received (31 May 2017).

Thus, NRHM, Assam, should ensure adequacy of health care system in all the TEs by providing required infrastructural, logistic and manpower support under the

Mission on priority basis to reduce the mortality rates in tea garden areas with consequential reduction in State MMR.

4.11 Equipment

4.11.1 Non-availability of equipment

NRHM Framework (2012-17) stipulated for availability of essential functional equipments in all the facilities.

Scrutiny of records of the test-checked health centres (SC to CHC) and information furnished by them, revealed that basic equipment, which included, *inter-alia*, DD Kits, labour table *etc.,* as shown in **Table-15,** were not available.

Table- 15
Non-availability of equipment in selected health centres

Types of Health Institute (number)	Parameters	Disposable delivery kits (DDKs)	Examination Table	Labour Table	OT Table	Bed Side Screen/ partition	Sterilization Instrument
SC(45)	Available and Functional	3	33	5	SCs do not have operation theatre, In Patient Department and full fledged labour room, hence not available		
	Available but not functional	1	2	9			
	Not Available	41	10	31			
PHC(30)	Available and Functional	19	27	19	3	22	18
	Available but not functional	0	1	6	5	2	1
	Not Available	11	2	5	22	6	11
CHC/ SDCH(13)	Available and Functional	12	12	12	7	8	10
	Available but not functional	0	0	0	1	0	2
	Not Available	1	1	1	5	5	1

Source: Physical verification of health centres.

It can be observed that the kits and equipment required for basic necessary health care services were deficient in a number of Health centres.

Despite this fact, the State did not procure adequate equipment which hindered health care service delivery, as discussed in the following paragraph.

4.11.2 Impact of non-availability of equipment on service delivery

The impact of non-availability of equipment in delivery of health services were as brought out below:

- In 31 out of selected 45 SCs, delivery could not be conducted due to non-availability of Labour Table despite having availability of SBA trained ANM in 18 of those SCs.

- In 11 out of 30 selected PHCs, delivery could not be conducted due to non-functionality/availability of labour table in spite of having doctors in 10 of those PHCs.

- In six out of 13 CHCs, caesarean delivery could not be conducted due to non-functionality/availability of Operation Theatre (OT) table as well as Gynaecologist.

Thus, due to non-functionality/availability of the basic equipment, the delivery services and privacy of treatment due to absence of bed side screens were denied to the patients. This also discouraged the patients' from visiting the health centres as was observed from the beneficiary survey wherein 12beneficiaries (women) out of 22 cases of home deliveries stated that due to non-availability of private rooms, they did not visit the health centres for delivery.

4.11.3 Idle machinery in the health centres

Scrutiny of records of the test-checked health centres revealed that both machineries and constructed infrastructure were lying idle for various reasons, as indicated in **Table-16**:

Table-16

Machinery and constructed infrastructure found lying idle in the selected health centres

Name of district	Name of health institution	Name of machinery	Remarks
KarbiAnglong	Howraghat CHC	Radiant warmer	NBSU including radiant warmer machine was not functional due to non-posting of paediatrician.
	Hamren SDCH	OT and X-ray	Not functional due to non- availability of manpower such as surgeons and radiographer/radiologist.
Darrang	Mangaldoi Civil Hospital (DH)	USG machine	Not operational since August 2014, due to absence of manpower.
Sonitpur	Kalabari MH (CHC)	USG, OT, X-ray	USG, OT, X-ray non –operational due to lack of manpower since inception (July 2014).
Kamrup	TRB Civil Hospital	X-Ray	X-ray machine not functional due to want of room.
	Sualkuchi FRU	ECG machine	ECG machine not working because of non- repairing.
		USG machine	USG not functional due to lack of Radiologist.

Source: Physical verification of health centres.

As a result of the non-functionality of the machines/equipment, the patients were deprived of the health care services assured to them under NRHM.

4.11.4 Availability of ASHA kits

An ASHA worker is provided with a drug kit containing a set of drugs for minor ailments and basic equipment that enables her to provide initial care. She is also provided with a Home Based Newborn Care (HBNC) kit for monitoring the growth of newborn children.

Verification in seven selected districts revealed that the Drug kit was not provided to 4,707 (51.61 *per cent* of 9,120) ASHA workers.

Further, obstetric delivery kits and emergency delivery kits were also not provided to ASHAs in any of the selected districts. HBNC kits, though provided to 3,323 (36.43 *per cent*) ASHAs, contained only two to three items per kit (out of the eight mandated items).

During field visit, 125 ASHAs[44] were interviewed in the seven selected districts, of which only seven ASHAs (5.6*per cent*) stated that Disposable Delivery (DD) kit was available with them. Thus, 94.4 *per cent* of ASHAs were found without DD kit.

[44] Available ASHA under 45 test checked SC subject to maximum of three ASHA per SC.

Further, of the 125 ASHAs, only five (4 *per cent*) knew the usage of the kit. Pregnancy kit (Nischay kit) to confirm the pregnancy was also not found available with 50 ASHAs (40 *per cent)*. 19 ASHAs (15.2 *per cent*) stated that medicines (paracetamol, iron pills, de-worming pills) were not replenished and they ran out of medications for periods ranging from 30 days to 365 days.

Thus, in the absence of the requisite kits, minimum basic care facility expected during emergency from ASHA workers in rural areas could not be ensured in all the cases.

4.12 Drugs and consumables

4.12.1 Procedure for procurement of drugs/consumables

As per Para 5.6.4 of NRHM Framework (2012-17), access to free drugs was an important initiative under NRHM in the 12th Plan. It was however, observed that NRHM, Assam procured drugs centrally without obtaining requirements from districts up to the year 2013-14. However, from the year 2014-15 though the requirement was obtained from districts it was obtained on annual basis only.

Further, the e-Aushadhi, a web based supply chain management application for Drug Inventory Management and Distribution of various drugs, surgical items to District Drug Warehouse, hospitals, health centres and distribution to patients, was not introduced in the State.

Thus, the assessment of requirement of drugs in the State was made on annual basis only. This resulted in instances of short supply of drugs on one hand and expiry of medicines in a few instances on the other hand as highlighted in the succeeding paragraphs.

4.12.2 Shortage of drugs against IPHS and State norms

Scrutiny of records revealed that the State had devised Essential Drug List (EDL) for various levels of health centres and hospitals except for SCs. However, as per IPHS norms, the SCs were required to make available nine types of drugs. It was seen that in the selected facility, significant number of drugs were never supplied as shown in **Table-17**:

Table-17
Non-availability of EDL in selected health centres

Category of health centres	Number of health centres	Number of items enlisted in the EDL	Number of items of drugs in the EDL not supplied (Range of non-supply)*	
			From	To
PHC	26	128	7	48
CHC	7	132	6	19
SDCH	4	189	6	48
DH	5	189	7	27

Source: Records and information from selected health centres.
***Less than 5 items of drugs ignored.**

It was noticed that shortfall in number of medicines ranged between two and seven in the SCs, while in other five SCs, no drug was available.

Further, it was also noticed that significant number of drugs in the enlisted EDL remained out of stock for prolonged periods as shown in **Table-18**:

Table-18
Period of non-availability of drugs in selected health centres

Category of health centres	Number of health centres	Number of medicines out of stock		Number of days (ranging)*	
		From	To	From	To
PHC	28	6	43	30	1,826
SDCH/CHC	9	4	29	31	1,826
DH	7	5	25	30	1,521

Source: Records and information from health centres.
****Gap period less than 30 days ignored.***

Thus, due to non-supply/non-availability of drugs for prolonged periods, the patients were either deprived of the medications or had to purchase the medicines from open market (Para 8.8 refers) thereby not fulfilling the objective of NRHM.

4.12.3 Expiry of medicines due to excess supply

Besides the shortages of essential drugs, there were instances of excess supply of medicines noticed giving rise to expiry of medicines under NRHM, Assam.

Scrutiny of records of 16 test-checked health centres revealed that 67 types of medicines ranging from13 to 3,10,000 in numbers and valued at ₹ 51.15 lakh were expired during 2011-16.

It was stated by the health centres that medicines expired due to excess supply of medicines by NRHM, Assam against the requirements of the health centres. Further, the supplied medicines were of short shelf life which contributed in expiry of the medicines.

4.12.4 Expiry of medicine at Central Drug Store

Scrutiny of records of Central Store at Guwahati revealed that 6.22 crore numbers of IFA small tablets supplied during April 2014 and June 2014, had a shelf life upto February 2016. Of these, 1.94 crore tablets valued at ₹ 48.52 lakh(@ ₹ 0.25 each) expired due to non-issue of tablets within its shelf life as distribution started only in March 2015 *i.e.*, after nine months of receipt.

1.94 crore expired IFA small tablets lying at Central Store, Guwahati (29.07.2016)

Similarly, 60,070 numbers of IFA large tablets worth ₹ 0.17 lakh (@ ₹ 0.28 each) expired in the Central store in February 2016 due to non-issue of the same within its shelf-life. On the contrary, instances of short distribution of IFA tablets amongst Pregnant Women (PWs) were noticed as discussed in succeeding Para 7.2.

This indicated that the assessment of requirement and distribution of medicines was not proper.

4.12.5 Prescribing medicines in brand name

GoA vide Notification (January 2013) directed that the prescription of drugs in all government Medical Colleges, Hospitals and Health Institutions, need to be made in generic names only. It was observed that NRHM procured all medicines in generic names only.

During test check of prescriptions/Bed Head Tickets (BHT) of selected seven DHs, it was noticed that medicines were prescribed in brand names as shown in **Table-19**:

Table-19
Position showing medicines prescribed in brand name

Name of District	Name of DH	Number of prescription/ BHT	Number of medicines prescribed	Number of medicines prescribed in brand name
Kokrajhar	RNB Civil Hospital	16	91	16
Golaghat	KK Civil Hospital	9	58	14
Sivasagar	Sivasagar Civil Hospital	11	47	11
Darrang	Mangaldoi Civil Hospital	25	93	25
Sonitpur	Kanaklata Civil Hospital	13	78	23
KarbiAnglong	Diphu Civil Hospital	4	14	4

Source: Records of DH
Note: only Kamrup DH, however, prescribed medicines in generic names.

Further scrutiny revealed that the generic medicines of the same composition although available in the health centres could not be issued by the pharmacists as those were prescribed in brand name by the doctors instead of generic name.

Thus, the patients were compelled to procure the brand name medicines from the open market which caused undue financial burden on the rural population in such situations.

It was thus, revealed in audit that there were shortages of health centres. Instances were noticed where the available health centres were not located as per norms to cater to the needs of the populace in an equitable manner. Deficiencies were also noticed in ensuring availability of drugs, consumables and equipment. Health care services in outreach areas especially in Char and Tea Garden areas were inadequate and needed immediate attention.

Chapter V

Availability of Health Care Professionals

Chapter-V: Availability of Health Care Professionals

5.1 Human Resources

With a view to ensure round the clock availability of health services, Indian Public Health Standards (IPHS) stipulated norms of essential requirement of health care professionals at the various centres. Further, assured services for Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH+A) having direct impact on Maternal Mortality Rate (MMR), Infant Mortality Rate (IMR) and Total Fertility Rate (TFR) specifically depends on availability of Specialists like Obstetricians, Gynaecologists, Paediatricians and Anaesthetist.

The District Hospital (DH) is required to meet most of the secondary health requirements of the community at district level. The minimum assured secondary level health care services under the NRHM Framework were General Medicine, General Surgery, Obstetrics and Gynaecology (O&G), Paediatrics including Neonatology, Anaesthesia, ENT, Ophthalmology, Dermatology and Venereology, Dental care, Orthopaedics, Physiotherapy, Psychiatry and De-addiction services.

Further, there should be seven Specialist Doctors and nine staff nurses at the Community Health Centre (CHC). Three staff nurses along with one doctor at every Primary Health Centres (PHCs) was considered to be essential. A separate Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy (AYUSH) set up was also to be provided in the CHCs/PHC.

As per the norms, provision of a trained female community health worker namely Accredited Social Health Activist (ASHA) at the village level, a minimum of two Auxiliary Nurse Midwives (ANMs), one Health Worker (Male) and one Safai Karmachari at Sub Centre (SC) was considered to be essential.

The position of availability of human resources for the health care services in the State as of March 2016 is summarised in **Table-20:**

Table-20
Position of availability of human resources in the State

Category of Post	Requirement as per IPHS norms	Sanctioned by GoA	Shortfall in sanctioned post	Men in position (MIP)			Shortage of MIP against IPHS norms (in percentage)
				Appointed by GoA	Contractual under NRHM	Total	
Non specialist Doctors [45]	1,886	926	960	871	448	1,319	567 (30.06)
Specialist Doctors[46]	1,715	608	1,107	734	195	929	786 (45.83)
AYUSH doctor	1,203	253	950	368	431	799	404 (33.58)
Staff Nurse	6,712	1,086	5,626	1,730	2,149	3,879	2,833(42.21)
Pharmacist[47]	1,510	777	733	1,157	440	1,597	**(87 surplus)** (+5.57)
Lab technician	1,572	488	1,084	686	680	1,366	206 (13.10)

Source: Information furnished by all DHS through NRHM, Assam.

[45] Medical Officer (MBBS), Superintendent, Dy. Superintendent.
[46] General Surgeon, O&G, Pediatrician, Physician, Anesthetist, Dermatologist, Ophthalmologist, Orthopedic Surgeon, ENT Surgeon, Radiologist, Pathologist, Psychiatrist and Dental surgeon.
[47] Pharmacist including AYUSH pharmacist.

Table above shows that there was acute shortage of health care professionals except in the case of pharmacists, where there existed a surplus of 87 MIP. It was also observed in audit that against the normative requirement of 14,598 health care professionals at various levels in the State, the GoA failed to even create the required sanctioned posts. As a result, insufficiency of key service providers diluted the objective of the Mission in providing an integrated comprehensive primary health care system.

Thus, against its own adopted benchmark of the IPHS norms, the NRHM was unable to even arrange sanctioning the requisite number of posts for reasons not on record. On this being pointed out the NRHM, Assam stated (March 2017) that filling up of vacant posts on contractual basis would be proposed in the next APIP.

5.1.1 Deficiency of Human resources in health centres

Shortages of human resources as of March 2016 against the essential requirement of IPHS norms in different categories of health centres in the State are discussed below:

- In 25 number DHs available in the State, while there were 16 surplus O&G, there were deficit in other categories of specialists *viz.,* Paediatrician (19), Anaesthetist (five), General Surgeon (four), General doctors (238) and Staff Nurse (403) as of March 2016. The details are shown in **Appendix-7**.
- In 13 Sub Divisional Civil Hospitals (SDCHs) existing in the State, while there was one surplus O&G, there were deficit in other categories of specialists *viz.,* Paediatrician (4), Anaesthetist (7), Surgeon (9), General Doctors (72) and Staff Nurse (47).
- In the existing 151 CHCs in the State, there was deficit in the categories of Surgeons (95 *per cent*), Paediatrics (89 *per cent*), Anaesthetists (88 *per cent*), Physician (87 *per cent*) and O&G (62 *per cent*). The details are given in **Appendix-8.**

  Further as per the information furnished to Audit in respect of 134 out of 151 CHCs, it was revealed that 14 CHCs were functioning without any doctor during 2015-16 in the State.
- There were 1014 PHCs in the State. NRHM Assam however, could furnish information of 878 PHCs only. Of these, 55 PHCs did not have any doctor.
- In the existing 4621 SCs in the State, there was shortage of 1527 ANMs/Health workers (Female), 2144 Health workers (Male) and 4531 Safai Karmacharis against the requirement as per norms**.**
- As per the information furnished to Audit in respect of 134 and 832 out of 151 CHCs and 1014 PHCs respectively in the State, 32 to 49 *per cent* of CHCs and 26 to 97 *per cent* of PHCs were functioning without key staff as shown in **Table-21:**

Table-21
Non availability of key staff in CHCs/PHCs (as of March 2016)

Type of Health Centres	Number of health centres for which information furnished	Number of CHCs/PHCs functioning without					
		Lab Technician (*per cent*)	Pharmacist (*per cent*)	Accountant (*per cent*)	Health Worker (Female) (*per cent*)	Health Worker (Male) (*per cent*)	Lady Health Visitor (*per cent*)
CHC	134	54 (40.30)	59 (44.03)	44 (32.84)	62 (46.27)	66 (49.25)	62 (46.27)
PHC	832	228 (27.40)	221 (26.56)	219 (26.32)	808 (97.11)	382 (45.91)	369 (44.35)

Source: Information furnished by NRHM, Assam.

5.2 Irrational deployment of manpower

Audit observed that available human resources were not rationally deployed in the health centres, as discussed below.

- In DH and SDCH levels, altogether 17 surplus O&G were available whereas at CHC level, there had been shortage of 93 O&G.
- The summarised position of availability of manpower *vis-a-vis* requirement in the selected DHs in respect of Specialists was as given in **Table-22**:

Table-22
Position showing posting of doctors in the selected DHs as of March 2016

Specialists	Requirement as per IPHS norms		Name of the districts																				
			Darrang (200 beds)			Golaghat (200 beds)			Kamrup (Rural) (50 beds)			Karbi Anglong (200 beds)			Sonitpur (200 beds)			Sivasagar (200 beds)			Kokrajhar (200 beds)		
	200 bed	50 bed	MIP	*S*	E	MIP	S	E	MIP	S	E	MIP	*S*	E	MIP	*S*	E	MIP	*S*	E	MIP	*S*	E
Medicine	2	1	2	**-**	-	4	-	**2**	1	-	-	1	**1**	-	0	2	-	2	-	-	0	**2**	-
Surgeon	2	1	1	**1**	-	2	-	**-**	1	-	-	4	**-**	**2**	3	-	**1**	2	-	-	3	**-**	**1**
O&G	3	1	3	**-**	-	5	-	**2**	3	-	**2**	4	**-**	**1**	7	-	**4**	1	**2**	-	3	**-**	-
Paediatrician	3	1	3	**-**	-	3	-	**-**	1	-	-	1	**2**	-	3	-	**-**	1	**2**	-	1	**2**	-
Anaesthesist	2	1	1	**1**	-	4	-	**2**	1	-	-	2	-	-	3	-	**1**	2	-	-	1	**1**	-
OPD patients during 2015-16			**1,36,265**			**1,91,829**			**42,480**			**43,185**			**1,71,326**			**1,02,713**			**48,208**		

Source: Information furnished by DHs (Kamrup: 50 bedded[48], other DHs: 200 bedded) (MIP-Men in Position, S-Shortage, E-Excess)

From the table above, the skewed position of deployment of doctors can be observed. While excess availability of doctors in districts of Golaghat and Sonitpur is required on considering the higher number of patients (1.92 lakh and 1.71 lakh respectively was also noticed during 2015-16) but excess deployment of doctors in Kamrup (R) was not justified owing to less number of patients (0.42 lakh) during 2015-16) as shown in the above table. On the other hand, shortage of doctors in Darrang and Sivasagar and Kokrajhar DHs was noticed.

Thus, attachment/posting of doctors in selected DHs was not based on actual requirement. The Government needs to rationalise the sanctioned strength *vis-à-vis* requirement of doctors.

- Similar to DH, in SDCH also, Gynaecologists were found more than that required as per IPHS norms whereas in case of other professionals, there were acute

[48] Kamrup Rural district hospital is a 50 bedded hospital as another Hospital under PPP mode is operational in the same campus.

shortages. In the selected four SDCH test-checked by Audit, the summarised position of Specialist Doctors is given in **Table-23:**

Table-23
Position of Manpower in the selected SDCHs as of March 2016

Specialists	Requirement per SDCH (as per IPHS norms)	Hamren			Gosaigaon			KSHS Nazira			Gohpur		
		MIP	S	E	MIP	S	E	MIP	S	E	MIP	S	E
Medicine	01	0	01	-	1	-	-	0	01	-	0	01	-
Surgeon	01	0	01	-	0	01	-	0	01	-	0	01	-
O&G	01	0	01	-	0	01	-	03	-	02	01	-	-
Paediatrician	01	0	01	-	0	01	-	01	-	-	0	01	-
Anaesthesist	01	0	01	-	0	01	-	01	-	-	0	01	-

Source : Information furnished by SDCH, S- Shortage, E – Excess, MIP-Men in Position

From the above table, it can be observed that in Hamren and Gosaigaon SDCHs, Specialists were not available whereas in one SDCH, there was excess deployment of Gynaecologists indicating irrational engagement of health care professionals.

- Similar deployment without reasons was noticed in case of PHCs also as shown in **Table-24:**

Table-24
Position of irrational deployment of doctors/ staffs in the 30 test checked PHCs (as of March 2016)

Category of post	Requirement (as per IPHS norms)	Men in position	Shortage	Number of PHC working without the deployment of concerned staff	Number of PHCs having deployment more than requirement of concerned staff
Doctor	30	30	0	10	08
Staff Nurse	90	45	45	10	03
Lab technician	30	31	01 (surplus)	05	06
Pharmacist	30	29	01	06	05
Accountant	30	25	05	06	01
Health Worker (Female)	30	26	04	15	06
Health Worker(M)	30	05	25	26	01
Lady Health Visitor	30	14	16	20	04

Source: Information furnished by audited PHC.

Thus, owing to deficient deployment of manpower coupled with skewed postings, provision of the required health care professionals at the various public health centers could not be ensured.

5.3 Impact of shortage of human resource on service delivery

In seven out of 13 test-checked CHCs/SDCHs, C-section[49] delivery could not be conducted due to non-availability of Specialists. Similarly, in eight out of 30 selected PHCs, even normal delivery could not be conducted for want of posting of doctor and skilled staff nurses. Facility of ultra-sonography (USG) could not be provided by two CHCs and one DH due to non-availability of O&G/Radiologist despite availability of USG machine. Similarly, three CHCs could not provide X-ray facility despite having the machines due to non-availability of any Radiographer.

[49] It is the use of surgery to deliver baby (ies) by Caesarean section.

Non- functional Sick New Born Care Unit (SNCU) at Karbi Anglong DH for want of manpower (18.05.16)

Non-functional New Born Stabilisation Unit (NBSU) at Howraghat CHC in Karbi Anglong district for want of manpower (27.05.16)

Labour bed and other equipment lying idle for want of SBA trained ANM at Phulguri SC, Kamrup (R) district (04.08.16)

Non-functional NBSU at Merapani CHC, Golaghat district for want of manpower (12.07.16)

OT table and OT room remained idle at Merapani CHC, Golaghat district for want of manpower (18.07.16)

Non-functional labour room and labour table at Bhalukmari PHC, Kokrajhar district for want of manpower (09.06.16)

It can thus, be seen that deficiency in posting of crucial staff in the six identified health centres, deprived the patients from availing of the mandated health care facilities.

It was thus, revealed that, NRHM, Assam could not ensure deployment of required human resources as per norms. Besides, there had been instances of uneven deployment of available manpower in health centres. As a result, health care services could not be provided in many health centres.

Chapter VI

Quality of Health Care in Health Centres

Chapter VI: Quality of Health Care in Health Centres

6.1 Quality Assurance Committees

Quality Assurance (QA) in Public Health is a cyclical process which involves setting up of standards and measurable elements, assessment of health facilities against the set standards, analysing the problems and preparing and implementing action plan.

As per the 'Operational Guidelines for QA in Public Health Facilities 2013', State Quality Assurance Committee (SQAC) and District Level Quality Assurance Committee (DQAC) were to be formed to oversee the QA activities for improving the public health care system.

Though the SQAC was formed in May 2015 *i.e.,* after a lapse of one and half years since the issue of the guidelines, it never met since its constitution against the norm of six monthly meeting. As such, the progress of QA activities was not reviewed by the SQAC for suggesting corrective measures, defining targets and setting road maps.

In the seven test checked districts, though DQACs were constituted (during 2008 to 2016), they did not hold requisite numbers of quarterly meetings (except Kamrup and Golaghat) to review the progress of QA in the districts. However, scrutiny of minutes of meeting of three DQACs[50]made available to audit, revealed that issues such as payment of compensation for sterilization failure, updation of Eligible Couple Register, promotion of PPIUCD[51], monthly reporting, place of sterilisation and training of doctors for laparoscopic operation etc., were discussed but it did not discuss about the identified gaps for improving the health care in public health centers. The Committees also did not share the reports of the DQAC with SQAC.

At the facility level, Internal Quality Assurance Team for internal assessment of QA at facility level was to be formed as per the guidelines. But in selected health centres such team was not formed. Due to non-formation of Internal Quality Team, the system of periodic internal assessment by way of conducting patient satisfaction surveys etc; and reporting thereon was missing.

As such, the functioning of the committees to oversee the QA activities for the improvement in quality of health care services under NRHM was not very effective as prescribed.

6.2 Standards of Quality in health centres

Patients' expectations, requirements of service providers and health systems requirements determine the quality of health care that should exist in a centre. The 'Operational Guidelines for QA in Public Health Facilities 2013' had set the Standards and Measurable elements to meet the above requirements. Owing to

[50] Karbi Anglong, Kamrup (R) and Golaghat.
[51] Postpartum Intrauterine Contraceptive Device.

deficiencies noticed during audit in health infrastructures and manpower (Chapter IV and V refer), the standards at par with the measurable elements was found lacking, as discussed in the succeeding paragraphs.

6.2.1 Availability of laboratory services at the health centres

During field visit of selected health centres, it was noticed that 17 *per cent* PHCs and 15 *per cent* CHCs did not have the facility of conducting routine urine, blood and stool tests. Rapid test of pregnancy was also not available in 20 *per cent* PHCs. As regards RTI/STI[52], syphilis etc., 29 to 90 *per cent* of health centers did not have the laboratory testing services. The reasons for not conducting the routine tests were stated to be due to insufficiency of reagents[53] (three cases), analyzer machines (two cases), microscope (one case) and laboratory technicians (five cases).

Thus, non-availability of adequate laboratory services forced the beneficiaries to spend their own money for diagnostic tests from private centers which diluted the objective of the Mission.

6.2.2 Availability of functional services

Functional services are directly related to patient care and are thus considered essential. Availability of functional services in the selected units were as under:

(A) District Hospital (DH) Level:

Table–25
Availability of functional services in selected seven DHs

Sl. No.	Measuring element as per 'Operational Guidelines for QA in Public Health Facilities 2013'	Number of DHs where available	Number of DHs where not available
1.	Essential 'New Born Care'	6	1[54]
2.	Sick New born Care Unit (SNCU) as well as dedicated Paediatric ward service	5	2[55]
3.	Nutritional Rehabilitation Centre (NRC) for malnourished child	0	7
4.	USG service and portable X-ray service	6	1[56]
5.	Management service of severe Diarrhoea with severe dehydration	6	1[57]
6.	Service of management of Meningitis	5	2[58]
7.	Availability of service of acute respiratory infection	6	1[59]

Source: Physical verification of selected units.

[52] Reproductive Tract Infection/Sexually Transmitted Infection.
[53] A substance or mixture for use in chemical analysis or other reaction. Here, it is used for medical test of urine, blood etc.
[54] Karbi Anglong DH.
[55] Kamrup (Rural) and Kokrajhar.
[56] "USG" not available in Darrang DH and "Portable X-ray "service not available in Kokrajhar DH.
[57] Kamrup (Rural).
[58] Sonitpur and Kamrup (Rural).
[59] Kamrup (Rural).

(B) Sub District Civil Hospital (SDCH)/Community Health Centre (CHC) level:

Table–26
Availability of functional services in the selected 13 SDCHs/CHCs

Sl No.	Measuring element as per 'Operational Guidelines for QA in Public Health Facilities 2013'	Number of SDCHs/CHCs where available	Number of SDCH/CHC where not available
(1)	(2)	(3)	(4)
1.	Spacing method of family planning service	12	1
2.	Female limiting of family planning	11	2
3.	Male limiting method of family planning	8	5
4.	Post-partum sterilisation service	6	7
5.	Dedicated family planning clinic	3	10
6.	Provision for ANC clinic	12	1
7.	24x7 labour room service	0	13
8.	Blood storage service	7	6
9.	Assisted delivery service	8	5
10.	Caesarean delivery service	6	7
11.	Functional NBSU	8	5
12.	24x7 nursing care at NBSU	5	8
13.	Dispensary services available after OPD hours	7	6

Source: Physical verification of selected units.

(C) Primary Health Centre (PHC) level:

Table–27
Availability of functional services in the selected 30 PHCs

Sl. No.	Measuring element as per 'Operational Guidelines for QA in Public Health Facilities 2013' (Availability of service for:)	Number of PHCs where available	Number of PHC where not available
1.	Six hours OPD service per day including family planning service like contraceptives (*viz. Condoms, Oral Pills, Progesterone Only pill-POP, Emergency Contraceptives*)	22	8
2.	IUCD insertion	22	8
3.	At least one ANM/Nurse/ LHV and MO on call 24x7	13	17
4.	System of identification and management of High Risk and Danger signs during pregnancy	16	14
5.	Provision of identification, primary management and prompt referral of sick newborns	17	13
6.	Emergency care of sick children (*e.g. treatment of Diarrhoea, Pneumonia, anaemia etc.)*	8	22

Source: Physical verification of selected units.

The above position indicated that there were shortages in providing key functional services required as per 'Operational Guidelines for QA in Public Health Facilities 2013' in the selected health centres.

6.2.3 Availability of support services

Adequate support services in the health centres are the important components for providing health care to the needy patients. Availability of such services in the selected units was as under:

- ***District Hospital Level***: Scrutiny of the position of support services in the selected seven DHs (detailed in **Appendix-9)** revealed that periodic cleaning, inspection and maintenance of equipment was not being done in four DHs. 24 x 7 running potable water were not found available in one DH. Centralised/local piped

oxygen and vacuum supply was not available in six out of seven DHs. Bed linens were not being changed daily in six DHs. Adequacy and frequency of diet as per nutritional requirement was also not found in five DHs. Further, the equipment installed were not covered under any Annual Maintenance Contract (AMC) in five out of seven selected DHs.

- ***Sub-District Hospital/Community Health Centre level*:** Similarly, the position of the support services available at the 13 selected SDCH/CHC revealed that power back up in labour room was found available in 11 and partially available in two SDCHs/CHCs. Running and potable water facility were found not available in two while hot water facility found not available in 11 SDCHs/CHCs. Linen was being changed whenever it soiled in seven SDCHs/CHCs only. The detailed position in this regard is shown in **Appendix-10**.

- ***Public Health Centre*:** Availability of Support Services on the following measuring elements in the selected 30 PHCs was as shown in **Table-28**.

Table-28
Availability of Support Services at selected PHC level

Sl. No.	Measuring element as per 'Operational Guidelines for QA in Public Health Facilities 2013'	Number of PHCs where Available	Number of PHCs where not Available	Number of PHCs where partially Available
1.	Drugs/injectable are stored in containers/tray and are labelled in injection Room/ Dressing room	14	13	3
2.	The Drugs received at the facility have sufficient shelf-life.	18	5	7
	Expiry dates' are maintained at emergency drug tray at injection Room	10	18	2
	Expiry drug found at injection Room	9	21	0

Source: Physical observation and information furnished by selected PHCs.

The above position indicated that selected health centres were deficient in providing support to health care services as per 'Operational Guidelines for QA in Public Health Facilities 2013'.

6.2.4 Accessibility of services by the users

Available services should be informative and user friendly so that easy accessibility of the services to the patients and visitors, is available. It was however observed that out of seven test checked DHs, entitlement of services under Janani-Shishu Suraksha Karyakram (JSSK), Janani Suraksha Yojana (JSY), name of doctor and Nurse on duty, contact details of referral transport/ambulance *etc*., had not been displayed in six, six, five and four DHs respectively. Enquiry Desk with dedicated staff were found available only in two DHs. Wheel chair or stretcher for easy access to wards, though found in all the seven selected DHs, but disabled friendly toilet was not found in any of the DHs.

In other test checked health centres, insufficiency in the level of accessibility of services are shown as under:

Sl No.	Measuring element as per 'Operational Guidelines for QA in Public Health Facilities 2013'	Number of health centres		
		Available	Not available	Partially available
Accessibility of services to users in test checked 13 SDCHs/CHCs				
1	Display of entitlement under JSY, JSSK and other schemes	12	1	0
2	Timings and days of OPD and other clinic services (*viz.* for fix day services like ANC, immunisation etc.) are displayed	5	8	0
3	Availability of directional and layout signages (in bilingual and pictorial form) for all the departments and utilities (toilets, drinking water, etc.)	4	8	1
4	List of doctors on duty	11	1	1
5	Availability of IEC materials on breastfeeding and family planning (Pictorial and Chart), immunisation schedules, danger signs, Post-natal (PN) advice etc	4	4	5
6	Drug store open after OPD hours	6	7	0
7	Barrier free access environment (viz. ramp, hand railing, etc.) for easy access to handicapped and elderly person	6	7	0
Accessibility of services to users in test checked PHCs (30)				
1	Timings and days of OPD and other clinic services (viz. for fix day services like ANC, immunisation etc.) are displayed	16	9	5
2	List of available drugs prominently displayed at drug dispensing counter.	18	11	1
3	Availability of female staff/attendant of a male doctor examines a female patient.	17	8	5
4	Dedicated female OPD for ANC Clinics	10	20	0
5	Availability of breast feeding corners	3	27	0

Source: Physical observation and information furnished by selected SDCHs/CHCs and PHCs.

Thus, patients could not be made well conversant of services available in the health centres and user friendly accessibility could also not be ensured.

6.2.5 Infection control practices

Infection control practices ensure safety of patients, visitors and service providers to safeguard them from getting infected. Scrutiny of records together with physical verification of selected health centres revealed the following:

District Hospital Level: Status of infection control practices in seven selected DHs was as under -

- Out of selected seven DHs, masks were found available in six DHs (except Karbi Anglong), elbow length gloves for obstetrical purposes were available in four DHs[60], heavy duty gloves and gum boots for housekeeping staff were available in three DHs[61]. However, gowns/aprons were found available in all the selected seven DHs.

[60] Kamrup (R), Kokrajhar, Sivasagar and Sonitpur DHs.
[61] Kamrup (R), Sivasagar and Golaghat DHs.

- Colour coded bins at point of waste generation though were available in six DHs (except Karbi Anglong[62]) but two of them (Karbi Anglong and Sivasagar DHs) could not ensure that there was no mixing of infectious and general waste.

- Functional needle cutter was not available in one DH (Karbi Anglong) and puncture proof box was also absent in three DHs (Karbi Anglong, Sonitpur and Golaghat).

- Disinfection of liquid waste before disposal was not done in three DHs (Golaghat, Kamrup (R), and Sivasagar). Besides, bio-medical waste was not found transported in closed containers in twoDHs (Karbi Anglong, Sonitpur).

- Staff was not found aware of spill mercury management[63] in any of the DHs.

Sub-District Hospital/Community Health Centre level: Status of infection control practices in 13 selected SDCH/CHCs was as under:-

- Masks and clean gloves were found available in only 10 and 11 SDHCs/CHCs respectively. Heavy duty gloves and gum boots for housekeeping staff were not found in any of the units.

- Disposal of wastes, by segregation into Colour coded bins, for different category, was being done in only 10 out of 13 selected units even though the bins were available in all the units.

- Eight units transported bio-waste in closed containers/trolleys, while in one CHC, waste was thrown outside the hospital compound.

- Disinfection of sharp objects/needles etc., before disposal and liquid waste was done only in nine and eight units, respectively.

- Staff of five units only was aware of mercury spill management.

Primary Health Centre level: The status of infection control practices in 30 selected PHCs was as under:-

- Wash basin near the point of use in eight units and running water in seven units, was not found available while instruction for hand wash had not been displayed in 16 units.

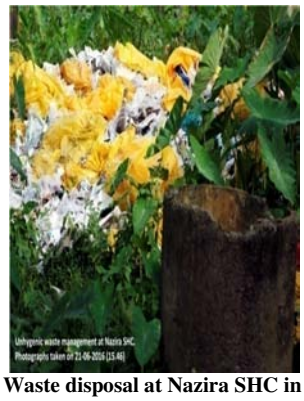
- Clean gloves and masks were not found available in three and six units, respectively.

- Colour coded bins at point of waste generation though found available in 28 units out of 30, only 23 units could ensure non-mixing of infectious and general waste.

[62] Karbi Anglong reported partial availability.
[63] Procedure for collection, treatment and disposal of mercury in case of spillage.

Pit for waste disposal in Baithalangsho PHC in Karbi Anglong district (03.06.16)

Pit for waste disposal in Sualkuchi FRU in Kamrup (R) district (27.07.16)



Waste disposal at Nazira SHC in Sivasagar district (21.06.16)

Thus, infection-free environment in all the health centres could not be ensured which was fraught with the risk of transmitting infection to patients, visitors and service providers.

It was thus, revealed that the quality of health care and scope of their improvement had not been reviewed by the Quality Assurance Committees. Laboratory services, other functional services, support services and infection control practices in health centres, to meet the requirement of both patients and service providers to ensure the quality services, were inadequate.

Chapter VII

Reproductive and Child Health

Chapter-VII: Reproductive and Child Health

7.1 Institutional and Home deliveries

Institutional delivery is the key intervention for reducing maternal and neo-natal mortality. NRHM aimed to promote institutional deliveries or facility-based births by making available health services in rural areas and by implementing Janani Suraksha Yojana (JSY)[64] and Janani Sishu Suraksha Karyakram (JSSK)[65]. Under the NRHM framework, home based delivery needs to be discouraged. Further, Skilled Birth Attendant (SBA) trained Auxiliary Nurse Midwife (ANM) should be engaged in the cases home deliveries for necessary care.

The status of target and achievement of the institutional deliveries in Assam during 2011-16 is as shown in **Table-29**:

Table-29
Target and achievement of institutional deliveries

Year	Number of PW registered	Number of institutional deliveries						Shortfall in institutional deliveries Column (5-8)	Number of Home Deliveries (Domiciliary deliveries)			Total deliveries during the year Column (8+12)	Percentage of home deliveries to total deliveries
		Estimated Institutional Delivery (as proposed in PIP)			Number of Institutional Delivery reported				Attended by SBA	Not attended by SBA	Total		
		Govt. Facility	Pvt. Facility	Total	Govt. Facility	Pvt. Facility	Total						
1	2	3	4	5	6	7	8	9	10	11	12	13	14
2011-12	8,01,575	4,57,794	50,866	5,08,660	4,18,170	40,883	4,59,053	49,607	10,464	1,04,263	1,14,727	5,73,780	20
2012-13	8,02,343	4,45,414	49,490	4,94,904	4,48,507	49,391	4,97,898	2,994 (Excess)	8,701	91,387	1,00,088	5,97,986	17
2013-14	7,89,120	5,00,976	55,664	5,56,640	4,60,095	55,384	5,15,479	41,161	13,300	85,085	98,385	6,13,864	16
2014-15	7,51,185	4,86,901	73,466	5,60,367	4,61,329	67,950	5,29,279	31,088	20,401	75,496	95,897	6,25,176	15
2015-16	7,40,895	4,86,737	75,549	5,62,286	4,52,370	86,109	5,38,479	23,807	20,365	68,324	88,689	6,27,168	14
Total	**38,85,118**	**23,77,822**	**3,05,035**	**26,82,857**	**22,40,471**	**2,99,717**	**25,40,188**	**1,42,669**	**73,231**	**4,24,555**	**4,97,786**	**30,37,974**	**16**

Source: Information provided by NRHM, Assam and HMIS Web Portal,
Note: Shortfall calculated with reference to the government institutional deliveries only.

The details above indicate that there was a decreasing trend (20 to 14 *per cent)* in home deliveries but at the same time, it was still on the higher side. In case of home deliveries, only 15 *per cent* were attended by SBA.

7.2 Antenatal Care (ANC)

ANC is a type of preventive health care with the goal of providing regular check-ups to the Pregnant Woman (PW) that allows doctors or midwives to treat and prevent potential health problems throughout the course of the pregnancy while promoting healthy lifestyle benefitting both mother and the child. Good ANC reduces the risk of childbirth complications.

WHO recommends that PW should receive four antenatal check-ups. The first ANC was to be provided within 12 weeks of pregnancy, second within 20-24 weeks, the third within 28-32 weeks and the fourth ANC within 34-36 weeks of pregnancy, to monitor the progress. NRHM aimed to provide four ANCs to all PW.

---

[64] JSY is a safe motherhood intervention under NRHM with the objective of reducing maternal and neo-natal mortality by promoting institutional delivery among all the PW.

[65] JSSK is an initiative to eliminate out of pocket expenses for both pregnant women and sick neonates wherein provision for free diet, free diagnostics, free drugs and consumables, free transport facility are provided.

The position of ANCs provided to PW in Assam during the period 2012-16 was as shown in **Table-30**:

Table-30
Position of ANCs provided to PW in Assam

Year	Total Number of PW registered	Number of registered pregnant women who received check-ups				Number of PW who received 1st and 2nd Tetanus Toxoid (TT) immunisation	Number of PW who received 100 Iron Folic Acid (IFA) tablets	Number of PW detected with hyper-tension	Number of PW detected with Eclampsia[66]	Number of PW detected with severe Anaemia
		1st visit at the stage of registration	2nd visit	3rd visit	4th visit					
2012-13	8,02,343	7,42,802	6,16,294	5,65,922	3,95,127	6,63,168	6,27,956	16,141	1,025	13,292
2013-14	7,89,120	7,84,602	6,74,121	6,24,770	5,52,818	6,73,461	5,83,523	17,684	660	5,046
2014-15	7,51,185	7,47,805	6,76,633	6,31,525	5,89,986	6,64,889	6,81,490	17,332	839	4,542
2015-16	7,40,895	7,40,794	6,80,324	6,43,921	6,09,306	6,71,809	6,69,118	15,580	1,039	5,390
Total	**30,83,543**	**30,16,003**	**26,47,372**	**24,66,138**	**21,47,237**	**26,73,327**	**25,62,087**	**66,737**	**3,563**	**28,270**

Source: Information furnished by NRHM, Assam.
****Full data for 2011-12 was not available***

Table above shows that complete ANC (four) could be provided to 21,47,237 (69.64 *per cent*) PW out of 30,83,543 registered during the period 2012-16 in the State. Shortfall was also noticed in providing Tetanus Toxoid 1st dose (TT1), Tetanus Toxoid- 2nd dose (TT2) and 100 IFA tablets to the PW as the same could not be provided to all the registered PW. The reasons for shortfall were attributed by the selected health centres to fear of side effects among the rural people, short supply of medicines *etc*.

Similarly, in the seven selected districts, 5,98,074 (63.16 *per cent)* out of 9,46,780 PW received four complete ANCs during 2011-16. Further, maternal death review (MDR) reports of the selected districts disclosed that in case of 29 deaths (11 *per cent*) out of 265 during 2013-16, no ANC was provided.

Thus, it would be evident that NRHM, Assam could not create adequate awareness amongst rural people of the importance of ANC check-up and taking of IFA tablets during pregnancy. Shortages and engagement of untrained Accredited Social Health Activist (ASHA) and ANM (as discussed in the previous chapter) could also be one of the reasons for shortfall in providing ANCs.

The number of PW detected with hypertension, eclampsia and anaemia was also significant and were seen as the major reasons of maternal deaths as evident from e-MDR[67] reports which disclosed that 20 *per cent* (732 out of 3,648 maternal deaths) of mothers died of anaemia caused due to iron deficiency during 2013-16.

7.3 Still birth

Still birth denotes death of an infant in the mother's womb after completion of 28[68] weeks of pregnancy. Early detection of obstetric complications would reduce the chances of still birth which can be ensured through timely ANCs and necessary medication to PW.

[66] A potentially dangerous pregnancy complication characterised by high blood pressure.
[67] Electronic- Maternal Death Review.
[68] By 28 weeks, PW were to receive 3 ANCs.

The year-wise position of still births in the State during 2011-16 was as shown in **Table-31**:

Table-31
Position showing number of still births in the State during last five years

Year	Number of PW registered	Number of PW who received 3rd ANC in 28-32 weeks of pregnancy		Total Number of still births	Percentage of still birth in terms of 3rd ANC
		Number	*Per cent*		
2011-12	8,01,575	NA	-	14,612	-
2012-13	8,02,343	5,65,922	71	14,462	2.55
2013-14	7,89,120	6,24,770	79	14,272	2.28
2014-15	7,51,185	6,31,525	84	14,185	2.25
2015-16	7,40,895	6,43,921	87	13,228	2.05

Source: Information furnished by NRHM, Assam.

From the above, it would be seen that during 2012-16, percentage of PW who received 3rdANC in the 28 to 32 weeks of pregnancy increased from 71 to 87 *per cent*. The rate of still birth had also reduced simultaneously and came down from 2.55 to 2.05 *per cent*. Thus, in order to reduce number of still births, further efforts are required to increase percentage of PW receiving 3rd ANC.

In the selected districts, the position of still births is shown in **Table-32**:

Table-32
Position showing number of still births in the selected districts during 2011-16

Name of District	Number of PW registered	Number of PW received 3rd ANC in 28-32 weeks of pregnancy		Total number of Still Births	Percentage of still birth in terms of PWs received 3rd ANC
		Number	*Per cent*		
Kokrajhar	1,08,209	56,198	51.93	1,570	2.79
KarbiAnglong	1,20,793	74,527	61.69	2,055	2.75
Golaghat	1,02,047	74,265	72.77	2,021	2.72
Sonitpur	2,04,815	1,57,404	76.85	4,163	2.64
Darrang	1,21,095	94,019	77.64	1,939	2.06
Sivasagar	1,13,821	1,01,781	89.42	1,648	1.61
Kamrup (R)	1,76,000	1,26,402	71.81	1,399	1.10

Source: Information furnished by DHS

As regards comparison of number of still births in terms of total PW registered in the selected district, Sonitpur district recorded highest number of still births whereas Kamrup (R) recorded the lowest cases of still births during 2011-16. Also, the percentage of still births came down with higher percentage of PW receiving ANC upto 3rd stage (except Kamrup Rural[69]). In Kokrajhar district, the rate of still births was higher where rate of 3rd ANC was less and in Sivasagar district rate of still births was less where 3rd ANC was higher.

Thus, it was evident that less number of ANC increased the chances of still births but NRHM, Assam failed to ensure complete and timely ANCs to all PW as discussed in paragraph 7.2 of the report.

[69] Kamrup Rural has most number of government hospitals including a nearby Medical College in comparison to other districts.

7.4 Delivery through Skilled Birth Attendant (SBA)

NRHM Framework of implementation envisaged that for improvement of home based newborn care in remote areas located far from the facilities, SBAs, ANMs and ASHA workers were to be engaged. There was acute shortage of SBA trained ANMs in the State. As per APIP 2016-17, only 2,299 ANMs out of the total 9,950 ANMs in the State had been trained as SBA and thus 7,651 ANMs (76.89 *per cent*) remained to be trained, for conducting deliveries.

In the SCs of seven selected districts, availability of SBA trained ANMs were as shown in **Table-33**:

Table-33
Availability of SBA trained ANMs in the SCs of seven selected districts

District	Number of SCs			SCs without SBA			Total population of the district
	In the district	With SBA	Having more than one SBA	Number	Number of villages	Population	
Darrang	163	88	37	75	294	2,85,035	7,56,151
Golaghat	144	40	14	104	570	4,78,563	7,09,640
Kamrup (R)	280	118	40	162	1,006	7,22,454	13,76,198
Karbi Anglong	145	101	28	44	561	2,30,182	6,98,071
Kokrajhar	161	65	15	96	491	3,55,497	6,71,419
Sivasagar	219	64	17	155	681	5,75,009	8,32,956
Sonitpur	275	58	27	217	849	8,72,617	11,67,935
Total	**1,387**	**534**	**178**	**853**	**4,452**	**35,19,357**	**62,12,370**

Source: RHS 2016 data furnished by DHS

From the above table it would be seen that 4452 villages having populations of 35.19 lakh in the selected seven districts did not have the scope of getting the service of SBA. Thus, home deliveries without the supervision of SBA were fraught with the risk of morbidity[70]. It would further be seen that 178 SCs were having more than one SBA whereas 853 SCs did not have any SBA highlighting irrational deployment of SBA in the selected districts. It needs to be mentioned that in the State, 593 SBA trained ANMs were posted (as of March 2016) in 297 number of higher facilities (PHC to DH) instead of in SCs, of which 261 facilities had doctors in place, augmenting further the irrationality in the deployment of SBA.

Scrutiny of records of the selected 45 SCs revealed that there was no SBA in 27 SCs. In the remaining 18 SCs where SBA was found available, deliveries were conducted by only three[71] SCs (447 deliveries during 2011-16). Other 15 SCs could not conduct delivery due to non-availability of labour table. Besides, during 2011-16, altogether 1,397 home deliveries were recorded in villages under the jurisdiction of the selected 45 SCs, of which 1,025 (73 *per cent*) deliveries were not attended by SBAs. Further, 505 (37 *per cent*) out of total 1,397 home deliveries were not visited by any health worker, including SBA, within 24 hours of the delivery to check the health status of new born babies and delivering mothers though required as per norms.

[70] The relative incidence of a particular disease.
[71] Dharapur, Junglebosti and Tekeliakur Grant B.

To utilise the service of SBAs, the State did not ensure providing 'labour table' in the SCs where SBAs were deployed. It was also noticed that the State did not fix any target for number of deliveries to be conducted by SBAs.

Thus, deliveries at home and in the SCs (the first contact point) could not be ensured to be conducted by a skilled person to reduce the risk of morbidity due to shortage of SBAs, irrational deployment of SBAs, lack of logistic support and absence of any fixed target for attending home deliveries by each SBA.

7.5 Post-natal care

(A) As per JSSK guidelines, 48 hours stay at the health facility after childbirth was to be encouraged for the well-being and survival of the mother and the newborn. NRHM framework and IPHS also provided for stay of mothers for 48 hours after delivery.

The position of institutional deliveries and discharge of women within 48 hours of delivery during 2011-16 in the State was as shown in **Table-34**:

Table-34

Position of women discharged within 48 hours of delivery during 2011-16 in the State

Year	Total Number of deliveries at government institutions	Number of women discharged within 48 hours of delivery	Percentage of women discharged within 48 hours
2011-12	4,18,170	2,34,761	56.14
2012-13	4,48,507	2,28,477	50.94
2013-14	4,60,095	1,92,569	41.85
2014-15	4,61,329	1,68,444	36.51
2015-16	4,52,370	1,55,719	34.40

Source: Information furnished by NRHM, Assam.

The position above shows that the number of women discharged within 48 hours had decreased gradually during 2011-2016 which was a positive indication. However, the percentage of discharge (34.40 *per cent*) during 2015-16 was still on the higher side.

The status of institutional deliveries at government health centres in the selected districts where women were discharged within 48 hours of delivery, was as stated in **Table-35**:

Table-35

Position of women discharged within 48 hours of delivery in the selected districts

Name of District	Total Number of institutional deliveries at government health centres	Number of women discharged within 48 hours of delivery	Percentage of women discharged within 48 hours	Reasons for discharge within 48 hours
Kokrajhar	75,910	52,323	69	Staff were not staying in most of the delivery points. Diet facility, as required, was not provided in all the delivery points except in DHs& SDCHs. There was not enough facility for patients to stay in the periphery and they also availed of LAMA[72].
Karbi Anglong	79,597	56,061	70	
Sonitpur	1,45,445	55,662	38	
Darrang	72,563	20,240	28	
Sivasagar	78,651	12,947	16	
Golaghat	80,649	41,765	52	
Kamrup (R)	1,01,729	38,522	38	

Source: Information furnished by DHS.

[72] Leave Against Medical Advice.

As per IPHS and Janani Sishu Suraksha Karyakram (JSSK), free diet upto three days for normal deliveries and seven days in case of caesarean deliveries are to be provided in PHCs, CHCs, SDCHs and DHs. However, scrutiny revealed that facility for providing the cooked food was not available in PHCs and CHCs. On being pointed out in audit, it was stated that construction for kitchen sheds for all the 1014 PHCs had been proposed in the APIP 2016-17.

Thus, gap in support services being the reason for early discharge of women as stated above was not addressed to ensure safety of mother and the new born.

(B) The post-natal period is a critical phase in the lives of mothers and newborn babies. Most of the maternal and infant deaths occur in the first month after the birth. Every mother and baby should get four Post-natal Care (PNC) check-ups *viz*., first on day one (within 24 hours), second on day three (48–72 hours), third on day seven to 14 and fourth in the sixth week.

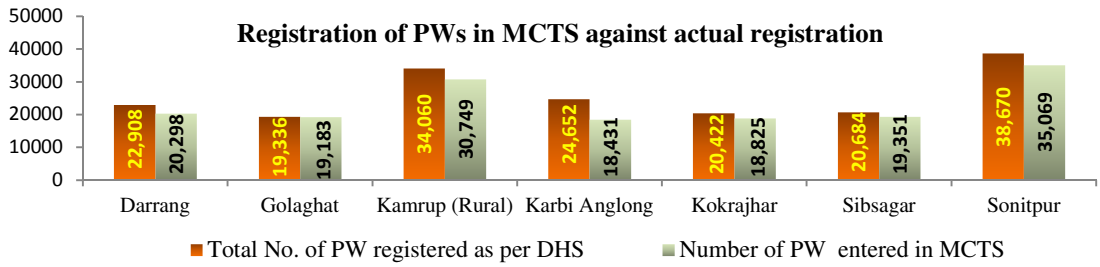
In the selected districts, it was seen that 74 *per cent* of women visited the health centres for PNC check-ups of which, one *per cent* were found with complications. Thus, in respect of 26 *per cent* women who had not taken PNC, cases of complications developed, MTP (medical termination of pregnancy) required or infection by RTI/STI, if any remained un-ascertained.

7.6 Utilisation of Mother & Child Tracking System (MCTS)

MCTS, launched by GoI in December 2009, is a centralised web based application for improving delivery of health care services to each and every PW and children up to five years of age through name-based tracking and monitoring of service delivery to avoid drop out in order to reduce maternal and infant mortality. MCTS was implemented in the State since 2011-12.

Analysis of the MCTS data for the year 2015-16[73] revealed that MCTS did not provide comprehensive status of all PW and children upto five years of age. The actual data of the selected districts did not tally with the MCTS data as shown in **Chart-4**:

Chart–4
Registration of PW in MCTS against actual registration of PW in selected districts during 2015-16



Source: Information furnished by DHS and data of MCTS.

[73] NRHM Assam could provide data only for the year 2015-16.

The number of PW registered in the MCTS was less than that of actual registration in all the selected districts ranging from 153 (Golaghat) to 6,221 (Karbi Anglong). Thus, all the PW were not entered/ uploaded on MCTS and hence, all PW could not be tracked to deliver health services, as intended.

Further, inconsistencies in the data of MCTS such as huge variation in the number of deliveries, number of new born babies, number of BCG[74] recorded and number of OPV[75] '0'recorded was also noticed as shown in **Table-36**:

Table-36
Inconsistency in data in MCTS (Year 2015-16)

Name of district	Mother tracking		Child tracking			
	Number of PW Registration in MCTS	Number of deliveries recorded	Number of new born babies recorded	Number of Mother ID against Child Registration	Number of BCG recorded	Number of OPV '0' recorded
Darrang	20,298	1,306	15,781	15,780	10,780	7,541
Golaghat	19,183	1,019	16,104	16,027	8,091	1,481
Kamrup (R)	30,749	10,311	25,139	23,782	15,516	3,046
Karbi Anglong	18,431	1,386	12,857	12,823	9,227	665
Kokrajhar	18,825	5,583	15,047	15,031	11,718	2,280
Sivasagar	19,351	8,452	16,766	16,749	13,348	6,989
Sonitpur	35,069	3,451	30,051	30,039	13,570	1,976
Total	**1,61,906**	**31,508**	**1,31,745**	**1,30,231**	**82,250**	**23,978**

Source: Information furnished by DHS and data of MCTS.

From the above table, it would be seen that against 31,508 deliveries, 1,31,745 new born babies were registered in the MCTS. Further, out of 1,31,745 newborn babies, OPV '0' dose, being the birth dose, was shown as 23,978 only. As such, the data in MCTS was unreliable.

Thus, intended objective of MCTS to monitor and track each and every PW and child to ensure complete service delivery (ANC/PNC for PW and immunisation of children) could not be achieved.

7.7 Implementation of Institutional delivery promoting schemes

For encouraging institutional delivery, the following incentive schemes to attract the PW, had been taken up by NRHM.

7.7.1 Janani Suraksha Yojana (JSY)

JSY is a safe motherhood intervention under NRHM with the objective of reducing maternal and neo-natal mortality by promoting institutional delivery among all the PW. The beneficiaries are paid ₹ 1,400 and ₹ 1,000 each in rural and urban areas respectively. MD, NRHM, Assam directed (August 2012) that after delivery, JSY incentive money needs to be paid to mothers before discharge from the health centres.

[74] Bacillus Calmette-Guerin (BCG) is a vaccine used for preventing tuberculosis.
[75] Oral Polio Vaccine used to prevent polio.

As per information furnished by six[76] out of seven selected districts, JSY incentive was reported to have been paid to 4,72,164 (82.71 *per cent*) out of 5,70,859 beneficiaries registered during 2011-16 as shown in **Table-37**:

Table-37
Position showing reported number of beneficiaries received JSY incentive in the test-checked district during 2011-16

Name of District	Total Number of PW registered under JSY	Total Number PW received JSY incentive	Number of PW who did not receive JSY incentive
Kokrajhar	75,910	75,748	162
Karbi Anglong	77,352	38,298	39,054
Sonitpur	1,78,004	1,72,165	5,839
Darrang	57,215	41,867	15,348
Golaghat	80,649	51,022	29,627
Kamrup Rural	1,01,729	93,064	8,665
Total	**5,70,859**	**4,72,164**	**98,695**

Source: Information furnished by DHS.

However, the information furnished by the DHSs was not reliable as in Kokrajhar district, only 162 women were shown to have not been paid JSY incentive, whereas scrutiny of records in three selected health centres only in Kokrajhar revealed that 1,763[77] beneficiaries were not paid JSY incentive during 2011-16.

Besides, 1,181 cheques (issued during April 2011 to February 2016) though shown to have been paid to the beneficiaries by nine health centres[78], were found retained by the health centres. The cheques had however, lost their validity being time barred. Further, delay ranging from 11 to 1085 days in making payment of JSY money was noticed in seven selected health centres[79] of the four districts.

On this being pointed out in audit, it was stated that some beneficiaries left without collecting the cheques and many of them did not have bank accounts. The reply was however, not tenable as it was the responsibility of health centres to disburse the cheques to the beneficiaries before their discharge from the health centres. Further, opening of bank account and encashment thereof, could also be ensured through ASHA workers at the time of registration of PW under the provision of JSY guideline.

[76] The information regarding number of PW registered with JSY who did not receive JSY incentive money was not furnished in respect of Sivasagar district.

[77]

Name of the health centre	Number of deliveries during 2011-16	Number of beneficiaries not paid JSY incentives
Dotma CHC	3868	1570
RNB Civil Hospital	14716	168
RNB SDCH Gossaigaon	11764	25
Total	**30348**	**1763**

[78] Mangaldoi Civil Hospital, Sipajhar CHC, Gorukhuti PHC, Ligiripukhuri SDCH, Sivasagar Civil Hospital, Dotma CHC, RNB Civil Hospital, RNB SDCH Gossaigaon, TRB Civil Hospital.

[79] Dotma CHC, Mangaldoi DHSipajhar CHC, Gorukhuti PHC, Ligiripukhuri SCDH, Kolabari CHC, Kanaklata Civil Hospital.

7.7.2 Janani Sishu Suraksha Karyakram (JSSK)

The Mission aimed at eliminating out of pocket (OOP) expenditure by providing free cashless delivery, drugs and diagnostics, blood, diet, conveyance back from health centre *etc.,* under JSSK.

7.7.2 (i) Adarani under JSSK

In the State of Assam, Adarani is a scheme which aims at the safe conveyance of mother and her child after delivery from hospital to their residence under the JSSK which is funded under NRHM. As of March 2016, altogether 235 Adarani vehicles had been operating under the scheme throughout the State.

The information collected from test checked health centres revealed that 13[80]out of 26 health centres did not have Adarani service and hence 8,745 mothers who delivered babies during 2011-16 were not provided with the conveyance under the scheme. In case of the remaining 13 health centres[81], 'Adarani' service was available but the facility of free drop back to residence was not provided to 61,951 (45 *per cent)* out of 1,37,711 mothers after the delivery during 2011-16.

Reasons (as stated by Golaghat DH and Merapani CHC) for not providing the service to all beneficiaries was attributed to inadequacy of vehicles while in Golaghat DH local taxi drivers prevented the Adarani service and local administration failed to take appropriate action for the resumption of the service .

Thus, mothers and new born children had been deprived of the service of free transport after delivery.

7.7.2 (ii) Out of pocket expenditure per delivery under JSSK

JSSK entitles all PW delivering in public health institutions to absolutely free and no expense delivery including in the case of a caesarean section.

As reported by NFHS-4[82], OOP expenditure per delivery in public health centres (rural areas) in the State was ₹ 3,054, the basis of this calculation was not available in the records made available to audit.

[80] Hamren SDCH, Tekelanjun SHC, Baithalangshu PHC. Santak MPHC, Nazira SHC, Bokota MPHC, Jharbari SD, Garukhuti MPHC, Rangamati MPHC, Gelabil MPHC, Kachomari SD, Halem SHC, Haleswar MPHC.

[81] Mangaldoi Civil Hospital, RNB Civil Hospital, Sivasagar Civil Hospital, Ligirpukhuri SDCH, HowraghatCHC,Diphu Civil Hospital, Azara CHC, Sualkuchi FRU,Rampur PHC, Chariduar CHC, Merapani CHC, Sarupathar CHC, K K Civil Hospital.

[82] NFHS-4 –the 4th National Family Health Survey conducted in 2015-16 under Ministry of Health and Family Welfare, Government of India.

During test check of 265 numbers of Maternal Death Report (MDR) of the sampled districts, audit came across one maternal death (Narmada Das, Kamrup (R) district died on 14th November 2014), wherein poor financial condition of the family of the deceased woman was highlighted. It was revealed that the PW visited Bezera CHC on 6th November, 2014 for check-up and she was advised to be admitted into Mahendra Mohan Civil Hospital (MMCH), Guwahati immediately. But due to poor financial condition of the family, the patient could not be admitted immediately to MMCH. After two days *i.e.,* on 8th November, 2014 only when the PW was critically ill, she was taken to MMCH by hiring an Auto Rikshaw. The PW gave birth to a baby girl on the next day. It was mentioned in the report that the husband arranged the money from others and spent around ₹ 2,000. The patient was released from MMCH on 12th and again on 14th November, 2014 the patient was brought to Kamalpur Model Hospital by '108' Ambulance (reached one hour late) as she was developing pain and swelling of limb. Finally the patient expired and doctor opined that she died during transportation.

Thus, the deceased PW could not be shifted immediately to the higher hospital due to poor financial condition of the family which highlighted the deficiencies in achieving the norms of free and no expense delivery at public health centres under NRHM.

During field visit of health centres, instances of shortage of medicines, insufficiency of transportation facility, lack of functional equipment, diagnostic services *etc.*, were noticed. As a result, free and cashless health care services were not feasible. Joint survey of patients[83] conducted by Audit with the departmental officials of DHs also revealed that patients had to spend their own money ranging from ₹ 950 to ₹ 8,100 for purchasing medicines, diagnostic test, transportation *etc.*, from outside.

Thus, the intended objective of providing free delivery service under NRHM was diluted due to high OOP expenditure in the State and also impacted adversely on reducing MMR by encouraging institutional delivery.

7.8 Immunisation

Target and achievement for immunisation in the State of Assam during 2011-16 were as stated in **Table-38**:

Table-38
Target and achievement for immunisation in the State (2011-16)

Year	Number of live births during the year	Target for complete Immunisation	Actual achievement (for all vaccines as prescribed)				Target for administration of Vitamin A	Actual achievement		
			Up to one year	Above one and half years	Above five years	Above 10 years		1st dose	2nd dose	3rd to 5th dose
2011-12	5,56,037	6,94,349	5,37,223	3,27,468	1,15,104	8,59,846	38,02,652	5,64,691	1,67,300	6,20,502
2012-13	5,76,475	7,05,011	5,90,806	4,10,225	1,97,741	3,77,218	38,67,552	6,02,058	3,74,999	8,51,917
2013-14	5,95,774	6,80,900	5,96,264	4,76,054	2,40,909	8,15,416	39,34,374	5,70,018	4,18,866	8,48,090
2014-15	6,12,883	6,68,181	5,75,634	4,82,108	2,48,838	3,84,566	80,00,841	5,36,651	4,04,738	6,36,045
2015-16	6,14,136	6,80,528	6,00,067	5,39,831	2,84,380	3,84,189	6,80,528	5,81,903	4,54,116	7,44,918
Total	**29,55,305**	**34,28,969**	**28,99,994**	**22,35,686**	**10,86,972**	**28,21,235**	**2,02,85,947**	**28,55,321**	**18,20,019**	**37,01,472**

Source: Information furnished by NRHM, Assam.

[83] 10 PW and mothers in each of the seven selected DH were surveyed during audit (December 2016).

It is thus revealed that-

- In case of 29 lakh out of 29.55 lakh live births (98.13 *per cent),* the children upto one year of age were immunised. But beyond one year and upto five years of age, there was a decreasing trend. Further during the period 2011-16, against the target of 202.86 lakh for the administration of Vitamin A doses, the State could only administer 83.77 lakh doses of Vitamin-A (41.29 *per cent).*

- In the selected seven districts, two districts[84] did not fix any target of immunisation. In the remaining five districts, the highest achievement of 95 *per cent* for complete immunisation *i.e.*, children upto one year of age was reported by Kamrup (R) whereas Golaghat district was the least performer with 66 *per cent* immunisation, against the target set.

It needs to be mentioned that, as regards administration of Polio drops, the State achieved 98.57 *per cent* of its target during 2011-16 which was high but 100 *per cent* immunisation to eradicate Polio from the State was still not achieved.

7.9 Availability of Cold Chain equipment in health centres

A Cold Chain, consisting of equipment such as refrigerators, cold boxes, ice packs *etc*., is a temperature-controlled supply chain. It is used to preserve and to extend and ensure the shelf life of chemicals and pharmaceuticals. This is important in the supply of vaccines to distant clinics in hot climates by poorly developed transport networks.

Test check of selected 30 PHCs revealed the following:

- In 11 PHCs[85] out of 30, no cold chain was found to store vaccines and logistics in the prescribed temperature (2 to 8^0 C) for which they had to depend on other PHCs/CHCs. Of these, in four PHCs[86], vaccine carrier was also not found available.

- In three PHCs[87] out of 30, though freezer and logistics were available but generator service was not available.

Thus, due to inadequate Cold Chain infrastructure, effectiveness of the vaccines could not be ensured in the health centres mentioned above.

On this being pointed out, NRHM, Assam noted (March 2017) the audit observation and assured that comprehensive proposal for additional cold chain points would be proposed in the APIP 2017-18.

---

[84] Kokrajhar and Kamrup (R).
[85] Rupshi, Bhalukmari, Suffry, Bokota, Samaguri, Tekelanjun, Bhoksong, Dampur, Guimara SD, Kulshi SD, Kakila.
[86] Bhalukmari, Suffry, Guimara SD, Kulshi SD.
[87] Furkating, Dakhinhengera, Jharbari.

7.10 Cases of Adverse Event Following Immunisation

As per Surveillance and Response Operational Guidelines 2010 (GoI), Adverse Event Following Immunisation (AEFI) is a medical incidence that takes place after an immunisation, causes concern and is believed to be caused by immunisation. AEFIs are grouped into *inter-alia*, vaccine reaction, programme error and injection reaction. The impact of AEFI can be minimised by providing quality immunisation services, appropriate case management and communication strategies. As per records of the DHS (FW), Assam, total number of AEFI death cases during the period 2011-16 was 39. However, as per Health Management Information System (HMIS), cases of AEFI reported during 2011-16 were as stated in **Table-39**:

Table-39
Cases of AEFI in the State (2011-16)

Year	Cases of AEFI		
	Number of cases of Abscess reported following immunisation	Number of cases of death reported following immunisation	Number of cases of other complications reported following immunisation
2011-12	280	0	1,750
2012-13	171	3	2,820
2013-14	217	5	2,971
2014-15	116	4	3,264
2015-16	93	1	3,843
Total	**877**	**13**	**14,648**

Source: HMIS data.

The above table indicated that cases of AEFI were found to be on an increasing trend during 2011-16. Death cases and complications arising out of the immunisation could have been reduced had timely appropriate action been taken by NRHM, Assam.

On this being pointed out, NRHM, Assam stated (March 2017) to have noted the audit observation for necessary compliance.

7.11 Family Planning

As envisaged in the NRHM Framework (2012-17), family planning services would be utilised as a key strategy to reduce maternal and child morbidities and mortalities in addition to stabilising population. NRHM aimed to provide services for both male and female sterilisation under family planning. Permanent methods of sterilisation included vasectomy/no scalpel vasectomy (NSV), tubectomy, laparoscopy *etc.*, whereas under spacing methods of sterilisation, intrauterine device (IUD) insertion, distribution of condoms, oral pill *etc.*, were being used. The NRHM, Assam aimed at reducing TFR to 2.2 per woman by March 2016 by successfully implementing activities of family planning. The position of TFR in the State however, could not be improved and remained constant (2.3) since 2012-13.

Target and achievement under family planning in the State during 2011-16 were as shown in **Table-40**:

Table-40
Target and Achievement under Family Planning of the State

Year	Vasectomy/NSV		Tubectomy		IUD insertion		Oral pills distribution	
	Target	Achievement	Target	Achievement	Target	Achievement	Target	Achievement
2011-12	18,887	8,161	1,09,722	69,310	85,942	70,852	*Data not furnished*	-
2012-13	13,850	4,056	98,000	58,704	90,000	60,064		10,07,321
2013-14	8,438	4,407	1,00,221	53,003	97,651	80,722		11,54,782
2014-15	9,380	4,391	71,973	41,178	95,200	90,241		13,33,537
2015-16	9,380	5,210	71,973	33,233	95,200	48,330		10,22,145
Total	**59,935**	**26,225**	**4,51,889**	**2,55,428**	**4,63,993**	**3,50,209**		**45,17,785**

Source: Information furnished by NRHM, Assam.
(Data with respect to target as well as achievement in case of mini-lap sterilisation, laparoscopy and distribution of condom was not furnished).

Table above shows that the State was lagging behind in achieving the target under different segments of family planning programmes highlighting the inadequacy in implementation of the programme. Reasons for shortfall were not on record.

This indicated that implementation of family planning programme in the State was not adequate and effective.

It was thus, revealed that home deliveries decreased from 20 to 14 *per cent* in the State during 2011-16. However, 85 *per cent* of home deliveries were not attended by the Skilled Birth Attendants. There were shortfalls in providing for the four Antenatal Care check-ups, distribution of Iron Folic Acid tablets and administration of Tetanus Toxoid injections to pregnant women. New mothers and child were discharged from hospitals before 48 hours' mandatory stay in 34 *per cent* cases of institutional deliveries during 2015-16. Instances had been noticed where patients had to spend their own money for delivery in government hospitals contrary to the aim of the NRHM. Cases of Adverse Event Following Immunisation were found to be on an increasing trend in the State during 2011-16. The State was lagging behind in achieving the target under different segments of family planning programmes. Implementation of health care services relating to reproductive and child health needs to be reviewed and strengthened under NRHM.

Chapter VIII

Monitoring and Evaluation

Chapter VIII: Monitoring and Evaluation

8.1 Approach

NRHM Framework 2012-17 provided for four major approaches to monitoring and evaluation *viz.,* (i) use of data from large scale population surveys, (ii) commissioning implementation research or evaluation studies, (iii) use of HMIS data and field appraisals and (iv) reviews. The health outcomes, output and process indicators, to be monitored, are discussed in the succeeding paragraphs.

8.2 Population surveys

- The District Level Household and Facility Survey (DLHFS) which is conducted by International Institute for Population Sciences under guidance of MoHFW, GoI, provides information on the availability and utilisation of services at health centres. It was noticed that during the period 2011-16, only one DLHFS *i.e.*, DLHFS-4[88] was conducted in 2012-13 by the Ministry of Health and Family Welfare (MoHFW), GoI which mainly pointed out the deficiencies in health infrastructures and human resources.

- Annual Health Survey (AHS) and Sample Registration Survey (SRS) are conducted by the Registrar General & Census Commissioner, India to yield data on sex ratio, disability, abortion, family planning practices, antenatal care, delivery care, postnatal care, Janani Suraksha Yojana, immunisation , mortality etc. However, AHS was conducted twice only (one each in 2011-12 and 2012-13) during the period 2011-16 while SRS was conducted thrice (once each in 2011-12, 2012-13 and 2014-15). Though both the AHS and SRS recorded a continuous improvement in mortality rate in the State, there was a mismatch of data relating to IMR between AHS and SRS as discussed in subsequent chapter.

- National Family Health Survey (NFHS) is conducted by International Institute for Population Sciences (IIPS) under the guidance of MoHFW, GoI to provide essential data on health and family welfare, emerging issues in this area and evidence for effectiveness of ongoing programmes and identify need for new programmes with area specific focus. However, only one NFHS (NFHS-4) was conducted in 2015-16 during 2011-16. As per NFHS-4, Infant Mortality Rate (IMR) during the year 2015-16 increased to 48 from 47 (SRS data in 2014-15).

Thus, the large scale population surveys were done intermittently in the State and these were not a reliable source of evaluation of the outcomes of NRHM.

8.3 Evaluation studies

NRHM, Assam entrusted the Regional Resource Centre for North Eastern States (RRC-NE) to conduct coverage evaluation survey on Maternal and Child Health (MCH) related activities for the year 2011-12 and 2012-13. These evaluation surveys

[88] DLHFS-4 is the 4th survey of District Level Household and Facility Survey (DLHFS).

covered 25 (out of 27) districts on the basis of selected sample size of beneficiaries. The findings of these two studies on the following vital indicators were as summarized in **Table-41**:

Table-41
Performance Indicators evaluated by RRC-NE

(figures in percentage)

Indicators	2011-12		2012-13		Reason for gaps stated by RRC
	Covered	Gap	Covered	Gap	
Children aged 12 to 23 months fully immunised	78.0	22.0	78.3	21.7	Unawareness, fear of side effects, remoteness of place of immunisation *etc.* were main reasons for the gaps.
Three and more ANCs done for pregnant women	83.9	16.1	76.3	23.7	Lack of awareness, remoteness of facility, financial problem *etc.*
Institutional delivery (Government Facility)	66.2	33.8	69.0	31.0	

Source: Report of RRC-NE.

Though the gaps were identified by the studies, the Evaluation Report had not been reviewed by the NRHM, Assam to develop any action plan for improvement. The State did not conduct any evaluation study in the subsequent years (March 2017).

8.4 Health Management Information System (HMIS)

HMIS is an information system that has been specially designed to assist health departments, at all levels, in managing and planning health programmes. HMIS is defined as "a tool which helps in gathering, aggregating, analysing and using information for taking action to improve performance of health systems." Continuous flow of good quality, accurate and reliable data on health of population and health care services assist in local planning, programme implementation, management, monitoring and evaluation.

As per HMIS Service Manual Volume-I, all health facilities including Sub Centres (SCs), Primary Health Centres (PHCs) & Community Health Centres (CHCs) were to send their data to the concerned Blocks in the prescribed format.

First level of data aggregation was to be done at the Blocks by consolidating data from all the facilities to prepare the 'Block Monthly Consolidated Report' for submission to District Programme Management Unit (DPMU).

Second level of aggregation was to be done at the DPMU, where data for all the Blocks and the District stock details were consolidated to prepare the 'District Monthly Consolidated Report'. This report was to be electronically uploaded on the central web portal.

Third point of aggregation was to be done at the State level, where the monthly, quarterly and annual reports of the State were generated. 'State Aggregated Report' was to be uploaded on the web portal, and a copy of the same was to be made available for the State specific HMIS application.

In this regard, two copies of data sets were to be prepared by each SC, PHC and CHC and after approval, one copy was required to be transmitted to the concerned Block/District. After sample verification of correctness of data at block and district levels, the same was to be forwarded to the State level for uploading in the website through HMIS. Besides, the system of social audit and the monitoring of health centres by Rogi Kalyan Samiti (RKS)/Hospital Management Committee (HMC) as well as patients' satisfaction survey were also required for accuracy and transparency purposes. Scrutiny of records revealed that:

- 30[89] SCs, 17[90] PHCs and eight[91] CHCs/SDCHs of the selected health centres prepared and transmitted the soft copies of data without approval of the competent authority.
- The mechanism for sample verification of correctness of data reported at Block, District and State levels was not found in place.
- District Report and State Report were generated automatically in the web portal after uploading of data by Blocks without second and third point aggregation/consolidation by the DPMUs as well as State Project Management Unit (SPMU).
- The State specific HMIS application did not exist on the State server.
- The system of social audit, monitoring of health centres by the RKSs/HMCs and patients satisfaction survey were not found available in the selected health centres to assess the health outcomes.
- Data collected through the household/facility survey had not been verified by the representatives of PRIs.

Thus, authenticity of the data generated and uploaded on the web portal and in the HMIS *vis-a-vis* monitoring of the health outcome could not be verified due to absence of three points of data aggregation, physical sample verification of data *etc.* Besides, absence of social audit, system of monitoring by RKSs/HMCs denied community participation in the process of monitoring the improvement of health services.

8.4.1 Inconsistency of data in HMIS

Common validation rules[92] for HMIS data provides that doses of OPV1 vaccines should be equal to DPT1 vaccines; OPV2 vaccines should be equal to DPT2

[89] Aflagaon, Agchia, AluguriPichala, Amoni, Azarguri, Baithalangsho (N), Borbil, Borchapori, Chamuapara, Charaimari, Dahali, Dampur, Dharapur, Dhekipara, Dudumari, Gendabosti, Gondhmow, Hazarika Para, Laduguri, Long-eh-luboi, Mowamari, Namoni Changmai, Napuk, Phulguri, Premhora , Rangajan, Rangamati, Tekeliakur Grant B, Tokradia and Uttar Borbil.

[90] Baithalangsu PHC, Bhalukmari PHC, Dakhinhengra MPHC, Furkating SD, Garal MPHC, Gelabil MPHC, Guimara SD, Halem SHC, Hazarika Para MPHC, Jaljali, Jharbari SD, Kachomari SD, Kulshi SD, Rampur PHC, Rangamati MPHC, Samaguri SD and Tekelangjan SHC.

[91] Azara CHC, Dotma CHC, Gohpur SDCH, Howraghat CHC, KMCH, SDCH, Merapani CHC, Sarupathar CHC and Sipajhar CHC.

[92] Source: www.nhsrcindia.org

vaccines and OPV3 vaccines equal to DPT3 vaccines. The provision made in the Rule envisaged that OPV1 and DPT1, OPV2 and DPT2, OPV3 and DPT3 were to be administered together. It was, however, seen that the above rule was not followed to verify the correctness. The inconsistency observed from the HMIS data in 2015-16 are shown in **Table-42**:

Table-42
Position showing inconsistencies in HMIS data

OPV1	DPT1	Variation	OPV2	DPT2	Variation	OPV3	DPT3	Variation
618119	13871	604248	614226	44151	570075	60114	94826	34712

Source: HMIS data, State of Assam, 2015-16.

The large variations between OPV1 and DPT1, OPV2 and DPT2 and OPV3 and DPT3 were indicative of inaccurate data.

Further, the total number of deliveries (home deliveries, private institutional deliveries and public institutional deliveries) were to be equal or less than the number of live births and still births taken together (because of twin/multiple births). Though such data was found correct in the HMIS (2015-16) for the overall position of the State, in case of three districts[93] reverse position was noticed as shown in **Table-43**:

Table-43
Position showing inconsistent data in HMIS

Name of district	Total number of Deliveries	Total live births/still births
Dhubri	48,744	48,595
Jorhat	18,423	18,305
Kamrup (R)	22,188	21,947

Source: HMIS data, State of Assam, 2015-16.

Although it was stated that data validation had been carried out both at District and State level, the above variation indicated shortcomings due to which data quality could not be considered as reliable.

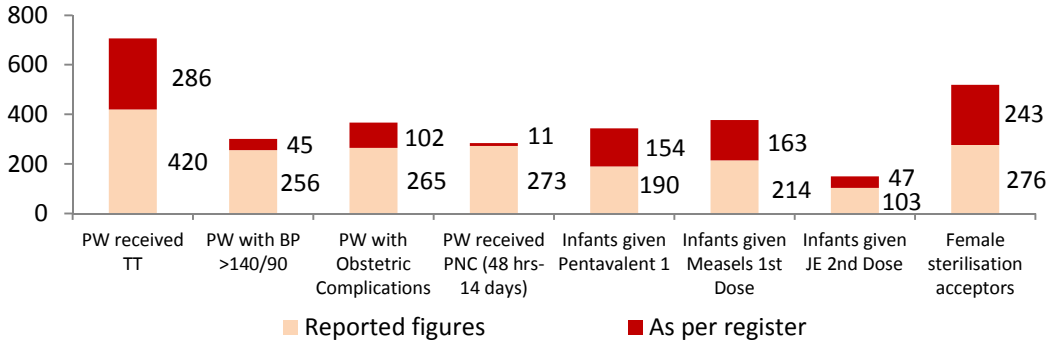
Thus, inaccurate data was likely to yield incorrect conclusions during analysis and interpretation of the progress of the particular intervention.

8.4.2 Discrepancies between the reported data and original data

With a view to assess the accuracy of data, test check of reported data for the month of March 2016 along with basic records/registers maintained by selected SCs, PHCs, CHCs, DHs etc., was carried out in audit. Test check revealed discrepancies at all level of health centers which are detailed in **Appendix-11.** Pictorial presentation of some such discrepancies noticed in the test-checked DHs are shown in **Chart-5**:

[93] Dhubri, Kamrup(R) and Jorhat.

Chart–5
Discrepancies between the reported and original data in DH



Source: MCTS data provided by NRHM.

Due to the discrepancies, the reported data uploaded in the HMIS did not represent actual state of implementation of the activities under the Mission.

Thus, usage of HMIS data to conclude and initiate action on the same was likely to be incorrect.

8.5 Reviews

Appraisal visits for monitoring and evaluation of programme as per NRHM Framework was also emphasized. Rapid appraisals by public health experts from various organisations have added significant value to implementation of the programme. Most important of these was the Common Review Mission (CRM).

It was seen that CRM was conducted by MoHFW, GoI annually during 2011-16 but in the State, CRM was done thrice only *i.e.* in the years 2012, 2014 and 2015 respectively. Perusal of reports relating to the State published by CRM revealed concern on issues like lack of residential accommodation for medical staff to ensure 24x7 service availability, high OOP expenditure, insufficiency of essential drugs, shortfall in human resources, gaps in utilisation of '108'Ambulance service and MMU, rationalisation of SBA, use of branded medicines, under-reporting of maternal death, non-payment of JSY assistance, free drop back facility and free diagnostic to antenatal mothers *etc.* Similar observations relating to the State have also been noticed, which have been highlighted in this report.

To address the issues pointed out by CRM, State should act upon accordingly for effective implementation of various programmes under the Mission.

It was thus, revealed that the monitoring and evaluation of the implementation of the programme was deficient in the State as NRHM, Assam did not adequately review evaluation study reports which identified various gaps in performance indicators. Further, HMIS did not serve as the continuous tool of monitoring of implementation of NRHM in the State due to erroneous and inconsistency of data.

Chapter IX

Impact of NRHM on MMR, IMR and TFR

Chapter IX: Impact of NRHM on MMR, IMR and TFR

9.1 Targets in Millennium Development Goals

Ministry of Health and Family Welfare (MoHFW), GoI in the 'Framework for Implementation (2005-2012)' and subsequent revised 'Framework for Implementation (2012-17)' had laid down certain expected outcomes (National Targets) to be achieved in line with the Millennium Development Goals (MDG), 2015 as well as by the end of 31 March 2016 as shown in **Table-44**:

Table-44
Expected outcome on Maternal Mortality Rate (MMR), Infant Mortality Rate (IMR) and Total Fertility Rate (TFR)

Para-meter	As per the Framework of Implementation (2005-2012)	As per the Framework of Implementation (2012-17)	Expected outcomes (National Targets) by the end of 31 March 2016	As per MDG (2015)
IMR	30 per 1,000 live births	25 per 1,000 live births	26 per 1,000 live births	27 per 1,000 live births
MMR	100 per 1,00,000 live births	100 per 1,00,000 live births	100 per 1,00,000 live births	109 per 1,00,000 live births
TFR	2.1	2.1	2.1	Not prescribed

Source: Framework for Implementation (2012-17), MDG Reports, 2014 of GoI.

9.2 Target and achievement at State level

The position of target *vis-à-vis* achievement at State level, in respect of IMR, MMR and TFR during 2011-16, was as shown in **Table-45**:

Table-45
Target and achievement on MMR, IMR and TFR in the State

Year	IMR			MMR		TFR	
	Target (as per APIP)	Achievement		Target (as per APIP)	Achievement (as per AHS)	Target (as per APIP)	Achievement (as per information furnished by SHS)
		Data furnished by SHS/SRS* data	As per AHS/ NFHS				
2011-12	NA	55 (SRS)	57 (AHS 2011-12)	178	347	Not specified	2.4
2012-13	52	54 (SRS)	55 (AHS 2012-13)	350	301	2.4	2.3
2013-14	46	Survey Report not published	NA	320	Survey Report not published	Not specified	2.3
2014-15	39	47 (SRS)		210			2.3
2015-16	35	Survey Report not published	48 (NFHS-4)	194		2.2	2.3

Source: Information furnished by SHS and available in the PIP, AHS and NFHS.
NA: Not Available.
**** SRS- Sample Registration Survey.***

It was noticed that the achievement of IMR for 2011-12 and 2012-13, as furnished by State Health Survey (SHS) based on SRS data, did not tally with the Annual Health Survey (AHS) data. Against the nation's IMR target of 26 to be achieved by March 2016, the State fixed a target of 35 (as per APIP 2014-15) whereas, IMR in the State was 48 in 2015-16 (as per NFHS-4).

As regards TFR, against the target of 2.1 set by the Mission, the State could achieve 2.3 only, which remained constant since 2012-13 till 2015-16.

Further, with regard to all the three parameters, it was noticed that the targets set by the State Mission were below the corresponding national targets. The State was however, unable to achieve the targets (2011-16).

9.3 Under reporting of maternal and infant deaths

AHS data for MMR had not been published since 2013-14 to 2015-16. As such, the rate of maternal mortality during those years could not be ascertained. However, as per the data furnished by NRHM, Assam and State website[94], total 3,655[95] maternal deaths were reported during 2013-16, which included 203 maternal deaths in seven selected districts during 2015-16.

However, during audit and as per information furnished by seven selected districts, 254 maternal deaths were recorded during the year 2015-16. Further scrutiny also revealed that additional 19 maternal deaths occurred during the same year in the selected districts were neither reported by the districts nor disclosed by NRHM, Assam on its Web portal. As such, there was under reporting of maternal deaths by districts as well as by the State.

Similarly, in case of infant deaths, the number of deaths reported by NFHS-4 was 29,478 (2015-16) against 7,231 reported in the State website.

Thus, due to discrepancies in the reported figures, actual IMR and MMR in the State remained unascertained in Audit.

9.4 Review of maternal and infant deaths

As per guidelines for Maternal Death Review (MDR), the District MDR Committee headed by the Deputy Commissioner will review all the maternal deaths in the district once in a month. Again, operational guidelines for Child Death Review (CDR) stipulated for reviewing a minimum of six death cases per block per month. The report on MDR and CDR is prepared by the in-charge doctor of the health centre for every death in the facility level and for deaths in the community level followed by verbal autopsy done by health worker. Reasons and probable causes of death are noted in the MDR and CDR.

During test check of records in the selected health centres, it was seen that death cases were not reviewed as per the guidelines. The position of review of death cases found in the selected health centres is given in **Table-46**:

[94] *https://www.nrhmassam.info (MIS-GIS).*
[95] 1,359, 1,244 and 1,052 in 2013-14, 2014-15 and 2015-16 respectively.

Table-46
Maternal and Infant deaths in the selected health centres

Particulars	Number of audited health centres with death case				2013-14		2014-15		2015-16		Total	
	DH	SDCH	CHC	PHC	Maternal	Infant	Maternal	Infant	Maternal	Infant	Maternal (*per cent*)	Infant (*per cent*)
Number of maternal and infant deaths	7	3	3	3	133	708	94	744	88	728	315	2180
Number of death review report prepared	6	1	2	3	78	14	88	11	71	12	237 (75)	37 (1.7)
Number of review report discussed	2	1	2	1	40	14	23	11	30	12	93 (30)	37 (1.7)

Source: Information furnished by the selected health centres.

From the above table, it would be seen that MDRs were prepared for 75 *per cent* of maternal deaths only and thus, causes of maternal death in 25 *per cent* cases remained unknown. More significantly, only 30 *per cent* of MDR were reviewed.

Similarly, in case of CDR, only 1.7 *per cent* of death cases were reviewed which was not significantly representative to draw any conclusion.

Thus, the cause of all the deaths in the State was not analysed in order to take necessary remedial measures for their elimination by NRHM, Assam.

9.5 Analysis of electronic Maternal Death Reporting (e-MDR)

NRHM, Assam had been operating e-MDR system *i.e.,* information on maternal death uploaded on the website.

As per e-MDR, the causes of maternal deaths reported for the period from 2013-14 to 2015-16 were as shown in **Table-47**:

Table-47
Causes of Maternal deaths as per e-MDR during 2013-16 in the State

Total maternal death in the State	Causes of death specified						Cause not specified	
	Abortion	Anaemia	Hemorrhage	Obstructed labour	Post-partum Hemorrhage	Sepsis	Cause not known	Others
3648	38	732	261	33	500	160	559	1,365
Total	**1,724**						**1,924**	

Source: e-MDR of SHS.

From the above, it would be noticed that out of 3,648 deaths reflected in the e-MDR (2013-16), the causes of death were not specified for 1,924 deaths (53 *per cent*). However, out of 1,724 death cases with specified causes, 732 (42 *per cent*) deaths were due to anaemia, it being the major cause of maternal deaths. Further, cross check of 70 MDR reports pertaining to the period 2013-16 furnished by nine[96] selected Blocks along with other related records revealed that 30 women (43 *per cent*) did not complete four ANCs, 22 deliveries (31 *per cent*) were home deliveries, 17 cases (24 *per cent*) were of multiple pregnancies[97], 14 deaths (20 *per cent*) were of women belonging to the minority community, 12 deceased women (17 *per cent*)

[96] Sipajhar, Jaljali, Sualkuchi, Rampur, Geleki, Baithalangso, Dotma, Gosaingaon and Sarupathar.
[97] More than two deliveries.

got married at an early age[98] *etc.* These were only some illustrative areas of concern noticed during audit scrutiny of MDRs.

Further, cross check of MDRs of the test-checked seven districts with the information available on e-MDR revealed less reporting of maternal death cases as shown in **Table-48**:

Table-48
Position showing less reporting of maternal deaths on e-MDR during the year 2013-16

Number of districts whose MDR reports cross checked	Number of MDR reports available	Number of MDR reports test checked	Number of death cases not found reported on e-MDR
7	454	276	48

***Source: e-MDR of test checked districts*.**
Details of the deceased mothers' whose names were not found in electronic Maternal Death Reporting (e-MDR) data are shown in **Appendix-12.**

Thus, e-MDR also did not depict the actual number of maternal deaths that had occurred.

As per the SBA Trainers' Guide, 2010, women below the age of 18 years or above 40 years have greater chance of having pregnancy related complications. As per the survey report of NFHS-4 for the year 2015-16, 13.6 *per cent* of women in the age group of 15 to 19 years become pregnant/mothers. It was observed from the e-MDR that out of 3,648 deaths occurred during 2013-16, age of 282 deceased PW/mothers were between 14 and 19 years. This indicated that early marriage was also another area of concern which contributed to maternal mortality.

Thus, the complete analysis of MDR and CDR was missing and high mortality rate was noticed. However, monitoring by the State to eliminate the identified risk areas relating to maternal and infant mortality was weak.

It was thus, revealed that the State could achieve IMR of 48, MMR of 301 (2012-13) and TFR of 2.3 only against the Mission's target of 25, 100 and 2.1 respectively. There were under reporting of death cases by NRHM, Assam on its website and State did not review death cases to find out the causes to mitigate those for the improvement.

[98] 18 years and less.

Chapter X

Impact on Beneficiaries

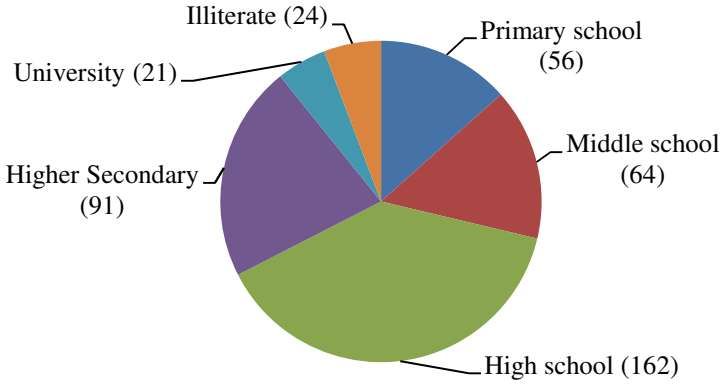
Chapter-X: Impact on beneficiaries

Beneficiary survey was conducted by a joint team of audit and State NRHM representatives. 10 women from each selected Sub Centre (SC), who gave birth within the last 24 months [either at institution (private/government) or at home] were selected for interaction to ascertain the quality of health services provided by the various health centres. The interactions were conducted in the presence of the Auxiliary Nurse Midwives (ANMs) from the SCs with a view to ascertain facilities extended, including difficulties, if any, faced by them during their visit to the Government health centres.

10.1 Coverage of beneficiaries

- Altogether 418 beneficiaries of 45 sub-centres from seven selected districts were interviewed/ surveyed during the PA.
- Age of the beneficiaries surveyed ranged between 17 and 38 years.
- Education level of beneficiaries ranged between illiterate and graduate level, as given in **Chart-6:**

Chart-6
Educational qualification of 418 surveyed beneficiaries



Source:Beneficiary Survey.

10.2 Role of ASHA and ANM

ANM and Accredited Social Health Activist (ASHA) are the village-level trained female health workers who are the first contact persons between the community and the Public Health Services. ASHA advises the pregnant woman (PW) about ANC, registers pregnancies, conducts Village Health and Nutrition Day (VHND)/Mamata Day/Immunisation Day, immunisation services, child care, taking pregnant women to Health Institutes (HI) for delivery, distributes oral pills/condoms *etc.* ANMs, *inter alia*, ensure registration of pregnancy, conduct blood tests and urine tests of PW, monitor their blood pressure, provide IFA tablets, refer the PW to hospital, counsel on pregnancy care and immunise the PW. Their services are considered important to provide safe and effective care to the beneficiaries.

During the survey, 10.53 *per cent* (*i.e.* 44 out of 418) and 29.19 *per cent* (*i.e.*122 out of 418) respectively, of the surveyed beneficiaries, stated that the above duties were done partially[99]by ANM and ASHA. Thus, sensitisation and care by ASHA and ANM remained deficient with reference to their assigned duties.

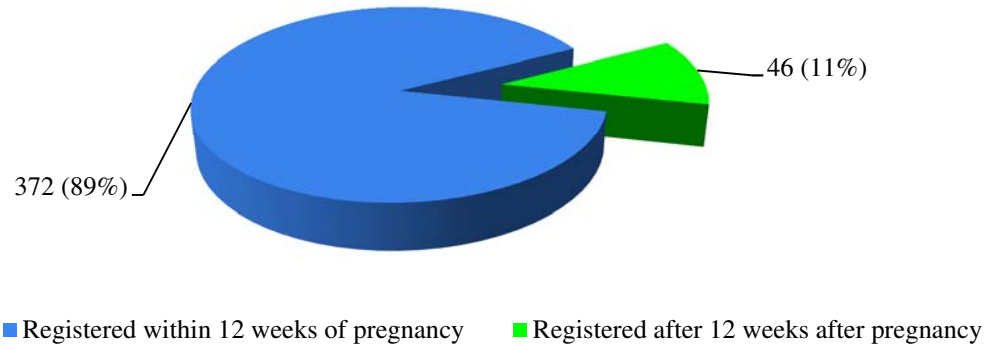
10.3 Antenatal Care (ANC)

WHO recommends that PW should receive four antenatal check-ups. NRHM aimed to provide four ANCs to all PW. The first ANC was to be provided within 12 weeks of pregnancy, second within 20-24 weeks, the third within 28-32 weeks and the fourth ANC within 34-36 weeks of pregnancy, to monitor the progress. Thus, early detection of complications during pregnancy through timely prescribed antenatal check-ups was an important intervention for preventing maternal mortality.

It was revealed in audit that, only 89 *per cent* of the beneficiaries (372 out of 418) registered their names in the Health Institution (HI) within 12 weeks of pregnancy.

The number of registered PW as per beneficiary survey is shown in **Chart-7**:

Chart-7
Registration of PW in case of 418 surveyed beneficiaries



Source: Beneficiary Survey

Further, survey revealed that 85 *per cent* (356 out of 418) of surveyed beneficiaries only undertook the four ANC check-ups.

Thus, complete and timely ANC check-ups were not ensured under NRHM.

10.4 Deliveries

An important component of the RCH programme is to encourage mothers to undergo institutional deliveries. The beneficiary survey revealed that:

- Out of 418 deliveries, 368 (88 *per cent*) were conducted in Government HIs.

The details of deliveries as per beneficiary survey are given in **Table-49**:

[99] One to six out of a total of seven duties and one to seven out of eight stated duties were performed by ASHA and ANM respectively.

Table-49
Position showing place of deliveries

Government Health Institutions				Non Government Health institutions and Others				
DH	**CHC**	**PHC**	**SC**	**Home**	**In transit**	**Non-Govt. facility[100]**	**Pvt. Clinic**	**Other[101]**
188	107	59	14	22	01	07	18	02

Source: Beneficiary Survey.

Out of 368 deliveries in Government health centres, as many as 216 deliveries (58.70 *per cent*) were conducted in the presence of doctor/nurse/SBA-trained ANM[102].

- Cash incentive under Janani Suraksha Yojona (JSY) was provided to 88 *per cent* (325 out of 368) beneficiaries only, thus depriving 12 *per cent* beneficiaries of the benefits under the scheme.

- There was delay in payment of the incentive money ranging between 3 and 365 days from the date of discharge of the beneficiaries from the HI.

- Out of 175 beneficiaries who had called for the Ambulances to reach the HIs, in 158 (90 *per cent*) cases, the same reached on time.

- Four beneficiaries had to pay for the Ambulance service (ranging from ₹ 100 to ₹ 400), despite it being free of charge.

- Forty seven *per cent* (172 out of 368) beneficiaries were discharged within 48 hours of delivery by the respective HIs, in contravention of mandatory stay of 48 hours prescribed as per JSSK/IPHS guidelines.

- Sixty two *per cent* beneficiaries (229 out of 368) were provided food during delivery while 32[103] *per cent* (117 out of 368) stated that no food was provided by the HIs. Remaining 22 beneficiaries could not recall and therefore did not furnish specific reply in this regard.

10.5 Post-natal care (PNC)/Immunisation

The post-natal period is a critical phase in the lives of mothers and newborn babies. Most of the maternal and infant deaths occur in the first month after the birth. Every mother and baby should get four PNC check-ups *viz*., first on day one (within 24 hours), second on day three (48–72 hours), third on day seven to 14 and fourth in the sixth week.

Post-natal services include immunisation, monitoring weight of the child, physical examination of the mother, advice on breast feeding and family planning *etc*. The beneficiary survey in this regard revealed that:

[100] Non Government facility means NGO run hospital.
[101] Other means PPP Mode hospital.
[102] These deliveries were conducted in presence of ASHA, AWW, Family members and Others.
[103] 7 per cent (23 out of 367) could not remember.

- Forty six *per cent* (194 out of 418) beneficiaries availed post-natal care services four times or more, as required. 184 beneficiaires[104]availed less than four PNCs while 40 beneficiaries did not avail any PNC.

- In 2.63 *per cent* (11[105] out of 418) cases, Health Workers did not visit the residences of the beneficiaries within two to seven days after delivery to check the mother and the baby.

408 out of 418 beneficiaries (98.31 *per cent* of 415 live births) stated that they got vaccinated at SCs by ANM, which was a positive indication.

10.6 Quality of care

Quality of service received by mothers from HIs or from ANMs/ASHAs was surveyed with regard to 14 parameters. Responses gathered during interaction are shown in **Table-50**:

Table-50
Position showing service received by beneficiaries (418 numbers) in HI - outcome of survey

Sl. No	Type of Services	Number of beneficiaries replied			Percentage of reply		
		'Yes'	'No'	'Don't know'	Yes	No	Don't know
1	Immunisation	414	4	-	99.00	1.00	-
2	Weight/Height measurement	416	2	-	99.50	0.50	-
3	Referral to another facility	374	44	-	89.50	10.50	-
4	Breastfeeding information	374	41	3	89.50	9.80	0.70
5	Information on JSY	412	5	1	98.50	1.20	0.30
6	Newborn care	368	50	-	88.00	12.00	-
7	Receive paediatric IFA tablets/syrup	348	70	-	83.00	17.00	-
8	Vitamin A dose	353	44	21	84.50	10.50	5.00
9	Diarrhoea management	358	40	20	85.50	9.50	5.00
10	Received adult IFA tablets	383	35	-	91.60	8.40	-
11	Received pediatric de-worming tablets/syrup	327	70	21	78.22	16.75	5.03
12	Advice about proper nutrition during pregnancy	407	8	3	97.36	1.91	0.73
13	Abdomen check-up	411	7	-	98.33	1.67	-
14	Blood pressure measured	417	0	1	99.70	0.30	-

Source: Beneficiary Survey.

The above services as per beneficiary survey were made available to 78 to 99 *per cent* of beneficiaries under NRHM which indicated a positive outcome.

10.7 Problem/difficulties faced by beneficiaries to visit HIs

Beneficiary survey of the 418 beneficiaries revealed that 22 (5 *per cent*) PW[106] did not visit HI for delivery, 62 (15 *per cent*) PW did not complete their ANC and 11 (3 *per cent*) PW did not visit for PNC at HI. Replies to further questionnaires on the

[104] 1 time PNC – 40 beneficiaries; 2 times PNC- 72 beneficiaries and 3 times PNC – 72 beneficiaries.
[105] Home delivery=1, Private Hospital=2, PHC=7, SC=1.
[106] Home delivery.

difficulties faced by the beneficiaries in visiting the HIs are summarised in **Table-51:**

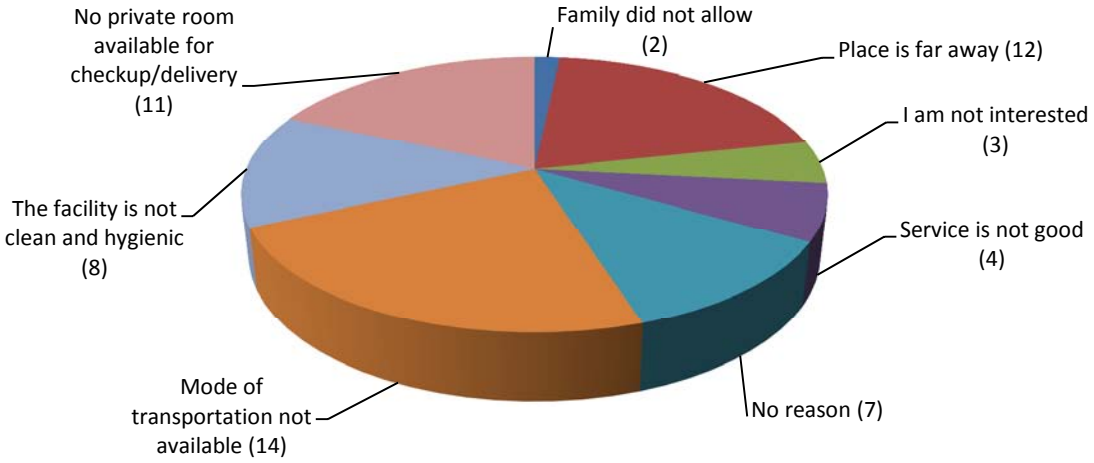
Table-51
Problems/difficulties faced by beneficiaries (418 numbers) - outcome of survey

Problems faced by beneficiaries to visit HI	Number of beneficiaries replied 'Yes'	
	Number	*Per cent*
Mode of transportation not available	140	33.00
No private room available for check-up/delivery	121	29.00
Place is far away	111	27.00
The facility is not clean and hygienic	81	19.00
No reason	72	17.00
Facility is overcrowded	42	10.00
Service is not good	38	9.00
I am not interested	26	6.00
People providing services do not treat me well	18	4.00
Service not available	12	3.00
Family did not allow	8	2.00
Staff is rarely available	2	0.50
Service not needed	1	0.24

Source: Beneficiary Survey.

Further, various/ multiple reasons for not visiting the HIs, were given by the 22 women who delivered at home, are as shown in **Chart-8**:

Chart-8
Reason(s) for not visiting the HI by women who delivered at home
(beneficiaries in number)



Source: Beneficiary Survey.

Besides, seven women stated that they had paid ₹ 200 to ₹ 2200 for their delivery at HI. However, for obtaining IFA tablets, vaccination, meeting doctors *etc*., none of the interacted beneficiaries paid any money, as stated.

***PA team conducting beneficiary survey* (25.05.2016)**

***PA team conducting beneficiary survey*(27.05.2016)**

It was thus, revealed that five *per cent* of the beneficiaries surveyed did not visit health centres for delivery. Remoteness of health centres, lack of transportation facilities, cleanliness, overcrowding, non-attending of all institutional deliveries by Doctors/Nurse, spending of own money *etc*., were the areas of concern pointed out by sampled beneficiaries during the survey conducted by audit which would require to be addressed on priority.

Chapter XI

Conclusion and Recommendations

Chapter XI: Conclusion and Recommendations

11.1 Conclusion

Reproductive and Child Health (RCH) programme emphasised, *inter-alia*, various key interventions to help reduce the maternal mortality rate (MMR) and the total fertility rate (TFR) of pregnant women (PW). It also encompassed provisions for neonatal care, vaccination and immunisation to reduce the infant mortality rate (IMR).

The Performance Audit (PA) of impact of National Rural Health Mission (NRHM) on RCH revealed that proper identification of gaps in implementation of programme and needs required to be addressed on a priority basis, could not be assessed in the absence of Perspective Plans. Involvement of State Health Mission in the planning and monitoring of the programme was found absent during 2014-15 and 2015-16. Bottom-up decentralised and community-based approach to public health planning was not ensured.

The year-wise utilization of available funds was poor which resulted in partial achievement of targeted goals, including fund cuts/short releases by the Government of India (GoI). Short utilisation of available funds and delay in submission of Annual Accounts along with Utilisation Certificates to GoI caused delay in receipt of grants including imposition of fund cuts against the approved grants.

There were shortages of health centres against the requirement as per the prescribed norms to cover the entire rural population under the programme. There had been delay in construction of health centres and in some cases, health centres were not found located in easy accessible areas and in equitable manner *viz*., operation of two health centers in one compound *vis-a-vis* overburdened health centres covering more population than the prescribed norms *etc*.

There were shortages of General Doctors, Specialist Doctors, AYUSH[107] Doctors and Staff Nurses *etc.*, in the State. Numbers of health centres were functioning without Doctor, Laboratory Technician, Pharmacist, Accountant, Male Health Worker, Female Health Workers and Lady Health Visitor. Besides, irrational posting of Doctors and other staffs and Specialist Doctors were also noticed in the test checked health centres.

The State had not adopted web based supply chain management application (e-Aushadhi) to assess the requirement and distribution of drugs, surgical items on a scientific basis. As a result, instances of both shortage and expiry of medicines due to excess supply were noticed in the test checked health centres. Basic services such as electricity, water, toilet *etc.*, were not found available in a number of health centres.

Audit revealed that health care services in outreach areas especially in Char and Tea Garden areas were inadequate. Boat Clinics were not able to provide comprehensive health care in Char areas. Tea Garden areas contributed to the high MMR in the State while MMR data of Char areas was not maintained by the NRHM, Assam.

[107] Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy.

A number of health centers were noticed with inadequate laboratory services and emergency care for sick new born due to shortage of manpower or non-availability of infrastructural support. Instances have been noticed where health infrastructures remained unutilized due to non availability of trained/skilled manpower. Required Quality Assurance activities for quality health care were also not ensured.

Number of home deliveries in the State was decreasing but 85 *per cent* home deliveries were not attended by the Skilled Birth Attendant trained Auxiliary Nurse Midwife though required as per norms.

It was revealed in audit that 98.13 *per cent* children upto one year of age were immunised and 98.57 *per cent* of the target for pulse polio administration was achieved under the programme which were high but 100 *per cent* immunisation to eradicate Polio from the State was still not achieved. Further, 39 deaths were recorded owing to Adverse Event Following Immunisation in the State during 2011-16 and there was shortfall in achieving the target for sterilisation under Family Planning.

It was revealed during joint patient survey, conducted by audit along with NRHM staff, among the beneficiaries of the seven selected DHs that patient's family had to spend money from their own pockets on account of purchase of medicines, diagnostic services *etc.*, though delivery service was free of cost under the programme. Further, Maternal Death Report in case of one deceased woman disclosed that the woman could not be shifted to higher health centre due to poor financial condition of the family.

It was noticed in audit that the State had not analysed the causes of maternal and infant deaths. Non-maintenance of data in a proper manner and lack of data validation resulted in mis-reporting and discrepancy between the actuals and Health Management Information System (HMIS) data, making it unreliable to assess the actual status of performance indicators under the programme.

Even though the State had set targets for performance indicators *viz.*, for MMR, IMR and TFR much below the national targets but the same however, remained to be achieved.

Thus, due to deficient implementation and non-resolution of the key issues related to implementation of various programmes under the Mission as discussed in the Report, the objective of NRHM on improving "Reproductive and Child Health" in the State was yet to be achieved.

11.2 Recommendations

- *Annual plans should be prepared by following bottom-up decentralised and community-owned approach in order to address the gaps and needs in health care at grass root levels. NRHM, Assam should ensure timely preparation and submission of Annual Accounts along with Utilisation Certificates as per rules.*
- *Health centres should be evenly located at easily accessible places and should ensure coverage of the populace in equitable manner. Rational deployment of*

available manpower should be ensured and adequate steps taken to fill up the vacant posts on priority basis for effective implementation of the programmes. Drug Inventory Management and Distribution System should be implemented in the State so as to ensure sufficiency of essential drugs and surgical items at all levels of the health system.

- *In Char areas, regular visit of Boat Clinics equipped with the minimal facility for conducting deliveries and also availability of Boat Ambulances should be ensured. The data relating to mortality rates in Char Areas needs to be maintained to assess the progress of implementation of the programme in such areas. Special focus should be accorded to Tea Garden areas by providing infrastructural, logistical and manpower support under NRHM in order to reduce the maternal mortality rate.*
- *Quality Assurance Activities by the concerned State level and District level Committees needs to be reviewed as per guidelines and by conducting patient satisfaction survey to ascertain the quality of health care to beneficiaries.*
- *Effective system of data maintenance and its validation with basic records should be put in place before uploading in the Health Management Information System to make it reliable to monitor the actual progress of performance indicators under the programme.*

(Rashmi Aggarwal)
Accountant General (Audit), Assam

Guwahati
The 19 July 2017

Countersigned

(Shashi Kant Sharma)
Comptroller and Auditor General of India

New Delhi
The 28 July 2017

Appendices

Appendix – 1

(Reference: Para 1.6)

List of samples of health facilities covered in the Audit

DHS		DH		BPHC		CHC/SDCH		PHC/SD/MPHC		SC
1	Golaghat	KushalKonwar Civil Hospital	1	K.B. Ali BPHC	1	Merapani CHC	1	Dakhinhengera MPHC	1	Kacharihat
							2	Furkating SD	2	Ratanpur
									3	Charaimari
			2	Sarupathar BPHC	2	Sarupathar CHC	3	Gelabil MPHC	4	Premhara
							4	Kachomari SD	5	Azarguri
									6	Borchapori
2	Darrang	Mangaldoi Civil Hospital	3	Sipajhar BPHC	3	Sipajhar CHC	5	Garukhuti	7	Tekeliakur Grant (B)
							6	Hazarikapara	8	Hazarikapara
									9	Dhekipara
			4	Jaljali BPHC		Nil	7	Rangamati	10	Punia
							8	Jaljali	11	Mowamari
									12	Chamuapara
3	Kokrajhar	RNB Civil Hospital	5	Gossaigaon BPHC	4	Gossaigaon SDCH	9	Rupshi MPHC	13	Srirampur
							10	Bhowraguri MPHC	14	Jacobpur
									15	Dudumari
			6	Dotoma BPHC	5	Dotoma CHC	11	Jharbari SD	16	Aflagaon
							12	Bhalukmari	17	Pakrirtal
									18	Kharidamodati
4	Sivasagar	Sivasagar Civil Hospital	7	Geleky BPHC	6	KSHS SDCH, Ligiripukhuri	13	Santak	19	Junglebosti
							14	Nazira SHC	20	Gendabosti
									21	Simaluguri
			8	Patsaku BPHC			15	Suffry MPHC	22	Borbil
							16	Bokota MPHC	23	Napuk
							17	Patsaku	24	NamoniChangmai
5	Karbi-Anglong	Diphu Civil Hospital	9	Howraghat BPHC	7	Howraghat CHC	18	Samaguri	25	Uttar Borbil
							19	Tekelajan	26	Amoni
									27	Ghorajan
			10	Baithalango BPHC	8	Hamren SDCH	20	Baithalangsho	28	Baithalangsho (N)
							21	Bhoksong	29	Dalimbari
									30	Long-eh Luboi
6	Kamrup (Rural)	TularamBafna Civil Hospital	11	Sualkuchi BPHC	9	Sualkuchi FRU	22		31	Tokradia
								Dampur SD	32	Dampur
									33	Gondhmow
			12	Azara BPHC	10	Azara CHC	23		34	Agchia
								Garal MPHC	35	Phulguri
									36	Dharapur
			13	Rampur BPHC			24	Guimara SD	37	Dohali SC
							25	Kulshi SD	38	Laduguri
							26	Rampur	39	Rangamati
7	Sonitpur	Kanaklata Civil Hospital	14	Balipara BPHC	11	Chariduar CHC	27	Haleswar MPHC	40	Rangajan
							28	Balipara	41	Baligaon
									42	Bindukuri
			15	Gohpur BPHC	12	Kalabari MH	29	Halem SHC	43	Ghimarujan
					13	Gohpur SDCH	30	Kakila MPHC	44	AliguriPichala
									45	Sonapur

Source: Result of Sampling

Appendix – 2

(Reference: Para 3.7.1)

Statement showing delay in recovery of mobilisation advance and loss of interest

(*Amount in* ₹)

Sl. No.	Details of construction schemes		Date of RA bills	Mobilisation advance adjusted	Mobilisation advance balance	No. of days	Loss of interest
1	**2**		**3**	**4**	**5**	**6**	**7**
1	Name of the scheme:	Construction of 100 bedded MCH wing at Karimganj	19-06-2014	18,43,098	1,36,56,902	174	7,38,904.11
	Contract price:	16,23,45,826	25-07-2014	50,00,000	86,56,902	210	1,34,698.21
	Name of contractor:	Abdul Kuddus	10-11-2014	40,00,000	46,56,902	318	2,56,149.43
	Mobilisation advance:	**1,55,00,000**	27-01-2015	46,56,902	0	396	99,517.36
	Date of advance	26-12-2013				**Sub Total**	**12,29,269.11**
2	Name of the scheme:	Construction of CHC Model Hospital including quarters at Nobera, Jorhat	18-03-2014	22,27,279	81,72,721	193	5,49,917.81
	Contract price:	5,30,07,476	04-09-2014	40,00,000	41,72,721	363	3,80,647.28
	Name of contractor:	Md Shoiab Khan	12-01-2015	27,59,508	14,13,213	493	1,48,617.46
	Mobilisation advance:	**52,00,000** dt. 14-08-2013	18-06-2015	14,13,213	0	650	60,787.52
		52,00,000 dt. 05-09-2013				**Sub Total**	**11,39,970.07**
3	Name of the scheme:	Construction of 100 bedded MCH wing with staff quarter at Mahkhuli, Nagaon	30-09-2014	28,30,307	1,21,64,638	255	10,47,592.05
	Contract price:	14,99,49,450	05-02-2015	30,86,828	90,77,810	383	4,26,595.52
	Name of contractor:	Shivam Transcon Pvt. Ltd.	12-08-2015	29,57,243	61,20,567	571	4,67,569.39
	Mobilisation advance:	**1,49,94,945** dt. 17-01-2014	31-10-2015	61,20,567	0	651	1,34,149.41
						Sub Total	**20,75,906.38**
4	Name of the scheme:	Construction of CHC at Uriamghat, Golaghat	09-09-2013	25,00,000	75,00,000	163	4,46,575.34
	Contract price:	5,06,31,901	06-03-2014	8,16,456	66,83,544	340	3,63,698.63
	Name of contractor:	Md Shoiab Khan	31-03-2014	12,16,778	54,66,766	365	45,777.70
	Mobilisation advance:	**1,00,00,000** dt. 30-03-2013	30-07-2015	54,66,766	0	851	7,27,903.64
						Sub Total	**15,83,955.31**

1	2		3	4	5	6	7
5	Name of the scheme:	Construction of CHC Hospital including residential quarters at Borchok, Sonitpur	04-04-2014	10,11,809	38,66,494	369	4,93,176.39
	Contract price:	4,87,83,033	31-10-2015	38,66,494		943	6,08,045.91
	Name of contractor:	Moina Enterprise				**Sub Total**	**11,01,222.29**
	Mobilisation advance:	**48,78,303** dt. 31-03-2013					
6	Name of the scheme:	Construction of CHC at Barama, Baksa	08-08-2013	22,16,013	26,62,290	130	1,73,747.78
	Contract price:	5,14,10,407	06-12-2013	8,19,591	18,42,699	249	86,797.95
	Name of contractor:	Mayur Associates	24-01-2014	12,37,467	6,05,232	298	24,737.60
	Mobilisation advance:	**48,78,303** dt. 31-03-2013	29-03-2014	6,05,232	0	362	10,612.29
						Sub Total	**2,95,895.62**
7	Name of the scheme:	Construction of CHC (Model Hospital) including residential quarters at Junaram Chowka, Darrang	08-08-2013	23,07,635	24,48,711	130	1,69,404.10
			06-12-2013	8,85,716	15,62,995	249	79,834.69
	Contract price:	4,98,55,292	24-01-2014	12,27,202	3,35,793	298	20,982.67
	Name of contractor:	Mayur Associates	29-03-2014	3,35,793	0	362	5,887.88
	Mobilisation advance:	**47,56,346** dt. 31-03-2013				**Sub Total**	**2,76,109.34**
8	Name of the scheme:	Construction of CHC (Model Hospital) including residential quarters at Nahar Donga, Golaghat	06-12-2013	13,20,149	35,58,154	249	3,32,793.82
			24-01-2014	12,37,988	23,20,166	298	47,767.00
	Contract price:	4,87,83,033	29-03-2014	19,88,925	3,31,241	362	40,682.36
	Name of the contractor:	Mayur Associates	04-09-2014	3,31,241	0	521	14,429.40
	Mobilisation advance:	**48,78,303** dt. 31-03-2013				**Sub Total**	**4,35,672.59**
9	Name of the scheme:	Construction of CHC Moinakhurung, Kamrup (R)	19-06-2015	8,86,882	20,33,118	444	3,55,200.00
			31-08-2015	7,68,266	12,64,852	517	40,662.36
	Contract price:	4,29,94,407	29-10-2015	8,80,000	3,84,852	576	20,445.55
	Name of the contractor:	Orbit Associate	31-10-2015	3,84,852	0	578	210.88
	Mobilisation advance:	**40,00,000** dt. 31-03-2014				**Sub Total**	**4,16,518.79**

Total = ₹ (12,29,269.11 + 11,39,970.07 + 20,75,906.38 + 15,83,955.31 + 11,01,222.29 + 2,95,895.62 + 2,76,109.34 + 4,35,672.59 + 4,16,518.79)

= ₹ 85,54,519.48

Source: Departmental records and information furnished

Appendix – 3

(Reference: Para 3.7.1)

Statement showing grants of interest free mobilization advance to contractors for construction of health centres

Sl. No.	Name of the contractor	Name of work and location	Estimated amount (₹ in lakh)	Contract value (₹ in lakh)	Date of advance	Cheque No.	Amount of mobilisation advance (₹)
1.	M/s Macrocosom Builders	CHC, Subhajhar	400.00	365.09	08.03.11	53523	36,50,916
2.	M/s MP Agarwala	CHC, Narayanpur	400.00	363.30	25.03.11	53545	36,33,015
3.	M/s Manabjyoti Gogoi & Co	CHC, Chabua	400.00	317.92	29.03.11	53556	31,79,237
4.	Pulen Haloi	CHC, Moterghar	400.00	319.80	31.03.11	58426	15,99,000
5.	Fayzal Haque	CHC, Manikpur	400.00	332.63	31.03.11	58341	16,31,563
6.	M/s Mayur Associates	CHC, Bogribari	400.00	384.41	31.03.11	58342	19,22,050
7.	M/s Malna Enterprise	CHC, Sirajuli	400.00	311.14	20.04.11	58406	15,55,719
8.	Harunr Rasid	CHC, Boitamari	400.00	341.21	31.03.11	58351	34,06,081
9.	Abdul Bachit	CHC, Dulavchera	400.00	391.57	31.03.11	58357	39,15,717
10.	Khalilur Rahman	CHC, Kachua	400.00	312.20	31.03.11	58376	15,61,007
11.	M/s Sunrise Enterprise	CHC, Belsor	400.00	314.91	31.03.11	58388	15,74,579
12.	Majibur Rahman	CHC, Tikal	400.00	390.07	31.03.11	58386	19,50,360
13.	Fayzal Haque	CHC, Chandamama	400.00	395.68	31.03.11	58396	19,78,420
14.	Munnaf Ahmed	CHC, Borgang	400.00	390.59	31.03.11	58382	19,52,982
15.	M/s Versa techno trade	CHC, Rowta	400.00	359.82	20.04.11	58407	35,98,270
16.	Mriganka Dhar Sarma	CHC, Boginadi	400.00	365.15	20.04.11	58412	36,51,554
17.	Abdul Quddus	CHC, Katigorah	400.00	339.12	06.06.11	60148	33,91,264
Total			**6,800.00**	**5,994.61**			**4,41,51,734**

Source: Departmental records and information furnished

Appendix - 4

(Reference: Para 4.2)

Statement showing position of delay in completion of construction of health centres during 2011-16

Sl. No.	Name of District	Year of sanction	Name of the Health Institution	Date of commencement of works	Target date for completion	Actual date of Completion	Delay in completion (days)
1	2	3	4	5	6	7	8
	Community Health Centre						
1	Golaghat	2012-13	Nahar Donga Grant	30.03.2013	31.10.2015	30.11.2015	**30**
2	Jorhat	2012-13	Chungi Kahargaon	13.05.2013	15.02.2016	02.06.2016	108
3	Kamrup (R)	2012-13	Kalitakuchi	30.03.2013	30.09.2014	24.01.2015	116
4	Barpeta	2012-13	Majgaon	03.04.2014	03.10.2015	26.02.2016	146
5	Nalbari	2012-13	Khatikuchi	14.05.2013	15.11.2014	10.04.2015	146
6	Nalbari	2012-13	Tihu (Makhibaha)	14.05.2013	15.11.2014	28.04.2015	164
7	Darrang	2012-13	Junaram Chowka	30.03.2013	30.09.2014	21.04.2015	203
8	Baksa	2012-13	Barama	30.03.2013	30.09.2014	30.04.2015	212
9	Kamrup (R)	2012-13	Rangia	21.08.2013	21.02.2015	30.10.2015	251
10	Nagaon	2012-13	Uzuragaon	07.09.2013	30.04.2015	14.03.2016	319
11	Morigaon	2012-13	Bhurbandha	05.02.2013	08.08.2014	25.08.2015	382
12	Karimganj	2012-13	Girishganj	13.05.2013	15.11.2014	28.12.2015	408
13	Goalpara	2012-13	Matia	08.08.2013	08.02.2015	29.03.2016	**415**
	Primary Health Centre						
1	Dibrugarh	2012-13	Mohmari Merbil	05.09.2013	05.09.2014	15.12.2014	**101**
2	Karimganj	2012-13	Adharkuna	05.09.2013	05.09.2014	15.01.2015	132
3	Kamrup (R)	2012-13	Mataikhar	12.11.2013	12.11.2014	28.03.2015	136
4	Sonitpur	2012-13	Bihumari Bongaon	23.09.2013	23.09.2014	16.03.2015	174
5	Hailakandi	2012-13	Santoshnagar	17.05.2014	17.05.2015	13.12.2015	210
6	Nalbari	2012-13	Mugdi	04.07.2014	04.07.2015	30.01.2016	210
7	Hailakandi	2012-13	Manipur	17.05.2014	17.05.2015	25.12.2015	222
8	Darrang	2012-13	Panbari	13.11.2013	13.11.2014	24.06.2015	223
9	Dibrugarh	2012-13	Telpani Caharikata	08.01.2014	08.01.2015	09.02.2016	397
10	Udalguri	2012-13	Puthimari	30.01.2013	30.01.2014	06.08.2015	**553**
	Riverine Primary Health Centre						
1	Barpeta	2010-11	Balikuri	06.11.2011	03.07.2012	30.08.2012	**58**
2	Nagaon	2010-11	Kandhulimari	04.12.2011	31.07.2012	28.09.2012	59
3	Dhubri	2010-11	Nayar Alga Bazar	06.07.2011	02.03.2012	08.05.2012	67
4	Dhubri	2010-11	Dewaner Alga	06.07.2011	02.03.2012	28.05.2012	87
5	Morigaon	2010-11	Jengpori Balichar	30.03.2011	25.11.2011	28.03.2012	124
6	Dhubri	2010-11	Puthimari (New market)	13.06.2011	08.02.2012	15.07.2012	158
7	Bongaigaon	2010-11	Bhandra Bongaigaon	06.07.2011	02.03.2012	16.08.2012	167
8	Jorhat	2010-11	Gereki	16.12.2011	12.08.2012	08.03.2013	208
9	Dhemaji	2010-11	Adutgaon	20.05.2011	15.01.2012	15.08.2012	213
10	Nagaon	2010-11	Ulubari	08.12.2011	04.08.2012	16.03.2013	224
11	Barpeta	2010-11	Kadamtola Chaysimana	25.03.2011	20.11.2011	23.09.2012	308
12	Dhemaji	2010-11	Changchongia Gaon	20.05.2011	15.01.2012	08.12.2012	328
13	Goalpara	2010-11	Simlitola	07.12.2011	03.08.2012	28.06.2013	329
14	Kamrup(R)	2010-11	Batahidia Char	20.05.2011	15.01.2012	24.12.2012	344
15	Sonitpur	2010-11	Bhujkhowa Chapori	20.06.2011	15.02.2012	28.02.2013	379
16	Nalbari	2010-11	Sialmari Bezichuti Char	06.07.2011	02.03.2012	19.03.2013	382
17	Nagaon	2010-11	No.6 Bhugmukh Char	27.03.2011	22.11.2011	23.12.2012	397
18	Morigaon	2010-11	Khandakhaity Char	20.05.2011	15.01.2012	15.03.2013	425

1	2	3	4	5	6	7	8
19	Morigaon	2010-11	Kathoni Balichar	23.05.2011	18.01.2012	30.03.2013	437
20	Barpeta	2010-11	Pub Mahchara	08.12.2011	04.08.2012	25.11.2013	478
21	Nagaon	2010-11	No.2 Bhurbandha Char	06.08.2011	02.04.2012	31.07.2013	485
22	Dhubri	2010-11	Baraibari Char	28.03.2011	23.11.2011	25.03.2013	488
23	Dhubri	2010-11	Birshing Pt.1	30.03.2011	25.11.2011	28.04.2013	520
24	Goalpara	2010-11	Tiapara	03.01.2011	31.08.2011	05.02.2013	524
25	Lakhimpur	2010-11	Bokulguri	23.05.2011	18.01.2012	20.07.2013	549
26	Sonitpur	2010-11	Bachasimalu Neyamat Chubori	14.09.2011	11.05.2012	08.12.2013	576
27	Lakhimpur	2010-11	Dorge gaon	23.05.2011	18.01.2012	20.08.2013	580
28	Kamrup(R)	2010-11	Bangalpara Char	19.05.2011	14.01.2012	24.08.2013	588
29	Barpeta	2010-11	Baghmara Char	03.01.2011	31.08.2011	12.05.2013	620
30	Barpeta	2010-11	Khulabandha	29.09.2011	26.05.2012	22.02.2014	637
31	Sonitpur	2010-11	Kumaliya Chapori	27.03.2011	22.11.2011	20.12.2013	759
32	Dhubri	2010-11	Bhugdahar Char	20.05.2011	15.01.2012	15.03.2014	790
33	Barpeta	2010-11	Isabpur	22.07.2011	18.03.2012	08.10.2014	934
34	Barpeta	2010-11	Karaikheti	30.06.2011	25.02.2012	30.10.2014	978
35	Darrang	2010-11	No. 1 Magurmari Chapori	22.07.2011	18.03.2012	15.12.2014	1,002
36	Bongaigaon	2010-11	Merer Char	30.03.2011	25.11.2011	29.08.2014	1,008
37	Dhubri	2010-11	Airkata Bazar	30.03.2011	25.11.2011	22.04.2015	1,244
38	Nagaon	2010-11	Jengoni Koladoba Char	27.07.2011	23.03.2012	27.03.2016	**1,465**

Source: Departmental records.

Appendix - 5

(Reference: Para 4.5)

Statement showing lack of Infrastructure noticed during visit of the selected health centres

Particulars	SC		PHC		CHC		DH	
	Sampled (nos)	Infrastruc-ture not available	Sampled (nos)	Infrastruc-ture not available	Sampled (nos)	Infrastruc-ture not available	Sampled (nos)	Infrastruc-ture not available
Building	45	9	30	0	13	0	7	0
Compound Wall		27		9		2		0
Plaster		3		1		0		0
Floor		2		1		0		1
Ward		32		10		0		0
OPD		4		0		0		0
Water supply		23		0		0		0
Toilet		5		0		0		0
Electricity supply		30		2		0		0
Standby Generator		0		12		0		0
Labour Room		41		4		0		0
New Born Care Corner		4		12		1		0
Separate male female toilet or functional toilet		37		16		3		2
separate male female ward		Not required		26		2		0
Beds				7		0		0
OPD rooms				2		0		0
Emmergency Room				19		7		0
laundry facility				28		7		3
Operation Theatre				28		4		0
Separate Minor OT, Separate Dressing Room, Injection Room, Emergency room to cater patient for mir injuries				11		0		0
New Born Care Stabilization unit				0		6		1
AYUSH Unit				19		12		2
Separate general storage for storage of sterile, common linen, other materials, drugs and consumable				4		1		0
separate cold chain, Logistics, Generator, office, Dirty Utility etc. room				6		0		0
Building equipped with fire protection measures				0		4		2
Barrier free access environment (viz. Ramp, hand railing etc.) for easy access to handicapped and elderly person				0		7		0

Source: Physical verification.

Appendix - 6

(Reference: Para 4.5)

Statement showing Infrastructure in poor condition noticed during visit of the selected health centres

Particulars	SC		PHC		CHC/SDCH		DH	
	Sampled (nos)	Poor Infrastruc-ture	Sampled (nos)	Poor Infrastruc-ture	Sampled (nos)	Poor Infrastruc-ture	Sampled (nos)	Poor Infrastruc-ture
PartialCompound wall	45	6	30	10	13	3	7	2
Building		1		1		0		0
Plaster of wall coming off		11		13		4		4
Florring is coming off		16		12		7		2
Cleanliness premise		7		0		0		0
Poor Cleanliness in OPD		2		0		2		1
Poor cleanliness of Toilet		9		2		2		0
Any nearby areas of garbage collection, cattleshed, water logging etc.		11		7		5		0
Generator available but not functional		0		5		2		0
Labour Room available but not in use due to not availability of staff, equipment etc.		1		7		0		0
Number of Bed less than norms		Not required		13		2		0
OPD rooms less than norms				0		6		0
Operation Theatre available but not functional due to non availability of man power, equipment etc.				2		5		0
OT without preoperative room, post operative room and changing room (separate for male and female)				0		5		2
Separate Minor OT, Dressing Room, Injection Room, Emergency room to cater patient for minor injuries				10		6		0
General storage for storage of sterile, common linen, other materials, drugs and consumable are partially available				6		1		0
Separate cold chain, Logistics, Generator, office, Dirty Utility etc. room partially available				8		0		0

Source: Physical verification.

Appendix - 7

(Reference: Para 5.1.1)

Statement showing requirement and availability of human resources in the DHs of the state as a whole

Staff	Requirement as per IPHS Norms				Status of availability of HR in District Hospital				Difference in Requirement and MIP w.r.t. IPHS norms Shortage (-)/Excess (+)
	100 bed (11No)	200 bed (11No)	300 bed (3No)	Total Requirement	Regular	NHM	Others	Total	
Superintendant	-	-	-	0	17	0	0	17	17
Deputy Superintendant	-	-	-	0	21	0	0	21	21
MO(MBBS)/GDMO	11	13	15	309	54	17	0	71	-238
Non Specialist Total	**11**	**13**	**15**	**309**	**92**	**17**	**0**	**109**	**-200**
MO(Ayur)	-	-	-	0	13	1	0	14	14
MO(Homoeo)	-	-	-	0	16	0	0	16	16
AYUSH	**1**	**1**	**1**	**25**	**29**	**1**	**0**	**30**	**5**
Obstetrician & Gynaecologist	**2**	**3**	**4**	**67**	**75**	**8**	**0**	**83**	**16**
Paediatrician	**2**	**3**	**4**	**67**	**40**	**7**	**1**	**48**	**-19**
Anaesthetist	**2**	**2**	**3**	**53**	**41**	**7**	**0**	**48**	**-5**
General Surgeon	**2**	**2**	**3**	**53**	**43**	**6**	**0**	**49**	**-4**
Physician/Medicine	2	2	3	53	45	3	0	48	-5
Dermatologist/ Venereologist	0	0	1	3	5	1	0	6	3
Ophthalmologist	1	1	2	28	58	0	0	58	30
Orthopedician	1	1	2	28	9	0	0	9	-19
ENT Surgeon	1	1	2	28	39	0	0	39	11
Radiologist	1	1	2	28	18	2	0	20	-8
Pathologist	1	2	3	42	30	1	1	32	-10
Psychiatrist	1	1	1	25	17	0	1	18	-7
Microbiologist	0	0	1	3	0	0	0	0	-3
Foreignsic Specialist	0	0	1	3	0	0	0	0	-3
Dental Surgeon	1	1	2	28	32	12	1	45	17
Other Specialist	**9**	**10**	**20**	**269**	**253**	**19**	**3**	**275**	**6**
Staff Nurse	45	90	135	1890	830	596	61	1487	-403
Pharmacist	4	6	8	134	102	2	0	104	-30
Pharmacist-AYUSH			6	18	6	0	0	6	-12
Pharmcist including AYUSH	**4**	**6**	**14**	**152**	**108**	**2**	**0**	**110**	**-42**
Radiographer	2	3	5	70	40	2	0	42	-28
Laboratory Technician	6	9	12	201	168	34	3	205	4
Ophthalmic Assistant	1	1	2	28	27	0	0	27	-1
ECG Technician	1	2	3	42	1	0	5	6	-36
Audiometrician	0	0	1	3	1	1	0	2	-1
OT Technician	4	6	8	134	16	3	0	19	-115
Dental Assistant	1	1	2	28	2	0	0	2	-26
Data Entry Operator				0	1	4	3	8	8
Dietician	1	1	1	25	1	7	1	9	-16
Dental Assistant/Dental Technician/Dental Hygienist	-	-	-	0	2	0	0	2	2
Physiotherapist/ occupational therapist/ rehabilitation therapist	1	1	2	28	7	2	0	9	-19
Cold Chain & Vaccine Logistic Assistant	-	-	-	0	3	0	0	3	3
Multi Rehabilitation/ Community Based Rehabilitation worker	1	1	2	28	0	0	0	0	-28
Dresser (certified by Red Cross/ Johns Ambulance)	-	-	-	0	33	3	1	37	37
Ward Boys/Nursing Orderly	-	-	-	0	340	5	0	345	345
Storekeeper	1	1	2	28	0	0	0	0	-28
EEG Technician	0	0	1	3	0	0	0	0	-3
CSSD Assistant	1	1	2	28	0	0	0	0	-28
Social Worker	2	3	4	67	0	0	0	0	-67
Counselor	1	1	2	28	1	33	11	45	17
Dermatologist Assistant	0	0	1	3	0	0	0	0	-3
Psytocian	0	0	1	3	0	0	0	0	-3
Dark Room Assistant	2	3	5	70	0	0	0	0	-70
Total Paramedics	**29**	**40**	**70**	**969**	**751**	**96**	**24**	**871**	**-98**

Source: Departmental records.

Appendix-8

(Reference: Para 5.1.1)

Statement showing requirement and availability of human resources in the CHC of the state as a whole

Staff	Requirement as per IPHS Norms		Status of HR in CHCs				Difference in Requirement and MIP w.r.t. IPHS norms Shortage (-)/Excess (+)
	Per CHC	Total	Regular	NHM	Others	Total	
1	2	3	4	5	6	7	8
Superintendant	1	151	1	0	0	1	-150
Deputy Superintendant	-	0	73	0	0	73	73
MO(MBBS)/GDMO	2	302	223	87	1	311	9
Non Specialist Doctors	**3**	**453**	**297**	**87**	**1**	**385**	**-68**
MO(Ayur)	-	0	51	36	0	87	87
MO(Homoeo)	1	151	18	33	0	51	-100
AYUSH	**1**	**151**	**69**	**69**	**0**	**138**	**-13**
Public Health Specialist	1	151	0	0	0	0	-151
Obstetrician & Gynaecologist	**1**	**151**	**43**	**15**	**0**	**58**	**-93**
Paediatrician	**1**	**151**	**10**	**6**	**0**	**16**	**-135**
Anaesthetist	**1**	**151**	**13**	**5**	**0**	**18**	**-133**
General Surgeon	**1**	**151**	**6**	**2**	**0**	**8**	**-143**
Physician	**1**	**151**	**15**	**4**	**0**	**19**	**-132**
Dermatologist/Venereologist	0	0	0	0	0	0	0
Ophthalmologist	0	0	6	0	0	6	6
Orthopedician	0	0	0	0	0	0	0
ENT Surgeon	0	0	3	0	0	3	3
Radiologist	0	0	3	0	0	3	3
Pathologist	0	0	2	2	0	4	4
Psychiatrist	0	0	1	0	0	1	1
Specialist (Others)	0	0	2	2	0	4	4
Dental Surgeon	1	151	42	23	0	65	-86
Total Specialist Doctors	**7**	**1,057**	**146**	**59**	**0**	**205**	**-852**
ANM	0	0	186	118	3	307	307
MPW (Male)	0	0	40	0	0	40	40
Staff Nurse	**10**	**1,510**	**514**	**405**	**2**	**921**	**-589**
LHV	0	0	42	0	1	43	43
Sister In-charge	0	0	4	0	0	4	4
Total Nursing Staff	**10**	**1,510**	**786**	**523**	**6**	**1,315**	**-195**
Laboratory Technician	**2**	**302**	**128**	**91**	**8**	**227**	**-75**
Pharmacist	1	151	185	53	0	238	87
Pharmacist-AYUSH	1	151	22	0	0	22	-129
Pharmacist including AYUSH	**2**	**302**	**207**	**53**	**0**	**260**	**-42**
Radiographer	0	0	48	1	1	50	50
Ophthalmic Assistant	1	151	21	0	1	22	-129
ECG Technician	0	0	0	0	0	0	0
Audiometrician	0	0	0	0	0	0	0
OT Technician	1	151	3	0	0	3	-148
Dental Assistant	1	151	2	0	0	2	-149
Data Entry Operator	0	0	0	4	2	6	6
Dietician	0	0	1	4	0	5	5
Dental Assistant/Dental Technician/Dental Hygienist	0	0	0	0	0	0	0
Physiotherapist/occupational therapist/rehabilitation therapist	0	0	12	0	0	12	12
Cold Chain & Vaccine Logistic Assistant	0	0	6	0	0	6	6
Multi Rehabilitation/Community Based Rehabilitation worker	1	151	0	0	0	0	-151
Counselor	1	151	0	0	0	0	-151
Total Paramedics	**9**	**1,359**	**428**	**153**	**12**	**593**	**-766**

1	2	3	4	5	6	7	8
Administrative Assistant	1	151	0	0	0	0	-151
Accountant/LDA	1	151	56	42	0	98	-53
Registration Clerk	2	302	2	3	3	8	-294
Medical records officer/technician	0	0	0	0	0	0	0
Statistical Assistant/Data Entry Operator/Computer Operator	2	302	1	5	0	6	-296
Dresser (certified by Red Cross/Johns Ambulance)	1	151	42	4	0	46	-105
Ward Boys/Nursing Orderly	5	755	134	0	4	138	-617
Driver	0	0	32	6	13	51	51
Health Educator	0	0	28	0	0	28	28
Multi-skilled Group D worker	0	0	53	0	0	53	53
Sanitary worker cum watchman	0	0	33	0	2	35	35
Safai Karamchari	0	0	38	3	24	65	65
Total Administrative Staff	**12**	**1,812**	**419**	**63**	**46**	**528**	**-1,284**

Source: Departmental records.

Appendix - 9

(Reference: Para 6.2.3)

Availability of Support Services in selected DHs

Sl. No.	Check Point	Tolaram Bafna DH	Diphu DH	RNB Civil Kokrajhar	Sivasagar DH	Mangaldoi DH	Sonitpur DH	Golaghat DH	Yes=1	No=2	Partial =3	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
Whether the facility has established Programme for inspection, testing and maintenance and calibration of Equipment.												
1.	All equipments are covered under AMC including preventive maintenance	2	2	3	2	3	2	2	**0**	**5**	**2**	**7**
	There is system of timely corrective break down maintenance of the equipments	1	2	3	2	1	1	2	**3**	**3**	**1**	**7**
	Periodic cleaning, inspection and maintenance of the equipments is done by the operator	2	2	3	2	3	1	2	**1**	**4**	**2**	**7**
2.	All the measuring equipments/ instrument viz. (BP apparatus, thermometers, weighing scale , radiant warmer etc) are calibrated	2	2	3	2	2	3	2	**0**	**5**	**2**	**7**
	There is system to label/ code the equipment to indicate status of calibration/ verification when recalibration is due	2	2	3	2	2	2	2	**0**	**6**	**1**	**7**
Whether the facility has defined procedures for storage, inventory management and dispensing of drugs in pharmacy and patient care areas												
3..	There is established system of timely indenting of consumables and drugs	1	3	1	1	1	1	1	**6**	**0**	**1**	**7**
4.	Drugs are stored in containers/tray/crash cart and are labelled	1	2	1	1	2	1	2	**4**	**3**	**0**	**7**
5.	Expiry dates' are maintained at emergency drug tray	1	1	2	1	2	2	1	**4**	**3**	**0**	**7**
	Records for expiry and near expiry drugs are maintained for drug stored at department	1	1	1	1	2	2	2	**4**	**3**	**0**	**7**
6.	The drugs received at the facility have sufficient shelf-life	1	2	-	3	3	3	3	**1**	**1**	**4**	**6**
	There is practice of calculating and maintaining buffer stock	1	3	2	1	2	2	2	**2**	**4**	**1**	**7**
	Department maintained stock register of drugs and consumables	1	1	1	1	1	1	1	**7**	**0**	**0**	**7**
	There is no drug out of stock	3	2	3	3	2	3	2	**0**	**3**	**4**	**7**
7.	Temperature of refrigerators are kept as per storage requirement and records are maintained	1	1	1	1	1	1	1	**7**	**0**	**0**	**7**
Whether the facility ensures 24X7 water and power backup as per requirement of service delivery, and support services norms												
8.	Availability of 24x7 running and potable water	1	2	1	1	1	1	1	**6**	**1**	**0**	**7**
	Availability of hot water	2	2	3	2	2	2	1	**1**	**5**	**1**	**7**

1	2	3	4	5	6	7	8	9	10	11	12	13
9.	Availability of power back up in labour room	1	1	1	1	1	1	1	**7**	**0**	**0**	**7**
	Availability of UPS	1	1	1	1	1	1	1	**7**	**0**	**0**	**7**
	Availability of Emergency light	1	1	1	1	1	1	1	**7**	**0**	**0**	**7**
10.	Availability of Centralized /local piped Oxygen and vacuum supply	2	2	1	2	2	2	2	**1**	**6**	**0**	**7**
Whether the facility ensures clean linen to the patients												
11.	Availability of clean Drape, Macintosh on the Delivery table,	1	1	1	1	2	1	1	**6**	**1**	**0**	**7**
	Gown are provided in labour room	1	1	1	1	1	1	1	**7**	**0**	**0**	**7**
	Availability of Baby blanket, sterile drape for baby	1	1	1	1	1	1	3	**6**	**0**	**1**	**7**
12.	Linen is changed every day and whenever it get soiled	1	2	2	2	2	2	2	**1**	**6**	**0**	**7**
13.	There is system to check the cleanliness and Quantity of the linen received from laundry	2	2	2	2	2	1	1	**2**	**5**	**0**	**7**
Whether the facility has established procedure for monitoring the quality of outsourced services and adheres to contractual obligations												
14.	There is procedure to monitor the quality and adequacy of outsourced services viz. (cleaning/ Dietary/Laundry/ Security/Maintenance) on regular basis by designated in-house staff)	2	2	2	2	1	1	1	**3**	**4**	**0**	**7**
Whether the Dietary services are available as per service provision and nutritional requirement of the patients.												
15.	Check for the adequacy and frequency of diet as per nutritional requirement	2	2	3	2	2	3	2	**0**	**5**	**2**	**7**

Source: Physical verification.

Appendix - 10

(Reference: Para 6.2.3)

Availability of Support Services in selected SDCH/CHCs

Sl. No	Particulars	Name of SDCH				Name of CHC									Yes=1	No=2	Partial=3
		Gossai-gaon	Hamren	KSHS	Gohpur	Azara	Sual-kuchi	Mera-pani	Sarupathar	Sipa-jhar	Dotma	Chari-duar	Howra-ghat	Kala-bari			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	The facility has established Programme for inspection, testing and maintenance and calibration of Equipment.																
1.	All equipments are covered under AMC including preventive maintenance	2	2	2	2	2	2	2	2	2	2	2	2	2	0	13	0
	There is system of timely corrective break down maintenance of the equipments	2	2	2	2	2	2	2	2	2	2	2	2	2	0	13	0
2.	All the measuring equipments/ instrument viz. (BP apparatus, Thermometers, Weighing scale , Mouth Gauze etc) are calibrated	2	2	2	1	2	2	2	2	1	2	2	2	2	2	11	0
	There is system to label/ code the equipment to indicate status of calibration/ verification when recalibration is due	2	2	2	2	2	2	2	2	2	2	2	2	2	0	13	0
	The facility has defined procedures for storage, inventory management and dispensing of drugs in pharmacy and patient care areas																
3.	Drugs are stored in containers/tray/crash cart and are labelled	2	1	1	2	1	2	3	3	2	1	1	1	3	6	4	3
4.	Expiry dates' are maintained at emergency drug tray	2	2	2	3	2	1	2	2	2	2	2	2	2	1	11	1
	Records for expiry and near expiry drugs are maintained for drug stored at department	2	1	1	1	2	1	2	1	2	3	1	1	1	8	4	1
5.	The Drugs received at the facility have sufficient shelf-life.	1	1	1	1	1	3	3	1	3	3	1	1	1	9	0	4
	There is practice of calculating and maintaining buffer stock	2	3	2	1	1	1	2	2	2	2	2	2	2	3	9	1
	Department maintained stock and expenditure register of drugs and consumables	1	1	1	1	1	1	1	1	1	2	1	1	1	12	1	0
	There is no stock out of drugs	1	1	1	3	1	1	3	2	3	3	1	1	1	8	1	4
6.	Temperature of refrigerators are kept as per storage requirement and records are maintained	1	1	1	1	1	1	1	1	1	1	1	1	2	12	1	0

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
The facility ensures 24X7 water and power backup as per requirement of service delivery, and support services norms																	
7.	Availability of 24x7 running and potable water	1	2	1	1	1	2	1	1	1	3	1	1	1	10	2	1
	Availability of hot water	2	2	2	2	1	2	2	2	2	2	1	2	2	2	11	0
8.	Availability of power back up in labour room	1	3	1	3	1	1	1	1	1	1	1	1	1	11	0	2
	Availability of UPS	1	2	1	1	1	1	1	1	1	1	1	2	1	11	2	0
	Availability of Emergency light	1	1	1	2	1	2	1	2	1	2	1	1	1	9	4	0
9.	Availability of Centralized /local piped Oxygen and vacuum supply	2	2	2	2	2	2	2	2	2	2	2	2	2	0	13	0
The facility ensures clean linen to the patients																	
10.	Availability of clean Drape, Macintosh on the Delivery table,	1	2	1	1	1	1	1	1	1	1	1	1	1	12	1	0
	Gown are provided in labour room	2	1	1	1	1	1	1	1	1	1	1	1	1	12	1	0
	Availability of Baby blanket, sterile drape for baby	1	2	1	1	1	1	1	1	1	2	1	1	1	11	2	0
11.	Linen is changed every day and whenever it get soiled	2	2	2	1	1	1	2	1	2	1	1	1	3	7	5	1
12.	There is system to check the cleanliness and Quantity of the linen received from laundry	3	2	2	2	1	2	1	2	2	2	1	2	2	3	9	1
Roles & Responsibilities of administrative and clinical staff are determined as per govt. regulations and standards operating procedures.																	
13.	Staff is aware of their role and responsibilities	3	1	1	3	1	1	3	1	3	1	2	1	1	8	1	4
14.	There is procedure to ensure that staff is available on duty as per duty roster	1	1	1	1	1	1	1	1	1	1	3	1	1	12	0	1
The facility has established procedure for monitoring the quality of outsourced services and adheres to contractual obligations																	
15	There is procedure to monitor the quality and adequacy of outsourced services viz. (cleaning/ Dietary/Laundry/Security/Maintenance) on regular basis by designated in-house staff)	1	2	2	2	1	3	3	2	1	2	3	2	3	3	6	4
Dietary services are available as per service provision and nutritional requirement of the patients.																	
16.	Check for the adequacy and frequency of diet as per nutritional requirement	1	1	1	2	2	1	2	2	2	2	1	2	2	5	8	0
	Check for the Quality of diet provided	1	1	2	2	2	1	3	2	2	2	3	2	2	3	8	2

Source: Physical verification.

Appendix - 11

(Reference: Para- 8.4.2)

Statement showing discrepancies between reported data with basic records of selected CHCs/PHCs/SCs

Name of the selected health centres where discrepancies noticed	Audit Question (As per)	PW received the prescribed medical check-up as per RCH schedule during 1st Visit	PW received the First and second dose of TT Immunisation		PW tested and found with Haemoglobin (Hb) less than 11 grams/dl	PW received post partum check-up between 48 hours and 14 days after delivery	Infants (0 to 11 months old) immunized	Data related to Measles vaccine 1st dose	Data related to Measles vaccine 2nd dose	Data related to children 9 to 12 months, given Japanese Encephalitis (JE) 1st dose	Data related to children more than 16 months of age given Japanese Encephalitis 2nd Dose	Data related to total number of Children (between 12 and 23 months) fully immunized	Data related to total number of oral pill packets distributed	Data related to Total number of condom pieces distributed
		1st ANC	TT1	TT2	Hb<11	-	-	Measles 1	Measles 2	JE 1	JE 2	-	-	-
CHC (8)	**HMIS Report**	260	241	219	110	69	7	82	82	85	80	0	1,820	1,060
	Register	251	217	204	185	57	47	74	87	71	74	11	175	285
PHC (30)	**HMIS Report**	292	223	155	124	92	96	183	200	176	170	14	281	960
	Register	271	187	113	247	96	92	168	146	146	106	30	267	935
SC (41)	**As per HMIS**	362	296	278	128	114	299	233	228	243	180	59	804	2,726
	Register	341	285	222	152	104	296	211	204	220	153	77	684	2,488

Source: Departmental records.

Appendix - 12

(Reference: Para 9.5)

Statement showing details of deceased mothers whose names were not found on e-MDR

District	BPHC	Date of Death	Name of Deceased	Age	Address	Place of Death/HI	When did death occurred	Causes of death as per MDR
1	2	3	4	5	6	7	8	9
Darrang	Kharupetia	05-08-2015	Amiran Nessa	26	Painakhat	Mangaldoi civil Hospital	7-42 days after delivery	unknown
Darrang	Kharupetia	13-07-2015	Dipali Harijan	25	Aizdalgaon, Dalgaon	Mangaldoi civil Hospital		unknown
Darrang		22-01-2015	Suryabhanu	27	Kopaligaon, Silbori	Mangaldoi civil Hospital	Within 1 week after delivery	PPH
Darrang	Jaljali	16-10-2015	Arpana Sarkar	35	No. 1 Chirang	on the way to HI	within 42 days after delivery	PPH
Darrang	Jaljali	22-10-2015	Sarala Deka	20	Pariapara	on the way to HI		Retained Placenta
Darrang	Jaljali	24-10-2015	Pinu Bania	30	Barkumar para	on the way to HI	During delivery	Retained Placenta
Golaghat	Kamar bandha	24-08-2014	Arati Das	29	Golampatty	JMCH, Jorhat	Within 7 days from the date of delivry	PPH
Golaghat	KB Ali	02-05-2014	Beauti Phukan Bora	29	Lachitpur	JMCH, Jorhat		PPH
Golaghat	K B Ali	05-10-2014	Deepali Deep	30	Charipuria Gaon	JMCH, Jorhat		Hypertension
Golaghat	K B Ali	21-10-2014	Junmoni Ghatowal	19	Kherketa Ali	JMCH, Jorhat		Early pregnancy
Golaghat	K B Ali	25-09-2014	Madhumita Gayan	19	Ahomgaon	JMCH, Jorhat		Hypertention
Golaghat	Bokakhat	28-10-2014	Mina Rabidas	26	Methani T.E	JMCH, Jorhat		eclampsia
Golaghat	K B Ali	08-09-2014	Puromi Orang	18	Bonpithaline	Home		unknown
Golaghat	Marangi	11-05-2014	Sarumai Bhumij	35	1 No. Balijan	Home		unknown
Golaghat	Marangi	28-07-2014	Sibirina Kulu	32	Raja Aligaon	Home		anemia
Golaghat	Bokakhat	09-01-2016	Kuni Tanti	18	Behora Newline	JMCH, Jorhat		Septicemia
Kamrup	Azara	18-07-2015	Reziya Bibi	18	Hatkhowa para,	GMCH	7- 42 days after delivery	Postpartum Septicaemia & Anemia
Kamrup	Azara	05-01-2016	Babita Sarmah	31	Kahikuchi, Ganakpara	GMCH	Within 1 week after delivery	Internal Haemerage
Kamrup	Sualkuchi	26-02-2015	Deeptara Kalita	23	Khathihardia	GMCH	within 42 days after delivery	Postpartum haemorage
Kamrup	Sualkuchi	16-01-2015	Bhanima Nath	30	Bhangu Nagar	GMCH		Eclampsia
Kamrup	Kamalpur	07-08-2015	Momi Begum	25	Piyalikhata	In transit 108	During delivery	Postpartum haemorage & Anaemic heart failure
Kamrup	Sualkuchi	25-04-2014	Churia Begum	23	2 No. Tupamari	GMCH	During pregnancy	Suspected antipertum hemorrage
Kamrup	Sualkuchi	14-12-2014	Queen Rabha	19		FAAMC&H	With in 1 week after delivery	PPH
Kamrup	Sualkuchi	13-08-2015	Rehena Begum	30	Borkukuria, Rangiya	Private Hospital		Septacemic shock
Kamrup	Sualkuchi	19-01-2015	Anjali Das	38	Baripara, Azara	GMCH		PPH
Kamrup	Hajo	01-01-2015	Anowara Begum	40	Tapabari	GMCH	During pregnancy	Hypertension and Anamia
Kamrup	Sualkuchi	06-10-2014	Sumitra Boro	28	Bardongeri Kushi	GMCH	Bleeding	Septacemic shock
Kamrup	Sualkuchi	11-06-2014	Lalita Devi	36	Bamunadi	In transit returned from Apollo, Chennai	During pregnancy	Ectopic pregnancy
Kamrup	Sualkuchi	22-07-2014	Sahanaj Begum	20	Saru Arikati	Sontoli PHC	During delivery	Fits
Kamrup	Sualkuchi	18-09-2014	Mafida Begum	20	Latharadia	GMCH		Anaemia
Kamrup	Sualkuchi	22-02-2014	Purnima Bibi	30	Jayantipur	In transit to GMCH	With in 1 week after delivery	PPH
Kamrup	Sualkuchi	01-06-2015	Amena Begum	20	Chakla Beparipara	GMCH		PPH

1	2	3	4	5	6	7	8	9
Kamrup	Sualkuchi	20-04-2015	Merenda Marak	36	Sangma Nagar	Home	During delivery	PPH
Kamrup	Sualkuchi	29-09-2015	Amina Begum	26	Newdova	Home	7-42 days after delivery	Anaemia
Kamrup	Sualkuchi	23-11-2015	Sonabhanu	22	Rangeswaripam	In transit to hospital	With in 1 week after delivery	Cardio Pulmonary arrest
Karbi Anglong	Bokajan	22-05-2015	Hemanti Chetry	24	Karmakar Bosti	Home	7-42 days after delivery	Anaemia
Karbi Anglong	Howraghat	04-01-2016	Smita Basumatary	28	Padum Pukhuri	Diphu Civil Hospital	With in 42 days after delivery	PPH
Karbi Anglong		04-02-2016	Indira Terangpi	26	Rong Chiang Rum	Diphu Civil Hospital	With in 42 days after delivery	Shock
Karbi Anglong	Manja	04-08-2015	Sunita Teronpi	30	Bokolia	Diphu Civil Hospital	With in hour after delivery	Eclampsia
Karbi Anglong	Manja	18-11-2015	Purnima Ronghanpi	23	Jaipong	Diphu Civil Hospital	Within 42 days after delivery	PPH
Kokrajhar	Kokrajhar	09-07-2015	Moni Murmu	27	Haltugaon, kushatola	RNB civil hospital, Kokrajhar	within 1 day after delivery	Eclamsia
Kokrajhar	Gossaigaon	29-04-2015	Pipila Hasda	35	Bharatnagar	RNB civil hospital, Gossaigaon	within 1 day after delivery	PPH, Anemia
Nagaon (K/A)	Lumding	12-03-2016	Muni Bhagot	22	Pashim Lumding	Diphu Civil Hospital	During pregnancy	Jaundice, fever
Sivasagar	Patsaku	07-04-2015	Putuli Routia	30	Desangpani	AMCH, Dibrugarh	within 7 to 42 days of delivery	unknown
Sivasagar	Patsaku	13-09-2015	Junali Munda	28	Hatibanda	AMCH, Dibrugarh	During pregnancy	cough
Sivasagar	Galeky	20-12-2015	Munni Tanti	21	Bihubar T.e	Sivasagar Civil Hospita	within 7 days from the date of delivry	Anaemia
Sonitpur	Biswanath Chariali	20-03-2014	Rita Hari	20	Kadomoni	K K civil Hospital, Sonitpur	within 42 days after delivery	unknown
Sonitpur	Biswanath Chariali	06-06-2015	Rasna Bibhar	20	Bihaguri	TMCH, Tezpur	During pregnancy	Severe Anemia

Source: Departmental records and e-MDR reports.

Glossary of Abbreviations

Glossary of abbreviations

AEFI	Adverse Event Following Immunisation
AG	Accountant General
AHS	Annual Health Survey
ANC	Ante Natal Care
ANM	Auxiliary Nurse Midwives
APWD	Assam Public Works Department
ARSH	Adolescent Reproductive and Sexual Health Programme
ASHA	Accredited Social Health Activist
AYUSH	Ayurveda,Yoga and Naturopathy, Unani, Siddha and Homoeopathy
BCG	Bacillus Calmette-Guerin
BHAP	Block Health Action Plan
BHT	Bed Head Tickets
BPHC	Block Primary Health Centre
BPL	Below Poverty Line
CDR	Child Death Review
CGHS	Central Government Health Scheme
CHC	Community Health Centre
CPWD	Central Public Works Department
CRPF	Central Reserved Police Force
CVC	Central Vigilance Commission
DD Kit	Disposable Delivery Kit
DH	District Hospital
DHAP	District Health Action Plan
DHM	District Health Mission
DHS	District Health Society
DLHFS	District Level Household and Facility Survey
DPMU	District Programme Management Unit
DPT	Diphtheria, Pertussis, Tetanus
DQAC	District Level Quality Assurance Committee
ECG	Electrocardiogram
EDL	Essential Drug List
ERS	Emergency Response System
FRU	First Referral Unit
GNM	General Nursing Midwifery
GoA	Government of Assam
GoI	Government of India
HBNC	Home Based New Born Care
HMIS	Health Management Information System
IFA	Iron Folic Acid
IMR	Infant Mortality Rate
IPD	In Patient Department
IPHS	Indian Public Health Standards
IUCD	Intra Uterine Contraceptive Device
IUD	Intrauterine device
JSSK	Janai Sishu Suraksha Karyakram
JSY	Janani Suraksha Yojana

KM	Kilometre
KPI	Key Performance Indicator
LHV	Lady Health Visitor
MA	Mobilization Advance
MCH	Maternal & Child Health
MCTS	Mother & Child Tracking System
MD	Mission Director
MDR	Maternal Death Review
MH	Model Hospital
MMR	Maternal Mortality Rate
MMU	Mobile Medical Unit
MO	Medical Officer
MoHFW	Ministry of Health & Family Welfare
NABH	National Accreditation Board for Hospitals & Healthcare Providers
NBCC	New Born Care Corner
NBSU	New Born Stabilisation Unit
NFHS	National Family Health Survey
NGO	Non-Governmental Organizations
NH	Narayana Hrudayalaya Private Limited
NHM	National Health Mission
NIDDCP	National Iodine Deficiencies Disorder Programme
NRC	Nutritional Rehabilitation Centre
NRHM	National Rural Health Mission
NSV	No-scalpel Vasectomy
O&G	Obstetric & Gynaecology
OOP	Out of pocket
OPD	Out Patient Department
OPV	Oral Polio Vaccine
OT	Operation Theatre
PA	Performance Audit
PHC	Primary Health Centre
PIP	Project Implementation Plans
PNC	Post Natal Care
PP	Perspective Plan
PPP	Public-private partnership
PSU	Public Sector Undertaking
PTS	Patient Transport Systems
PW	Pregnant Women
QA	Quality Assurance
QA	Quality Assurance
RCC	Reinforce Cement Concrete

RCH	Reproductive and Child Health
RHS	Rural Health Statistics
RKS	Rogi Kalyan Samity
RMNCH	Reproduction, Maternal, Newborn, Child Health
RMNCH+A	Reproductive Maternal Neonatal Child Health + Adolescent
ROP	Records of Proceedings
RRC-NE	Regional Resource Centre for North Eastern State
RTI/STI	Reproductive tract infection/Sexually transmitted infection
SBA	Skilled Birth Attendant
SC	Sub Centre
SD	State Dispensary
SDCH	Sub Divisional Health Centre
SHM	State Health Mission, Assam
SHS	State Health Society
SNCU	Sick New born Care Unit
SPMSU	State Programme Management Support Unit
SPMU	State Programme Management Unit
SQAC	State Quality Assurance Committee
SRSWOR	Simple Random Sampling Without Replacement
TE	Tea Estate
TFR	Total Fertility Rate
TT	Tetanus Toxoid
UC	Utilization Certificates
USG	Ultrasound Sonography
VHSNC	Village Health Sanitation and Nutrition Committee
WHO	World Health Organisation
WIFS	Weekly Iron- Folic Acid Supplementation

http://agasm.cag.gov.in