

**Received Date:** September 13, 2024

**Accepted Date:** October 11, 2024

**Published Date:** November 09,

2024

Available Online at <https://www.ijsrisjournal.com/index.php/ojsfiles/article/view/195>

<https://doi.org/10.5281/zenodo.14060054>

## **Maternal Health and Its Impact on Maternal Morbidity and Mortality**

Mashaal Mahdi Saleh Alshulah<sup>1</sup>, Zahra Ali Mohammad Aldarazi<sup>1</sup>, Ghadeer Ali Muhammad Alrmadhan<sup>1</sup>, Aisha Nasser Ahmed Azizi<sup>1</sup>, Marwa Abdullah Ahmed Almanasif<sup>1</sup>, Eman Saeed Mohammad Aldorazy<sup>1</sup>, Bushra Hassan Amer Asiri<sup>1</sup>, Nasreen Saeed Muhammed Alsadiq<sup>1</sup>, Amani Ali Mahdi Alnabi<sup>1</sup>, Maryam Jawad Almarzooq<sup>1</sup>, Mohammed Shaya Ali Alshahrani<sup>1</sup>, Adel Hadi Hussin Lsallum<sup>1</sup>, Fayez Jabal Fayez Alshahrani<sup>1</sup>, Hussain Mohammed Ahmed Otain<sup>1</sup>, Abduljabar Ibrahim Abduljabar Alhassan<sup>1</sup>

<sup>1</sup> Erada complex for mental health in Dammam, Saudi Arabia.

### **Abstract**

Maternal health is a critical component of public health, impacting not only the lives of mothers but also the well-being of families, communities, and future generations. Maternal morbidity and mortality are significant indicators of healthcare system quality, particularly in low- and middle-income countries, where limited access to healthcare services exacerbates these issues. This review discusses the key factors affecting maternal health, the main causes of maternal morbidity and mortality, and the impact of various interventions aimed at improving maternal health outcomes.

**Keywords:** Maternal Health, Maternal Morbidity, Maternal Mortality.

### **1. Introduction**

Maternal health refers to the health of women during pregnancy, childbirth, and the postpartum period. Despite global efforts to improve maternal health, maternal morbidity and mortality remain pressing issues, especially in resource-poor settings. The World Health Organization (WHO) estimates that approximately 295,000 women die every year due to complications related to pregnancy and childbirth, with 94% of these deaths occurring in low- and middle-income countries(1). Maternal health complications not only result in

the loss of life but also have long-term effects on families and communities, as maternal well-being is closely linked to child survival and development.

## 2. Maternal Morbidity and Mortality: Key Definitions

- **Maternal Mortality:** The death of a woman during pregnancy, childbirth, or within 42 days of termination of pregnancy, from causes related to or aggravated by the pregnancy.
- **Maternal Morbidity:** Refers to health complications resulting from pregnancy and childbirth that do not necessarily result in death but have a significant impact on a woman's quality of life. These may include physical, psychological, and social challenges that extend beyond the postpartum period.

## 3. Factors Influencing Maternal Health

Several factors influence maternal health and contribute to maternal morbidity and mortality. These include:

### 3.1 Socioeconomic Factors

Socioeconomic disparities play a significant role in maternal health. Poverty, low education levels, and gender inequality limit access to essential healthcare services and adequate nutrition. Studies indicate that women in the lowest income quintiles face higher maternal mortality rates due to a lack of resources and healthcare access (2).

### 3.2 Healthcare Access and Quality

Access to skilled healthcare providers during pregnancy and childbirth is crucial for preventing complications. Inadequate access to quality prenatal and postnatal care, as well as emergency obstetric services, increases the risk of complications such as postpartum hemorrhage, infections, and obstructed labor (3). Training healthcare providers and ensuring the availability of essential supplies can greatly reduce maternal mortality rates.

### 3.3 Nutrition and Pre-existing Health Conditions

Maternal malnutrition, including deficiencies in essential vitamins and minerals, can increase the risk of complications during pregnancy and childbirth. Anemia, for example, is a leading cause of maternal mortality, contributing to increased risk of hemorrhage and infection. Additionally, pre-existing health conditions like hypertension, diabetes, and obesity can complicate pregnancy and increase maternal morbidity and mortality(4).

## 3.4 Cultural and Social Factors

Cultural beliefs and practices can affect maternal health-seeking behavior. In some communities, women may rely on traditional birth attendants or delay seeking medical care due to stigma or fear. Additionally, societal expectations and gender norms can affect women's autonomy, making it difficult for them to access necessary healthcare services (5).

## 4. Common Causes of Maternal Morbidity and Mortality

The leading causes of maternal morbidity and mortality are largely preventable with appropriate healthcare interventions. These include:

### 4.1 Hemorrhage

Postpartum hemorrhage (PPH) is the leading cause of maternal mortality, accounting for approximately 27% of maternal deaths worldwide (3). Active management of the third stage of labor, including the use of uterotonic drugs and proper monitoring, can significantly reduce the risk of PPH.

### 4.2 Infections

Infections, including sepsis, contribute to a significant portion of maternal deaths. These infections often result from poor hygiene during delivery and inadequate postnatal care. Antiseptic techniques, antibiotic prophylaxis, and improved postpartum monitoring can help reduce infection-related maternal morbidity and mortality (6).

### 4.3 Hypertensive Disorders

Hypertensive disorders, such as preeclampsia and eclampsia, are another leading cause of maternal morbidity and mortality. These conditions can lead to organ failure, seizures, and death if not managed promptly. Regular blood pressure monitoring, early diagnosis, and timely intervention can prevent complications associated with hypertension in pregnancy (7).

### 4.4 Obstructed Labor

Obstructed labor occurs when the baby cannot pass through the birth canal due to malposition, a narrow pelvis, or other anatomical reasons. This can lead to maternal exhaustion, infections, and uterine rupture. Access to emergency obstetric services, such as cesarean sections, is critical for managing obstructed labor and preventing maternal deaths(8).

### 4.5 Unsafe Abortion

In many regions, restrictive abortion laws drive women to seek unsafe abortion procedures, which can lead to severe complications, including hemorrhage, sepsis, and death. Ensuring access to safe abortion services and post-abortion care can greatly reduce the risk of maternal morbidity and mortality from unsafe abortion (9).

## 5. Interventions to Improve Maternal Health

Efforts to improve maternal health focus on providing women with timely access to quality healthcare services and addressing underlying socioeconomic and cultural factors.

### 5.1 Antenatal and Postnatal Care

Comprehensive antenatal care (ANC) and postnatal care (PNC) are essential for detecting and managing complications early. Regular ANC visits allow healthcare providers to monitor the health of the mother and baby, screen for conditions like anemia and hypertension, and provide necessary vaccinations (10). PNC is equally critical for managing postpartum complications and supporting maternal mental health.

### 5.2 Skilled Birth Attendance

Skilled birth attendance, ideally with a trained midwife or healthcare provider, can prevent and manage complications during childbirth. Studies show that skilled birth attendance significantly reduces maternal mortality rates (11). This intervention is particularly important in rural and underserved areas where access to skilled providers is limited.

### 5.3 Emergency Obstetric Care

Emergency obstetric care is essential for managing life-threatening complications such as hemorrhage and obstructed labor. Ensuring that facilities have adequate equipment, trained personnel, and the ability to perform cesarean sections can reduce maternal mortality significantly (3).

### 5.4 Nutrition and Supplementation Programs

Nutrition programs targeting pregnant women can reduce the risk of complications associated with malnutrition. Iron and folic acid supplementation, for example, is a simple yet effective intervention to reduce anemia and its related risks(12).

### 5.5 Community Education and Empowerment

Educating communities about the importance of maternal health and empowering women to seek care can lead to improved maternal health outcomes. Community health workers can play a key role in educating women about antenatal care, safe delivery practices, and postpartum health (13).

## 6. Conclusion

Improving maternal health is essential for reducing maternal morbidity and mortality. Addressing the multifactorial causes of maternal complications requires a comprehensive approach that includes access to quality healthcare, nutritional support, and community education. While progress has been made globally, significant disparities remain, particularly in low- and middle-income countries. Continued efforts to strengthen healthcare systems, provide equitable access to maternal health services, and address socioeconomic barriers are crucial for achieving better outcomes for mothers and their children.

## References

- 1.WHO. Trends in Maternal Mortality; WHO. Canadian Journal of Urology. 2022;18(1).
2. Howell EA. Reducing Disparities in Severe Maternal Morbidity and Mortality. Clin Obstet Gynecol. 2018;61(2).
- 3.Say L, Chou D, Gemmill A, Tunçalp Ö, Moller AB, Daniels J, et al. Global causes of maternal death: A WHO systematic analysis. Lancet Glob Health. 2014;2(6).
- 4.Black RE, Victora CG, Walker SP, Bhutta ZA, Christian P, De Onis M, et al. Maternal and child undernutrition and overweight in low-income and middle-income countries. Vol. 382, The Lancet. 2013.
- 5.Koblinsky M, Chowdhury ME, Moran A, Ronsmans C. Maternal morbidity and disability and their consequences: Neglected agenda in maternal health. Vol. 30, Journal of Health, Population and Nutrition. 2012.
- 6.Dept. of Reproductive Health and Research W. WHO recommendations for the prevention and treatment of postpartum haemorrhage. World Health Organization. 2012.
7. Duley L. The Global Impact of Pre-eclampsia and Eclampsia. Vol. 33, Seminars in Perinatology. 2009.
8. Gülmezoglu AM, Lawrie TA, Hezelgrave N, Oladapo OT, Souza JP, Gielen M, et al. Interventions to Reduce Maternal and Newborn Morbidity and Mortality. In: Disease Control Priorities, Third Edition (Volume 2): Reproductive, Maternal, Newborn, and Child Health. 2016.
9. Ganatra B, Gerds C, Rossier C, Johnson BR, Tunçalp Ö, Assifi A, et al. Global, regional, and subregional classification of abortions by safety, 2010–14: estimates from a Bayesian hierarchical model. The Lancet. 2017;390(10110).
10. Lassi ZS, Salam RA, Das JK, Bhutta ZA. Essential interventions for maternal, newborn and child health: Background and methodology. Vol. 11, Reproductive Health. 2014.
11. Graham H, Bell J, Bullough C. Can Skilled Attendance at Delivery Reduce Maternal Mortality in Developing

Countries? Safe motherhood strategies A review of the evidence. 2001;Studies in.

12. Keats EC, Haider BA, Tam E, Bhutta ZA. Multiple-micronutrient supplementation for women during pregnancy. Vol. 2019, Cochrane Database of Systematic Reviews. 2019.

13. Kruk ME, Gage AD, Arsenault C, Jordan K, Leslie HH, Roder-DeWan S, et al. High-quality health systems in the Sustainable Development Goals era: time for a revolution. Vol. 6, The Lancet Global Health. 2018.