

## **Maternal Death Review - A Tool for System Strengthening:Gujarat Experience**

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### **Maternal and Neonatal Mortality: Magnitude of the Problem in Gujarat**

- About 14,14,000 pregnancies per year
- 12,86,000 deliveries per year
- IMR(2011) is 41/1000 live births and MMR(2007-09) is 148/1 lakh live births
- Estimated 1900 maternal deaths per year (5-6 maternal deaths per day)
- Estimated 38,500 Neonatal deaths per year (106 neonatal deaths every day )

### **Process of Maternal Death Review (MDR) in Gujarat:**

- Gujarat has adopted Community Based Maternal Death Reviews in all the districts since 2006. The process was rolled out in the entire state by the year 2009.
- Taluka Health Officer (THO conducts verbal autopsy within 3 weeks of receiving information from ASHA/AWW/others.
- District Reproductive and Child Health Officer (Class 1 Officer) is District Nodal Officer for MDR.
- Every district has a District Maternal Death Review Committee under the chairpersonship of CDHO which reviews all the maternal deaths in the district once every month.
- Every month a meeting is also held under the Chairpersonship of District
- At the state level, State Maternal and Infant Death Review Committee under the chairpersonship of Principal Secretary (Health and Family Welfare) meet every 6 monthly.

### **Observations: Maternal Deaths in Gujarat (April 2011-March 2012)**

#### **Process Indicators:**

- Summary Status of Maternal Deaths Reporting:** Out of Estimated Maternal deaths, the HMIS reported 806 deaths (55.6%), Verbal Autopsy of 686 maternal deaths (47%) was carried out, 601 (88%) maternal deaths reviewed by CDHO and 519 (76%) of Maternal Deaths reviewed by Collector.
- Taluka wise reporting of maternal deaths:**
  - ✓ Taluka wise data of maternal deaths was reported form 25 districts for the year 2011-12.
  - ✓ Among 25 districts having 215 talukas, 31 talukas reported more than 7 maternal deaths, 39 talukas reported maternal deaths in the range 4-6 and 101 talukas reported maternal deaths in the range 1-3.
  - ✓ It was noted that 54 talukas did not report any deaths in the year 2011-12.
- District-wise reporting and review of maternal deaths in Gujarat (April 2011- March 2012)**
  - ✓ 11 out of 26 districts reported maternal deaths more than the State average of 47% reported deaths as compared to estimated deaths. 15 out of 26 districts reported less than the State average

- ✓ As compared to state average of 88% of reported deaths reviewed by CDHO, 18 districts CDHO had reviewed more than state average and 8 districts less than state average.
- ✓ Except for Junagadh district, Collector of all the other 25 districts had reviewed the maternal deaths.

#### **Program Indicators:**

- **Place of delivery of mothers who died:** Out of 490 mothers who delivered before death 192 (39%) delivered in private hospital, 107 (22%) at home, 69 (14%) at district hospital.
- ❑ **Who conducted Home delivery?** Among 107 females who delivered at home, 102(95%) were conducted by unskilled birth attendant.
- ❑ **Place of Maternal Death:** Eighty eight women (14.3%) died on the way to hospital. 146 (23.7%) females died in private hospital. 180 (29.2%) died at government health facility.
- ❑ **Time of Maternal Death:** The majority of the maternal deaths (75%) occurred in the post partum period., followed by ante-partum period with 19% and intrapartum period contributed to 6% of maternal deaths. Within 48 hours of pregnancy the proportion of maternal deaths is very high contributing to 61% of total maternal deaths.

#### **Cause of Maternal deaths**

- ✓ PPH and Sepsis are the most common cause contributing to 34% (204) and 15% (89) of total maternal deaths in Gujarat respectively.

#### **Pathway analysis**

- ✓ In Gujarat in the year 2011-12 out the data available for 616 maternal deaths only 7% (43) died at home without seeking any care at facilities and 5% (31) died on the way during transportation to the first facility of contact.
- ✓ 88% (542) of the pregnant women who died had sought care in 1 or more than 1 health facilities.

**MDR leading to State Level Actions:** Maternal death review led to identifying the issues followed by series of actions for strengthening the systems in State.

1. The State created a pool of Resource people for MDR technical support.
2. **MDR sensitized District authorities to strengthen the system and take local level actions:**
3. Post partum hemorrhage, pregnancy induced hypertension and obstructed/prolonged labor was among the major causes of maternal deaths. The districts were instructed to implement compulsory use of partograph and make available the following essential drugs in all the facilities conducting delivery, Inj. Magnesium Sulphate, Plasma Substitute (Dextran 70), Inj. Carboprost, Tab/Inj Methyl Ergometrine Maleate, Tab Misoprostol and Injection Oxytocin which was complied by all the districts.
4. **Technical Series on Acute Management of Third Stage of Labor (AMTSL), Use of Partograph and Use of Magnesium Sulphate for capacity building** initiated.
5. **Newer approaches to help to understand why women die:** State has decided to go for an independent evaluation by *Confidential Enquiries into Maternal Deaths approach* which will be piloted in 1 district.

6. **Special 4 wheel drive vehicles for geographically difficult to access:** MDR could identify unique issues in referral transport where 108 vehicles though are in readiness but could not reach to geographically difficult to reach areas/hilly tracts, mainly in tribal districts of Gujarat. Department of Health and FW with the advocacy efforts of UNICEF and willingness of EMRI-108 introduced Special 4 Wheel Drive vehicles (12 in Number in six districts) in Gujarat during 2012 for reaching out to needy people in most difficult to reach areas.
7. **Inter-Facility Transfer (IFT) services:** The MDR also identified the delay arising due to issues in referral services from one hospital to another which is termed as inter facility transfer. The advocacy during MDR meet led to state initiatives to provide inter facility transfer and as an outcome six vehicles were launched in the state to provide inter facility transfer services in the first phase.

**Scalability:**

- The Maternal death review does not need extra Human resource and hence it is scalable
- Except for the initial training cost no extra budget is required to sustain the program
- If any punitive action is taken based on MDR findings it can demoralize the program. Corrective actions instead of punitive actions should be the goal.
- Involving community and ethical issues while conducting verbal autopsy is a challenge

**Conclusion:**

- Maternal death review is an important tool for system strengthening
- It sensitizes all the health care providers, district and state authorities to focus on averting maternal deaths