

## Safe Motherhood How Far Safe

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### Abstract

Epidemiological data pertaining to maternal mortality is valuable in each set-up to design interventional programs to reduce the ratio favourably. This study was design to evaluate the mortality rate in our hospital, to assess the epidemiological aspects ,types of delay, and to suggest recommendations for improvement. Objective of the study was to analyse type of delay, and to suggest measures to reduce it. *Methods:* A retrospective study done at a tertiary level care centre , data were collected from maternal death review forms and case records. Data studied and analysed. *Results:* (Majority women were from rural area (73.5.%), and majority (66.8%) were emergency cases .79.3% cases were belonging to lower socioeconomic class and 76.8%cases were uneducated. most cases Type 1 delay was most common (75.4%) comparatively to Type 2 and 3 delay. *Conclusions:* High risk cases should be identified. Early referral, easy transport, continued skill based training, monitoring of health services can reduce maternal mortality. Special training should be conducted for ASHA workers and ANM who generally works at grass root level in our country. Continued medical training is required for medical officers who are working at PHC and sub district hospital for early recognition of high risk women and their referral in time to higher centers to avoid maternal near miss or death.

### Introduction

*Moment child is born*

*Mother is also born.*

The journey towards motherhood may be hazardous. It is important to prevent, diagnose and treat obstetric emergencies promptly to prevent maternal mortality.

Maternal Mortality is defined as the death of a woman while pregnant or within 42 days of termination of pregnancy irrespective of the duration and the site of pregnancy or its management, but not from accidental or incidental causes

Maternal Mortality Ratio is calculated as Total number of female deaths due to complications of pregnancy, childbirth or within 42 days of delivery from puerperal causes in an area during a given year  $\times 100000$ .

Total no of live births in the same area and year in the study is based on three delays Model. The model outlines three phases of delay that affect reaching and receiving care.

The first delay is recognizing a problem and deciding to seek care. Factors shaping this decision-making process include knowledge about pregnancy and childbirth complications, recognizing the seriousness of symptoms, cultural beliefs, and traditional decision-making roles. The second delay is reaching a facility that provides an appropriate level of care. Factors contributing to this delay include physical accessibility, transport cost and availability, distance, and infrastructure conditions.

The third delay is receiving adequate and appropriate care. Availability of supplies and equipment, a lack of trained and competent person and facility.

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This study carried out at tertiary health centre helps to find out the lacunae at various levels and help to plan out the methods to reduce the MMR. This study is also intended to be a catalyst for change in public health policy by establishing the special and long neglected health needs of women as a high priority.

### Material & Methods

This study is carried out on females delivering in a tertiary care hospital M.P. Shah Medical college Jamnagar from April 2012 to March 2017.

#### Study Population

The study is carried out on maternal deaths occurring during antepartum intrapartum and postpartum period (up to 42 days) during 5 year period.

#### Study Design

Retrospective Study

Duration of Study: 5 Year

#### Inclusion Criteria

Maternal death during pregnancy or within 42days of delivery, irrespective of duration and site of pregnancy, from any cause related to or aggravated by the pregnancy, or its management

#### Exclusion Criteria

1. Death from accidental or incidental causes not related to pregnancy.

#### Tools Used

The study was conducted using semi-structured questionnaire with two parts..

Regular questionnaire- for collection of basic demographic information (name, age, religion, occupation, education status)

Directed questionnaire- for collection of research oriented data and knowledge about event leading to maternal deaths.

### Observation & Discussion

As shown in above table, in our study conducted during 5yrr period of April 2012 to March 2017 total live births were 41931 of which 121 mothers died giving cumulative Maternal Mortality Ratio as 288.5 /1,00,000 live births. (Table 1)

Our study's MMR is almost similar to the other institute's study of MMR. (Table 1.1)

In the present study, 81 patients were emergency who had not taken any antenatal visit this is due to lack of knowledge regarding regular antenatal visits. (Table 2).

Table 1: Maternal mortality ratio at our institute from april 2012 to march2017

Total No of Maternal Deaths	Total No of Live Births	Maternal Mortality Ratio/ 1,00,000 Live Births
121	41931	288. 5

Table 1.1: Comparison of MMR between different institute with our study

Institute	MMR/1,00,000 LIVE BIRTHS
Sri Ganga RamMedical college, New Delhi 2010-14 <sup>34</sup>	333.07
SDM Medical College, Karnataka 2009-14 <sup>35</sup>	277
JSS Medical College, Karnataka 2007-12 <sup>39</sup>	586
GajraRaja Medical College. MP 2001-05 <sup>37</sup>	828
Malda Medical College, West Bengal 2008-12 <sup>38</sup>	518
Present Study	267.2

Table 2: Antenatal registration

Status	No. of Cases	Percentage
Booked	40	33.0%
Emergency	81	66.9%

Maternal Mortality is higher in the emergency cases compared to the booked. Comparable results are seen in study at Sri Ganga Ram Medical College, New Delhi and SDM Medical College, Karnataka. Other studies show comparable results. This signifies the importance of health education in prevention of maternal mortality (Table 2.1)

In our study 89 patients were from rural area. Lack of transportation, communication and inevitable delay in decision making by family members results in higher mortality in rural areas (Table 3).

The study shows comparable results to those conducted in JSS Medical College, Karnataka, Indira Gandhi Institute, Maharashtra.

Our study is comparable with other studies (Table 3.1)

Lower socio-economic class is associated with high maternal mortality.

Highlighting the importance of poverty, no deaths were observed in high socio economic class (Table 4).

Study of Malda medical college is comparable to our study (Table 5).

Uneducated people are ignorant and don't seek medical care and so suffer from higher mortality rates. (Table 6).

**Table 2.1:** Comparison of antenatal registration

Institute	Booked (%)	Emergency (%)
Sri Ganga Ram Medical college, New Delhi 2010-14 <sup>34</sup>	5.7%	94.2%
SDM Medical College, Karnataka 2009-14 <sup>35</sup>	28.8%	71.1%
Indira Gandhi Medical College, Maharashtra 2011-15 <sup>36</sup>	90.7%	8.3%
GajraRaja Medical College. MP 2001-05 <sup>37</sup>	26%	74%
Malda Medical College, West Bengal 2008-12 <sup>38</sup>	10.1%	89.8%
Present Study	44.4%	55.5%

**Table 3:** Distribution of subjects by residence

Residence	No of Patients (121)	Percentage
Rural	89	73.5%
Urban	32	26.4%

**Table 3.1:** Comparison of subjects by residence

Institute	Rural	Urban
JSS Medical College, Karnataka 2007-12 <sup>39</sup>	69%	31%
Indira Gandhi Medical College, Maharashtra 2011-15	58.9%	41%
Present Study	55.5%	44.4%

**Table 4:** Socio economic status and maternal mortality

Socio Economic Status	No of Patients	Percentage
Lower	96	79.3%
Middle	25	20.6%
Higher	00	00%

**Table 5:** Comparison of socio economic status

Socio Economic Status	Malda Medical College, West Bengal 2008-12	Present Study
Lower	77.5	80%
Middle	22.4%	20%
Upper	00%	00%

**Table 6:** Educational status

Educational Status	No of Patients	Percentage
Educated	28	23.1%
Uneducated	93	76.8%

**Table 7:** Comparison of type of delay

Type of Delay	No.	Percentage
TYPE 1	91	75.4%
TYPE 2	27	22.1%
TYPE 3	3	2.50%

## Conclusion

While prevention remains critical, treatment within the context of a patient centered supportive system will be needed., if we are too achieve large sustain reduction in death and disability resulting from emergency situations.

However strong emergency system can prevent delays at critical time point.

Such system do not require massive resources allocation but rather a cost effective , informed approach that emphasise proven life saving intervention that are appropriate to the context.

Improving access to emergency care by minimising the 3 types of delay in delivery of such care, has the potential to reduce mortality in every field, system and population.

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