ISSUE BRIEF

Strengthening Surveillance and Maternal Death Reviews to Improve the Quality of Maternity Care

Acting on essential data to help reduce maternal mortality

Importance of Quality Care

Although maternal deaths have declined by nearly 40% worldwide over the past two decades,[1] maternal mortality continues to be a significant public health challenge. A large proportion of maternal deaths are preventable, even in countries with limited resources. In low- and lower-middle income countries, almost 60% of preventable deaths are the result of poor quality care.[2] Quality of maternal health care services is poor in many of the 81 countries that account for 95% of all maternal deaths and 90% of all child deaths worldwide.[3]

High quality maternal health care sets the foundation for women, children, families, communities and societies to thrive for generations to come.[4,5] Quality care underpins efforts to build resilient health systems that can manage health emergencies while delivering primary care—saving more lives and advancing equity.

To achieve high quality maternity care, every maternal death, wherever it occurs, should be counted, reported and examined—and the findings from these reviews should drive action to prevent future deaths.

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MSD for Mothers

Strengthening Maternal Death Reviews to Improve the Quality of Maternity Care

Meeting the Sustainable Development Goal target for reducing maternal mortality will require doubling the progress over the last decade and using data to focus efforts more intensively. Health care providers, policymakers, women and families need timely and accurate information about where, how and why women are dying so they can prevent future loss of life.[6,7]

Unfortunately, data on the true burden and causes of maternal deaths in low-and-middle income countries (LMICs) are often unreliable. Countries rely on estimates and statistical models that are subject to error and do not include the full picture of why a woman died during pregnancy, childbirth or the postpartum period, especially if she gives birth outside of a facility.[8]

Maternal death reviews, often referred to as Maternal and Perinatal Death Surveillance and Response (MPDSR) and Maternal Mortality Review Committees in the United States, are recognized as an effective strategy to help reduce maternal mortality.[9] A well-functioning surveillance system supports a country's efforts to determine why a woman died from complications of pregnancy and childbirth and steers decision makers, donors and local stakeholders toward evidence-based and evidence-informed life-saving interventions.

Findings from maternal death reviews provide countries with critical information to identify opportunities to improve the quality of clinical care as well as care that takes place outside of health facilities. Based on trends identified in the data, decision makers can allocate time and resources more strategically to help build the capacity of health systems to recognize and respond effectively to life-threatening complications that arise during pregnancy, childbirth and the year after giving birth when many deaths occur.

The Current State of Maternal Death Reviews

The U.K. has set the standard for maternal death surveillance and case reviews through its Confidential Enquiry into Maternal Deaths. This system, which examines every death, has been in operation for more than 60 years, during which time maternal mortality has declined ten-fold.[10] It has since expanded to include reviews of the care received by women who experienced severe maternal morbidities.

Several countries, including LMICs, have also invested in building their capabilities in maternal death surveillance. For example, in 2014 Ethiopia, implemented a national MPDSR system and now reports on maternal deaths that occurred in both community and facility settings through the Integrated Disease Surveillance and Response system, maternal death reviews take place at the subnational level and review committees include community representatives.[11]

Countries are at various stages of adopting, implementing and institutionalizing maternal death reviews at the national and/or subnational levels. Of 110 LMICs, 89% have a national policy to notify the surveillance system of all maternal deaths and 88% instituted a policy to review all maternal deaths. Of these countries, 76% have a national maternal death review committee in place, but only 48% meet, at least, on a biannual basis.[12]

The Current State of Maternal Death Reviews in MSD for Mothers' Focus Countries

INDIA: Though fragmented, more states are strengthening their MPDSR system.

KENYA: Mandated maternal death review in 2004, but underreporting and inaccurate reporting of cause of death remain challenges

NIGERIA: The federal government is considering a bill to mandate MPDSR across the country.

UNITED STATES: Preventing Maternal Deaths Act of 2018 provided resources to help states strengthen their maternal mortality review committees.

Implementation at the state or district level is often fragmented and inconsistent. For example, in India, despite a national policy to report all maternal deaths, 2015 data show only 5% of all maternal deaths in Bihar reported to the government compared with 96% of all maternal deaths reported in Haryana.[13]

Likewise, surveillance systems in many countries may not be capturing all data on maternal deaths, especially those that occur at home, in community settings or in private facilities. In LMICs, approximately 40% of women deliver in private facilities[14] and more than 20% of women give birth outside of a facility without a skilled birth attendant.[15]

Taking Action to Help Save Women's Lives: Adopt and Implement Maternal Death Reviews

The World Health Organization (WHO) and United Nations Children's Fund (UNICEF) recommend that all countries institutionalize maternal death reviews as a key strategy to prevent maternal deaths.[16, 17] Effective surveillance systems are comprehensive and include data from public and private clinical settings and from both health facilities and communities. Equipped with more representative data, health systems and providers can make better informed decisions about how to improve the quality of care they deliver before, during and after childbirth.

When these data are integrated into national health information systems, policy makers and governments have the facts they need to develop evidence-informed maternal health policies and interventions that will improve access to quality healthcare services. In addition to supporting better allocation of resources, annual reports from surveillance systems also help hold policymakers, health providers and communities accountable for improving the quality of maternity care so that that all women have a healthy pregnancy and safe childbirth.

Recommendations

The WHO has developed guidelines for implementing maternal death surveillance systems which call for action from national and subnational governments, health care facilities and local communities.[18] Collaboration across all levels of the healthcare system—government, facility, provider and community—is required to design an effective system that reports, analyzes and acts on all maternal deaths to prevent future maternal deaths.

Policy

- Develop a national policy to review all maternal deaths regardless of where they take place—public and private facilities as well as community settings—through qualitative, in-depth examinations of the causes and circumstances
- Create national incentives to encourage private facilities to report their data into the national maternal death surveillance system
- Build a favorable legal framework for surveillance systems to function in accordance with the "no name, no blame" principle

Programming

- Establish maternal death review committees—ideally at the national as well as subnational and facility level—to analyze and interpret the causes, contributing factors and other emerging data patterns to inform quality improvement efforts
- Include women with have experienced a life-threatening complication as members of maternal death review committees
- Ensure maternal death review committees represent the multidisciplinary care team, including community health workers, that supports women across the pregnancy continuum and to integrate perspectives from across the health system—both public and private facilities

- Establish subnational maternal death review committees in large countries to localize the analysis; encourage these groups to share their data with the national-level surveillance system
- Support regular meetings—at least biannually—of the national maternal death review committee to identify patterns, develop strategies to address them and assess progress

Accountability

- Design a reporting system that captures data on all maternal deaths—those that occurred in public and private facilities as well as in communities
- Develop an annual national report on maternal deaths and publicly disseminate findings and recommendations to support accountability
- Monitor and evaluate maternal death surveillance systems to make sure that they identify, report, analyze and respond to maternal mortality in a systematic and equitable way

Examples of How MSD for Mothers is Supporting Stronger Maternal Death Reviews to Help Ensure Quality Maternity Care

Here are a few examples of recent progress in maternal and perinatal death surveillance and response in the U.S., Nigeria and throughout Africa. MSD for Mothers—MSD's global initiative to help create a world where no woman has to die while giving life—is proud to support this work and catalyze improvements in maternal health through financial support and technical expertise.

Counting, reviewing and reporting every maternal death in the U.S.

The U.S. Centers for Disease Control and Prevention (CDC) has been helping states across the country strengthen their maternal mortality review systems and act on the findings. The CDC team provided technical assistance to states and created a mechanism for states to contribute their data to a new centralized reporting system with the goal of identifying trends nationwide. The CDC published the first multi-state report on maternal mortality in 2018. That year, the U.S. government sustained this important work by passing legislation and providing funding to enable states to routinely review maternal deaths. The CDC's analysis show that maternal health inequities persist, many deaths happen after discharge from the facility and more than half are preventable. These findings informed the creation of the Safer Childbirth Cities initiative and its focus on community-led solutions to improve the quality of maternity care and reduce inequities.

Building a national database on maternal and perinatal deaths in Nigeria

In support of the Quality, Equity, Dignity initiative (QED), the WHO is developing and implementing an electronic national maternal and perinatal death database system called MPD-4-QED in Nigeria. The system is a network of 54 public and private referral hospitals across the country using the electronic database to collect routine maternity and perinatal data to determine the causes of mortality and guide action to improve the quality of maternity care.

Mobilizing communities to report maternal deaths in Nigeria

Giving Birth in Nigeria, an advocacy effort led by Africare, Nigeria Health Watch and EpiAfric, empowers communities to report maternal deaths using citizen reporting, storytelling and social media. The project aims to enhance the public's understanding of why women are dying and increase maternal death surveillance and response in six states. Giving Birth in Nigeria advocates for widespread adoption of maternal death surveillance systems, including community perspectives in maternal death reviews, and greater collaboration among multi-sectoral stakeholders to create sustainable solutions that will help save women's lives.

Increasing transparency and accountability for implementing maternal death reviews in Africa

To support greater transparency in counting, reporting and responding to every maternal death across Africa, the African Union developed a new indicator on surveillance implementation for their online data platform—African Health Stats. The indicator reports the number of maternal death investigations individual countries have completed as a proportion of total maternal deaths in that country. The Gender Is My Agenda Campaign is leading an advocacy effort to use the indicator as a tool to hold local health officials and policy makers accountable for counting and investigating every maternal death and use the findings to drive improvements in the quality of maternity care.

Global Call to Action:
Invest in Data to Help Save Women's Lives

Maternal death review is a globally endorsed, foundational strategy to help save women's lives from complications of pregnancy and childbirth. Countries that are committed to improving maternal health need to invest in maternal death surveillance so that they have the data required to identify causes of death and respond effectively. Equipped with this vital information, countries are better able to target resources—within health facilities as well as communities—to strengthen the overall health system and systematically improve the quality of maternity care.

To help create a world where no woman has to die while giving life, we need to incorporate women's experiences in all efforts to improve the quality of care that women receive during pregnancy, childbirth and beyond regardless of where they seek care. Increasing access to high quality care is key to accelerating equitable progress towards achieving the Sustainable Development Goals, advancing Universal Health Coverage and reducing maternal mortality globally.

Endnotes

1 UNICEF DATA. (2019) Maternal Mortality - UNICEF DATA.

2 Kruk, M. E., Gage, A. D., Joseph, N. T., Danaei, G., García-Saisó, S., & Salomon, J. A. (2018). Mortality due to low-quality health systems in the universal health coverage era: A systematic analysis of amenable deaths in 137 countries. The Lancet, 392(10160), 2203-2212.

3 Boerma, T., Requejo, J., Victora, C. G., Amouzou, A., George, A., Agyepong, I., ... & Borghi, J. (2018). Countdown to 2030: Tracking progress towards universal coverage for reproductive, maternal, newborn, and child health. The Lancet, 391(10129), 1538-1548.

4 Miller, S., & Belizán, J. M. (2015). The true cost of maternal death: Individual tragedy impacts family, community and nations. Reproductive health, 12(1), 56.

5 Patton, G. C., Sawyer, S. M., Santelli, J. S., Ross, D. A., Afifi, R., Allen, N. B., ... & Kakuma, R. (2016). Our future: A Lancet commission on adolescent health and wellbeing. The Lancet, 387(10036), 2423-2478.

6 Institute for Global Health.(2020) Evidence for action to reduce maternal and neonatal mortality in Africa.

7 Ayele, B., Gebretnsae, H., Hadgu, T., Negash, D., G/silassie, F., Alemu, T... Godefay, H, (2019). Maternal and perinatal death surveillance and response in Ethiopia: Achievements, challenges and prospects. PLOS ONE, 14(10), doi:10.1371/journal.pone.0223540

8 Mgawadere, F., Kana, T. and van den Broek, N. (2017). Measuring maternal mortality: a systematic review of methods used to obtain estimates of the maternal mortality ratio (MMR) in low- and middle-income countries. British Medical Bulletin, 121(1), 121-134. doi:10.1093/bmb/ldw056

9 World Health Organization. (2021) Maternal Death Surveillance and Response - background.

10 Knight, M., & Tuffnell, D. (2018). A view from the UK: The UK and Ireland Confidential enquiry into maternal deaths and morbidity. Clinical Obstetrics & Gynecology, 61(2), 347-358 doi:10.1097/grf.0000000000000352

11 WHO. (2015) Maternal Death Surveillance and Response (MDSR) Ethiopia.

12 World Health Organization. (2017) Maternal Death Surveillance and Response - progress.

13 World Health Organization. (2016) Strengthening Country Capacity on Maternal and Perinatal Death Surveillance and Response.

14 Campbell, O. M., Benova, L., MacLeod, D., Baggaley, R. F., Rodrigues, L. C., Hanson, K., ... & Vahanian, A. (2016). Family planning, antenatal and delivery care: cross-sectional survey evidence on levels of coverage and inequalities by public and private sector in 57 low-and middle-income countries. *Tropical Medicine & International Health*, 21(4), 486-503.

16 World Health Organization. (2016) Making Every Baby Count: Audit and Review of Stillbirths and Neonatal Deaths.

17 World Health Organization. (2015) Strategies toward Ending Preventable Maternal Mortality (EPMM). https://www.who.int/reproductivehealth/topics/maternal_perinatal/epmm/en/

18 WHO. (2016). Time to respond: A report on the global implementation of maternal death surveillance and response. https://www.who.int/docs/default-source/mca-documents/maternal-nb/time-to-respond.pdf?Status=Master&sfvrsn=a8574864_2

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