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ORIGINAL ARTICLE

SOCIAL AUDIT AND VERBAL AUTOPSY ON MATERNAL DEATHS IN PRAKASAM DISTRICT, ANDHRA PRADESH

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ABSTRACT: OBJECTIVE: To conduct the social audit and verbal autopsy on maternal deaths in Prakasam district, Andhra Pradesh, for the year 2008-2009, done in the year 2010.**DESIGN:** It was a Community based maternal death review. Maternal deaths in Prakasam district, Andhra Pradesh, during the year 2008-2009, were collected from the District Medical and Health Office, and social audit and verbal autopsy was conducted in the field. **METHOD:** It was a retrospective community based study. A group of three doctors, which includes an Obstetrician and Gynecologist, a Physician and a specialist from Social and Preventive Medicine, conducted social audit and verbal autopsy by interview method in the field with the family members and neighbors of the victim and analyzed the various social causes and delays leading to the maternal death. **RESULTS:** The various causes leading to delay in the treatment and to the death of the mother were collected and analyzed. Most of the maternal deaths were young primigravidae of 20 to 24 years. About 65.9% cases were during postpartum period. About 30% of them had not decided whether to go to either government or private hospital for antenatal checkup. 30% to 50% of the family members were not sure or not aware of the danger signs of pregnancy and still 25% of them were home deliveries. The probable medical causes leading to maternal deaths were due to Post-partum hemorrhage, anemia and pregnancy induced hypertension. Most of the cases (about 42.2%) were due to delay in receiving appropriate care. About 28.7% of them were due to the delay in recognizing the danger signs of pregnancy. Delay in decision making and delay in reaching the care together forms about 40%.

KEYWORDS: Maternal deaths: Social audit: Verbal autopsy: Community based study: Delays in treatment.

INTRODUCTION: "Every Maternal Death has a story to tell and can provide information on practical ways of addressing the problem".

Every year in India, roughly about 28 million women experience pregnancy and 26 million have a live birth. Of these, an estimated 1, 00,000 maternal deaths and one million newborn deaths occur each year.[1] In addition, millions of 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.

International standards defined "Maternal death as, death of a woman while pregnant or within 42 days of the end of the pregnancy, irrespective of the duration and the site of the pregnancy, causes related to or aggravated by the pregnancy or its management".

Maternal mortality is an indicator of good quality of obstetric care in a community directly reflecting the utilization of health care services available.[2] The care not only depends on the various medical causes but also on the social factors which causes delay in the treatment.[3] In the World about 5,10,000 Maternal deaths (9% of total deaths) occur every year. Maternal mortality has been higher

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in developing countries than in developed countries.[4] Overall the maternal mortality ratio in India has an appreciable decline from 405 per one lakh live births in the year 1997 – 98 to 254/ one lakh live births as per the survey report released in April 2009. Every five minutes we are losing a pregnant mother. In India more than 1, 00,000 women die every year due to pregnancy related complications. Out of which about 80% of the deaths are preventable and avoidable.[5]

However, to accelerate the pace of decline of MMR in order to achieve the NRHM (National Rural Health Mission) and MDG (Millennium Development Goals) 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 antenatal care, emergency obstetric care, nutritional status, educational levels of women and other social factors.[6]

The total expected number of maternal deaths in one year in Andhra Pradesh was 5376. But only 797 cases were recorded in Andhra Pradesh during the year 2008-2009.

OBJECTIVES:

1. To conduct social audit and verbal autopsy on maternal deaths in Prakasam district, Andhra Pradesh.
2. To evaluate and analyse the data.
3. To develop some recommendations for the improvement.

METHODOLOGY: This was a retrospective community based study of the maternal deaths in Prakasam district, Andhra Pradesh. This district has a population of about 3,397,764 and the area of about 17,628 sq. kms. A group of three specialists which includes an Obstetrician and Gynecologist, a Physician and a specialist from Social and Preventive Medicine, conducted social auditing and verbal autopsy of the maternal deaths in the field.

The study was done in the year 2010. The maternal deaths in Prakasam district during the year 2008–2009 were collected along with their addresses from the Office of the District Medical and Health Officer, Prakasam district. The route map for the approach of the residence of the victims was discussed with the administrative authorities. A proforma was designed for collecting the data from the relatives of the deceased mother regarding probable social causes leading to the death of the mother and were analysed.

A total of 59 maternal death (2008-2009) cases were collected from the office of the District Medical and Health Officer, Prakasam district. The help of the local ASHA worker/ ANM and the concerned Medical Officer were taken. Investigation of the maternal deaths was done using Verbal Autopsy Format, which was designed. The narration of the various events which led to the death of the mother was recorded and analysed.

RESULTS:

AGE in years	NUNBER OF CASES (n=59)	PERCENTAGE
15-19	10	16.9%
20-24	37	62.5%
25-29	8	13.5%
> 30	4	6.7%

Table: 1: Age-wise – Maternal Deaths

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GRAVIDA	CASES (n=59)	PERCENTAGE
Primi	31	52.4%
Multi	25	42.2%
Grandmulti	3	5%

Table 2: Gravida-wise – Maternal Deaths

PERIOD	CASES (n=59)	PERCENTAGE
Antenatal	13	21.9%
Intrapartum	7	11.8%
Postpartum	39	65.9%

Table 3: Period of Death - Maternal Deaths

Prefer government hospital	40%
Prefer private hospital	40%
No check ups	20%

Table 4: Preference for Antenatal check-up (n=100%)

Aware of danger signs of pregnancy	50%
Doubtful of danger signs	20%
Not aware of danger signs	30%

Table 5: Awareness for danger signs of Pregnancy (n=100%)

Prefer Institutional delivery	75%
Prefer Home delivery	25%

Table 6: Preferences for the place of delivery (n=100%)

PPH	19	32%
Anemia	6	10%
APH	3	5%
PIH	6	10%
Eclampsia	3	5%
Jaundice	4	7%
Fever	4	7%
Puerperal sepsis	4	7%
CVT	4	7%
Table death	4	7%
Amniotic fluid embolism	2	3%

Table 7: Medical causes of Maternal Deaths (n=59)

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1	Delay in recognizing of danger signs	17 cases	28.7%
2	Delay in decision making	11 cases	18.6%
3	Delay in reaching care	13 cases	21.9%
4	Delay in receiving appropriate care	25 cases	42.2%

Table 8: Various Delays leading to Maternal Deaths (n=59)

DISCUSSION: Community based Maternal Death review using a social audit and verbal autopsy format is a method of finding out the probable medical causes of death and ascertaining the personal, family or community factors that may have contributed to the maternal deaths. The verbal autopsy consists of interviewing people who are knowledgeable about the events to the death such as family members, neighbors and traditional birth attendants.

In this study the community based reviews was taken up for all maternal deaths that occurred in this geographical area, Prakasam district, Andhra Pradesh, irrespective of the place of death, either at home, facility or in the transit. The present study shows that many social causes were responsible for the maternal deaths.

In my study, most of the maternal deaths were young between 20 to 24 years and about 52.4% were primigravidae. In my study the maternal deaths in the multigravidae (42.2%) were seen mostly in previous normal deliveries. This shows that every pregnancy has to be planned and given importance. Many deaths, about 65.9% were in the postpartum period and mostly were preventable. About 30% to 50% were not aware or not sure of danger signs of pregnancy.

Still about 25% were home deliveries of which mostly were multigravidae. About 30% to 50% of the medical causes were related to postpartum hemorrhage, anemia and pregnancy induced hypertension. About 42.2% of maternal deaths were due to the delay in receiving appropriate care on reaching the facility, either due to lack of a specialist or due to lack of the appropriate infrastructure. 28.7% were due to delay in recognizing of danger signs of the pregnancy.

Even after recognizing the danger signs of pregnancy, delay in decision making and delay in reaching the place of hospital care, were about 18% to 22%. This shows that most of the maternal deaths were preventable either by early identification, decision making by the family members and proper timely transport. Most of the deaths which occurred in the hospital were either due to late arrival or due to lack of specialist treatment within the reach, or lack of blood bank within the reach.

RECOMMENDATIONS: Government and public sectors should play an important role in improving the maternal care and in increasing the awareness among the society. The recording of the maternal deaths should be increased by improving the awareness among the public, which can be increased by providing basic health education and conducting community based camps. The maternal health services should be integrated by computerizing the antenatal cases inter district-wise and should be tracked till delivery. Secondary level referral health care unit's infrastructure should be improved. The secondary level specialist treatment should be improved by updating the knowledge and training in emergency obstetrical management.

Provision of 24 hours a day throughout the week for safe deliveries within the reach in PHCs. Trained birth attendants should be updated in identifying the high risk group during antenatal, intranatal and postnatal period. Efforts are needed to provide health education and create awareness

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in the public, role of family members and particularly the husband's role, to conduct monthly maternal death review meetings at the community, district and state levels. Confidential enquiries should be conducted for the cause of maternal deaths.

Free bus passes to the patients and also the attendants should be provided apart from 108 services. Trained Obstetrician and Gynecologists and Blood bank facilities within 1 hour reach by the patients. Community participation plays an important role in the care of the maternal health. Above all no program is successful without the political commitment in the society.

Lessons from other Countries: In United Kingdom the Maternal mortality during the year 1920 – 1930 was 440 per 1 lakh live births. After 10 years the maternal death ratio has fallen to 11 per 1 lakh live births.

In our neighboring country Sri Lanka the MMR is less than 92 (2000).

Reasons for the success in the above countries are trained birth attendants for all deliveries, backed by trained Obstetrician and Gynecologists within 1 hour reach.

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