

# Maternal Death Surveillance and Response Systems

## Analysis and response



### Introduction

Objective analysis and therefore appropriate responses is one of the most difficult and neglected areas of maternal death surveillance and response (MDSR) systems.

### Analysis and response: general considerations

Analysis and response should be carried out at all levels - community, facility, district, regional and national. Analysis may include positive as well as negative findings

The aims of analysis are to identify the:

- Cause of death
- Subgroups at the highest risk
- Contributing factors to the death, including avoidable factors
- Emerging trends

This analysis will then make it possible to develop a strategy to respond. A consistent approach in identifying contributory factors, both medical and non-medical, is essential to establishing an effective MDSR. The data generated from the analysis must be presented to decision makers, the medical community and the general public in appropriate language.

### Recommendations

- Analysis is a difficult area and therefore needs to be well covered in training programmes
- At district level, a database manager is responsible for checking the completeness of data collection, identifying inconsistencies and entering data into an abstraction form
- The abstraction forms are used to feed essential information up the system from community or facility level to regional and national level.
- The abstraction forms used should be compliant. It is no use expecting information to be available at national level if it has not been included at district level
- National tools should be developed which allow consistent information to be extracted and acted upon at various levels
- Feedback, positive and negative, at all levels is essential to create a functional system
- The maternal death data base which is created from the abstraction forms should be password protected
- Each analysis should have an agreed list of contributory factors which are considered
- Results can then be grouped and patterns of problems identified
- Responses can be immediate, periodic or annual

### Nigeria

A ten year retrospective review of maternal deaths at a referral hospital identified that the maternal mortality rate was 30 times higher in unbooked women as compared with booked women. Recommendations included increased public enlightenment campaign.

Abe et al 2008

For more information or to join the MDSR Action Network, please:  
**Email:** l.hulton@evidence4action.net  
**Visit:** www.mdsr-action.net



### Examples of contributing factors to maternal death

Community-based factors	Health service factors
<b>Lack of awareness of danger signs of illness</b>	<b>No health service available or too far away</b>
Delay in seeking care due to lack of family agreement	Sought care but no staff were available
<b>Geographic isolation</b>	<b>Medicine not available at the hospital and must be provided by the family</b>
Lack of transportation or money to pay for it	Lack of clinical care guidelines
<b>Other responsibilities</b>	<b>Woman was not treated immediately after arriving at the facility</b>
Cultural barriers, such as prohibitions on mother leaving house	Health facility lacked needed supplies or equipment
<b>Lack of money to pay for care</b>	<b>Staff did not have knowledge/skills to diagnose and treat mother</b>
Belief in use of traditional remedies	Had to wait many hours for qualified staff to see mother
<b>Belief in fate controlling outcome</b>	<b>No transport available to reach referral hospital</b>
Dislike of or bad experiences with health care system	Poor staff attitude

### Senegal

A newly implemented MDSR system in a district hospital was assessed and showed a fall in the deaths from haemorrhage and hypertension and evidence of the implementation of recommendations.

These included 24h hour availability of services, essential drugs and blood products. Some recommendations had not been introduced. The overall conclusion was that MDSR could be effectively introduced in a resource poor environment.

Dumont et al 2006

### Mexico

Verbal autopsy of maternal deaths in Mexico found that relatives of pregnant women who died were unable to recognise symptoms as abnormal or severe, and lacked finances and transportation to reach health facilities.

Based on these findings, it was recommended that pregnant women receive education to recognise complications that require care and also sensitize them to the possibility of needing emergency transportation during labour and delivery.

WHO, 2004