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# MATERNAL MORBIDITY SCORE (MMS) TO PREDICT PERIPARTUM MATERNAL MORBIDITY

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**ABSTRACT** In 2013, 289000 maternal deaths took place globally. Maternal mortality has declined by 45% between 1990-2013, and while considerable progress has been made particularly in recent years, it is now extremely unlikely that the goal of reducing maternal mortality by 75% will be met. Women face the higher risk of maternal death in South Asia and Sub-Saharan Africa. The most important direct causes are hemorrhage, hypertension, abortion, and sepsis; however, the proportion of deaths due to indirect causes is increasing everywhere and HIV has a big role to play for mortality in Africa. The most frequent complications are anemia and depression, but prolonged and obstructed labor has the highest burden of diseases because of disabilities associated with fistulas. The risk of maternal deaths has two components: the risk of getting pregnant, which is a risk related to fertility and its control or lack of control; and the obstetric risk of developing a complication and dying while pregnant or in labour. The obstetric risk is highest at the time of delivery. The article take into account to know the maternal morbidity ,screenimg of maternal morbidity and early detection will help for referral and treatment to reduce the maternal mortality as well as neonatal mortality.

**KEYWORDS :** maternal morbidity, screening

## INTRODUCTION

WHO Maternal Morbidity Working Group (MMWG) defines maternal morbidity as "any health condition attributed to and/or aggravated by pregnancy and childbirth that has a negative impact on the woman's wellbeing". The MMWG emphasises the wide range significance of indirect conditions in the morbidity that women experience during pregnancy, delivery, or post-pregnancy by listing and dividing more than 180 diagnoses into 14 organ dysfunction categories, ranging from obstetric to cardio-respiratory and rheumatology conditions. The negative impact of pregnancy-related ill health is also highlighted on the basis of subsequent disabilities, including how severely the functional status is affected and for how long. While the origins of maternal morbidity occur during pregnancy, the sequelae might take several months to manifest themselves. This is a major difference from maternal mortality, where deaths are counted during pregnancy and up to one year after pregnancy, but more frequently within 42 days.

### Obstetric Causes of Maternal Morbidities and Deaths

Abortive outcomes include abortion, miscarriage, ectopic pregnancy, and other abortive conditions (WHO 2013). Abortive outcomes take place before 28 weeks during pregnancy, but this time definition varies among countries, with lower cut-offs of 24 weeks used.

Preeclampsia is characterized by high blood pressure and protein in the urine; women are diagnosed with eclampsia when the preeclampsia syndrome is associated with convulsions.

Obstetric hemorrhage refers to anomalous or excessive bleeding because of an early pregnancy loss, a placental implementation abnormality (including placenta previa or placental abruption) or because of an abnormality in the process of childbirth.

Pregnancy-related infections include puerperal sepsis, infections of genitourinary tract in pregnancy, other puerperal infections, and infections of the breast associated with childbirth (WHO 2013).

Prolonged labour is labor lasting more than 12 hours, in spite of good uterine contractions and good cervix dilatation.

In obstructed labor, the fetal descent is impaired by a mechanical barrier in the birth canal ,despite good contractions (WHO 2008). Causes of obstructed labor include cephalopelvic disproportion, abnormal presentations, fetal abnormalities, and abnormalities of the reproductive tract.

Anemia Anemia—when the number of red cells or hemoglobin (Hb) concentration has reached too low a level in the blood—is a commonly diagnosed condition during pregnancy or the postpartum period. Its main symptoms include excessive fatigue; it can contribute or lead directly to a maternal death when Hb concentration has reached particularly low levels. Anemia has many different causes, including blood loss; infection-related blood cell destruction; and deficient red blood cell production because of sickle cell disease, parasitic diseases such as hookworm or malaria, nutritional deficiency, including iron deficiency. During pregnancy, anemia is diagnosed when Hb levels are below the threshold of 11 g/dl. Anemia is classified as severe when the levels reach 7 g/dl.

### Broader Determinants of Maternal Mortality and Morbidity

The broader determinants for maternal mortality and highlights the specificities of maternal health by other health conditions, determinants include characteristics of the social, legal, and economic contexts; individual risk factors, such as women's age and parity; and the physical environment, for example, water sources and geographical accessibility, some of these have more salience in maternal health.

### Risk Factors and Pathways of Influence Individual Nonmedical Risk Factors

**Age:** Women at the extremes end of the reproductive age range (below 20 and above 35) have a higher risk of death for both physiological and sociocultural reasons; the largest number of deaths might be in the middle group, because this

is when most birth occurs. However, Graham and Airey (1987) have estimated that between a 50 percent and 75 percent of maternal deaths occur between ages 20-35 years.

**Parity:** First pregnancy and more than three to five pregnancies have a higher risk of complications and death. Women in their first pregnancy have longer duration of labor, while women with multiple pregnancies are more likely to suffer postpartum hemorrhage. While family planning can help to reduce the number of higher order births, first pregnancies can only be delayed but not avoided (Graham and Airey 1987).

**Unintended pregnancies :** These pregnancies are either mistimed or unwanted. Unwanted pregnancy is a risk factor for unsafe abortion, lack of social support, and domestic violence. Women who continue with their pregnancy are less likely to plan for childbirth and more likely to commit suicide (Ronsmans and Khlat 1999).

**Marital status :** Single women who are pregnant often lack support from their partners or their families and are more likely to try to induce an abortion or to run into financial and other logistic difficulties when seeking care for labor.

**Women's education:** Women who are educated know where to obtain effective services and are more likely to request these services, when needed. Husbands' education Where husbands are the main decisions makers, the educational level of the husbands is often a more important determinant of maternal mortality than the women's education (Ganatra and others 1998).

**Ethnicity and religion :** In high-income countries, women from black or migrant communities are more likely to die during pregnancy for cultural and medical reasons, including chronic illhealth. Women from certain religious groups may seek medical advice from their religious leaders or deliver in places of worship.

**Poverty :** Money is often required to travel or to deliver safely. Emergency caesarean section is a very expensive procedure, which can lead to delays in seeking care and in catastrophic expenditures. Obesity and other nutritional factors Obese or anemic women are more likely to die in childbirth. Obese women face the increased risk due to comorbid conditions, such as diabetes, hypertension, or cardiac problems; it is also because it is technically more difficult to provide them with clinical care. Severely anemic women cannot tolerate hemorrhage to the same degree as women with higher hemoglobin levels.

**Past obstetric history:** Past stillbirths and emergency caesarean are predictors of complications and deaths. Social and economic context Women's status Often measured using education as proxy, women's status indicators help to assess the extent to which women can make decisions on their own and the extent to which women and their decisions are valued. Many proxy variables have been used to measure women's status, including age at marriage, financial decision making power, and women's opinion on domestic violence (Gabrysch and Campbell 2009).

Legality of reproductive health services Where abortion laws are restrictive, women are more likely to have unsafe abortions. The current focus is on delegating certain procedures to mid-level providers to ensure that more women have access to safe and effective services.

**Transportation:** Women who live at a distance from facilities are much more likely to delay seeking care and to experience multiple referrals. Transport network Patient access to transport and problematic topography are risk factors for the long duration of the second tier of delays.

**Water and sanitation:** The availability and quality of water and sanitation (WATSAN) are key factors at the community level; they influence direct risks of diarrheal diseases and other waterborne infections in pregnant and parturient women, as does personal hygiene before and after delivery (Shordt and others 2012). WATSAN can indirectly pose risks to women's health in terms of carrying heavy water receptacles and violence against women at public water collection points or latrines. In health care facilities, WATSAN impacts the hygiene practices of providers during childbirth, such as hand washing and environmental cleaning, with attendant increased risks of maternal and newborn nosocomial infections (Hussein and others 2011).

**Quality of care and accountability :** As more women deliver with skilled providers, the quality of care in facilities becomes increasingly important. The accountability of the health sector is a new focus of interventions to improve the quality of care. The availability of blood is one of the most important determinants in the quality of care received by women who are severely ill (Graham and others 2013).

## CONCLUSION

Despite gains throughout the 20th century, maternal health remains a major global public health concern. Of particular concern is that Maternal morbidity rates appear to be trending upward. Such increases in maternal morbidity not only are failures to achieve broad public health goals of improved women's health, but also contribute to sub-optimal delivery outcomes and poor infant health.

Most of the obstetric morbidities and mortality occur in developing and under privileged countries; the occurrence being unacceptably high. These occurrence mostly around the time of delivery peripartum period .Early detection of high risk mothers reduce maternal morbidity and mortality .Screening high risk patients in peripartum period plays important role in reducing risk of morbidity.

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