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MCHIP Technical Summary

QUALITY OF CARE

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The Maternal and Child Health Integrated Program (MCHIP) is the USAID Bureau for Global Health's flagship maternal, neonatal and child health (MNCH) program. MCHIP supports programming in maternal, newborn and child health, immunization, family planning, malaria, nutrition, and HIV/AIDS, and strongly encourages opportunities for integration. Cross-cutting technical areas include water, sanitation, hygiene, urban health and health systems strengthening.

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Abbreviations

ADRA	Adventist Development and Relief Agency
AMREF	African Medical and Research Foundation
AMTSL	Active Management in the Third Stage of Labor
ANC	Antenatal Care
BEmONC	Basic Emergency and Neonatal Care
CHAM	Christian Health Association of Malawi
CHS	Center for Health Services
COPE	Client-Oriented Provider Efficient
CSHGP	Child Survival and Health Grants Program
D&A	Disrespectful Care and Abuse
FP	Family Planning
L&D	Labor and Delivery
LQAS	Lot Quality Assurance Sample
MCHIP	Maternal and Child Health Integrated Program
MNCH	Maternal, Newborn, and Child Health
MNH	Maternal and Newborn Health
MOH	Ministry of Health
NGO	Nongovernmental Organization
PAC	Postabortion Care
PDQ	Partnership Defined Quality
PDSA	Plan-Do-Study-Act
PE/E	Pre-Eclampsia and Eclampsia
PMTCT	Prevention of Mother-to-Child Transmission of HIV
PPH	Postpartum Hemorrhage
PQI	Performance Quality Improvement
PVO	Private Voluntary Organization
QI	Quality Improvement
QOC	Quality of Care
RAPID	Regular Appraisal of Program Implementation in a District
RMC	Respectful Maternity Care
RMNCH	Reproductive, Maternal, Newborn, and Child Health
SBM-R	Standards-Based Management and Recognition
SPA	Service Provision Assessment
TRAction	Translating Research into Action
USAID	U.S. Agency for International Development
WHO	World Health Organization
WRA	White Ribbon Alliance

Background

Since 2008, the U.S. Agency for International Development's (USAID's) Bureau for Global Health's flagship Maternal and Child Health Integrated Program (MCHIP) has worked in more than 50 developing countries in Africa, Asia, Latin America and the Caribbean to improve the health of women and children. MCHIP works on programming in maternal, newborn, and child health (MNCH), immunization, family planning (FP), nutrition, malaria, and HIV/AIDS and has supported various approaches to measuring and improving quality of care (QoC) in these technical areas. All of the approaches supported by MCHIP: 1) **define quality,** including setting standards of care and 2) **measure QoC** through either primary data collection or routine information systems; and most approaches also aim to 3) **improve quality** through specific interventions. This paper highlights five key quality measurement and improvement approaches and tools developed and/or used in MCHIP's work:

- **Standards-Based Management and Recognition (SBM-R)** for quality improvement (QI) of reproductive, maternal, newborn, and child health (RMNCH) services
- **Quality of care health facility assessments** for measurement of the quality of facility-based maternal and newborn health (MNH) services
- **Regular Appraisal of Program Implementation in a District (RAPID)** for QI of immunization services
- **Respectful Maternity Care (RMC)** toolkit for defining, measuring, and improving maternity care from a client perspective
- **Community-inclusive approaches for QI** of reproductive RMNCH services, specifically: Partnership Defined Quality (PDQ) and Client-Oriented Provider Efficient (COPE) services

Recent Evidence on the Importance of Quality

Progress toward ending preventable child and maternal deaths will require reaching high levels of *effective coverage* with high-impact RMNCH interventions. The concept of effective coverage emphasizes the fact that only through delivering health care services of sufficient quality can health impact be achieved. For example, although several sub-Saharan African countries have increased their rates of antenatal care (ANC) and institutional deliveries, maternal mortality rates have remained high, suggesting that one of the chief constraints is poor quality. This is the case in Malawi, where skilled birth attendance has risen to 71%, yet maternal mortality is still at 460/100,000 live births.[1] A large cross-sectional World Health Organization (WHO) multi-country study of maternal health services published in the *Lancet* in 2013 showed no correlation between maternal mortality and implementation of known lifesaving interventions such as use of magnesium sulfate for women with eclampsia: varying levels of quality of service provision are most likely a key contributor to this finding. The study concluded that "universal coverage of lifesaving interventions must be matched with … overall improvements in the quality of maternal health care."[2]

Quality services improve health outcomes by providing clients with respectful and technically sound services, delivered according to standards that are known to maximize their health impact. Additionally, client and community perceptions of quality can affect utilization of those services.[3] Although knowledge and experience in QI have accumulated globally over the last few decades, there are still important knowledge gaps in terms of the most effective and sustainable approaches.[4] Recent trends in addressing QoC have taken a system view of the production of quality services, acknowledging that: 1) health care delivery occurs as part of an interaction between a health care provider and the client and community; 2) provider performance is affected and motivated by a wide range of factors in the provider's immediate environment; and 3) the health system is responsible for providing inputs and processes that service providers need to deliver quality services, including infrastructure, supplies, supervision, and management.

WHAT IS QUALITY?

Dimensions of Quality from Common Frameworks

One of the first systematic frameworks for the quality of health services was developed by Donabedian,[5] who divided the production of quality services into structure, process, and outcome. Structural measures gauge the degree to which a facility is prepared to deliver care in terms of necessary inputs and staffing. An Institute of Medicine report[6] stated that structural measures include "the presumed capacity of the practitioner or provider to deliver quality health care. For health care professionals, this may include licensure, specialty board certification, and type of training. For facilities, they include government certification and private accreditation, physical attributes including safety, and policies and procedures." Process measures focus on the clinical content of care being delivered according to standards. This includes timely and accurate diagnosis, appropriate treatment, respectful care, and provision of information to clients. "Outcomes" refer to the health status and satisfaction of the clients served.

The WHO identifies six dimensions for services delivered with quality, which are:[7]

- **Effectiveness**—delivering health care that results in improved health outcomes for individuals and communities
- **Efficiency**—maximizing resource use
- **Accessibility**—delivering health care that is within reasonable geographic reach and available when needed
- **Acceptability and patient-centeredness**—taking into consideration preferences and cultures

- **Equitability**—delivering health care that is of equal quality for all
- **Safety**—minimizing risk and harm

Role of Health Care Provider Motivation in Producing Quality Services

Whether health workers deliver quality services depends in part on whether they have the needed inputs such as commodities, training, and support from processes like supervision. Another key determinant of providers delivering quality care is their **motivation.** Health workers often perform at a lower capacity than they are able.[8] Providers, regardless of their intrinsic motivation, often face an environment that has built-in and strong disincentives for them to deliver consistent QoC. These include low salaries, paid without regard to their performance; overwork; lack of accountability and supervisory support; fear of negative clinical outcomes; and perceptions of patients' demands and fears.[9,10,11] QI strategies that recognize these challenges and attempt to address them are more likely to be successful.

Common Elements of QI Approaches

Many QI approaches have been developed over the last several decades that take into account some or all of these dimensions and elements of QoC. The *Finding Common Ground* report[12] reviews several of the most widely used approaches to QI, which it defines as "a cyclical process of measuring a performance gap; understanding the causes of the gap; testing, planning, and implementing interventions to close the gap; studying the effects of the interventions; and planning additional corrective actions in response." This is a process often termed the Plan-Do-Study-Act (PDSA) cycle. At an operational level, most QI approaches include the following elements as well:

1. **Standards:** QI models tend to have reference points adopted from international or national guidelines for the particular set of health services addressed by the QI model.
2. **Organizational drivers:** This may be persons, teams, and/or organizations that facilitate and support the QI process.
3. **Situation analysis:** An initial assessment is usually performed to identify deficiencies, deviations, or gaps between the standards and actual practices.
4. **Specific aims:** Each model has specific aims or objectives that provide a rationale and targets for what the QI effort is trying to accomplish. In several approaches, specific indicators are identified to help track progress toward reaching the overall goal.
5. **Identification and selection of interventions:** QI models include various tools to facilitate the identification and selection of interventions and changes to narrow the performance gap.
6. **Implementation of interventions:** QI models apply selected interventions or changes, usually with a deliberate set of steps, to close the gap between standards and actual practices documented during the situation analysis.
7. **Monitoring and documentation of results:** QI models include a system to track the differences in performance that result from an intervention over time. Such a system measures selected process indicators and/or health outcomes. Tools for monitoring and documenting QI results include repeated self-assessments, external audits, and run charts.
8. **Community involvement:** Most QI models include a component to involve the community in activities such as advocacy, awareness-raising, and active participation in the QI process.
9. **Incentives and motivation:** Some QI models incorporate financial or non-financial rewards to inspire providers to change and sustain behaviors and practices according to standards.
10. **Scale-up plan:** After an intervention has been shown to improve performance according to standards and/or health outcomes, a scale-up plan may be devised to spread the interventions.
11. **Sustainability plan:** A sustainability plan may be undertaken to ensure that not only is the intervention scaled up, but also institutionalized so that health care providers continue to perform according to standards over the long term.[13]

Standards-Based Management and Recognition

BACKGROUND AND IMPLEMENTATION UNDER MCHIP

SBM-R promotes the systematic use of performance standards as the basis for the organization and functioning of health services.[14] It is one of MCHIP's most widely applied approaches to QI of health facility-based RMNCH services. SBM-R begins by convening an in-country group of experts to define quality—developing/adapting evidence-based operational standards in a health service area (for example, FP, maternity and newborn care, and facility-based child health in Pakistan and Afghanistan), which are then incorporated into an assessment tool that can be self-administered or administered by peers, or by external assessors, such as supervisors, at health facilities at any level. When used by supervisors, the assessment tool can support a more structured supervision process, serve as a point-of-care learning tool, and set expectations of quality for new staff. Implementation of the assessment tool is intended to result in facility teams identifying performance gaps, analyzing the causes of the gaps, and developing and implementing interventions to close these gaps (Figure 1). The gaps observed usually fall into the following categories: lack of knowledge and skills, lack of resources, and lack of motivation. Many of these gaps can be addressed through local action with minimal external support; however, external support is sometimes needed. Table 1 shows data from Pakistan demonstrating that 95% of the identified gaps cost little to nothing to address, and are within the means of facility personnel to address themselves.

Figure 1. The Four Steps of SBM-R

Table 1. Estimated Costs of Planned Improvement Activities to Attain Maternal Health Care Standards (Pakistan, Provinces of Mansehra and Bagh)

No Cost	Low Cost	High Cost
75%	20%	5%
e.g., reorganizing shelves, cleaning facility, counseling	e.g., chlorine solution (Rs 30 per BHU per month), gloves, screens for privacy	e.g., refrigerator, sterilizer, ambulance

Performance assessments result in a score and "when a facility team achieves a pre-agreed level of performance, the entire facility is acknowledged through a recognition mechanism, which is usually designed by the Ministry of Health or other key stakeholders or institutions, and normally involves institutional authorities and the community."

SBM-R is meant to enhance several drivers of improved health worker performance. First, because the assessments (i.e., performance based on the standards) are externally verified, SBM-R reinforces top-down accountability. Second, SBM-R is designed to motivate health workers by rewarding improved performance with public and/or peer recognition and rewards (i.e., the "recognition" component). Finally, SBM-R is expected to motivate health workers by encouraging teamwork and self-assessment within facilities, which in turn spurs health workers to hold each other accountable and builds on their intrinsic motivation.
MCHIP has supported implementation of SBM-R in one-third to half of the countries it has worked in. The bulk of MCHIP's experience with SBM-R has been in FP, maternity care, ANC, and infection prevention. More recently, SBM-R has been used by MCHIP in HIV treatment and prevention of mother-to-child transmission of HIV (PMTCT), child health, and other areas.

In all the areas in which it has been used, the data generated through the QI process itself have consistently shown improvements.

Dimensions and Elements of Quality Addressed

SBM-R is a QI approach that focuses primarily on the WHO dimensions of safe and effective care, but also includes respectful care (respect of clients' rights and preferences, development of partnerships with clients for better health outcomes). The tools also include measurement of facility readiness (basic infrastructure, human and material resources, and basic management systems). SBM-R incorporates several of the elements of QI described in *Finding Common Ground* such as definition of standards, measurement against those standards, and motivation of health workers through the recognition process.

Lessons Learned

Evaluations of SBM-R have shown promising results. For example, in Malawi, a 2009 Jhpiego evaluation[15] found a significantly greater proportion of ANC* and FP† standards met by facilities in the SBM-R intervention groups than for those in the comparison groups (i.e., those not using SBM-R); postnatal care standards also improved. "Although quality of care was high at comparison as well as intervention facilities, the evaluation found that the Performance Quality Improvement (PQI) intervention significantly improved the management of postnatal care and family planning clients."[16] SBM-R was scaled up to all central and district hospitals in Malawi, including many Christian Health Association of Malawi (CHAM) hospitals and some health centers.‡

SBM-R QI data have not always been linked to either key practices or outcome level results (morbidity/mortality), but MCHIP country programs in Ethiopia, Guinea, Malawi, Mozambique, Nigeria, and Zimbabwe worked with Ministries of Health (MOHs) to make those linkages. Figure 2A shows results from six maternities in Guinea, collectively performing 3,500–4,000 annual deliveries. Compliance with labor and delivery (L&D) standards rose from an average of less than 40% in 2011 to 80% in 2013. Over that time, the use of active management in the third stage of labor (AMTSL) rose from under 40% to over 80%, and the incidence of postpartum hemorrhage (PPH) dropped from 2.9% to 0.7% of cases. Figure 2B shows similar data from 34 Model Maternities in Mozambique from 2010 to 2013, with over 100,000 annual deliveries. Compliance with standards rose from an average of <30% to over 50%. Correct partograph use doubled from 30% to 60%; AMTSL use rose from <70% to near universal. The institutional maternal mortality trend can be assessed later this year, once another data point is added. A full report of these and other findings can be found in *Linking Quality Improvement Scores to Service Outputs and Outcomes* (manuscript in preparation). While these examples are positive, they do not conclusively demonstrate causality as data were collected only from intervention facilities. These country program examples are limited in number, and the experience needs to be expanded and made standard practice to continue to improve SBM-R implementation.

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* Both study groups achieved 80% or more of the verification criteria for 11 out of the 18 ANC standards. Scores for 3 of 17 standards were significantly higher in the intervention than in the comparison group: rapid initial evaluation, which helps the provider triage ANC clients who need urgent attention (63% and 23%, p = 0.05), cordial reception and treatment (99% and 84%, p =0.05), and conducting the physical and obstetric exam (89% and 73%, p = 0.01).

† Both study groups complied with at least 80% of the verification criteria for 9 of the 16 FP standards. The intervention group scored significantly higher than the comparison group on two standards: establishing a cordial relationship with the client and identifying her needs (99% and 84% respectively, p = 0.05), and identifying the need for protection against sexually transmitted infections, including HIV (73% and 26%, p = 0.01). Intervention facilities were more likely than comparison facilities to have working toilets and adequate counseling and examination areas in the FP service area.

‡ Established in 1966, CHAM has 171 member health facilities, including hospitals and health centers. These provide about 37–40% of the health care service delivery in Malawi, 80% of it in hard-to-staff areas.

Figure 2A. Trends in MNH Standards Achieved, Maternal Health Service Delivery Practices, and Health Outcomes in Six Facilities in Guinea: 2011–2013

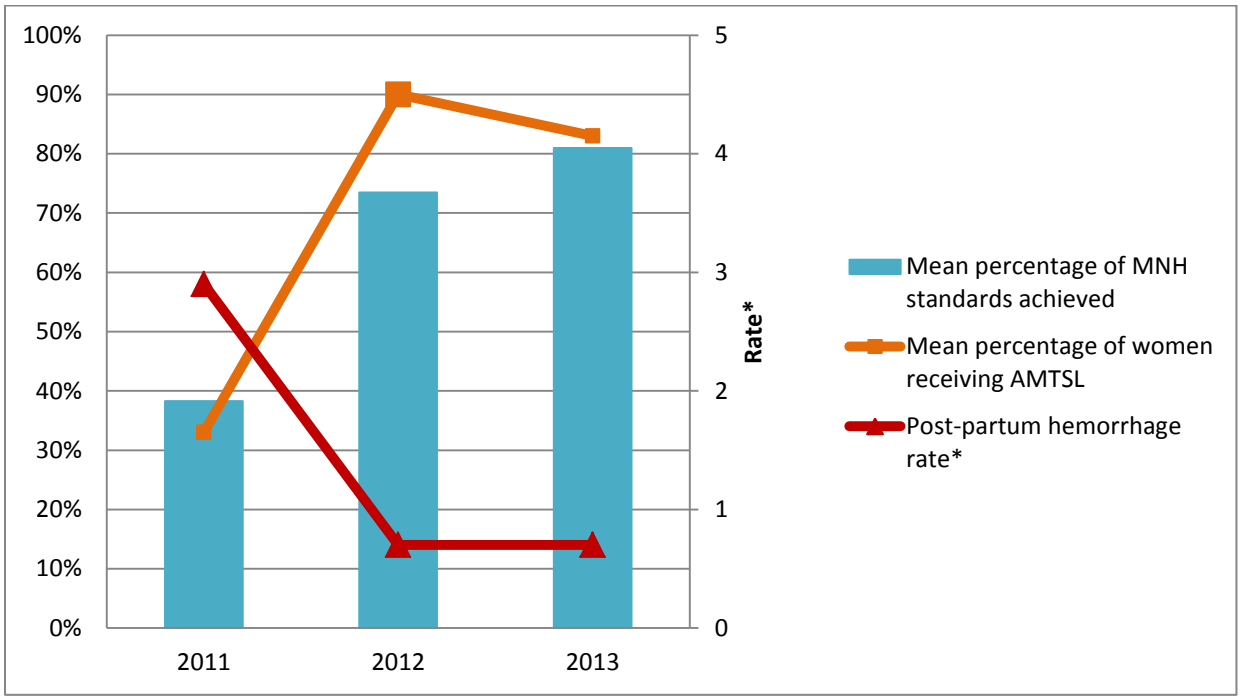
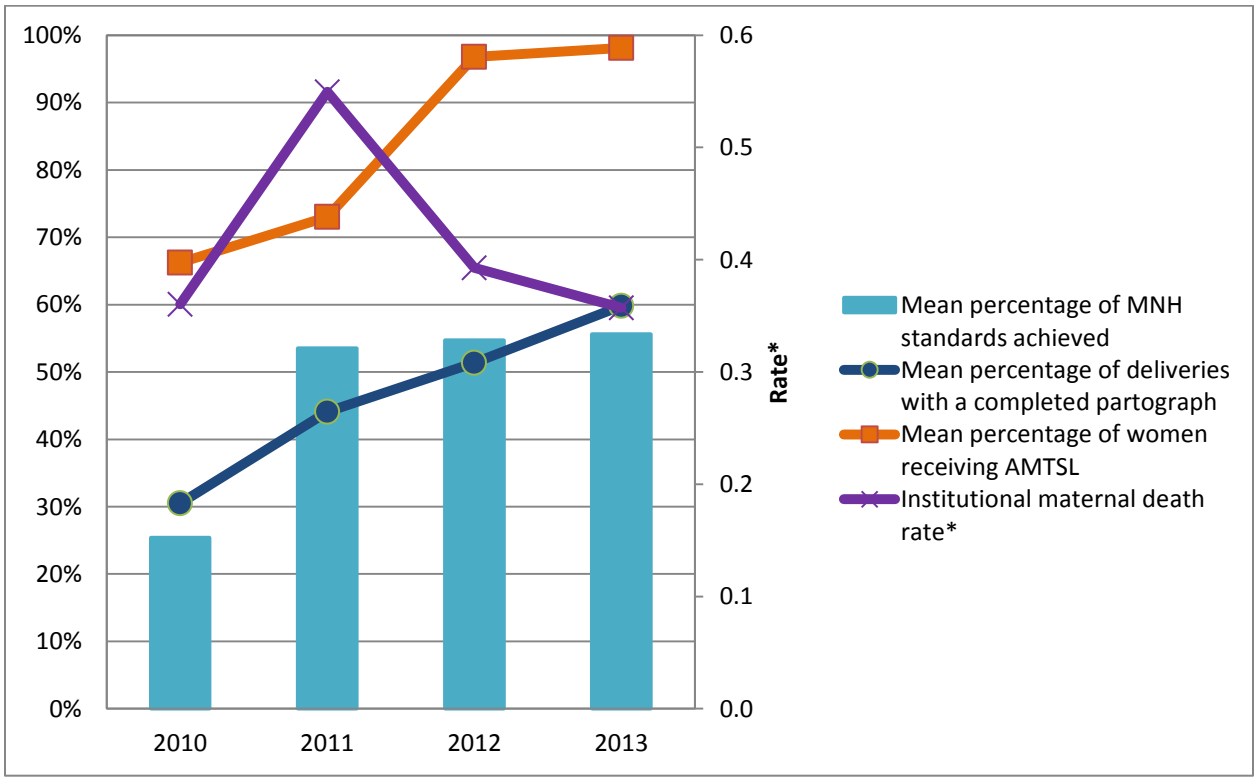


Figure 2B. MNH Standards Achieved, Maternal Health Practices, and Health Outcomes in 34 Facilities in Mozambique, 2010–2013



MCHIP's experience in implementing SBM-R suggests that the approach can empower facility staff through jointly defining standards, measuring them, and rewarding delivery of high-quality care. In many countries where MCHIP has supported SBM-R implementation, staff trained and mentored on SBM-R found it motivating—because they saw quantifiable results of their actions

and they were recognized and rewarded for improvements achieved. In some countries, such as Bolivia and Liberia, SBM-R has been adapted to support national facility accreditation.

Institutionalization and sustainability of SBM-R remain challenging. Implementing the approach often relies on individual champions and external supervision (either by the project team or MOH) to drive the process. Moreover, MCHIP assessments of SBM-R sustainability in Indonesia and Malawi found some evidence that, once project resources ended, verification of SBM-R results occurred less frequently, rewards for performance often ceased, and implementation waned. Reduced project resources also affected the availability of needed inputs, such as reference documents and training. Where implementation of SBM-R has waned, facilities did not seem to face consequences for poor performance. The focus of SBM-R has typically been on reinforcing positive practices and not on consequences for poor performance. These factors point to difficulties with institutionalization and sustainability of the approach—a common problem with QI approaches, particularly in settings with weak governance, but one that should be addressed in the future through streamlining and linking to motivational systems.

Future Directions

It is important to continue to invest in implementation research for SBM-R to understand what is working well, what can be improved, the variations in how it is implemented, and how the approach can be adapted to support its effectiveness, sustainability, and scalability. Standard documentation should include information on who was involved from the MOH in rolling out the process; who was trained in SBM-R use; how often improvement and measurement cycles were repeated; the types of improvement activities included in facility plans; and the proportion of improvement activities completed. In addition, guidance recently developed under MCHIP now requires that reporting of SBM-R results always be linked to recording the use of key practices (e.g., uterotonic use in third stage). Having a more complete picture of inputs, processes, and outcomes will enable meaningful comparisons to improve the practice of SBM-R.

In terms of sustainability, there are activities on two fronts. The first focuses on institutionalization of SBM-R within a larger community and health systems framework. This includes linking SBM-R to national and community health systems management policies and practices such as national accreditation, professional association certification processes, and regular supportive supervision programs.[17] The second set of activities focuses on streamlining the approach to make it less time consuming to implement. This includes applying only a subset of standards at any one time and using mHealth tools supplemented by job and communication aids that analyze the data and also suggest appropriate improvement activities.

Finally, mechanisms for recognition to better motivate health workers are being expanded. Performance-based incentives based on meeting SBM-R quality targets have been used in Mozambique by the Elizabeth Glaser Pediatric AIDS Foundation and in Malawi. Graded recognition and reward schemes are also being explored to counter the perception among some health care providers that attainment of an 80% overall score is too distant a goal to be immediately motivating.

Measurement of the Quality of Antenatal and Maternity Services through the QoC Health Facility Assessments

BACKGROUND AND IMPLEMENTATION UNDER MCHIP

Despite great efforts at global and country levels to increase birth attendance by a skilled provider, the quality of care provided by skilled birth attendants varies widely, and is often unknown.[18] To better characterize the nature of the quality of service provision for antenatal and maternity care by skilled providers, MCHIP designed and conducted assessments in health facilities providing maternity services in seven countries in East and Southern Africa (Ethiopia, Kenya, Madagascar, Mozambique, Rwanda, Tanzania [including Zanzibar], and Zimbabwe) from 2010 to 2012.[19] The sampling of health facilities varied between countries based on the purpose of the assessment. For example, the samples in Zimbabwe and Kenya were nationally representative whereas, in Mozambique and Tanzania, the samples were designed to be baselines for programs. The main objective of these assessments was to determine the frequency and quality with which evidence-based interventions were implemented by maternal and newborn care providers. This was achieved by assessing both facility readiness (i.e., presence of required drugs, supplies, and other health system inputs also often assessed using Service Provision Assessment [SPAs]) and the quality of services provided during ANC and L&D, assessed by direct observation of provider performance. Unlike SBM-R, the QoC assessments were intended to be quality *measurement* exercises primarily and not QI activities except insofar as they fit into larger country-led QI processes.

The use of observation with re-examination is considered to be the gold standard in measuring QoC.[20] Re-examination of an obstetric event is not practical so direct observation alone was conducted. This approach is clearly better than the alternatives—either extrapolation from facility readiness assessments or chart audits in environments where records may be highly incomplete and inaccurate. The definition of quality used in the assessments was that key practices were correctly carried out according to globally accepted, evidence-based guidelines established for MNH, as defined in WHO's Integrated Management of Pregnancy and Childbirth (IMPAC) manuals.[21] In all seven of the countries, with the exception of Kenya, the data were collected using smartphones or tablet computers, allowing for automated data management and a standardized report format across countries.

The QoC assessment tools included over 100 indicators, covering aspects of both facility readiness and provider performance. The QoC assessments were unusual in that they employed observations of the entire L&D experience—from the admission process, through intermittent observation of the active phase of the first stage of labor, and then continuous observation of the second and third stages, terminating at one hour postpartum. The assessments examined routine ANC, infection prevention, RMC, routine L&D care, focusing on screening and prevention for common serious conditions, and immediate and essential newborn care. A test of provider knowledge and clinical management skills was included. The assessments also included observation of the management of the most common potentially life-threatening peripartum complications of the mother and newborn such as pre-eclampsia/ eclampsia (PE/E), PPH, obstructed labor, and newborn asphyxia.

Results of QoC assessments were disseminated to the MOH and other country stakeholders. National programs have used assessment findings to address specific gaps identified in the delivery of care, as shown in Table 2. In Mozambique and Tanzania/Zanzibar, baseline and follow-up assessments were conducted as part of evaluations of programs with substantial maternity care

QI components. In Zimbabwe and Kenya, they were part of larger MOH-led national assessments of quality. In Rwanda, the QoC results were used by the MOH to develop national basic emergency and neonatal care (BEmONC) training guidelines and policy for the Public Accounts Committee. The findings in Rwanda also helped MCHIP to develop an intervention supporting postabortion care (PAC), and to revise its BEmONC training. In Madagascar, there was more limited use of the findings, given restrictions on U.S. government projects working with the MOH. The findings were used to advocate for the use of the Helping Babies Breathe approach to address identified shortfalls in the quality of newborn resuscitation. The Ethiopia QoC was the first independent assessment and focused on a small group (N=19) of high-volume hospitals. The assessment was done at an opportune time in which practice had not yet been updated for management of severe PE/E. The findings were used to advocate for uniform guidance on the use of magnesium sulfate rather than diazepam as well as for refinement of the tools.

The QoC assessment tools have also been used by others. The World Bank, with support from Jhpiego, used the tools in a QoC study in Kyrgyzstan and extended the observations and audits to include non-communicable diseases such as strokes and myocardial infarctions. With help from ICF International, the Nepal MOH has used the QoC L&D observation tools to assess the country's low-volume public sector birthing centers. The QoC L&D observation tools have now been added to the SPA as an optional module that has been applied in recent SPAs in Malawi and Bangladesh.

Table 2. National Actions Resulting from Maternal and Newborn QoC Assessments

Country	Action
Ethiopia	Used findings to advocate for increased use of magnesium sulfate.
Kenya	Part of national SPA. Regional workplans developed based on findings.
Madagascar	Used to advocate for national adoption of Helping Babies Breathe, as well as improved use of key maternal interventions such as partograph use.
Mozambique	Highlighted the need to improve newborn resuscitation. MCHIP advocated for Helping Babies Breathe to be rolled out as national policy.
Rwanda	QoC influenced development of three major documents: national guidelines, BEmONC training, and PAC policy. Health care providers were encouraged to use magnesium sulfate (increased attention to supply and training of providers).
Tanzania/Zanzibar	Increased linkages to Venture Strategies International to improve misoprostol supply. Stock-out data helped stakeholders reach consensus on the need for tracking of maternal health drugs.
Zimbabwe	Part of national QoC assessment used for national planning.

Dimensions and Elements of Quality Addressed

The QoC assessments focused on measuring QoC according to globally accepted standards. They focused on technical dimensions of care (WHO dimensions of effectiveness and safety), but also had a significant content on WHO's dimension of acceptability and patient-centeredness (i.e., respectful maternity care). They were not originally conceived as QI tools in and of themselves, but rather were intended to be used as part of larger QI processes.

Lessons Learned

The QoC assessments highlighted some major country accomplishments such as the fact that use of uterotonic immediately following birth is now almost universal in an important set of countries. It also delineated ongoing challenges such as the fact that even in relatively well-resourced facilities there are still large gaps in quality for the delivery of high-impact interventions against the major causes of maternal and newborn mortality (e.g., screening for

proteinuria as a means to detect pre-eclampsia, and some elements of essential newborn care like skin-to-skin contact). Findings suggested difficulties in the management of newborn resuscitation and eclampsia as well. Improvements in just these few interventions could result in dramatic gains in MNH; however, these gains will not be realized by emphasizing only facility readiness (training of personnel, improvement of supply chains for key commodities), but will also have to consider provider behavioral elements.

Textbox 1: Highlights of Recommendations from QoC Assessments

1) Continued need for policy, advocacy, and provider education, training, and support to promote the wide-scale use of essential lifesaving interventions.
2) Emphasize health systems strengthening to ensure that drugs and commodities are available to implement best practices.
3) Organize services so that critical supplies and equipment are accessible and ready for use when needed.
4) Encourage supportive supervision to ensure adequate monitoring of service provision in clinical decision-making, management, and reporting.
5) Conduct research to understand factors that limit or encourage implementation of proven lifesaving interventions.

Important learning about strengths as well as gaps in the quality of delivery and ANC is described at length in "Quality of antenatal and delivery care services in seven countries in Sub-Saharan Africa" (Summary in Textbox 1).[22] Although some of the recommendations are general, the third point bears particular emphasis, "Organize services so that critical supplies and equipment are accessible and ready for use when needed." There were numerous instances where all the necessary elements were present to respond to an urgent or emergency situation such as an asphyxiated newborn, but all the equipment was not easily at hand and ready for use. The precious time lost locating the equipment cost some clients dearly. Small procedural changes on maternity wards could address such problems at little or no additional cost.

A full summary and discussion of the assessment findings is available on the MCHIP website.[23] Below is a brief summary of the lessons learned about the use of the tools:

- Direct observation provides different information on quality rather than assessments of readiness. Once a moderate to high level of readiness is assured, the extra effort that direct observation requires is justified to further characterize actionable gaps in quality of service provision.
- Assessments involving direct observation of maternal and newborn complications such as PPH, PE/E, or newborn asphyxia are challenging because such complications are rare. Despite these challenges, the QoC assessments demonstrated that it was still possible to learn about the quality of delivery of care from direct observation. Further simplification of the observation checklists for complications, possibly applied to simulations, would make these components more feasible and the data more usable.
- A simpler QoC tool is needed that could be incorporated into supportive supervision. The current tool could also be adapted to make it more easily understood by providers and managers.

Future Directions

The QoC assessment tools are being simplified and refined. A much shorter version has been field-tested in Tanzania, with 20 indicators from the routine L&D observation tool. It was implemented by observers with the profile of supervisors rather than highly trained data collectors. MCHIP is also drafting additional indicators for RMC, one indicator of which might be added to the list of routine L&D indicators in the shortened tool.[24] Given that the tool requires observation of multiple L&Ds it will never be a rapid technique. However, if a small number of routine observations are done at a limited number of facilities during supervision, and a "rolling sample" within a single district is generated, for example, by visiting a Lot Quality Assurance Sample (LQAS) of 19 facilities over a one-year period (i.e., less than two per month), a very useful picture of the quality of services in that district over the last year could be generated.

During the last three applications of the QoC assessment tool, the complication observation checklist forms were simplified. If these were used to observe "full simulations" (i.e., a scripted simulation with a mannequin placed in the actual practice setting), then the complication modules might also be made part of an ongoing LQAS assessment in a district, incorporated into supervisory visits. This approach would facilitate a focus of supervision on clinical practice, which is as it should be.

Client perspectives are clearly needed to round out the picture painted by the QoC assessments, but the question is where this information should be obtained. Evidence shows a clear courtesy bias in terms of the information that clients are willing to give about the facility in exit interviews when the client is interviewed on site.[25] The most unbiased information on client perspectives will need to come from other complementary sources. Such sources could come from spot checks of wait times from special data collection registers; observations of respectful care; and community-based focus groups and/or household surveys of users and non-users of facility-based services, which is how it is done in the PDQ method described on page 17.

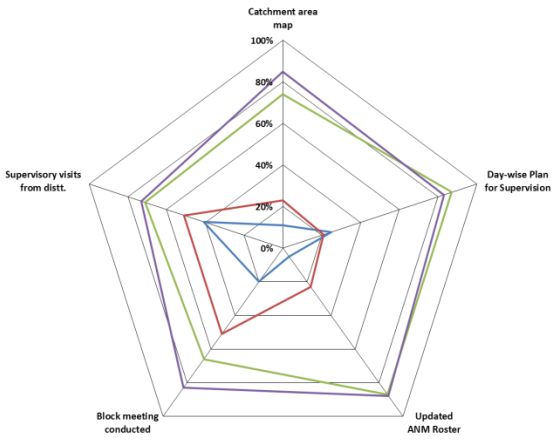
For various reasons, some outside of the control of the project, in some of the countries where the QoC assessment was not part of a larger QI process (i.e., Ethiopia and Madagascar), there was less than optimal action on the QoC findings. Future QoC assessments should incorporate a rapid guide on dissemination and incorporation of findings into annual facility and district workplans, linking the assessments to QI actions. This would make the QoC more of a stand-alone QI tool, rather than the simple quality measurement tool that it was originally designed to be and still is. Displaying the results disaggregated at the district level would also make the findings more readily actionable. However, this approach would need to be balanced against the possibility of identifying individual facilities. While consent forms could be modified to make this possible, the ability to keep the process positive with providers being assessed could be compromised.

QI for Immunization Services using the RAPID Approach

BACKGROUND AND IMPLEMENTATION UNDER MCHIP

Supervision has been one of the most commonly recommended strategies to improve health worker performance,[26] but it is widely known to be deficient in many low- and middle-income countries.[27,28] This deficiency is often cited as a major constraint to improving the quality of essential health interventions in developing countries and a key factor contributing to poor performance of frontline health workers.[29]

Figure 3. Results of RAPID Assessments in Three Districts of Uttar Pradesh, India (June 2010–November 2012), MCHIP



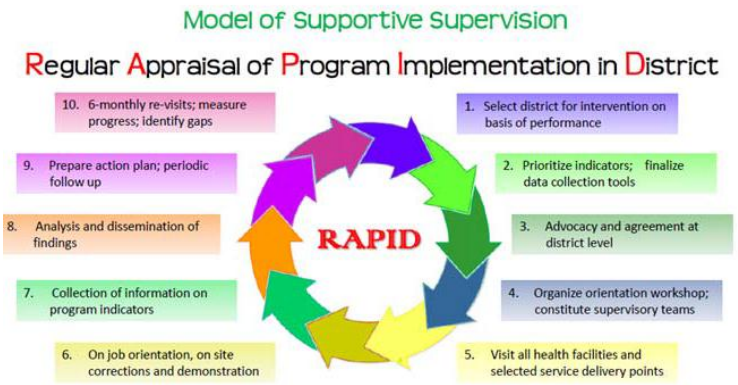
RAPID is a QI method integrated into supportive supervision to improve immunization services. It is a systematic approach applied in "campaign style" supervision rounds of various districts, resulting in a systematic improvement plan that is then followed until the next supervisory visit and round of measurement. MCHIP has led the implementation of RAPID with other partners—UNICEF, WHO, CARE International, the Norway-India Partnership Initiative, and district health departments—following a successful pilot study in five districts in the states of Uttar Pradesh and Jharkhand, India. RAPID is currently being implemented in the Indian states of Jharkhand, Uttar Pradesh, Rajasthan, Orissa, Haryana, and Madhya Pradesh.[30]

RAPID is implemented by viewing each district as a unit. Teams of trained supervisors visit district health facilities and outreach immunization sessions, using standardized checklists based on international standards to assess the quality of program management, cold chain and vaccine management, records and reports, immunization safety, and waste disposal practices.[31] Each team discusses identified program issues with facility staff and corrects improper practices through on-site demonstrations and training on guidelines, correct procedures, and service delivery.[32] Data are entered into an Excel tool, which generates program indicators, graphs, and scores for cold-chain points. The tool is then shared with facility managers and staff through a one-day dissemination workshop.[33]

Figure 3 shows an example of how multiple RAPID assessments for a technical area are displayed so that successive improvements are easily seen. This information allows regions to rank health facilities on overall performance and the status of individual indicators. The supervisory process is repeated every three to six months to assess improvements and identify any remaining gaps in health worker performance (Figure 4). The teams of external supervisors are crucial for leveraging local resources from within the health system and developing action plans to ensure the sustainability of high-quality immunization services.

MCHIP developed tools and materials to improve the quality of care through RAPID. These include supervision checklists for health facilities and immunization sessions, electronic templates to enter data and generate reports, and a planning and implementation framework with training agendas, films, and presentations.

Figure 4: Model of Supportive Supervision using RAPID[34]



Dimensions and Elements of Quality Addressed

RAPID is a QI intervention that focuses on the WHO dimensions of safe and effective care. It takes a broader system perspective as well by looking at adherence to standards; use of systematic supervision rounds as an organizational driver; systematic monitoring and corrective systems; practice of advocacy at the community level, for partners, and at all QI meetings; and a structured scale-up and sustainability plan through ongoing training and mentoring of local staff. A full summary and discussion of findings is available in the *MCHIP India: End of Project Report*.[35]

Lessons Learned

Successive rounds of RAPID have demonstrated improvements in the quality of immunization service delivery provided as described in the *MCHIP India: End of Project Report*.[36] This is likely attributable to the following:

- RAPID is easily adaptable to the local context.
- RAPID indicators are identified or modified in discussion with staff and stakeholders, which is empowering.
- RAPID requires the consensus and participation of government as well as facility staff, which fosters collaboration and creates a network of staff committed to quality of care.
- RAPID uses simple low-technology tools (standardized checklists and reporting tools) appropriate to existing field realities.
- RAPID provides an immediate quantification of quality and existing gaps in service delivery providing data for action and follow-up. This approach allows districts to build local capacities and enhances ownership, strengthening the overall system.
- RAPID enables facility staff to demonstrate and validate their need for resources or additional support through use of documented strengths and weaknesses.

Future Directions

The success of the RAPID approach has led to expansion of the model using domestic resources in India as well as in Madagascar, Kenya, and Tanzania. In addition to replicating and scaling up this approach, it will be important to find ways to support the sustainability of RAPID within districts. Activities that further develop ownership and build supervisory capacity so that supervisors are facilitators or mentors will be essential. Focused training for managers to strengthen their goal-setting skills will also be needed. Robust process documentation is critical to learn how to improve the method. In particular, recording whether the full RAPID package, or only a subset of the tools, was used. Finally, future assessments should examine the institutionalization and sustainability of the approach once technical assistance has ended.

Respectful Maternity Care

BACKGROUND AND IMPLEMENTATION UNDER MCHIP

Though important progress has been made globally to improve MNH, utilization of quality MNH services is still not universal even where access is not an issue. Factors contributing to less than ideal utilization have to do with the perceptions of clients and communities regarding the QoC. These often are not centered on issues of technical content of care and are more likely to center on factors such as an unwelcoming reception by staff, lack of privacy, poor information sharing with the client, and even disrespectful and abusive care. The "respectful maternity care" movement, also known as "humanization of childbirth care," is an approach centered on the individual and based on principles of ethics, respect for human rights, and promotion of evidence-based care that recognizes women's preferences and the needs of women and newborns. RMC is also influenced by cultural norms and behaviors, which are often difficult to change.

MCHIP has worked on RMC definition and measurement in collaboration with the advocacy and research efforts of the White Ribbon Alliance (WRA) and the USAID Translating Research into Action (TRAction) Project,[37] respectively. Table 3 shows the seven categories of disrespect and abuse from the TRAction landscape analysis published in 2010 and the corresponding respectful care elements developed by WRA. MCHIP collected information on selected aspects of RMC in the QoC facility assessments in seven Eastern and Southern African countries. The QoC assessment tools were developed and largely applied before the Bowser and Hill landscape analysis was done. Therefore, the information gathered in the QoC assessments was not designed to cover nor to fit in these categories; however, the first four of the domains (in bold in Table 3) were covered in some or all of the assessments and valuable information about the prevalence of the practices was obtained. While physical abuse was not common, other more subtle aspects, such as undignified or un-consented care occur in many births. The assessments give initial glimpses into the extent of this important, but still poorly characterized, problem.

Table 3. Categories of Disrespect and Abuse (from Bowser and Hill, 2010)[38] and Corresponding Right to Respectful Care (from WRA)

Category of Disrespect and Abuse	Corresponding Right
Physical abuse	Freedom from harm and ill treatment
Non-consented care	Right to information, informed consent and refusal, and respect for choices and preferences, including companionship during maternity care
Non-confidential care	Confidentiality, privacy
Non-dignified care, including verbal abuse	Dignity, respect
Discrimination based on specific attributes	Equality, freedom from discrimination, equitable care
Abandonment or denial of care	Right to timely health care and to the highest attainable level of health
Detention in facilities	Liberty, autonomy, self-determination, and freedom from coercion

Steps taken by MCHIP to implement QI approaches that include the RMC perspective have focused on developing and disseminating tools, templates, and other materials. The RMC toolkit developed by MCHIP provides a range of resources, including: a survey on RMC from 19 countries; an assessment instrument; program briefs and reports providing examples of how RMC has been implemented; training and advocacy materials; operational standards for RMC; illustrative indicators for monitoring RMC; job aids; and a resource list. These are available

online at K4Health (http://www.k4health.org/toolkits/rmc). MCHIP has provided many of these tools, checklists, and training and technical assistance to country programs implementing RMC, including Ethiopia, Mozambique, Pakistan, South Sudan, Tanzania, and Yemen.

Mozambique is the MCHIP country program with the most experience in QI efforts that include RMC. As part of the MOH's Model Maternities Initiative, RMC elements were added as an integrated part of the SBM-R Labor and Delivery quality checklist with MCHIP technical assistance in 2010. The verification checklist includes questions on encouraging the presence of a birth companion and birth in a traditional position (i.e., not dorsal lithotomy), as well as encouraging ambulation and free access to food and fluids during labor. Seven key indicators of quality maternal and newborn service provision have been included in routine reporting and are now part of integrated maternity registers. These include such evidence-based practices as AMTSL and immediate breastfeeding. Two of these key indicators are measures of RMC—presence of a birth companion and birth in a vertical/semi-vertical position. Because of severe space limitations in some maternities, progress has not been as rapid on these RMC indicators as on some of the technical care indicators. However, from a baseline of near zero, the value of both these indicators has slowly risen over the last four years, to the point that both are near 30% currently.[39] It should be emphasized that these indicators are reported in routine registers for all births occurring in a group of facilities that is responsible for attending approximately half of all institutional births nationwide (and the institutional birth rate was 53% in the 2011 Demographic and Health Survey).

Photo by Daniel González, CHS-Ecuador

Traditional birth attendants demonstrate to doctors and nurses the birthing position preferred by Andean communities as part of an exercise to make facility childbirth services more responsive to the preferences of Andean women and their families.

The Center for Health Services (CHS), a Child Survival and Health Grants Program (CSHGP) grantee supported by MCHIP, implemented a project prioritizing RMC provision in Ecuador, showing the potential for expanding client-centered programming. The project focused on aligning formal and informal health systems, and targeted training of health workers to increase their awareness of respectful care as well as compliance to technical QoC standards. Traditional birth attendants, who are often preferred by women because of the culturally sensitive care they provide, worked closely with health facilities to refer women in labor to skilled birth attendants. This increased service utilization has led to improved client outcomes and improved detection and management of obstetric and newborn complications.[40]

Dimensions of Quality Addressed

RMC addresses the WHO's dimensions of quality of *acceptability*, *equity*, and *patient-centered care*. RMC promotes respectful and culturally sensitive care for all women, regardless of their wealth or status and thereby addresses the equity component of QoC. Delivery of patient-centered care is improved by ensuring that local cultural preferences are considered and respected.

Lessons Learned

Defining, measuring, and improving RMC is an approach still early in its development. Measuring RMC has been difficult, especially from a programmatic perspective. Warren et al. describe the limited evidence related to disrespectful care and abuse (D&A). Gaps include "the lack of: operational definitions; validated measurement methods; evidence of successful interventions; and prevalence estimates … There is a lack of systematic evaluation and analysis of the contributors of D&A and specific mechanisms by which different drivers may contribute to the problem including interactions between the different drivers. Another gap is the specific way in which D&A acts as a deterrent to skilled care utilization as well as the contribution of the different categories of D&A in reducing maternal health coverage. There are almost no studies that evaluate impact of interventions designed to reduce D&A or promote respectful care."[41] Another challenge is that disrespectful maternal care can be resistant to change because it is driven by social norms that are held in place by the expectations of people within a particular group.[42] Not only is RMC dependent on underlying health systems issues and the many determinants of QoC, but issues of class, culture, and social norms add to its complexity.

Future Directions

MCHIP has already begun to incorporate RMC as an important component of its programming and will continue to expand these efforts. Future focus in the field should include:

- Continued collaboration with TRAction and others on standards and measurement approaches to track progress on RMC.
- Collaboration with WRA to ensure agreement on the meaning of a rights-based approach to care.
- Continued integration of RMC as an element in quality measurement and improvement tools like SBM-R and QoC assessments.
- Accurate tracking of utilization of health care services as a metric of RMC outcomes.
- Developing evidence on how to effect and sustain provider behavior change, including mechanisms to improve accountability.
- Expanding the RMC focus to include measures to counter the stigma and discrimination faced by HIV-positive women seeking maternal health care. A recent study in Kenya showed that HIV-related stigma often impacts utilization of maternal and child health services.[43]

Community-Inclusive Approaches to QI

BACKGROUND AND IMPLEMENTATION UNDER MCHIP

Community and household perspectives on care can affect utilization of services.[44] Community-inclusive approaches to QI include community accountability and auditing processes. The gaps identified by clients and communities tend to be non-technical in nature and often relate to the convenience and accessibility of services as well as their cultural acceptability. The objective of community- and client-focused approaches is to increase access and utilization of services. Examples of such community-inclusive approaches to QI include MCHIP efforts in Mozambique and MCHIP-supported private voluntary organization/nongovernmental organization (PVO/NGO) projects in Kenya and Nepal.

The African Medical and Research Foundation (AMREF) worked with District Health Management Teams in Kenya to implement the PDQ method (originally developed by Save the Children in the 1990s)[45] to improve QoC, particularly as it applies to the client-provider interaction. The PDQ approach brings together community members (both users and non-users of services) with health workers to define and operationalize the meaning of quality care in a particular context. The open dialogue helps health workers recognize what community members perceive as obstacles to care and encourages community members to demand quality services and take ownership of their own health. Final independent evaluation findings for this project showed that mothers who attended ANC at least four times during pregnancy rose from 32% to 49%; mothers who attended postnatal care within two days of delivery increased from 23% to 58%; and children who were delivered by a skilled health professional rose from 26% to 57%.[46]

Source: AMREF and USAID. 2010. Busia Child Survival Project (BCSP) Final Evaluation Report

Traditional birth attendants in the Kenyan communities where PDQ was utilized.

Recently, the MCHIP Associate Award in Mozambique introduced the PDQ method as a part of the Model Maternities Initiative in selected smaller health facilities. The project trained national and provincial MOH staff on how to use the PDQ tool to engage communities and better link them to health facilities[47] through formation of Community-Facility Co-Management Committees. Improvement plans have been drawn up and implemented in more than 20 facilities. The experience is still too early to be evaluated.

Another example of a QI approach focusing on the client perspective is the COPE[48] method, originally developed by EngenderHealth. COPE is a participatory activity to help facility staff realize the importance of using self-assessment and client exit interview tools. This approach contrasts with PDQ in that it does not include the community perspective directly in defining quality. Instead, client satisfaction is obtained through exit interviews and this feedback is used to improve services.

The Adventist Development and Relief Agency (ADRA), a CSHGP grantee, implemented COPE to improve FP services in Nepal. The COPE approach was used to enable staff to recognize the client's right to high-quality care as well as strengthen their understanding of the need to provide that level of care. Health facilities that participated in the COPE training found the method useful to identify problems and appropriate solutions. The problems identified were often simple and could be improved immediately. As an example, one facility team realized they could improve the quality of FP services and decrease client waiting times without any additional financial resources by simply introducing a "first-come, first-serve" approach using a token system. Client satisfaction increased overall.[49] Due to political instability, this project was not completed and long-term impact could not be determined. However, promising feedback from staff and clients suggest the potential of COPE as a QoC tool.

Dimensions and Elements of Quality Addressed

These community-inclusive approaches focus on the WHO quality dimensions of *accessibility, acceptability, and patient-centeredness* by developing mechanisms to include client perspectives and increase community-driven accountability. To the extent that such approaches incorporate the perspectives of marginalized and underserved groups they also promote *equity*. In particular, the PDQ approach involves the community in defining standards and monitoring whether improvements occurred. The COPE approach emphasizes the community perspective on services and client satisfaction to improve the provider-client interaction and modify services to improve utilization.

Lessons Learned

Tools, such as PDQ and COPE, demonstrate the feasibility and importance of including client and community perspectives on QoC. Understanding the community perspective on use or non-use of services is essential to increase coverage and utilization. Preliminary evidence points to the utility of various approaches in increasing utilization of key MNCH services. The success of these approaches depends on understanding social and cultural nuances of target populations, which in turn is facilitated by community members having a voice at the health facility level. For example, in the ADRA Nepal project, feedback from clients showed that lack of privacy in health facilities was a concern for clients seeking care. This challenge was overcome through the use of curtains as a partition, circumventing the issue of limited space.[50] The incorporation of community perspectives can also strengthen community and health facility linkages by helping to develop shared definitions of quality. As such, they fill an important niche in the portfolio of QoC approaches.

Future Directions

Given the emphasis on equity and inclusion of communities in the post-2015 agenda for Ending Preventable Maternal and Child Deaths, it is important to develop and expand approaches that include the community perspective on quality. Although SBM-R often includes a community component, tools such as PDQ and COPE have a particular emphasis on community definitions of quality and accountability, and provide communities the opportunity to engage with the health system and shape the definition of quality to include matters that are important to them. Evidence from the PVO/NGO experience at the district level shows that such approaches can increase utilization of services. However, future work should explore how to expand these approaches within country health systems and move them toward scale, especially targeting groups that are marginalized or hard to reach.

Conclusions and Priorities for Future Action

As the global community redoubles efforts to end preventable child and maternal deaths by helping countries implement high-impact interventions at scale and with quality, the expansion of effective and sustainable QI approaches becomes even more critical. Some key issues stand out as priorities for action for a future USAID global flagship project. Investments are needed not only to help countries scale up key QI approaches, but also for selected learning to help resolve several critical questions on effectiveness and sustainability:

- How can QI approaches be streamlined, made more feasible to use, and sustained over time?
- How can QI approaches best be integrated with the larger health system, including supervisory systems?
- What is the regulatory role of the MOH in ensuring QoC in both public and private sectors and sustainability of approaches?
- What is the best way to include community and client perspectives on quality (including respectful care) to promote greater service utilization and hold the health system accountable to deliver high-quality care?
- What are the most effective ways to motivate health workers to improve the quality of the services they provide?

INVEST IN DOCUMENTING AND MEASURING PROCESSES AND OUTCOMES OF QI APPROACHES TO LEARN HOW TO MAKE THEM MORE EFFECTIVE

There is a need for more investment in implementation science to refine and understand the effects of the various QI approaches already prioritized (i.e., SBM-R and other facility-based approaches, including supervisory checklists; PDQ and other community-inclusive approaches; and RAPID and other immunization QI approaches). In order to best facilitate learning, certain key implementation process elements need to be documented and analyzed regularly for any QI approach: description of the MOH and/or other personnel engaged to lead the QI process; the types and numbers of health workers trained in the QI approach and who received training; the types of QI activities in facility and district workplans; to what extent plans are followed; how often the PDSA QI cycle was repeated; what specific improvements occurred at the facility and district levels; what resources were provided or mobilized to make the improvements. These could include improvements in infrastructure, supervisory processes, institutionalization and standardization of registers, and use of job aids and reminders. Other promising QI approaches should be brought in. Particularly promising are experiences with brief point-of-service checklists simple enough to be applied in real time, such as WHO's Safe Birth Checklist.

EMPHASIZE COMMUNITY AND CLIENT PERSPECTIVES

Community and civil society engagement in defining and implementing QI approaches is important to ensure sustainable and culturally sensitive interventions. QI processes and tools should allow the full participation of civil society. The use of PDQ or other community-inclusive approaches will be a priority. The project should also look for opportunities to evaluate such approaches.

INTEGRATE RESPECTFUL CARE AND ITS ASSESSMENT INTO ALL QI APPROACHES

The importance of respectful care as an essential element of QoC cannot be over emphasized. Building true symmetric partnerships between clients and providers increases the likelihood of better health care seeking and better outcomes. MCHIP's learning about and experience with respectful care, in conjunction with several other partners, has added critical knowledge to the field and should be incorporated in all QI approaches used. Work needs to continue on feasible and valid measurements, and, even more importantly, on effective methods for improving this aspect of care.

CREATE STRONGER INCENTIVES FOR QUALITY

Health worker behavior and motivation are central issues for QI approaches. Frontline health workers and their managers at the district level need strong incentives for instituting and maintaining a QI system. Strategies that incorporate a behavior change approach for providers should be explored further. Three performance-based incentive approaches appear to hold promise for use in low- and middle-income countries.[51] These include rewards for attaining accreditation standards and rewards for achieving performance on quality components incorporated in correct treatment protocols. Some countries are also exploring the use of quality checklists or scorecards producing a quality index or score, which is then used to either inflate or deflate the performance payment that a health facility should receive based on the quantity of services delivered.

STREAMLINE QI APPROACHES TO MAKE THEM MORE FEASIBLE AND SUSTAINABLE

QI tools should be streamlined to maximize the chance of institutionalization and sustainability within national systems. SBM-R is systematic and focused on the whole system, but the checklists can be quite lengthy when explanations and tables are included. RAPID is an example of a streamlined approach with promising results in one setting that other QI approaches might emulate. Simple and systematic data presentation and visualization are also important to ensure that data are used by those who need it most—health care providers and their managers. Application of only part of a QI tool at any one time; use of mHealth for data collection; and use of tablets to link specific improvement plans to identified weaknesses are all approaches currently being developed and piloted. The QoC assessment L&D observation checklist is currently being refined so that it has only 20 indicators (reduced from more than 100 in its current form), which would transform the QoC tool from its current quality measurement focus to a true QI focus.

TAKE A SYSTEM PERSPECTIVE, SEEKING WAYS TO INTEGRATE QI WITH THE LARGER HEALTH SYSTEM

Many of the challenges in delivering QoC relate to underlying health system issues. An exclusive focus on improvement of quality of service provision will not achieve optimal results if other system issues such as commodity management and shortages of health workers are not addressed. A broader health systems strengthening approach is required. In addition, QI interventions cannot be time-limited and donor driven, but must be institutionalized and sustained within national programs to strongly signal to providers that quality care is not optional. This can be done in multiple ways, some of which have already been piloted, but rarely scaled to national level:

- More frequent and rigorous external verification of results (in SBM-R and other similar approaches)
- Linking facility scores on QI tools to provider pay and/or results-based financing programs
- Incorporating QI approaches into routine supportive supervision systems
- Blending QI tools with national accreditation systems or incorporating QI into the regulatory role of the MOH and rest of the government
- Encouraging the formation of QI committees in facilities

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