EQUAL
EVIDENCE & IMPACT FOR MOTHERS & NEWBORNS LIVING IN CONFLICT

MATERNAL AND PERINATAL DEATH SURVEILLANCE AND RESPONSE (MPDSR) STUDY IN THE DRC

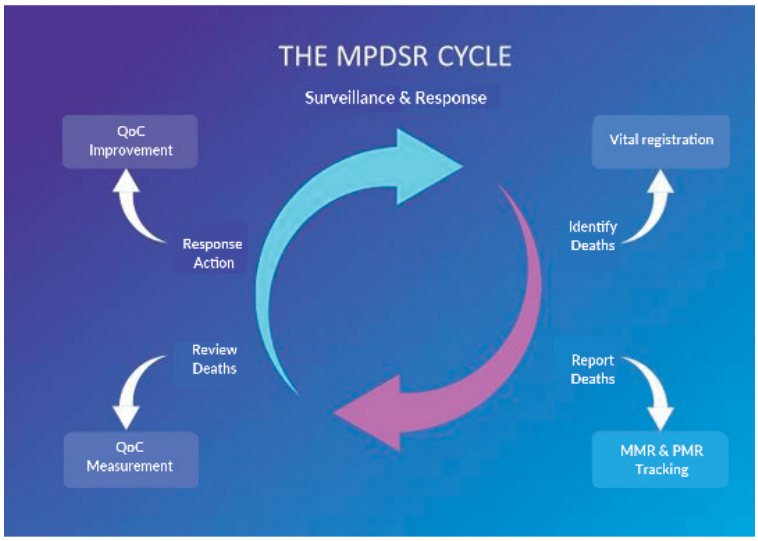
RESEARCH BRIEF

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.[1] 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.

Figure 1: WHO MPDSR Cycle



This brief outlines a 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.

Université Catholique de Bukavu
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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.[2]

- **Maternal mortality ratio (2020):** 547 maternal deaths per 100,000 live births.[3]
- **Neonatal mortality rate (2021):** 27 deaths per 1,000 live births.[4]
- **Stillbirth rate (2021):** 28 deaths per 1,000 births.[5]

Since 2015, 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 is low or absent. Similarly, there is a lack of evidence regarding the implementation of the MPDSR in the eastern DRC context.

As members of the EQUAL consortium, the Catholic University of Bukavu 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.

STUDY OVERVIEW

EQUAL is conducting a study that includes an assessment of existing health surveillance and information systems that collect data on pregnancy, birth, and maternal and perinatal mortality, and a qualitative exploration of socio-cultural practices surrounding death in North and South Kivu provinces. 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 stakeholders to develop and/or strengthen and evaluate the effectiveness of a community-based maternal and perinatal death surveillance system 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. In North Kivu, the study will take place in Mweso, Karisimbi, and Katwa health zones, while in South Kivu the research will take place in Mulungu, Kadutu, and Walungu health zones.

EQUAL PROJECT OVERVIEW

Funder: UK aid from the UK government

Length: July 2021 – April 2026

Locations: DRC, Nigeria, Somalia, and South Sudan

Partners: Catholic University of Bukavu, Johns Hopkins Center for Humanitarian Health, International Rescue Committee, Somali Research and Development Institute, and the Institute of Human Virology Nigeria

Design and methodology

This study adopted a mixed method of qualitative and quantitative data collection through key informant interviews and an assessment of 19 monitoring and 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.	**What:** Key informant interviews to document contextual knowledge related to the implementation of existing health surveillance and information systems that collect data on pregnancy, birth, and maternal and perinatal mortality. **Who:** Up to 133 people, 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.	**North Kivu:** Mweso, Karisimbi and Katwa health zones **South Kivu:** Mulungu, Kadutu and Walungu health zones
	What: Assessments of existing health surveillance and information systems to document processes and assess functionality and capacity to collect data on pregnancy, birth, and maternal and perinatal mortality. This includes reviewing health registries and other source documents (e.g., journals, reports, and tables) to document the availability of key data points related to pregnancy, birth, and maternal and perinatal mortality and reviewing mortality reports, if available, to assess the systematically collected and reported information for maternal and perinatal deaths **Which systems:** Health information systems (e.g., DHIS2) in 62 sites, about 12 community systems, and up to six other administrative systems, including the vital registration and vital statistics system.	
Understand the socio-cultural practices surrounding death	**What:** In-depth interviews **Who:** Up to 30 interviews with socio-cultural leaders and community members who have experienced a maternal, perinatal, or infant death in their family/household.	**North Kivu:** Mweso health zone
Understand the factors that influence the identification or notification, reporting, and review of maternal and perinatal deaths by health providers	**What:** In-depth interviews **Who:** Up to 15 interviews with health care providers who were involved in a maternal or perinatal death at their health care facility	**North Kivu:** Mweso health zone

Findings

Study results are anticipated in mid-2023.

For more information, visit www.EQUALresearch.org and contact Christine Chimanuka (christinechimanuka@gmail.com) and Meighan Mary (mmary1@jhu.edu).

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References

[1] 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

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[4] United Nations Inter-agency Group for Child Mortality Estimation (2023).

[5] United Nations Inter-agency Group for Child Mortality Estimation (2023).

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