

# **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)**

Parameter	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<sup>94</sup>, total 3,655<sup>95</sup> 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**:

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<sup>94</sup> <https://www.nrhmassam.info> (MIS-GIS).

<sup>95</sup> 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
<b>Total</b>	<b>1,724</b>						<b>1,924</b>	

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<sup>96</sup> selected Blocks along with other related records revealed that 30 women (43 per cent) did not complete four ANC's, 22 deliveries (31 per cent) were home deliveries, 17 cases (24 per cent) were of multiple pregnancies<sup>97</sup>, 14 deaths (20 per cent) were of women belonging to the minority community, 12 deceased women (17 per cent)

<sup>96</sup> Sipajhar, Jaljali, Sualkuchi, Rampur, Geleki, Baithalangso, Dotma, Gosaingaon and Sarupathar.

<sup>97</sup> More than two deliveries.

got married at an early age<sup>98</sup> 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.

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<sup>98</sup> 18 years and less.