Guidance Note on rolling out
Maternal Death Reviews
(Facility and Community Based)

Background and Introduction:

Each year in India, roughly 28 million women experience pregnancy and 26 million have a live birth. Of these, an estimated 67,000 maternal deaths and one million newborn deaths occur each year. In addition, millions more women and newborns suffer pregnancy and birth related ill-health. Thus, pregnancy-related mortality and morbidity continues to have a huge impact on the lives of Indian women and their newborns.

The maternal mortality ratio is the number of women who die from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes) during pregnancy and childbirth or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, per 100,000 live births.

Maternal Mortality Ratio (MMR) in India has shown an appreciable decline from 398/100,000 live births in the year 1997-98 to 301/100,000 live births in the year 2001-03 to 254/100,000 live births in the year 2004-06 as per the latest RGI-SRS survey report, released in April 2009. However, to accelerate the pace of decline of MMR in order to achieve the NRHM and MDG Goal of less than 100 per 100,000 live births, there is a need to give impetus to implementation of the technical strategies and interventions for maternal health. Levels of maternal mortality vary greatly across the regions, due to variation in underlying access to emergency obstetric care, antenatal care, anemia rates among women, education levels of women, and other factors. About two-thirds of maternal deaths occur in a handful of states – Bihar and Jharkhand, Orissa, Madhya Pradesh and Chattisgarh, Rajasthan, Uttar Pradesh and Uttarakhand and in Assam, all these states being among the 18 high focus states under NRHM.

Maternal Death Review (MDR) as a strategy has been spelt out clearly in the RCH –II National Programme Implementation Plan document. It is an important strategy to improve the quality of obstetric care and reduce maternal mortality and morbidity. The importance of MDR lies in the fact that it provides detailed information on various factors at facility, district, community, regional and national level that are needed to be addressed to reduce maternal deaths. Analysis of these deaths can identify the delays that contribute to maternal deaths at various levels and the information used to adopt measures to fill the gaps in service. MDR has been conducted as an established intervention for the last few years by some states like Tamil Nadu, Kerala and West Bengal which have also shared their experiences while these guidelines and tools were being framed. However, in most of the other states the efforts in this area have been at
best fragmented. Recognising the need for sharing of and learning from experiences of different stakeholders, MOHFW organized a two day workshop to finalize the MDR strategy at PGIMER, Chandigarh, in May 2009, with the objective of developing a roadmap and also guidelines and tools, which the states could use and implement easily. During the workshop, participants from various states shared their experiences in initiating maternal death reviews in facilities and also in community settings.

**Guidance note:**

The present note is based on the inputs and deliberations held during the above workshop. The purpose of this guidance note is to provide a roadmap to the State and District Programme Managers for conducting MDR. The tools for MDR have been developed with the objectives of identifying gaps and the reasons for maternal deaths, for taking corrective actions to fill such gaps and improve service delivery. The process of MDR should not be utilized for taking punitive action against service providers.

The objectives of the guidelines are:

a. To establish operational mechanisms/modalities for undertaking MDR at selected institutions and in community level

b. To disseminate information on data collection tools, data/information flow, analysis

c. To develop systems for review and remedial follow up actions

The note will be useful for programme managers, Medical Superintendents, officer in charges and district programme managers who are routinely engaged in delivery of maternal health interventions. For ease of reference this document has been organized separately for facility and community based reviews and in the end has a section on MDR at District and State level. Private sector providers may also find this useful in instituting maternal death reviews/audits.

While implementing interventions on MDR, a one day sensitization cum training of trainer for the states will be conducted at the national level at the National Health System Resource Centre (NHSRC) with participation of national level programme officers from Ministry of Health and Family Welfare. Similarly, district CMOs will be trained at the state level and all block and PHC level MOs will be trained for one day at the district level. Each Block/PHC MO will conduct a similar training for all paramedical staff. This guidance note and annexure will be used for training. Printing of these materials shall be done through the state health society and this must be reflected in the budget of the state PIPs.

The conduct of these reviews and meetings shall be **supported by a State Government Order.**
Facility Based Maternal Death Review

A. The objective of this process is to identify the various delays causing maternal deaths in the health facilities and to enable the health system to take corrective measures at various levels. Identifying maternal deaths would be the first step in the process of review, the second step would be the investigation of the causes which led to the maternal death mainly clinical and systemic and the third step would be to take appropriate and corrective measures.

B. State/District Programme Managers, the nodal point for MDR, will identify and notify names of institutions which will take up MDRs. Since, it has been observed that a large number of maternal deaths take place in tertiary level facilities and district hospitals, it is suggested that in the first phase, this exercise be limited to Medical College Hospitals, District Hospitals and high volume (about 500 deliveries per year) sub district level FRUs.

C. MS/Officer I/c of these facilities will identify the nodal officer from these facilities. A one day orientation meeting may be required to be organized by the State Program manager/ nodal officer for orienting the MS/Officer I/c and nodal officer of identified facilities in the data collection tools and processes.

D. Each Nodal Officer will constitute a facility level MDR committee in consultation with Officer I/C of the hospital. The members of this committee would be staff members from Obstetrics & Gynaecology, Anesthesia, Nursing, Blood Bank and any other relevant departments. The Nodal officer will be the member secretary of this committee.

E. For each case of maternal death, the form for facility based MDR at Annexure 1 is to be completed and signed by the MO on duty /Medical Officer I/c ward/emergency within 24 hours in consultation with the nodal officer. After the forms are filled and duly signed by both these officials they should be sent in a sealed envelope to the nodal officer of the MDR committee who in turn will immediately send information about these deaths to the District Collector, District CMO and the State Director of Health Services telephonically and in the format for Primary Informer at Annexure-6, and also put up the cases to the committee during their scheduled meeting.

F. Case sheet available with respect to the deceased should invariably be referred to while filling this form. It is desirable to attach this case sheet with the review form. Any post facto recording/entry in the case sheets should be discouraged.

G. The committee formed above will have the responsibility of reviewing all the MDR forms filled and collected during the month. The implementation of the suggested corrective measures which emerge as an outcome of this review should be the responsibility of the Medical Superintendent (MS)/Officer- Incharge of the facility through the respective department. The recommendations of the committee should be confidential and known only to the (MS)/Officer I/c and the relevant department/officials who will act on the recommendations. The findings from the review should not be used as a tool for punitive action against service providers.
H. The findings of the review for each maternal death and the corrective actions taken during the month should be reported every month to a district level MDR committee headed by the district CMO.

I. In rare cases in which deaths occur immediately after the woman leaving against medical advice (LAMA), these deaths should be captured at the facility itself and reviewed.

J. The facility level MDR committee shall meet as per the following schedule:
   a. Medical College: monthly
   b. District Hospital/FRU: monthly

K. The terms of reference for the facility based review committee are as follows:
   Committee will meet and review the following:

   a. Circumstances under which the death took place
   b. Cause of maternal death: Direct obstetric, indirect obstetric and non obstetric cause.
   c. What steps are required to prevent such deaths in future:
      ➢ Action related to infrastructural strengthening
      ➢ Action required to augment human resource availability
      ➢ Action required to strengthen protocols and competence of staff
      ➢ Supplies and Equipment
      ➢ Demand Side Interventions to address first and second delays
      ➢ Management interventions
      ➢ Other interventions based on the findings of MDR

L. Committee will nominate a member to participate in monthly meeting of the district level MDR committee convened by the district CMO.

M. Committee will map any particular pattern in occurrence of deaths in the facility such as:
   a. Deaths occurring in/on particular weeks/months/days
   b. Any pattern in timing of deaths: day/night
   c. Any pattern in relation with staff deployment
   d. Others

I. A quarterly review meeting to take stock of the situation and corrective measures will be chaired by the District Collector. The MDR meeting will be attended by District Maternal Death Review committee members and any other member incorporated/suggested by the District Magistrate. This may include the family members of the deceased who were present at the time of death. The meeting will be convened by the District CMO/District Nodal Officer.
Community Based Maternal Death Review (Verbal Autopsy)

- The verbal autopsy is a technique whereby family members, relatives, neighbours or other informants and care providers are interviewed and asked for a narrative to elicit information on the events leading to the death of the mother during pregnancy (in their own words) in order to identify the medical and non medical (including socio-economic) factors responsible for the death of the mother.

- The main purpose of the CBMDR is to identify the various delays and causes leading to maternal deaths, to enable the health system to take corrective measures at various levels. Identifying maternal deaths would be the first step in the process, the second step would be the investigation of the factors/causes which led to the maternal death – whether medical, social, systemic, and the third step would be to take appropriate and corrective measures on these, depending on their amenability to various demand side and communication interventions.

- The District will be the unit for undertaking Community based MDR. A District nodal person shall be nominated by District CMO, who could be the RCH officer, Deputy CMO, DPHN or some other district level programme manager.

- The District nodal officer will be responsible for organizing the district level review committee meeting to be chaired by the District CMO every month. He will be also responsible for organizing necessary documentation for review by the committee and keeping a record of follow up actions initiated.

- The District nodal officer for MDR will organize a one- day orientation programme for all MOs of the primary health care institutions, focused on the processes to be adopted and formats to be used for data collection.

- The MO of Block PHC will orient all Health Workers including LHV, PHN, Staff Nurses, ANM etc., on the processes and data collection tools etc.

- All MOs will also orient the ASHAs in scheduled monthly meetings about line listing of all deaths of women in the age group of 15-49 yrs irrespective of cause or pregnancy status. Line listing format as enclosed in Annexure 4 would need to be explained and adequate copies should be made available in the local language for ASHAs to report to the Block PHC she is attached to. The line listing format duly filled should be submitted to the MO Block PHC once a month but telephonic intimation should be made immediately within 24hrs after the occurrence of any maternal death.

- Once the report reaches the concerned Block PHC Medical officer I/C, he will immediately send information of this death by telephone within 24 hours to the District Collector, District CMO and the State Director of Health Services and also in the format for Primary Informer at Annexure-6. He will simultaneously also designate a LHV/BPHN (or other appropriate personnel) and the sub-centre ANM in the jurisdiction of which the death has occurred, to further investigate and conduct a verbal autopsy by visiting the deceased woman’s house in order to collect complete information relating to the death as per VA questionnaire at Annexure-2. It is proposed that such investigations should ideally be completed within 3 weeks of receiving information from ASHA. These visits should be made to the house as per the convenience of respondent/s and taking into consideration the period of mourning for the family.
• All the confirmed maternal deaths have to be recorded serially in a register at block level (Block level register format at Annexure 5) and linked with the reporting in the HMIS.

• In Annexure-2, there are three modules for data collection. Module 1 refers to general background information about the deceased. Module 2 pertains to maternal deaths during Ante-natal period and Module 3 refers to death during intra partum and post natal period.

• After completing the questionnaire at Annexure-2, it should be immediately submitted to MO I/C of Block PHC who would be required to discuss and analyse the findings with the team and complete the case summary form at Annexure 3. This would then be sent to the District CMO for further needful action at that level (as elaborated later in this note).
Conducting MDR at District and State Level

District reviews:

This is envisaged at two levels:

A. District Maternal Death Review Committee under the chairpersonship of District CMO:

Every district will have a committee for maternal death review. District CMO will nominate a nodal person for this committee. The District MDR Committee will review all the maternal deaths in the district once every month on a pre-fixed date. In case, a district level committee under quality assurance exists, then the same committee can be extended by nominating additional relevant members and can be utilized for maternal death review.

The District MDR Committee will review all the maternal deaths in the district once every month on a pre-fixed date. The MDR committee under the Chief medical officer (CMO) will receive two types of MDR reports.

- Community based maternal death review reports from the block medical officers
- Facility based maternal death review from the Medical College Hospitals, District Hospitals and Referral Hospitals

Preferably, the District CMO can utilize existing quality assurance committee of the district or a new committee could be formed at the district level for MDR. The existing quality assurance committee or a newly formed committee should have following members-

- CMO/CS as the chairman
- ACMO
- Medical officer nominated by the CMO/CS as nodal officer
- Medical officer in charge of Obstetrics & Gynaecology
- Anaesthetist
- Officer in charge of Blood bank/blood storage centre
- Senior nurse nominated by the CMO/CS
- Invited members from the facilities where maternal death has taken place.

The district level nodal officer convenes the meeting of the committee under the chairmanship of CMO/CS/ACMO once every month and will put up for review of the committee all the maternal death reports received in last month.

Responsibilities of the committee

- To conduct a detailed review and analysis of the facility based maternal deaths and all the community based maternal death reports received from the block PHC Medical officers, and spell out the remedial follow-up actions.
- Maintain the list of maternal deaths reported and investigated in the district
• Prepare reports in the form of Case Summaries (in the format at Annexeure-3), of all the maternal deaths reviewed by the Committee and share the findings with the District Magistrate. The DM will have the option of reviewing in detail a sample of these deaths in the quarterly meeting. The Nodal Officer of the committee will assist the DM in these quarterly reviews.

• Record the minutes of the DMs’ quarterly meeting with specific corrective measures and monitor the implementation of these in line with the timeline.

B. Maternal Death Review by District Health Society under the Chairpersonship of District Magistrate:

II. The objectives of the District level review by the District MDR Committee under the CMO and at the level of District Magistrate are:

• To sensitize the service providers to improve their accountability
• To find out the system gaps including the facility level gaps to take appropriate corrective measures with time-line
• To allocate funds from the district health society for the interventions
• To monitor the implementation of the corrective measures
• To disseminate the findings of the district maternal death review in the next medical officers review meeting by the DM
• To institute measures to prevent maternal deaths due to similar reasons in the district in future.

III. All the Maternal Death Reports compiled by the District MDR Committee will be put up to the District Magistrate, who will have the option of reviewing a sample of these deaths, which will be representative of deaths occurring at home, at facilities and in transit.

IV. The CMO of the district in consultation with District Magistrate will fix up the date for the review meeting once in 3 months. The MDR meeting will be attended by District Maternal Death Review committee members and any other member incorporated/suggested by the District Magistrate. This may include the family members of the deceased who were present at the time of death.

V. The CMO, through the ANMs will arrange to bring two relatives of the deceased to attend the MDR. Only relatives who were with the mother during the treatment of complications may be invited for the meeting. Each person will be paid Rs.200 to compensate the wage loss and to meet the travel cost out of the RKS funds from the district hospital at the end of the meeting.

V. The relatives of the deceased will first narrate the events leading to the death of the mother in front of the DM and all service providers. The case history of each of the selected maternal deaths will be heard separately. After the deposition and getting clarifications from the relatives they will be sent back. Then the various delays - the decision making at the family, getting the transport and institutional delays would be discussed in detail. The provision of antenatal, post natal care will also be discussed. The outcome of the meeting will be recorded as minutes and corrective actions will be listed with time line to prevent similar delays in future.
VI. The minutes of the meeting will be recorded in a register. The corrective measures will be grouped into 3 categories with time lines:

- Corrective measures at the community level
- Corrective measures needed at the facility level
- Corrective measures for which state support is needed

After the meeting, the minutes of the MDR meeting with corrective measures planned or implemented will be sent to the State level Task Force on Maternal Mortality Reduction.

C. State reviews:

A State level task force will be formed headed by Principal Secretary Health and Family Welfare, Mission Director SHS, Senior Obstetrician of the Medical College Hospital, IMA, FOGSI and any other members nominated by Government.

The State Level Task Force will meet once in 6 months under the chairmanship of Principal Secretary Health and Family Welfare to discuss the actions taken on the minutes of the last meeting and make recommendations to Government for policy and strategy formulations.

Every year an annual maternal death report for the state will be prepared and a dissemination meeting will be organized to sensitize the various service providers and managers. The annual report may contain interesting maternal death case studies which may be used during the training of medical and paramedical functionaries.
### Time Lines & Incentive Suggested

<table>
<thead>
<tr>
<th>Activity</th>
<th>Time line</th>
<th>Incentive/Transaction Cost/ payment suggested</th>
<th>Source of funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reporting death of women (15-49 years) by ASHA to the Block PHC MO</td>
<td>Within 24 hours of occurrence of death by phone</td>
<td>Rs.50 per report</td>
<td>HSC untied fund</td>
</tr>
<tr>
<td>Reporting death of woman by Block MO to the District Collector, District CMO and the State Director of Health Services</td>
<td>Within 24 hours of occurrence of death by phone</td>
<td>No incentive</td>
<td></td>
</tr>
<tr>
<td>Field verification of maternal death and community based investigation by LHV/BPHN/Sub-center ANM/Other</td>
<td>Within 3 weeks of occurrence of death</td>
<td>Rs.100 per person to a maximum of three persons</td>
<td>HSC untied fund</td>
</tr>
<tr>
<td>Submission of report by Block PHC MO/facility MDR Nodal MO to CMO in the prescribed form</td>
<td>Within 4 weeks of occurrence of death</td>
<td>No incentive</td>
<td></td>
</tr>
<tr>
<td>Reporting deaths of women by Block MO/ Nodal Officer of Facility to the District Collector, District CMO and the State Director of Health Services</td>
<td>Within 24 hours of occurrence of death by phone</td>
<td>No incentive</td>
<td></td>
</tr>
<tr>
<td>Conduct of facility based review meetings and preparation of district MDR report for all deaths in district by the District committee (chaired by the CMO)</td>
<td>Every Month for the deaths reported in previous months.</td>
<td>No incentive</td>
<td></td>
</tr>
<tr>
<td>Conduct of MDR meeting chaired by District Magistrate/Dist. Collector</td>
<td>Once in 3 months</td>
<td>Incentive of Rs.200 each for two persons of the deceased family</td>
<td>District hospital RKS fund</td>
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**NOTE:** Based on the findings of the MDRs no disciplinary action is to be initiated against any of the service providers. The key principle to be adopted during the entire process of reviewing is not to blame or find fault with anybody. The purpose of the discussion is to identify gaps at different levels and to take appropriate corrective measures and to sensitize the service providers to improve the accountability.