

## RESEARCH BRIEF

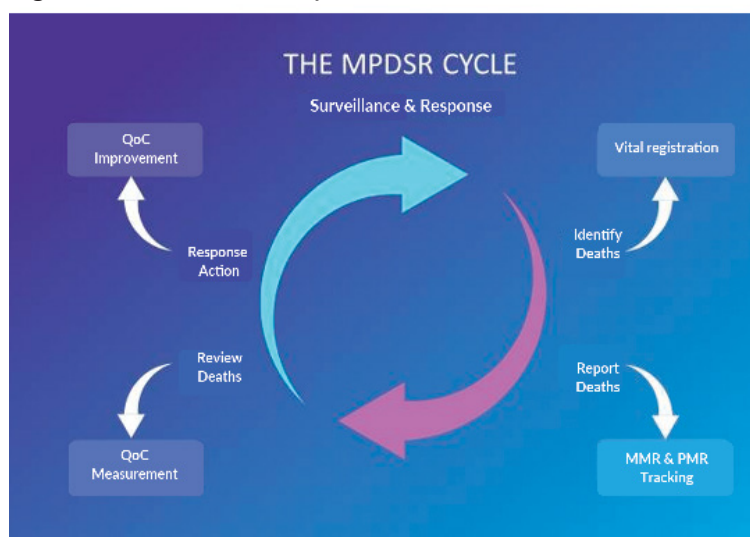
### CONTEXT

Complications during pregnancy and childbirth are a major cause of death among women of reproductive age in developing countries. The majority of maternal and newborn deaths are preventable with existing interventions, yet countries need access to reliable and timely data on how many women and newborns are dying, where they are dying, and from what causes. Collecting this information can be difficult in developing countries, particularly in humanitarian and conflict-affected settings where a significant number of maternal and newborn births and deaths occur outside of health facilities.

The World Health Organization (WHO) recommends that countries institutionalize maternal and perinatal death surveillance and response (MPDSR) – a system for identifying and analyzing maternal and perinatal deaths and then implementing an informed response.<sup>1</sup> This system not only counts the number of deaths that occur, but also provides an understanding of the factors that contribute to the deaths of women and newborns. Beyond documenting mortality, MPDSR translates the lessons learned from identifying causes of death, social determinants, and health system barriers into actionable solutions to improve maternal and perinatal services and prevent further deaths in the local context. Many countries have adopted national MPDSR policies and guidelines, some with a community-based approach. However, implementation remains weak, with little evidence or documentation of implementation in crisis and conflict settings.

This brief outlines a formative study that includes an assessment of existing health surveillance and information systems that collect data on pregnancy, birth, and maternal and perinatal mortality at the health facility and community levels and a qualitative exploration of sociocultural practices surrounding death in North and South Kivu, DRC.

Figure 1: WHO MPDSR Cycle



## MPDSR in the DRC

Over the past two decades, the DRC has made great strides to improve access to maternal health care, seeing an increase from 60 to 85 percent of deliveries attended by a skilled birth attendant. Despite this, maternal and neonatal mortality rates remain high.<sup>2</sup>

Since 2015, the DRC Ministry of Health authorities have strongly recommended more robust studies to establish reliable estimates and understand the key drivers of maternal and perinatal mortality. DRC's national policy outlines expectations for implementation of MPDSR, including identification and investigation of deaths at the

health facility and community level, and engagement of community stakeholders in review and response. However, as documented in the literature for other settings, awareness of these policies and guidelines and their implementation are low or absent. Similarly, there is a lack of evidence regarding the implementation of MPDSR in the eastern DRC context.

As members of the EQUAL consortium, the Université Catholique de Bukavu (UCB) and Johns Hopkins University partnered to conduct action-oriented research related to maternal and newborn health service delivery and MPDSR in the North and South Kivu provinces of eastern DRC. The results of the study will inform subsequent efforts to develop or strengthen surveillance systems for maternal and perinatal deaths, including the design of research on the implementation of community-based MPDSR in Mweso, North Kivu.

- **Maternal mortality ratio (2020):** 547 maternal deaths per 100,000 live births.<sup>3</sup>
- **Neonatal mortality rate (2022):** 26 deaths per 1,000 live births.<sup>4</sup>
- **Stillbirth rate (2021):** 28 deaths per 1,000 births.<sup>5</sup>

## STUDY OVERVIEW

EQUAL is conducting a formative study to inform the co-creation of a community-based MPDSR approach in Mweso, North Kivu. The study aims to: assess the functionality and capacity of existing health surveillance and information systems to capture pregnancy and maternal and perinatal mortality; understand the socio-cultural practices surrounding death and the impact of insecurity and displacement on these practices; and understand the factors that influence the identification or reporting and review of maternal and perinatal deaths by health providers. With this information, EQUAL will work with national and provincial stakeholders to develop, pilot, and evaluate the feasibility, acceptability, and/or effectiveness of this evidence-based approach in Mweso, North Kivu.

### Study location

EQUAL's research will be implemented in North and South Kivu provinces, located in eastern DRC, which has experienced decades of instability and regular conflict. The formative study will take place in Mweso, Karisimbi, and Katwa health zones in North Kivu and in Mulungu, Kadutu, and Walungu health zones in South Kivu.

## EQUAL PROJECT OVERVIEW

**Funder:** UK aid from the UK government

**Length:** July 2021 – April 2026

**Locations:** DRC, Nigeria, Somalia, and South Sudan

**Partners:** Institute of Human Virology Nigeria, International Rescue Committee, Johns Hopkins Center for Humanitarian Health, Somali Research and Development Institute, and Université Catholique de Bukavu.

## Design and methodology

This formative study employed a mixed methods approach through qualitative interviews and quantitative assessments of existing surveillance and health information systems, as shown in Table 1.

**Table 1: Study design**

Objective	Methods	Sites
Assess the capacity of existing health surveillance and information systems to capture pregnancies, births, and maternal and perinatal mortality.	<p><b>What:</b> Qualitative interviews</p> <p><b>Who:</b> Key informants including health authorities, community and religious leaders, and other stakeholders involved in supporting or implementing surveillance and information systems on pregnancy, birth, and maternal and perinatal deaths.</p>	<p><b>North Kivu:</b> Mweso, Karisimbi and Katwa health zones</p> <p><b>South Kivu:</b> Mulungu, Kadutu and Walungu health zones</p>
	<p><b>What:</b> Quantitative assessments of existing health surveillance and information systems including the review of health registers, mortality reports, and other source documents (e.g., policies, journals, reports, and tables).</p> <p><b>Which systems:</b> Health information systems (e.g., DHIS2), community systems, and other administrative systems, including the civil vital registration and vital statistics system.</p>	
Understand the socio-cultural practices surrounding death	<p><b>What:</b> Qualitative interviews</p> <p><b>Who:</b> Socio-cultural leaders and community members who have experienced a maternal or perinatal death in their family.</p>	<b>North Kivu:</b> Mweso and Mulungu health zones
Understand the factors that influence the identification or notification, reporting, and review of maternal and perinatal deaths by health providers	<p><b>What:</b> Qualitative interviews</p> <p><b>Who:</b> Health care providers who were involved in a maternal or perinatal death at their health care facility.</p>	<b>North Kivu:</b> Mweso and Mulungu health zones

## Findings

Study results are anticipated in mid-2024.

For more information, visit [www.EQUALresearch.org](http://www.EQUALresearch.org) and contact Dr. Christine Chimanuka ([christinechimanuka@gmail.com](mailto:christinechimanuka@gmail.com)), Dr. Meighan Mary ([mmary1@jhu.edu](mailto:mmary1@jhu.edu)), and/or [Equal@rescue.org](mailto:Equal@rescue.org)

## Acknowledgements

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Other members of the EQUAL research consortium leading studies in the DRC, Nigeria, Somalia, and South Sudan include partners from the Institute of Human Virology Nigeria (IHVN), the International Rescue Committee (IRC), and the Somali Research and Development Institute (SORDI). Funding for this work is provided by UK aid from the UK government.

## References

<sup>1</sup> Maternal and perinatal death surveillance and response. (2021). Retrieved from World Health Organization website: <https://www.who.int/teams/maternal-newborn-child-adolescent-health-and-ageing/maternal-health/maternal-and-perinatal-death-surveillance-and-response>

<sup>2</sup> COD - UNICEF DATA. (2015). Retrieved from UNICEF DATA website: <https://data.unicef.org/country/cod/>

<sup>3</sup> Trends in maternal mortality 2000 to 2020: estimates by WHO, UNICEF, UNFPA, World Bank Group and UNDESA/Population Division. Geneva: World Health Organization; 2023. Licence: CC BY-NC-SA 3.0 IGO.

<sup>4</sup> United Nations Inter-agency Group for Child Mortality Estimation (2024).

<sup>5</sup> United Nations Inter-agency Group for Child Mortality Estimation (2024).

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