

## Maternal and Perinatal Deaths are Intrinsicly Linked

Even today, about 800 women across the world die from complications related to pregnancy or childbirth every day, most of which are preventable or treatable if presented on time. The vast majority of maternal deaths – around 99% – occur in low- and middle-income countries, and the risk of maternal death is highest for adolescent girls under 15 years old.

Ensuring access to affordable and good quality of care throughout pregnancy and the perinatal period is essential to reducing the rates of complications and deaths related to pregnancy and childbirth.

A WHO/HRP compendium on respectful maternal and newborn care is intended to launch in early 2025. It is designed to provide program managers with practical guidance for understanding, designing, implementing, monitoring, and adapting interventions for ending mistreatment and improving respectful care.

Maternal and perinatal deaths are intrinsicly linked because maternal health and the care received during pregnancy and childbirth directly impact the well-being and survival of the newborn, with many perinatal deaths resulting from maternal conditions or complications.

Maternal health is a foundation for the fetus. The health of the mother during pregnancy, labor, and childbirth is a critical factor in the health and survival of the baby.

**Shared timeframe and causes:** Many maternal and perinatal deaths occur during the same period (from the onset of labor or abortion to 48 hours postpartum or postabortion) and can be related to similar underlying causes.

### Interconnected Causes

**Maternal complications:** Conditions like hemorrhage, pre-eclampsia, eclampsia, sepsis, and complications from obstructed labor can lead to both maternal and perinatal deaths.

**Perinatal complications:** Conditions like intra-partum asphyxia, prematurity, newborn sepsis, and stillbirths can be influenced by maternal health and the quality of care received during pregnancy and childbirth.

**Addressing one impacts the other:** Programs focused on improving maternal care often have a positive impact on perinatal outcomes, and vice versa, particularly in areas like hypertension management and intrapartum care.

**Socio-cultural factors:** Socio-cultural factors can also play a role in maternal and perinatal deaths, impacting access to care, adherence to recommendations, and overall health outcomes.

**Surveillance and response:** Maternal and Perinatal Death Surveillance and Response (MPDSR) systems are essential for understanding the causes of maternal and perinatal deaths and for developing strategies to prevent future deaths.

### Examples of Interlinkages

**Hemorrhage:** A major cause of maternal death, can also lead to perinatal complications like birth asphyxia or stillbirth.

**Hypertension:** Complications of hypertension during pregnancy (pre-eclampsia and eclampsia) can lead to both maternal and perinatal deaths.

**Sepsis:** Maternal sepsis can lead to newborn sepsis and other complications.

Addressing these deaths in isolation overlooks critical connections and underlying causes, often led by socio-cultural factors. Stillbirths fall within the definition of perinatal deaths; however, stillbirths often go uncounted in many countries.<sup>1</sup>

Intrapartum care and management of hypertension and obstetric hemorrhage remain high priority areas for reducing perinatal mortality in an Indian setting. Consideration needs to be given to novel ways to predict growth restriction in resource limited settings as this may be an underestimated significant contributor to perinatal mortality. A large number of perinatal deaths in our population may be in the context of healthy mothers, limiting our ability to predict poor outcomes by maternal assessment antenatally. Identifying causes and the interplay of maternal and perinatal condition are important in narrowing this focus.

Maternal health is a social issue: maternal ill-health and disability are not just medical problems, but outcomes of a complex interplay of eco-social forces, lifestyles and exposures, and individual-level factors.

Focusing solely on biomedical causes of maternal mortality is insufficient, and has possibly been the cause of many countries remaining at the same maternal mortality transition stage for decades (121 out of 185 countries analyzed have been in the same maternal mortality transition stage for 20 years).

Addressing maternal health issues and reducing maternal mortality are complex endeavors, due to both modifiable and unmodifiable factors that affect outcomes; a broad, multipronged approach, including promotion of social development and gender equality at national level, will be necessary to tackle determinants that act upstream in the chain of events that leads to severe morbidity and death.<sup>2</sup>

The health sector has a crucial role in saving the lives of women with pregnancy, labor, or postpartum complications, and should be expanded to mitigate the detrimental effects of maternal health determinants.

Expanding demand for and access to high-quality reproductive health services and commodities (including safe abortion, modern contraception, and antenatal, intrapartum, and postpartum care) are needed for primary prevention, early identification, and adequate management of pregnancy, labor, and postpartum complications.

Achieving universal health coverage is essential to ensure access to quality care during pregnancy, childbirth, and the postpartum period, and to reduce maternal mortality.

Ultrasound plays a crucial role in reducing maternal and perinatal mortality by enabling early detection of complications and facilitating timely interventions, particularly in identifying fetal anomalies, assessing fetal well-being, and accurately determining gestational age.<sup>3</sup>

The use of ultrasound services at health centers has improved maternity care. The utilization of ultrasound in healthcare enables providers to closely monitor the growth and development of the fetus, identify potential complications or abnormalities and administer timely interventions. This integration of ultrasound technology translates into enhanced prenatal care, early detection of issues and prompt management, ultimately leading to improved outcomes for both the mother and the baby. By incorporating ultrasound into ANC practices, healthcare providers can offer comprehensive and effective perinatal care, contributing to healthier pregnancies and safer deliveries for pregnant women. The valuable lesson for healthcare professionals and stakeholders is providing a practical insight on how to implement similar activities in other health centers. By adopting this approach, there is a hopeful expectation of improving maternal healthcare and preventing avoidable complications during pregnancy.

## References

1. World Health Organization. Maternal and Perinatal Death Surveillance and Response: Overview. Accessed June 3, 2024. <https://www.who.int/teams/maternal-newborn-child-adolescent-health-and-ageing/maternal-health/maternal-and-perinatal-death-surveillance-and-response>
2. World Health Organization. Maternal Death Surveillance and Response: Technical Guidance Information for Action to Prevent Maternal Death. 2013. Accessed June 3, 2024. <https://www.who.int/publications/i/item/9789241506083>
3. World Health Organization. Maternal and Perinatal Death Surveillance and Response: Materials to Support Implementation. 2021. Accessed June 3, 2024. <https://www.who.int/publications/i/item/9789240036666>

**Geetha Balsarkar**

Consultant, Obstetrics and Gynecology  
Nowrosjee Wadia Maternity Hospital Seth GS Medical College  
Mumbai, Maharashtra, India  
E-mail: [gdbalsarkar@yahoo.com](mailto:gdbalsarkar@yahoo.com)