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MATERNAL MORTALITY: NATURAL RISK TO WOMEN

J. N. Mojekwu[25]

ABSTRACT

Maternal mortality has global importance. It has assumed both local and international dimensions, in spite of assessment challenges. This is supported by the fact that in some parts of the world, vital registration systems are either inadequate or totally absent, thereby making the scanty available information unreliable. Available statistics reveal that there are at least twelve causes of maternal mortality with Abortion, Hemorrhage, Hypertensive disorders of pregnancy and Tetanus recording the highest rates. Due to the complexity involved in determining the actual cause of maternal mortality, the study revealed that factors such as Medical, Health service, Reproduction, Unwanted Pregnancy, socio-economic contribute to maternal mortality. A survey involved two randomly selected private hospitals in Ajegunle, Nigeria. The records from these two hospitals were examined using the χ^2 *- test for independency. The results tend to agree with the patterns obtained in other parts of the low-income groups of the world.*

Key words: Maternal, Mortality, Pregnancy, Socio-Economic, Reproduction

INTRODUCTION

Maternal mortality refers to deaths among women who are or have been pregnant during the previous 42 days. Potts (1986) found that maternal mortality rate (MMR) in developing countries is quite high. He however, suggested that there is a great need to design and implement effective programmes to study the various causes of the maternal deaths as well as identifying the problems they pose to women in particular and to the society in general.

[25] Department of Actuarial Science, University of Lagos, Nigeria

In the past decade, a number of international conferences have established goals related to the environment, health, population and development. The reduction of maternal mortality by half the 1990 levels by year 2000 was a goal common to several such conferences including, in particular, the Nairobi Motherhood Conference in 1987, the World Summit for Children (WSC) in 1990, the International Conference on Women (ICPD) in 1994, and the Fourth Conference on Women (FWCW) in 1995. Ascertaining progress towards the goals is however, extremely difficult for two reasons; maternal mortality is difficult to measure and the information available at country level does not generally permit the establishment of good baseline data.

AbouZahr (2002) said that every minute of everyday, somewhere in the world, a woman dies following pregnancy-related complications. The author further stated that the neglect that contributes to the deaths of women also compromises the health and survival of the infants they are carrying and the older children they leave behind. The author claimed that this would lead to poverty, as they constitute great problems to their families, communities and society.

The incorporation of maternal mortality reduction into the goals of the international community reflects its importance as a measure of human and social development. Maternal mortality is therefore, a sensitive indicator of inequity. Of all the indicators commonly used to compare levels of development between countries and regions, levels of maternal mortality show the widest disparities. Maternal mortality offers a litmus test of the status of women, their access to health care and the adequacy of the health care system in responding to their needs. Information about the levels and trends of maternal mortality of any economy reflects not only what it tells us about the risk of pregnancy and childbirth, but also for what its implication for women's health in general and by extension their social and economic status.

The report of National Population Commission (1999) indicated that in many poor African countries, one mother dies from compli-

cations of pregnancy and delivery for every 100 live births. Ninety-nine percent of maternal deaths occur in developing countries even though most of them preventable. Infections, blood loss and unsafe abortion account for the majority of deaths. To reduce maternal mortality, more investment in health systems is needed to improve on the quality and coverage of delivery services and to provide prenatal and postnatal care for the poor. However, maternal mortality varies widely in the world's regions-low in Latin America, but very high in Africa (See Table 1).

Table 1: Maternal Mortality Indicators for Some Selected African Countries (1990-1999)
Source: World Health Statistics Annual, 1999

1.2 THE DATA

It is usually extremely difficult to assess levels of maternal mortality at the national level. Doing so requires knowledge about deaths

Location	MMR per 100,000
World	732
Latin America	291
Low & Middle Income	750
Africa	306
Algeria	220
Cote d'Ivoire	600
Ghana	210
Kenya	590
Morroco	230
Nigeria	700
Zambia	650

of women of reproductive age (15 – 49 years), the cause of death and also whether or not the women were pregnant at the time of

death or had recently been so. Yet, few countries record births and deaths, even fewer register the cause of death, and fewer still systematically note pregnancy status on the death form. Broadly speaking, countries fall into one of these three categories:

i. Countries with no reliable system of vital registration where maternal deaths, like other vital events go unrecorded.
ii.
iii. Countries with relatively complete vital registration in terms of numbers of births and deaths but where cause of death is not adequately classified. According to World Health Statistics Annual (1993), only 35% of the world's population is routinely reporting regarding the cause of death(s).

Countries with complete vital registration and good cause of death attribution, although, in this category misclassification of maternal deaths can arise for a variety of reasons (such as under – reporting, illiteracy and cultural norms).

World Health Statistics Annual (1993) further claims that where vital registration systems are absent or inadequate, it is possible to estimate maternal mortality using survey techniques but these have a number of disadvantages. It however concluded that high mortality countries have neither adequate systems of registration nor the resources to rely on surveys.

1.3 METHODOLOGY

Records of maternal deaths from two private hospitals were extracted for the year 2000. A total of 105 maternal deaths were obtained and classified accordingly. These hospitals were selected based on their locations. These hospitals were located in Ajegunle, a suburb of Lagos, Nigeria with high-density population and dominated by low-income groups. In each of the hospitals, the Medical Director and the most senior Nursing Sister were interviewed. This is to buttress further the findings. Furthermore, scientific statistical

tool (chi- squared distribution) was applied to Tables 2 and 3. This is to study the dependency of age of the mother on the causes, as well as the age of the mother on the parity with respect to maternal deaths.

RESULTS

Table 2: Maternal Deaths Cases Cross classified By Age &Cause
Source: Survey of Two Private Hospitals in Ajegunle, 2004

Cause/ Age	Abor-tion	Haemo r-rage	Teta-nus	Hyper-tensive Disor-ders	Ectopic/ Ob-structed Labour/ Uterus Rapture	Hepati-tis/ Ma-laria/ Anae-mia	Sep-sis	Pro-lon-ged La-bour	To-tal
15-19	10	6	5	4	1	2	4	1	33
20-24	3	4	3	2	2	5	1	4	24
25-34	2	2	3	5	4	8	1	4	29
35+	2	1	2	2	5	2	3	2	19
TO-TAL	17	13	13	13	12	17	9	11	105

1.5 DISCUSSION

1.5.1 MEDICAL FACTORS.

There is considerable variation in ways of classifying medical causes of death. For example, a woman who bleeds to death when her uterus raptures may be listed as dying from either haemorrhage or raptured uterus. Nevertheless, the final "causes" of maternal deaths that is, those diagnosed and recorded by medical personnel are remarkably consistent throughout the developing world and the results in Table 2 displays the same pattern. Maternal deaths are usually divided into three categories: "Direct" obstetric deaths; indirect obstetric deaths; and unrelated deaths. Direct obstetric deaths are those resulting from complications of pregnancy, delivery or their management. Indirect obstetric deaths are the result of the ag-

gravation of some existing conditions (such as hepatitis or heart disease) by pregnancy or delivery.

In developing countries, as the earlier studies had shown, direct deaths constitute about 50 –98 percent of all maternal deaths, and haemorrhage infection and toxemia together make up at least half of all maternal deaths in most countries for which the information was provided. In a few studies, some other conditions were listed as among the three leading causes of death. Most often, this other condition was illegally induced abortion but in two cases it was embolism. Raptured uterus, hepatitis, anaemia and obstructed labour were each cited once as among the three leading causes of maternal deaths.

The present study does not quite agree with this notion. However, with the improved access to medical care in some developing countries, one would expect that the trend would have changed.

1.5.2 HEALTH SERVICE FACTORS:

The fact that medical causes of death are not the whole story emerged clearly from the recent studies on the causes of maternal deaths. The medical records of women who had died had been analyzed in nine countries in order to identify factors that contributed to their deaths. The investigators found that 63-80percent of direct maternal deaths and 88-98percent of all maternal deaths could probably have been avoided with proper handling. In a number of cases the researchers specifically stated that they had evaluated the availability of deaths not by standards of care under the best of circumstances, but by standards realistic under the circumstances prevailing in that country at the time. For example, a report from World Health Organization (1996) stated that in Turkey, 51percent of maternal deaths were judged to be avoidable within the existing health system, and another 24percent avoidable with an improved health system. In most cases, investigators identified more than one avoidable factor that contributed to each death.

According to World Health Organisation (1999) deficient medical treatment of complication was often an important factor. Again, mistaken or inadequate action by medical personnel was judged to be a contributing factor in between 11percent and 47percent of maternal deaths in the developing countries studied. Further, lack of essential supplies and trained personnel in medical facilities was mentioned frequently as a contributing factor. In some countries, lack of blood for transfusion, drugs and equipment were factors in more than half of the cases studied. However, the medical personnel interviewed during the present survey supported almost all these.

Lack of access to maternity services is another crucial step on the road to death. Past studies in sub-Saharan Africa demonstrated that maternal mortality rates increased in areas where access to a hospital is difficult, and where women are likely to arrive at the hospital, if at all, in a serious condition. The studies estimated that 32percent of women who died in the hospital arrived in very poor conditions and another 17percent arrived unconscious.

Lack of prenatal care was frequently mentioned as a contributing factor. In Nigeria, according to World Health Organisation (1999) in all age-parity groups, maternal mortality rates were drastically lower among women who had prenatal care than among those who had none. However, the community-based study of maternal mortality in Addis Ababa by the United Nations illustrates the point that antenatal care and selection of high risk women are not an end in themselves. The study pointed out that all three women in the Ethiopian study who died of haemorrhage had prenatal care, but had delivered at home. This shows that women must be convinced of the benefit of referral and above all, services must be accessible. Another problem in interpreting data on prenatal care is the difficulty of distinguishing the well-known effects of poverty on maternal health from the effects of lack of prenatal care.

Table: 3 : Maternal Deaths Cases Cross classified By Age & Parity

Parity/ Age	0	1	2	3+	Total
15-19	25	3	-	-	28
20-24	4	10	5	4	23
25-34	9	2	6	14	31
35+	2	3	12	6	23
Total	40	18	23	24	105

Source: Survey of Two Private Hospitals in Ajegunle, 2004

1.5.3 REPRODUCTIVE FACTORS:

Bah (1987) confirmed that for decades, it has been known that groups of very young women, those aged above 35 years and women who have already born up to four children, are at very high risk of dying during pregnancy and delivery. He further stated that although, information on parity is more difficult to obtain than information on age, several studies also confirmed the increased risk of death associated with having many children. For example, in Jamaica, it was found that women having their second child were 43percent more likely to die than those having their fifth birth.

The importance of these data is that the practice of family planning could prevent great many deaths of women of unfavourable age or parity. However, practice of family planning would go a long way in reducing the risk of maternal deaths amongst the women.

1.5.4 UNWANTED PREGNANCY

Given the high, overall rates of maternal death in poor countries, the impact of family planning would be important if unwanted pregnancies were averted at any age or parity. Illegally induced abortion has

been mentioned as a major killer of women, as past studies have demonstrated. In Ethiopia for example, four of the six women who died on the way to hospital had an illegally induced abortion. Reluctance or inability to get medical care results in a selective underreporting of abortion deaths. Clearly, since induced abortion occurs in cases of unwanted pregnancy, family planning could substantially reduce the number of deaths from this cause. Finally, unwanted pregnancy contributes to maternal deaths in ways, which are not yet understood. The Ethiopian study found that women who had an unwanted pregnancy were less likely than other women to seek prenatal care.

1.5.5 SOCIO-ECONOMIC FACTORS:

Socio-economic factors undoubtedly play a large role in maternal deaths but then, the how and the why are still obscure. What is known is that poverty is clearly a high-risk factor. It is also well established that poor women are less likely to have formal education than wealthy women, and are less likely to be in good health and to seek (or receive) medical care. Which of these factors are causes and which are effects, and how can this vicious circle be broken? Much more research needs to be done to answer these questions.

The kinds of questions raised above are also relevant to health problems such as infant mortality. But another aspect of socio-economic status that has special importance in maternal deaths is the status of women. A recent study carried out by Nigerian Demographic Survey (1999) in Western Nigeria emphasized that in almost all societies in the past, and in many societies in the present, women are a socially disadvantaged group. Hence, the status of women affects their nutrition, reproductive behaviour, and utilization of health care services and vulnerability to harmful traditional practices. The ramifications of the status of women are so far reaching that nothing will really change as far as maternal mortality is concerned until attitudes towards women change and people are sufficiently motivated to improve their living conditions.

1.6 DISCUSSION OF FINDINGS

The joint statement notes by World Health Organization, United Nations Fund for Population Activities, United Nations Children's Fund and World Bank stated that the low social status of women in developing countries is an important factor underlying maternal mortality. Low status limits women's access to economic resources and basic education, impeding their ability to make informed decisions on childbearing, health and nutrition. Poor nutrition before and during pregnancy contributes to poor health, obstetric problems and poor pregnancy outcomes for both women and their newborns.

Infections, blood loss and unsafe abortion account for the majority of deaths; all these causes are well within the ability of health workers with midwifery skills to tackle. It is obvious that poor mothers are much less likely to have access to a skilled birth attendant than richer ones and therefore, more likely to die too.

According to National Population Commission (1999), there is a positive association between mother's education and source of antenatal care. The author claimed that as a mother's level of education increases, so does the likelihood that she would receive antenatal care from a doctor during pregnancy. This association can be linked up with the poverty level as we observed that majority of the poor mothers have very low education.

Social and political leaders in developing countries need to foster the perception that pregnancy and childbirth can and should be made safer. Communities must pay special attention to the nutritional and educational needs of girls and women, enabling women to make decisions for themselves about the number and timing of their children and use of maternal health care services.

The results of the scientific test carried on the data confirmed that certain age- range of the mothers experience certain cause of maternal death. Similarly, the results also support the notion that the

number of childbirths a mother has determines her age in relation to the type of maternal death to which she is exposed.

Health workers with midwifery skills are required to work towards reducing maternal mortality. In addition to attending births, they provide mothers with basic information about prenatal and postnatal care. Improving women's social status and ensuring gender equity in health care are important in achieving this goal. It is a disturbing trend, which is probably caused by barriers to access. These include high cost of services and drugs, transport difficulties (including costs) and distrust of the services that are provided. However, neglect of women drives poverty and robs the next generation of hope for a better future.

Poovan, P. *et. al.,*(1990) in OECD Observer (2001) claimed that China, Cuba, Iran, Malaysia and Sri Lanka have been able to achieve and maintain significant reductions in levels of maternal mortality by deliberately allocating the resources where they were needed. However, what is lacking is not the level of national wealth, but the level of commitment to act.

1.7 CONCLUSIONS

From the review, it is strongly indicated that major new initiatives to prevent maternal deaths should be mounted as this overdue. In order to establish a concerted and effective effort to reduce maternal deaths in developing countries, maternal mortality must be given high priority. It should be noted, however, that maternal mortality is affected not only by the variables of immediate interest, but also by much wider array of socioeconomic factors. Which of these factors are the causes and which are effects is a difficult question to answer. Much research needs to be done to identify the more important factors. However, based on these tentative findings, it could be suggested that the priority of every government should be to ensure that every woman, whenever possible, lives and grows up in a family unit, with care and security in healthy surroundings, receives

adequate nourishment, health supervision and efficient medical attention, and is taught the elements of healthy living. Furthermore, we suggest that maternal health must comprise preventive as well as curative aspects of problems arising in pregnancy. As far as maternal mortality is concerned, until attitudes towards women change and people are sufficiently motivated to improve their living conditions, maternal mortality rates and patterns would remain significantly unchanged.

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