A Regional Assessment of Facility-Level Maternity and Perinatal Death Surveillance and Response Systems in Four Sub-Saharan Countries

Mary Kinney[1], Kusum Thapa[2], Joseph de Graft-Johnson[2], Kathleen Hill[2], Gbaike Ajayi[2], Alyssa Om'Iniabohs[2], Edwin Tayebwa[2], Fadzai Mutseyekwa[3], Chrisostom Lipingu[4], and Oladapo Shittu[5]

[1]Save the Children; [2]Maternal and Child Survival Program (MCSP); [3]Maternal and Child Health Integrated Program (MCHIP); [4]Jhpiego, Johns Hopkins University Affiliate; [5]Ahmadu Bello University

Background

An estimated 2.3 million women and their babies died from pregnancy and childbirth complications in sub-Saharan Africa in 2015. Of these, 201,000 were maternal deaths, 1.06 million were stillbirths, and 1.04 million were newborn deaths.[1] A system for maternal and perinatal death surveillance and response (MPDSR) is an important component of a strategy to decrease preventable maternal and perinatal deaths. Despite global recommendations and favorable national policies in many countries, few sub-Saharan African countries have robust MPDSR systems.

Assessment and Objectives

From 2016–2017, the United States Agency for International Development's Maternal and Child Survival Program (MCSP) conducted an assessment on MPDSR implementation in four countries: Nigeria, Rwanda, Tanzania, and Zimbabwe. The objectives of the assessment were to 1) assess implementation status of MPDSR processes at subnational and facility levels and 2) describe facilitators and barriers to sustainable MPDSR practices.

Methods

MCSP conducted a desk review of national MPDSR policies, guidelines, and tools and conducted semi-structured interviews with 41 key informants (national and subnational levels). Data collectors visited 55 health facilities (41 hospitals and 14 health centres) to conduct semi-structured interviews with managers and providers, review documents for MPDSR processes, and assess the implementation status of each facility's MPDSR system. Facility inclusion criteria included provision of childbirth services, including referral and primary-level facilities; and current or previous experience conducting maternal or perinatal death review, or both, or implementing formal MPDSR processes or policies.

Results

In the four countries, the mean MPDSR implementation progress score across 55 facilities was 15.9 (demonstrating some evidence of practice), ranging between 1.08 and 27.38 (see Figure 1). Hospitals scored higher on average (18.57) than health centers (11.34).

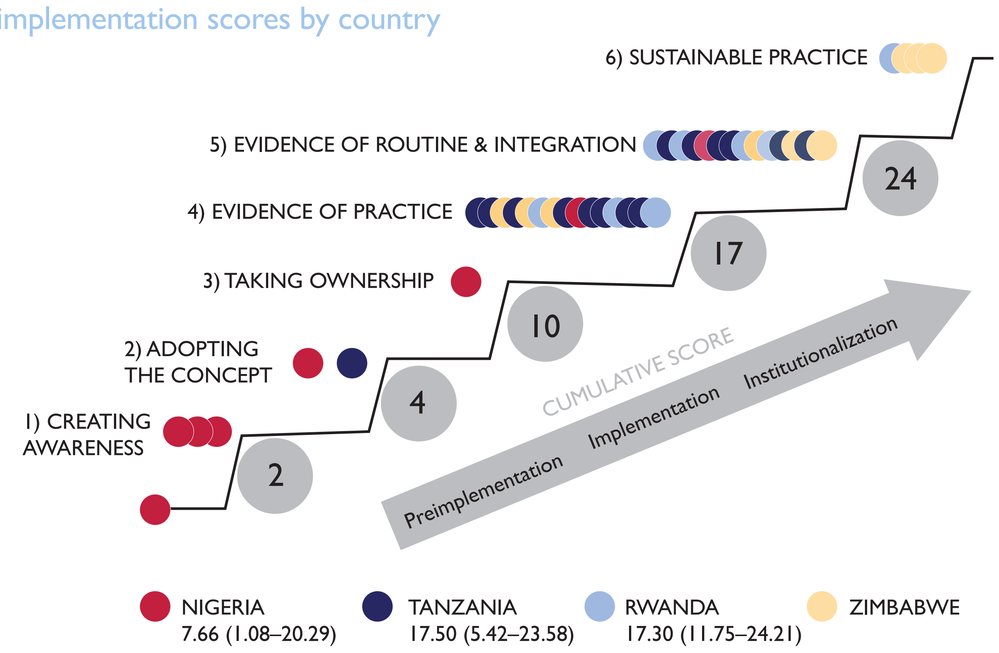
- 85% of health facilities assessed demonstrated some evidence of MPDSR practice.
- 56% of all facilities demonstrated some elements of routine MPDSR practice.

The facilities in the four countries were at variable stages in implementing an MPDSR system (see Table 1 for selected progress markers based on implementation scores). Awareness, availability, and use of standardized MPDSR forms were inconsistent. Subnational stakeholders reported low integration of surveillance information from the MPDSR process into civil registration and vital statistics (CRVS) and Health Management Information Systems (HMIS).

Table 1. Proportion of facilities with evidence of practice that achieved the selected progress markers

Implementation construct	Progress marker or instrument item	Nigeria (n = 3 facilities)	Rwanda (n = 13 facilities)	Tanzania (n = 15 facilities)	Zimbabwe (n = 16 facilities)	Average
1. Creating awareness	Clear leader(s) establishing and championing death reviews (past or future)	100%	69%	100%	94%	89%
2. Adopting the concept	Steering committee established	67%	100%	100%	81%	91%
3. Taking ownership	Tools available—data collection form	17%	100%	100%	69%	84%
4. Evidence of practice	Evidence of MPDSR meetings—meetings notes include action items	17%	31%	100%	81%	68%
5. Evidence of routine integration	Further evidence of practice—evidence of change based on previous recommendations	61%	10%	44%	71%	44%
6. Evidence of sustainable practice	Documented results—ongoing death-review meetings for > 1 year	75%	85%	77%	95%	83%

Figure 1. MPDSR implementation scores by country



Each facility received a cumulative implementation progress score of 0–30 based on standardized criteria that assessed three phases: preimplementation (0–10), implementation (11–17), or institutionalization (18–30). MCSP adapted Bergh et al.'s scoring tool, with permission, to assign the implementation progress score.[2]

Top 3 observed enablers to MPDSR implementation were 1) interdisciplinary teamwork and participation in meetings with good communication among staff; 2) support from national or subnational level, or both, including through training and capacity-building; and 3) evidence of MPDSR process leading to change or improved health services.

Top 3 observed barriers to MPDSR implementation were the following: 1) health worker capacity, i.e., limited staff time and work overload, preventing people from attending meetings; 2) human resource shortage, i.e., high staff turnover and general staff shortage; and 3) lack of motivation because recommendations were not implemented.

Examples of successful practices

- District reproductive health coordinators participate in facility death reviews (Tanzania).
- Capacity-building for MPDSR cascades to all facility levels (Rwanda).
- Junior colleagues receive mentoring (Nigeria).
- Death review meetings have multidisciplinary participation (all facilities in Zimbabwe).

Conclusions

This multicountry assessment is the first to measure across facilities the stage of MPDSR implementation. Findings demonstrate that most facilities practice some elements of MPDSR, but there are implementation gaps. The practice of MPDSR should continue to be assessed and monitored to clarify generalizability of findings and deepen understanding of the quality of MPDSR processes to further inform country implementation and global recommendations.

Recommendations

- Strengthen health workforce to enable meaningful participation in audit meetings.
- Build health worker capacity to implement the full cycle of a death audit, including the following: identification of all deaths, correct assignment of death using a standardized classification system, identification of key contributing factors, and prioritization and systematic implementation of recommendations.
- Create or strengthen the joint quality improvement and MPDSR committees at national, subnational, and facility levels to align and coordinate processes across a country's health system.
- Motivate health workers and engage professional associations to support MPDSR and apply the benefits in their everyday work.
- Ensure systematic surveillance, notification, and tracking of all institutional deaths.
- Promote a no-blame culture with legal protections.
- Promote availability and accurate completion of standardized forms, including the use of a standardized classification system to accurately assign the cause of death.
- Promote systematic 'response' processes to follow up on audit recommendations across all health system levels.
- Incorporate surveillance results from maternal and perinatal death audits into mortality surveillance in HMIS and CRVS.

References

1. World Health Organization. World Health Statistics 2016: Monitoring health for the SDGs. http://www.who.int/gho/publications/world_health_statistics/2016/en/. Accessed February 6, 2018.
2. Bergh AM, Arsalo I, Malan AF, et al. 2005. Measuring implementation progress in kangaroo mother care. *Acta Paediatr*. 94(8):1102–8.

This poster was made possible by the generous support of the American people through the United States Agency for International Development (USAID), under the terms of the Cooperative Agreement AID-OAA-A-14-00028. The contents are the responsibility of the Maternal and Child Survival Program and do not necessarily reflect the views of USAID or the United States Government.