

Verbal Autopsy Of Maternal Death In A Rural Community Of India

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Abstract

INTRODUCTION

Pregnancy is the normal healthy event in the reproductive life of women, yet this life-affirming process carries the risk of death and disability for many women (1). Deaths due to conditions related to pregnancy and childbirth, in other words maternal deaths, are the 6th biggest cause, following infectious and parasitic diseases, injuries, conditions not elsewhere classified, neoplasms and diseases of the circulatory system (2). The World Health Organization (WHO) estimates that, 536,000 maternal deaths occur globally each year and 136,000 of them take place in India. Estimates of global burden of disease for 1990 also showed that India contributed 25% to disability-adjusted life-years lost due to maternal conditions alone (3). Unfortunately, there is little evidence that maternity has become significantly safer in India over the last 20 years despite the safe motherhood policies and programmatic initiatives at the national level (4).

Still a large majority of maternal deaths occur outside hospitals, there is paucity of information on the causes and circumstances surrounding them. This gap could be addressed by using verbal autopsy, a technique in which relatives of the deceased person are interviewed regarding conditions and care seeking sequence preceding death. This information is used to reconstruct the course of illness and for assigning a probable cause of death (5). For assessing maternal deaths, the verbal autopsy method has been found to have high degree of specificity but low sensitivity. To facilitate identification of maternal deaths in circumstances in which attribution of cause might be inadequate, ICD-10 introduced a category of 'pregnancy-related death', defined as the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of cause of death (6). Few questions of prime importance asked while conducting

verbal autopsy of a maternal death were:

Figure 1

Serial No.	Question
1.	Age at time of death, Occupation, Educational status, Marital status
2.	Time, date and place of death
3.	Illness/ Events that led to death
4.	Obstetric history of the mother
5.	History of ante natal care during concerned pregnancy
6.	History of previous known medical conditions

CASE REPORT

A 26 year old illiterate female from the Amritsar district was pregnant for the third time. Her obstetrical history is shown in table 2.

Figure 2

Gravida	Result	Mode of delivery	Place of delivery	Conducted by	Remarks
1	Live Birth (Singleton)	Full term, Normal Vaginal Delivery (NVD)	Home	Trained Dai	Presently the male child born is 4 yrs old & in good health
2	Spontaneous abortion	-	-	-	Occurred at 8 weeks of gestation followed by dilatation & curettage by ANM
3 (Present)	Still birth (singleton)	Full term, NVD	Home	Trained Dai	Mother died due to PPH

She was registered for her pregnancy in the 2nd month of gestation by the ANM (Auxiliary Nurse Midwife) of that area. As per the recommendations of Reproductive & Child Health programme she received both the doses of tetanus toxoid and 100 tablets of Iron and folic acid from the Primary Health Centre of concerned area. As per the history from mother in law and ANM, she was in good health and carried on with routine work throughout her pregnancy. When her records at concerned PHC were checked she was found to be anemic.

During the 38th week of gestation, she started having labor

pains of low intensity which persisted for two days. A local woman trained or untrained, who conduct deliveries especially in rural areas as they are often the only people immediately available to women during the perinatal period of the area was called upon. After a thorough checkup the patient was informed that she could deliver at any time. With the consensus of family members, the local women was asked to conduct the delivery at home. The main reasons cited for the same by them were financial constraints plus faith in the women who had conducted her first delivery where a male baby was born. Later some medications were given orally to the patient for increasing the intensity and frequency of labor pains as progression was slow. It was perceived that the women must have applied some mechanical pressure on the abdomen to hasten the expulsion of the fetus.

The delivery resulted in a stillbirth, after which she was given injections and medicines names not known to the women as the patient was bleeding profusely. The pharmacist who prescribed them was not available for the interview even on repeated visits. The women also put her hand inside the womb to extract placenta and thought she could combat the bleeding with this. According to the women and the other family members she was bleeding so profusely that all her clothes, even the cot and mattress were soaked with blood and it flowed out on the floor to reach the verandah. Soon the women advised them to take her to the hospital but they gave importance to the burial of the dead fetus. About one and a half hour passed and no one paid attention to the bleeding mother. As the family belonged to the lower socio economic status, they had to borrow some money and arrange for an ambulance/ vehicle but there was delay of about one hour. During this period she succumbed to her condition before she could not be taken to the hospital to treatment.

Based on the available history, the patient apparently died from postpartum hemorrhage compounded by anemia. Her visits to the ANM and PHC during pregnancy apparently helped in diagnosis of anemia but she did not bother to take iron folic acid tablets as prescribed. She was advised to get the delivery at the hospital only but perhaps because of uncertainty relating to an unfamiliar place and the cost of treatment she did not go to the health facility for the same. The patient's family successfully called the women for delivery but later delayed going to the hospital even after severe bleeding started due to perceived lack of sufficient money to pay for emergency treatment and even the

transport could not be arranged.

DISCUSSION

Maternal death is a tragic event. In practical life, it has a severe impact on the family, community and eventually the nation. The young surviving children left motherless are unable to cope with daily living and are at an increased risk of death (1).

Indian government estimates that 301 women die annually for every 100,000 live births. Since many deaths happen in the anonymity of women's homes or on the way to seek help at a medical facility, they often go unrecorded. An estimated 80,000 pregnant women or new mothers die each year in India often from preventable causes including hemorrhage, eclampsia, sepsis and anemia(7). Hemorrhage is considered to be the major maternal killer in India: 38% of maternal deaths were caused by hemorrhage, mostly PPH, according to a recent SRS analysis (8).

According to another estimates made by the WHO, every minute around the world, 380 women become pregnant, 190 women face unplanned or unwanted pregnancies, 110 women experience pregnancy related complications, 40 women have unsafe abortions and one woman dies. Post partum hemorrhage accounts for 34% and 31% of women dying from complications related to pregnancy or child birth in Africa and Asia, respectively (9).

The Indian government under National Rural Health Mission has launched Janani Suraksha Yojna nationwide with an objective to reduce maternal mortality in year 2005. The scheme integrates the benefit of cash assistance with institutional care during ante natal, delivery and immediate post-partum care. The Accredited Social Health Activist (ASHA) works as a link worker between the poor pregnant women and public sector health institution. She would also be responsible for making available institutional ante-natal as well as post natal care and escort her to the health centre. During the year 2008-2009, about 84.26 lakh pregnant women have benefitted from the scheme, out of which 47% had institutional deliveries (10).

This maternal death could have been prevented had the family members and most importantly the patient herself understood the problem and got her delivery conducted at the hospital only. As the family belonged to low socio economic status they could have saved some money well in advance incase for emergency situation. Above all the delivery could have been conducted free of cost and even the

transport expenses would have been borne by the government if the family had contacted ASHA worker in this case.

CONCLUSION

For India to achieve The Millennium Development Goal of reducing maternal mortality by three quarters till 2015, social and economic factors like the low status of women in communities, the poor understanding of families on when to seek care, multiple referrals to different health facilities and a delay in life-saving measures in rural areas need to be addressed. Similar studies will be helpful to assess the magnitude of the problem and hence the government can act accordingly.

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