Chapter VIII

Monitoring and Evaluation

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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.

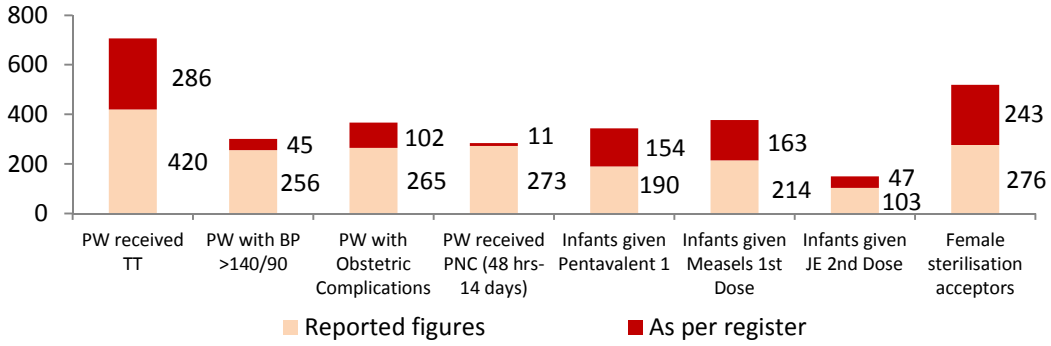
Thus, inaccurate data was likely to yield incorrect conclusions during analysis and interpretation of the progress of the particular intervention.

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.