USAID FROM THE AMERICAN PEOPLE

Maternal and Child Survival Program

Testing Routine Maternal, Newborn, and Child Health Indicators on Quality of Care

Results from Madagascar and Nigeria

October 2019

www.mcsprogram.org

MCSP Implementation Research Brief Series

Background and Rationale

Better measurement of health services plays a critical role in improving quality of care to benefit patients and providers.[1, 2] Health care quality indicators are "measurable elements of practice for which there is evidence or consensus that they reflect quality and hence change the quality of care provided."[3] In low- and middle-income countries, sustainable improvements in measurement most often occur when indicators are integrated into national health management information systems (HMIS).

While measurement guidance from the World Health Organization (WHO) sets global standards, many of the new globally recommended reproductive, maternal, newborn, and child health (RMNCH) indicators require further testing. Indicators recommended for use by experts are not always measurable in practice, and quality indicators are generally more widely accepted after testing. Learning activities are essential prior to recommending indicators for national scale-up.

Globally, much attention has focused on RMNCH indicators collected through household surveys. Less has been done to identify and test indicators captured through national HMIS. HMIS indicators are critical to measuring progress toward national and global goals and driving quality improvement efforts. Madagascar and Nigeria have national plans and priorities that include testing key indicators to improve RMNCH services. Both countries chose to be involved in indicator testing activities supported by the Maternal and Child Survival Program (MCSP).

Indicator testing objective

The aim of the Maternal and Child Survival Program (MCSP) indicator testing in Madagascar and Nigeria was to determine the acceptability, relevance and usefulness, and feasibility of key reproductive, maternal, newborn, and child health (RMNCH) indicators. RMNCH indicators can be used to routinely track, assess, and improve the quality of health services in low- and middle-income countries.

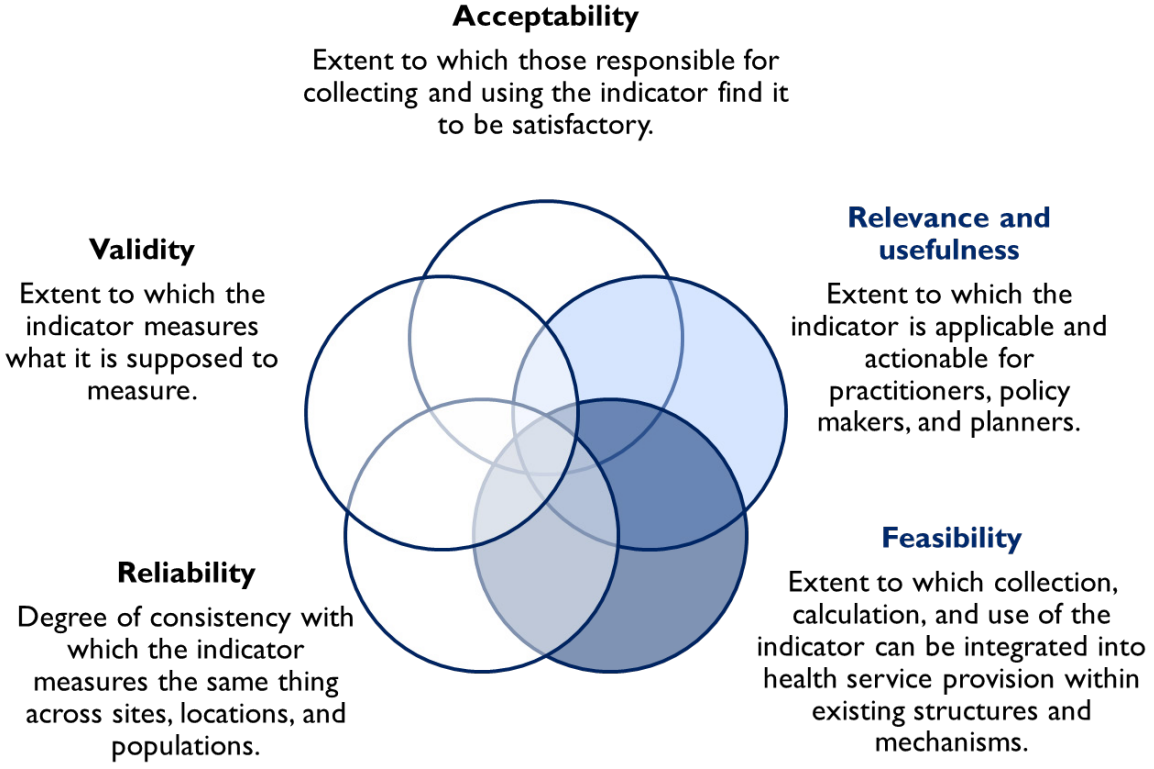
These indicator testing activities build on multiple global efforts to identify improved RMNCH metrics, including core indicators proposed in the Every Newborn Action Plan,[5] a maternal health indicator measurement framework in WHO's Ending Preventable Maternal Mortality initiative,[6] indicators to monitor integrated community case management, and standards and process indicators for quality service provision proposed in the WHO Maternal and Newborn Health Quality of Care framework.[7,8]

This brief presents findings from assessments of activities to introduce the calculation and use of WHO-recommended routine RMNCH indicators in Madagascar and Nigeria. The aims of the two country assessments were to determine the perceived acceptability, relevance and usefulness, and feasibility of the indicators for quality improvement efforts among providers and supervisors. The assessments also looked at efforts to integrate new RMNCH indicators into the national HMIS in each country.

Methodology

MCSP, in collaboration with other partners, developed an indicator testing framework that included five measurement domains (Figure 1). The analysis presented in this brief focuses on three of those domains: (1) acceptability, (2) relevance and usefulness, and (3) feasibility. Other studies have been conducted testing validity of selected maternal and newborn health indicators and that was beyond the scope of our work.[9] However, the indicator testing activities did address content and construct validity to some extent.

Figure 1. Measurement domains for field testing new routine maternal, newborn, and child health indicators



Nigeria and Madagascar conducted indicator testing activities within MCSP programs. Programs selected were focused on improving the quality of maternal and newborn health services, had a local project team that demonstrated interest, and had the support of the ministry of health (MOH) and the United States Agency for International Development. The primary considerations for identifying indicators for testing were:

(a) related to an evidence-based RMNCH intervention or health outcome, (b) recommended for monitoring by WHO or another global entity, (c) fit within MCSP's scope of work in a country, and/or (d) recently introduced in a country. An indicator was considered newly introduced if the indicator or data element was not currently captured in the HMIS or if the indicator or data element was captured but not abstracted and aggregated into a calculable indicator.

During project implementation, facilities recorded, calculated, and tracked indicators with support from MCSP and MOH district supervisors. MCSP-supported assessment teams interviewed a purposive sample of health care providers who were directly providing the services being tracked and had used the indicators. Regional and district supervisors in the localities were also interviewed.

Structured interview guides with closed- and open-ended questions were used for the interviews. The interview tools were guided by the measurement domains in the indicator testing framework. The indicator testing assessment received a non-human subjects research determination from Johns Hopkins University Bloomberg School of Public Health institutional review board.

Madagascar

In Madagascar, indicators were selected for testing during meetings conducted in February 2015. MCSP and the MOH jointly selected three indicators on uterotonic, postpartum family planning (PPFP), and management of newborn asphyxia (Table 1). The MOH intended to incorporate the indicators into quality dashboards where indicators linked to quality of care could be plotted and displayed. All three tested indicators were included in the quality dashboards along with other indicators related to high impact interventions and practices. Facilities began using these dashboards in June of 2015.

The indicator testing activity was formally conducted in 31 health centers and two district hospitals in three regions (Atsinanana, Haute Matsiatra, and Analamanga). Eligible health facilities (1) averaged at least 15 facility births per month and, for health centers, ranked among the highest 33% of health centers in the region by delivery volume; (2) could be accessed safety and easily; and (3) granted permission (via the health facility chief) to conduct the documentation activity.

Two providers at each site were interviewed if they (1) completed maternal and newborn health or family planning training, (2) had been stationed at that facility for at least 6 months, and (3) gave consent to participate. Health care providers and supervisors were oriented to the recording and calculation of the indicators as part of a larger maternal and newborn health training using a low-dose, high-frequency approach. Providers received supervision on a quarterly basis. During the supervision visits, providers and supervisors discussed the results of the indicators and created action plans to respond to identified gaps.

Structured interviews with health care providers and regional- and district-level supervisors used an interview tool adapted to the Madagascar context. Data collection was conducted from February to May 2018 by a team of trained interviewers from MCSP and MOH. Analysis was done using Microsoft Excel. Descriptive statistics were calculated for quantitative results and main themes were summarized for qualitative data.

Nigeria

In Nigeria, indicator testing planning started in February 2017 and was led by the Department of Planning, Research and Statistics (DPRS) of the Federal Ministry of Health (FMOH) with support from MCSP. Eleven indicators were selected for testing, including maternal, newborn, and child health indicators (Table 1). A concept note was jointly created.

Following consensus on the indicators, 24 MCSP-supported facilities in Kogi and Ebonyi States were selected for the study and introduced in May/June of 2017. The sites included tertiary referral hospitals, general and mission hospitals, and primary health centers. Facility staff were oriented to the new indicators, and modifications were made to the HMIS registers to allow tracking of new data elements.

After eight to nine months of testing, with supportive supervision throughout, teams that included FMOH and MCSP staff returned to all of the facilities in each region to interview individuals involved in recording data, calculating or graphing the indicators, or using the indicators. Structured interview guides based on the original indicator testing framework were used to interview health care providers and local government area and state staff. Data collection took place from February to March 2018 and was conducted by a team of trained interviewers from MCSP and DPRS with the support of the state HMIS officers in the health facilities. Data analysis was completed using Excel. Descriptive statistics were calculated, and main qualitative themes were summarized.

Table 1. Reproductive, maternal, newborn, and child health indicators tested in Nigeria and Madagascar

	Nigeria	Madagascar
Maternal	**% of women receiving uterotonic immediately after birth of baby** % of antenatal care visits at which blood pressure was measured % of women with severe preeclampsia or eclampsia treated with magnesium sulfate injection Institutional Maternal Mortality[a]	**% of women receiving uterotonic immediately after birth of baby**
Family planning	**% of women who received a modern family planning (FP) method pre-discharge after delivery**	**% of women who received a modern FP method pre-discharge after delivery**
Newborn	**% of newborns not breathing/crying at birth resuscitated by stimulation or with bag and mask ventilation** % of newborns receiving essential newborn care % of newborns for whom chlorhexidine was applied to the umbilical cord at birth	**% of newborns not breathing/crying at birth resuscitated by stimulation or with bag and mask ventilation**
Child Health	Number of cases of diarrhea among children under 5 years of age treated with oral rehydration solution (ORS) or zinc Number of children under 5 years of age at the health facility with pneumonia treated with antibiotics Number of children under 5 years of age with confirmed uncomplicated malaria treated with artemisinin-based combination therapy (ACT)	

Note: Indicators in bold were tested in both countries.

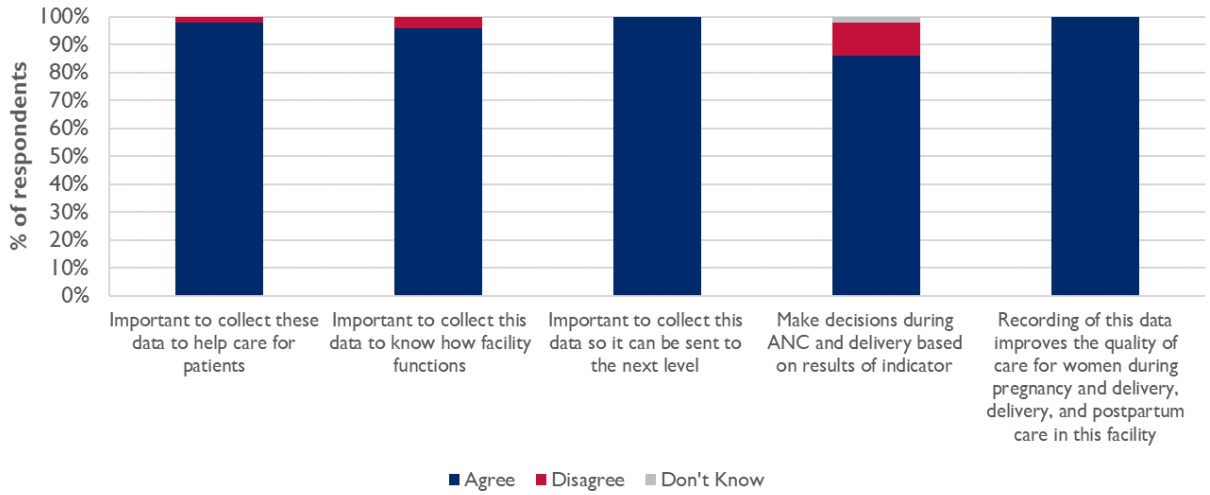
[a] Percentage of maternal deaths in a health facility, where the numerator is the number of maternal deaths in the health facility and the denominator is the total number of deliveries at the health facility.

Key Findings

Madagascar

Indicator testing was conducted in two district hospitals and 31 health centers across the three regions. Post-testing interviews were done with 51 health care providers and nine regional or district supervisors. Respondents reported that the indicators were highly relevant and useful (Figure 2). Supervisors universally recommended that the indicators be put into use at health facility, district, and regional levels. Health care providers understood the importance of reporting to the next level. But providers also noted the relationship between collection of the indicators and quality of care at their own facilities. The exception was due to the indicators being postnatal (provision of uterotonic, newborn resuscitation, and PPFP) and the question including an element of antenatal care. Perhaps due to the simultaneous rollout of data dashboards at health facilities, all interviewees associated indicator tracking with improved quality of client care.

Figure 2. Health care provider perspectives on relevance and usefulness of tested indicators, Madagascar (n=51)*



* Questions were asked regarding the combination of all three indicators rather than individual indicators.

Decision-making and the new indicators

Respondents noted that the indicators were immediately used for decision-making—generating discussions on treatment protocols, bolstering evaluation of quality, identifying problems associated with quality of care, improving assessments of the availability of family planning methods, and reinforcing birth care and postpartum family planning counseling.

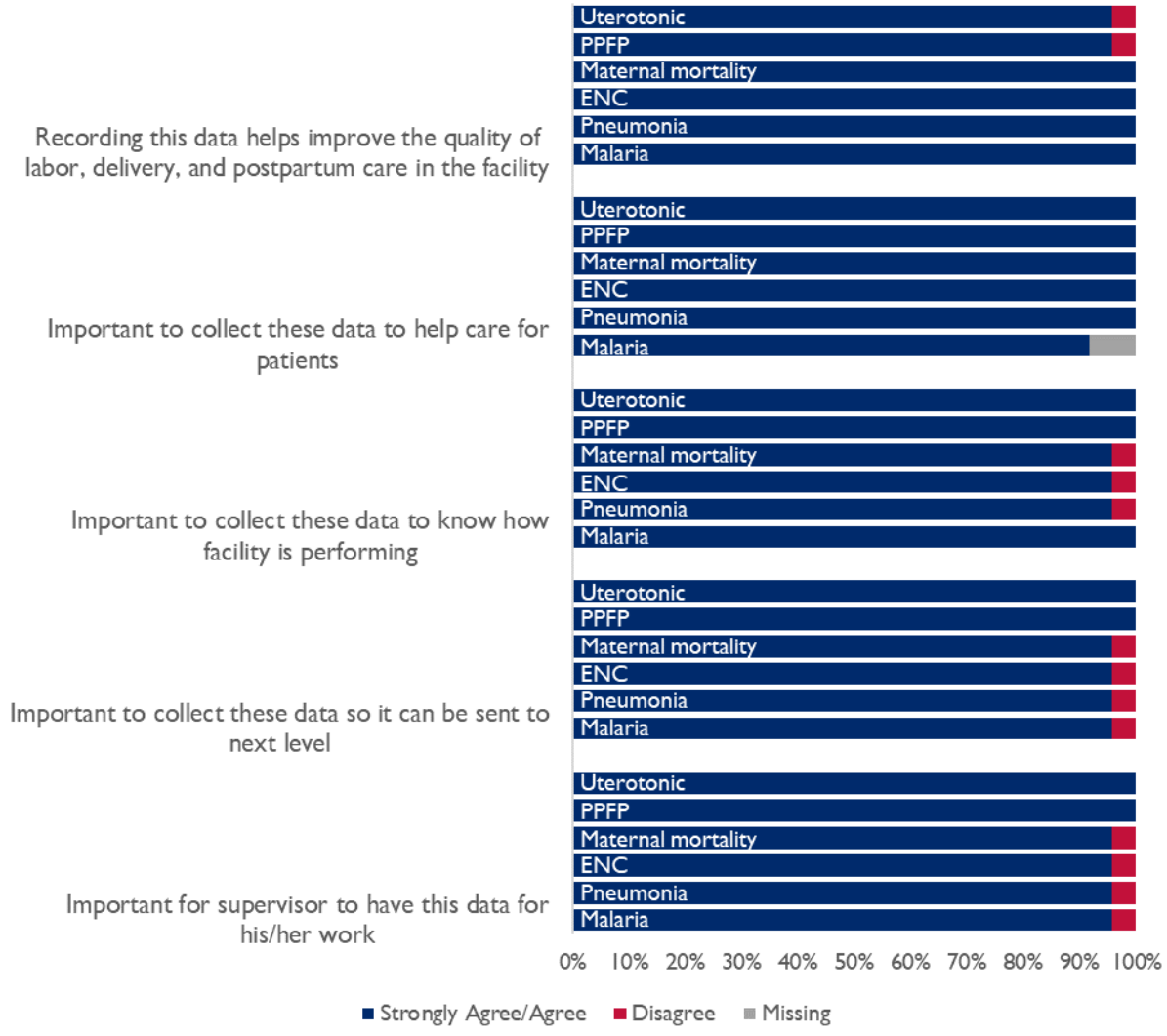
Advocating for the inclusion of RMNCH indicators in the national HMIS

The information gathered through the testing activity provided useful inputs for improving the national HMIS. Results were presented to the MOH in August 2018 and to national stakeholders in September 2018. Participants were particularly moved by qualitative input from health care providers regarding data use, and they advocated for an improved culture of data use for decision-making. The indicator testing results ultimately enabled the inclusion of all three of the tested indicators into the national HMIS. The indicators are currently being integrated into facility-level registers and monthly summary forms in Madagascar.

Nigeria

Indicator testing was conducted in 24 health facilities and with 15 local government area staff in Kogi and Ebonyi States. Post-testing interviews were done with 24 health care providers and 15 monitoring and evaluation or HMIS staff at the local government area or state level. As in Madagascar, agreement about the feasibility and usefulness of the indicators was high in Nigeria. Respondents were asked about individual indicators (Figure 3). Nearly all respondents reported that the indicators were useful and important to report up the health system, important for understanding in relation to key interventions, and helpful for improving quality of care. For example, providers noted that data on pneumonia treatment allowed them to track patient care, assisted with monitoring and treating patients, and helped them know when to refer a client. Health care providers also mentioned that tracking the pneumonia indicator helped improve the quality of services by identifying strengths and weaknesses in performance of the facility and motivating the team to find solutions.

Figure 3. Health care provider and supervisor perspectives on relevance and usefulness of a selection of tested indicators, Nigeria (n=39)



Note: *Uterotonic* indicates the percent of women receiving a uterotonic immediately after the birth of the baby; *PPFP* indicates the percent of women who received and initiated a modern postpartum family planning method pre-discharge after delivery; *Maternal mortality* indicates the institutional maternal mortality ratio, *ENC* indicates the percent of newborns receiving essential newborn care; *Pneumonia* indicates the number of children under five years of age at the health facility with pneumonia treated with antibiotics; *Malaria* indicates the number of children under 5 years of age with confirmed uncomplicated malaria treated with artemisinin-based combination therapy.

Data for decision-making

Approximately half of the health care providers interviewed said that they used data collected from each of the indicators to make decisions. They reported using indicators related to uterotonic provision, eclampsia/pre-eclampsia treatment, and PPFP to inform stock management, track service provision, and monitor quality of care. One health care provider from Ebonyi reported using the data collected from the PPFP indicator to "create awareness on women's readiness timeline to accept family planning" and to organize outreach in the community. Providers used institutional maternal mortality data to improve quality and trigger additional reporting and audits.

Making a change at the health facility level in Nigeria

A benefit of conducting the indicator testing was an apparent increase in data literacy in participating facilities. As described by a respondent from the local government area/state personnel, " . . . when we went in, health care providers could only tell you that numerator was the number you put on the top and denominator was the number you put on the bottom. But they didn't have a sense of what it meant to create a meaningful measurement. The indicator testing exercise exposed them to the meaning of the measurement."

Conclusion

In Nigeria, having both quantitative and qualitative data to back up the recommendation proved to be a successful means of integrating new reproductive, maternal, newborn, and child health (RMNCH) indicators into the HMIS.

Leadership of national stakeholders

One key to the success of the indicator testing was the involvement of the DPRS, the body responsible for routine HMIS in Nigeria. An indicator testing concept paper was created jointly between DPRS and MOH. Staff training to evaluate the indicators and orient health facilities was also accomplished cooperatively. Facility-level supervision during the 6 months of indicator testing was done jointly with DPRS representatives at the state level.

Challenges

Several challenges were noted regarding collection and calculation of the new indicators, particularly with the institutional maternal mortality indicator. For all indicators, respondents noted a lack of guidelines and the need for a designated recording place for the indicators in the HMIS register. Some respondents did not fully understand the initial explanation of the uterotonic indicator, which necessitated additional orientation. For maternal mortality, respondents alluded to stigma associated with reporting maternal deaths. Only about half of the facilities included in the assessment were tracking the maternal mortality indicator. One respondent noted that health care providers "fear arrest or closure of the health facility or seizure of the health worker's certificate" if they report a maternal death. Other respondents reported that health care providers "fear being punished by the government" or "being sanctioned" and being held responsible for adverse event if they report a maternal death. Another replied that the facilities "do not want to document mortality for the sake of reputation."

Advocating for the inclusion of RMNCH indicators in the national HMIS

After testing, in June 2018, a review of the national HMIS took place. All of the tested indicators were integrated into the HMIS and are being rolled out to public health facilities in Nigeria. Jhpiego, under a separate project, has also been active in the testing of new antenatal care registers related to indicators on malaria in pregnancy (not described in this brief) in Ebonyi State.

Program and Policy Implications

These assessments provided insights about the introduction and use of selected new, globally recommended RMNCH indicators in health systems. The indicators, which were designed to measure gaps in availability of RMNCH services and quality of services, had been presumed to be helpful for decision-making but needed practical testing. The testing process increased buy-in among key stakeholders and created a dialogue on the data sources and definition of the indicators and opened the door for practical observations on the feasibility of the indicators. Additionally, the testing created an opportunity to increase data literacy by providing a forum to discuss the way the indicators were calculated (the numerators and denominators) and helped health care providers interpret the indicators in a way that improved quality of care. Importantly, a major success of this exercise was that all of the indicators tested were integrated into the national HMIS in Madagascar and Nigeria—a feat accomplished in part due to evidence generated by the indicator testing activities. Findings from the indicator testing assessments ultimately became a tool for advocating for better, more relevant, information systems that can be used for improving quality of care at national HMIS meetings.

While all dimensions of indicator testing (reliability, validity, acceptability, relevance and usefulness, and feasibility) are helpful, acceptability, relevance and usefulness, and feasibility were an important starting point for both countries. Assessing these measurement domains clarified for policy makers how and whether the information could be used. Documentation of the findings convinced stakeholders of the importance of the indicators and factored into the revision of the HMIS. As one Nigerian policy maker stated, "the real impact of the testing came when we were revising the HMIS and we had data to back up our recommendations. This was an added value we brought to the process." In addition, few indicators in national HMIS have undergone rigorous validity testing. In general, stakeholders do not require validity testing of indicators prior to incorporation into national HMIS due to the high cost of validation studies and the fact that the data are being used to inform local decisions, rather than to compare findings across countries. A lower level of programmatic evidence is acceptable for HMIS indicators compared with new indicators proposed to be included in the Demographic Health Survey.

Feasibility field testing in Madagascar and Nigeria led to the recommendation that both orientation and written instructions or job aids be made available to health care providers to guide recording and calculating practice for the new indicators. In addition, a culture of stigma or job insecurity associated with the reporting of maternal or perinatal death should be recognized. Results indicated that fear of punishment and retaliation may keep health workers from validly and reliably reporting on institutional maternal mortality. An environment of trust will need to be created to ensure that accurate data are collected. Additional information on PPFP and uterotonic indicators is included in Appendixes A and B.

Testing RMNCH indicators has been designated high priority by WHO and other international leaders.[4, 7] Many countries are beginning to prioritize routine quality RMNCH indicators as health systems place more emphasis on monitoring quality of care in addition to service utilization (e.g., contacts at antenatal care, labor and birth, and postnatal care). Future investments in testing the dimensions of indicator quality are recommended to promote data for decision-making as a foundation for improving care.

Acknowledgments

MCSP would like to acknowledge the work of the FMOH of Nigeria and the MOH of Madagascar in striving to improve health services and quality of care through this indicator testing process and other initiatives. MCSP also gratefully acknowledges and thanks the staff at the health facilities and at the district and regional MOH for their participation, without which this exercise would not have been possible.

This brief is 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.

References

1. Donabedian A. 1980. Methods for deriving criteria for assessing the quality of medical care. *Med Care Rev.* 37(7):653–98.

2. Boulkedid R, Alberti C, Sibony O. 2013. Quality indicator development and implementation in maternity units. *Best Pract Res Clin Obstet Gynaecol.* 27(4):609–19. doi:10.1016/j.bpobgyn.2013.04.001.

3. Marshall M, Campbell S, Hacker J, Roland M. 2002. *Quality indicators for general-practice*. London: Royal Society of Medicine Press Ltd.

4. WHO. 2014. Consultation on improving measurement of the quality of maternal, newborn and child care in health facilities. http://www.who.int/iris/bitstream/10665/128206/1/9789241507417. Accessed 12 September 2017.

5. WHO, UNICEF. 2014. Every Newborn: an action plan to end preventable deaths. Geneva World Heal Organ. http://www.who.int/maternal_child_adolescent/documents/every-newborn-action-plan/en/.

6. Moran AC, Jolivet RR, Chou D, Dalglish SL, Hill K, Ramsey K, et al. 2016. A common monitoring framework for ending preventable maternal mortality, 2015–2030: phase I of a multi-step process. *BMC Pregnancy Childbirth.* 16:250. doi:10.1186/s12884-016-1035-4.

7. WHO. Quality of Care Monitoring Framework and core indicators. 2019. https://www.who.int/maternal_child_adolescent/epidemiology/quality-of-care-monitoring/en/. Accessed 21 August 2019.

8. 2018 Global Reference List of 100 Core Health Indicators (plus health-related SDGs). WHO/HIS/IER/GPM/2018.1. https://apps.who.int/iris/bitstream/handle/10665/259951/WHO-HIS-IER-GPM-2018.1-eng.pdf?sequence=1. Accessed 21 August 2019.

9. Plotkin M, Bishanga D, Kidanto H, Jennings MC, Ricca J, Mwanamsangu A, et al. 2018. Tracking facility-based perinatal deaths in Tanzania: results from an indicator validation assessment. *PLoS One.* 13(7). doi:10.1371/journal.pone.0201238.

Appendix A: Testing a postpartum family planning indicator in Madagascar and Nigeria: health care provider and supervisor perspectives

Postpartum family planning (PPFP) can contribute to reducing the risk of poorly timed or unwanted pregnancies. Closely spaced pregnancies pose greater health risks for mothers and their infants and unwanted pregnancies often result in unsafe abortions. PPFP is recommended by WHO[1] because it can reduce short birth intervals and reduce unmet need for family planning. A PPFP indicator was tested in both Madagascar and Nigeria as part of the larger indicator testing exercise.

Postpartum family planning indicator

Percentage of women who delivered at a health facility and initiated a modern family planning method prior to discharge

Relevance and Usefulness

Health care providers, supervisors, and district or state officials in Madagascar and Nigeria almost unanimously agreed that the PPFP indicator improved quality of care, helped health care providers care for patients, and was important to report upwards. Providers from both countries largely indicated that the PPFP indicator would be more useful if disaggregated by PPFP method. As explained by a health care provider from Nigeria: "Disaggregation by method will help to track which method is preferred . . . so that we can plan procurement of commodities." In particular, providers from both countries attested to the usefulness of tracking the lactation amenorrhea method (LAM) separately. LAM disaggregation was described as useful to health care providers in that it helped recommend timing for initiation of another method of family planning. One Nigerian provider mentioned, "Recording LAM will help me to track the patient as time goes by and to warn her of possible failure." Stock management was the most commonly cited use of disaggregated PPFP data in Nigeria. In Madagascar, respondents also felt that disaggregation by method would be useful, stating that this would help providers understand which methods women prefer and inform provider counseling strategies, helping facilities plan for commodities.

Feasibility and Acceptability

Almost all providers in Nigeria and Madagascar felt that the PPFP indicator was feasible to report. Providers in Madagascar stated that data were easily accessible. When asked what might aid them in collecting, analyzing, and using the indicator, respondents in Madagascar reported training (69%), more support from supervisors (55%), and regular meetings with facility staff (45%). A number of providers said that reporting the number of women using LAM would be challenging because following the women after they left the health center was difficult. *"Suivi difficile dès que la femme est sortie du CSB.* (It is difficult to follow up with the woman after she has left the primary health center [CSB].)" Another provider commented that verifying a woman's self-report of LAM is also difficult: *"La femme peut dire qu'elle pratique la Mobile Alliance for Maternal Action (MAMA) alors qu'en réalité elle ne la pratique pas, alors les indicateurs peuvent être fausses.* (The woman may say she is practicing LAM when in reality she is not, so the indicators may be wrong.)"

In Madagascar, 51% of interviewed providers reported that they felt the quality of the data for the PPFP indicator was satisfactory noting that PPFP registers were filled out completely and in a coherent manner. Roughly one-third (35%) said that PPFP data quality was moderately satisfactory and 12% said indicator data quality was not satisfactory; one provider noted that while a register was available it was not used. To increase feasibility of the collection of the PPFP indicator, some Nigerian health care providers suggested that incorporating the PPFP indicator into the labor and delivery register might improve the collection of PPFP

[1] World Health Organization (WHO), Programming Strategies for Postpartum Family Planning, Geneva: WHO, 2013.

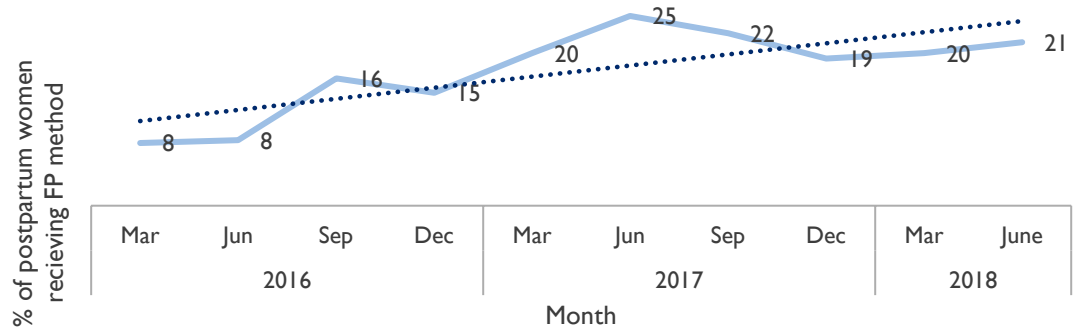
information. Additionally, providers noted the importance of facility management supporting the collection of the indicator for sustainability.

Providers in Nigeria were asked additional questions about the feasibility of reporting and using the PPFP indicator, including disaggregation and reporting on LAM. All providers in both Kogi and Ebonyi States replied that the PPFP indicator was feasible to report. As in Madagascar, one provider noted that feasibility of capturing the PPFP indicator might improve "if we can make it part of the labor and delivery register." Another provider noted that facility management's support and approval for collecting the PPFP indicator would likely boost feasibility: "It will be feasible if the hospital management agrees." When asked about the feasibility of recording and reporting the number of women who initiated LAM, 8 of the 12 providers in Kogi and all 12 providers in Ebonyi responded that this would be feasible; however, they noted that the register needed to include a space for collecting and recording this information. When queried further, those who disagreed with the feasibility of the LAM indicator clarified that they either disagreed with the use of LAM as a family planning method or believed that very few women practiced exclusive breastfeeding.

Challenges were noted. Approximately half of the local government authorities interviewed in Nigeria called attention to the additional time providers needed to collect, analyze, graph, and review data. Roughly one-third of respondents noted that detailed guidelines on the indicator were not available. Similarly, in Madagascar, one regional-level staff member noted that providers already have a lot of responsibility and reports to send to higher levels; thus, adding other indicators would require additional resources.

Data on the PPFP indicator were collected throughout the life of the project in all project-supported facilities. Between the initiation of the project and the final indicator testing assessments, an increasing trend was noted in postpartum women accepting a modern method of family planning pre-discharge (Figure A-1). The graph below illustrates how a health facility team might track PPFP service provision.

Figure A-1. Improving uptake of family planning (FP)* in the pre-discharge postpartum period, Madagascar (n=576 facilities; 203,601 deliveries)



*Does not include the lactation amenorrhea method.

The Way Forward

Both Madagascar and Nigeria advocated for the inclusion of this PPFP indicator into the hospital and health center registers and into the monthly facility summary reports that are sent to the district level. The teams succeeded and the indicator will be part of the HMIS in coming years, providing the opportunity for data driven decision-making. Supplying providers and data users with job aids and supportive supervision is recommended for helping to sustain a culture of data use for decision-making.

Appendix B: Testing a uterotonic provision indicator in Madagascar and Nigeria: health care provider and supervisor perspectives

In order to prevent postpartum hemorrhage, a leading cause of maternal death in developing countries,[2] women should receive a uterotonic in the third stage of labor, immediately after the birth of the baby. Despite being recommended best practice, this quality of care measure is not routinely captured in national health management information systems (HMIS). Evidence is needed to determine the usefulness and feasibility of the uterotonic provision indicator for providers and stakeholders. Results from the uterotonic use indicator testing in Nigeria and Madagascar are summarized below.

Uterotonic provision indicator

Percentage of women delivering in a facility who received a uterotonic immediately after the birth of the baby

Relevance and Usefulness

Almost all providers and stakeholders surveyed in Madagascar and Nigeria reported that the uterotonic provision indicator was relevant and useful. Most providers in Madagascar (78%; 40 of 51) and Nigeria (50%; 12 of 24) reported that they made decisions using this indicator. In Madagascar, respondents described the indicator as useful to assess appropriate practice of uterotonic and verify availability of stock. One provider reflected that using the data is important *". . . Parce que ces données reflètent le fonctionnement de mon établissement.* (. . . Because the data reflect the functioning of my facility.)" Participants most frequently used the indicator to plan for training (41%), manage stock (37%), and make human resources decisions (17%). Supervisors in Madagascar noted that the indicator was presented and discussed during monthly meetings. Some providers noted that they used the data to ensure that uterotonic stock is sufficient. Others used indicator results to discuss facility protocols and service provision. Only a third of providers in Madagascar reported having regular meetings to discuss the data. Of these, 80% met monthly, 10% met quarterly, and 10% weren't sure of the frequency of meetings. In Nigeria, one provider acknowledged that using "real information" about the provision of uterotonics after delivery allowed for better decision-making to improve care. Another respondent pointed out the need to monitor patient care and usage in facilities in order to make decisions at higher levels about the provision of equipment and commodities.

Almost universally (96%), providers in Madagascar recommended that the uterotonic indicator should continue to be collected. Most supervisors in Madagascar also noted that having data for the indicator improved service quality. One supervisor said, *"Oui, on constate un changement de comportement/attitude au niveau de la formation sanitaire qui utilise ces indicateurs (curiosité, analyse de données, et précipitation à trouver des solutions).* (Yes, there is a change in behavior/attitude at the facility level where they use these indicators [curiosity, data analysis, and motivation to find solutions].)"

Feasibility and Acceptability

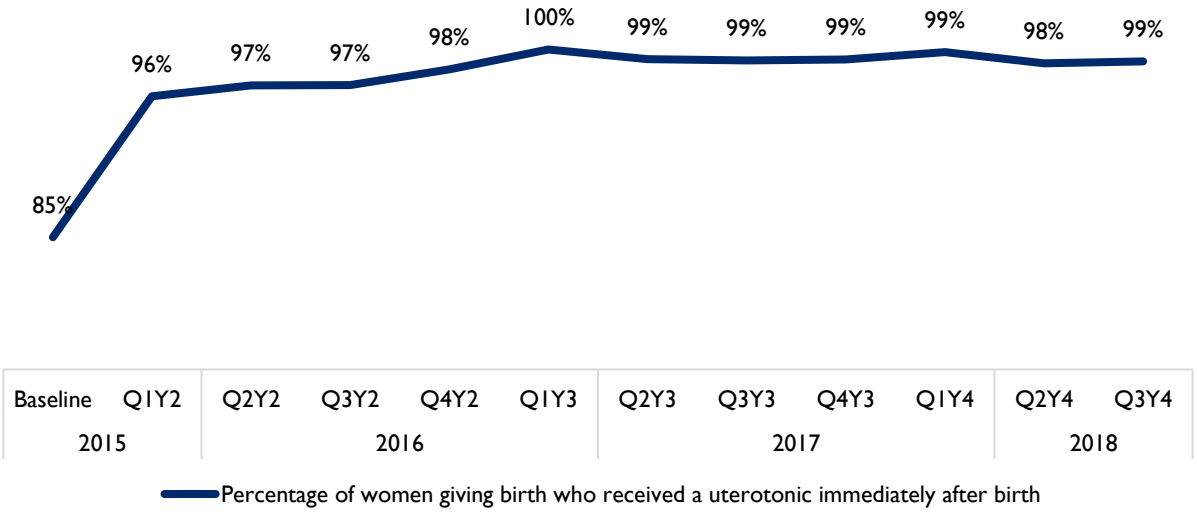
Almost all interviewed providers in Madagascar (94%) said they did not have difficulty collecting data on the uterotonic indicator; only 2% thought that the information was not of satisfactory quality. Of the nine supervisors interviewed in Madagascar, four thought the quality of the data was good, two thought it was acceptable, one thought it was unsatisfactory, and two did not know the level of data quality. Three of the nine supervisors thought that the collection, analysis, graphical representation, and data review of the indicator would take a lot of extra time and resources at the facility, district, or regional level. One provider noted that there are many other tasks and reports that providers contend with each month.

[2] Say L, Chou D, Gemmill A, Tunçalp O, Moller A, Daniels J, et al. Global causes of maternal death: a WHO systematic analysis. *Lancet Global Health*. 2014;2(6):E323–33.

In Nigeria, 6 of 24 (25%) providers reported challenges with data collection. Some noted that space to record the data does not exist in the register. The majority of respondents—67% in Ebonyi and 92% in Kogi—agreed that collecting data on the uterotonic indicator added to their responsibilities at the health facility. In Kogi, nearly half of providers (5 of 12) were concerned that collecting data on the uterotonic indicator might detract from their ability to provide clinical services.

After the indicator testing process was initiated, data were collected throughout the life of the project in all facilities. An increasing trend in uterotonic use was observed—from 85% of all facility deliveries in September 2015 to 99% in June 2018 (Figure B-1). The graph below illustrates how a health facility team might track uterotonic provision after delivery.

Figure B-1. Percentage of women who received a uterotonic immediately after birth, Madagascar (n= 513 facilities; 191,343 deliveries)



The Way Forward

Following indicator testing, the Madagascar and Nigeria teams advocated for the inclusion of the uterotonic indicator in the national HMIS in their countries at national HMIS revision meetings, presenting findings from the indicator testing activities. The teams succeeded and the indicator will be reported in the future, providing an opportunity to improve delivery care. Supplying providers and other users of data with job aids and supportive supervision will help sustain a culture of data use for decision-making around delivery care.