



**USAID**  
FROM THE AMERICAN PEOPLE

Maternal and Child  
Survival Program

February 2017

[www.mcsprogram.org](http://www.mcsprogram.org)

# Preliminary Results of an Analysis of the Maternal and Newborn Content of Routine Information Systems in 24 Countries

## Introduction and Background

Routine health management information systems (HMIS) provide valuable information for district health managers and health workers that can help guide service delivery and district management decisions and measure progress toward national and subnational health objectives. Recently, several global initiatives have issued recommendations for core maternal and newborn health indicators that should be tracked at global and national levels via national HMIS (e.g., Ending Preventable Maternal Mortality, Every Newborn Action Plan, Every Woman Every Child).

In 2017 the World Health Organization (WHO) is launching a multi-country network to improve quality of care for maternal, newborn, and child health (MNCH) that links to standards, quality statements, and quality measures published by WHO in 2016. The WHO quality measures are intended for use by district, regional, and facility managers as well as facility quality improvement teams to monitor performance of essential functions (e.g., 24/7 availability of essential commodities) and quality of maternal and newborn care in facilities.

To help determine whether countries are currently positioned to calculate quality of care measures for antenatal care (ANC), labor and delivery (L&D), postnatal care, and child health as well as recommended global maternal and newborn health indicators, the Maternal and Child Survival Program (MCSP) is reviewing the availability of key data elements in HMIS tools. Frontline health workers and managers in 24 USAID priority countries<sup>1</sup> use these tools—health facility registers, standardized patient records, and monthly facility summary reports—at the district and/or national level.

This review of routine HMIS MNCH content across 24 countries will help country and global stakeholders understand which MNCH indicators can be currently calculated using data available in routine information systems. Data gaps identified by the review can help inform revisions to facility registers and patient records to capture essential data elements for calculation and use of quality measures by facility health workers and district managers. This kind of information can also support advocacy at the national level for incorporating recommended high-priority MNH data points and indicators into national HMIS.

---

<sup>1</sup> Afghanistan, Bangladesh, Burma, Democratic Republic of Congo, Ethiopia, Ghana, Haiti, India, Indonesia, Kenya, Liberia, Madagascar, Malawi, Mali, Mozambique, Nepal, Nigeria, Pakistan, Rwanda, Senegal, South Sudan, Tanzania, Uganda, Zambia. Yemen was excluded because of political instability.

In 2013, the Maternal Child Health Integrated Project, the predecessor to the MCSP project, reviewed MNH data elements in 13 MCHIP-supported countries.<sup>2</sup> Building on the 2013 review, MCSP's current review has expanded to include postnatal care and child health<sup>3</sup> in 24 of USAID's 25 priority countries (Yemen was excluded, due to political instability). In addition, in 2016 MCSP surveyed 35 experts from 22 countries to understand the extent to which HMIS data are available in electronic HMIS tools such as DHIS2, as well as the perceived quality of the data.<sup>4</sup> About three-fourths of countries reported that data are available electronically at the district level, and all but a few have aggregated electronic data at the national level. However, availability of specific indicators varied widely, and 13 countries rated data quality as poor.

This brief discusses the types of information that are being collected at different levels of the health system: which data are collected at the facility level using registers and maternity client records or partographs, and which data are being reported to a higher level in the health information system hierarchy (usually the district level) using monthly facility summary forms.

## Methods

Starting in August 2015, MCSP staff contacted 24 of USAID's current 25 MNCH priority countries to request HMIS forms (client records, service delivery area registers, and monthly facility summary forms). In partnership with USAID, MCSP identified more than 200 data elements of interest, many of which are needed to calculate indicators recommended by WHO. Data elements are pieces of information that could be included in a form and used as a standalone indicator, such as number of women diagnosed with a specific obstetric complication (e.g., postpartum hemorrhage [PPH]), or as a numerator or denominator in a percentage indicator (e.g., percentage of asphyxiated newborns for whom resuscitation actions were taken). Data elements identified for this review relate primarily to provision of high-impact routine interventions, screening for complications, management of obstetric and newborn complications, and facility-based health outcomes, including maternal and newborn morbidity and mortality.

MCSP staff reviewed the forms using a standardized data abstraction template in Microsoft Excel. MCSP country support teams reviewed completed data abstraction templates for accuracy. Analysis was conducted in Microsoft Excel.

## Selected Findings in Eight Countries

Below are selected findings on availability of specific MNH data elements in routine information systems—facility registers or facility monthly summary forms reported to higher level—in eight countries participating in the first phase of the WHO network to improve quality of care for MNCH. The eight countries include Bangladesh, Ethiopia, Ghana, India, Malawi, Nigeria, Tanzania, and Uganda. This review did not include Cote d'Ivoire, the ninth country participating in the first phase of the WHO network.

Table 1 summarizes the number of countries (out of eight) that record data on specific priority MNH interventions and outcomes as part of the routine information system at either the facility level (facility register) or as part of the district/regional and/or national information system (the

---

<sup>2</sup> The report is available at <http://www.mchip.net/content/review-maternal-and-newborn-health-content-national-health-management-information-systems-13>.

<sup>3</sup> The child health review is still underway and will be published separately.

<sup>4</sup> The full report is available online: <http://www.mcsprogram.org/resources/health-management-information-systems-hmis-review/>

facility summary form reported to regional, district, and/or national level). These findings should be considered preliminary; in the coming months, MCSP will publish the complete and final results of the HMIS review across 24 countries.

**Table 1: Number of countries recording priority data in routine HMIS (N=8 countries).**

Domain	Data Elements	Number (%) of eight countries (N=8)	
		Register at health facility level	Summary form, report to district and/or national level
Outcome	Maternal death	7/8 (88)	6/8 (75)
	Maternal death by cause	0 (0)	2/8 (25)
	PPH diagnosed	8/8 (100)	6/8 (75)
	Maternal death audit conducted	4/8 (50)	5/8 (63)
	Newborn death	6/8 (75)	5/8 (63)
	Newborn death by cause	5/8 (63)	4/8 (50)
	Newborn asphyxia	5/8 (63)	4/8 (50)
	Stillbirths (disaggregated by fresh and macerated)	8/8 (100)	8/8 (100)
Output/process	Immediate postpartum uterotonic (PPH prevention)	2/8 (25)	2/8 (25)
	Newborns resuscitated	5/8 (63)	3/8 (38)
	Breastfeeding within one hour of birth	7/8 (88)	5/8 (63)

## Summary results (by data recording at health facility level in registers)

- Seven of the eight countries record data on maternal deaths in registers at the health facility level, while six report in monthly summary forms. It is difficult to determine from the registers and summary form if the recorded maternal deaths are deaths occurring prior to discharge from the maternity.
- Only two of the eight countries report cause of maternal death via facility monthly forms.
- Data on audit of maternal deaths conducted are recorded in four countries in registers at the health facility level; five countries report in their monthly summary forms.
- All eight countries record data on PPH diagnosis in registers at the health facility level, while six report in monthly summary forms. However, only two have a column in the register at the health facility level to record uterotonic use immediately after birth for prevention of PPH.
- All countries record and report on stillbirths disaggregated by fresh and macerated.
- Five of the eight countries systematically record newborn asphyxia and newborn resuscitation. Two other countries record newborn resuscitation but not newborn asphyxia.
- A newborn death is recorded in six of the eight countries at the health facility level, but only five record newborn deaths by cause.
- Seven of the eight countries record breastfeeding within one hour of birth in registers at the health facility level, while five report on monthly summary forms.

## Discussion and Conclusion

Countries track utilization and volume of facility childbirth services and birth outcomes for the mother and newborn. However, these preliminary findings reveal that certain indicators that are highly relevant for measuring and improving quality of care and that are recommended for country and global monitoring are not consistently available in HMIS in most countries. Preliminary findings from the full review across 22 countries indicate that incidence of and specific treatments for maternal and newborn complications are also poorly documented in the routine information systems of many countries. Provision of uterotonics after birth as part of active management of the third stage of labor to prevent PPH is still not widely tracked. Only one element of essential newborn care—breastfeeding within one hour after birth—is commonly reported in the HMIS.

Opportunities exist to improve monitoring of the quality of ANC, L&D, and postnatal care. Health systems need to make the most of their HMIS by collecting data that are actionable, that monitor important health outcomes (e.g., cause of death, case fatality), and that capture the delivery of essential routine interventions and life-saving interventions for complications. Upcoming reports will expand on the findings presented here to describe in more detail the MNCH data elements included in routine information systems across 22 countries.