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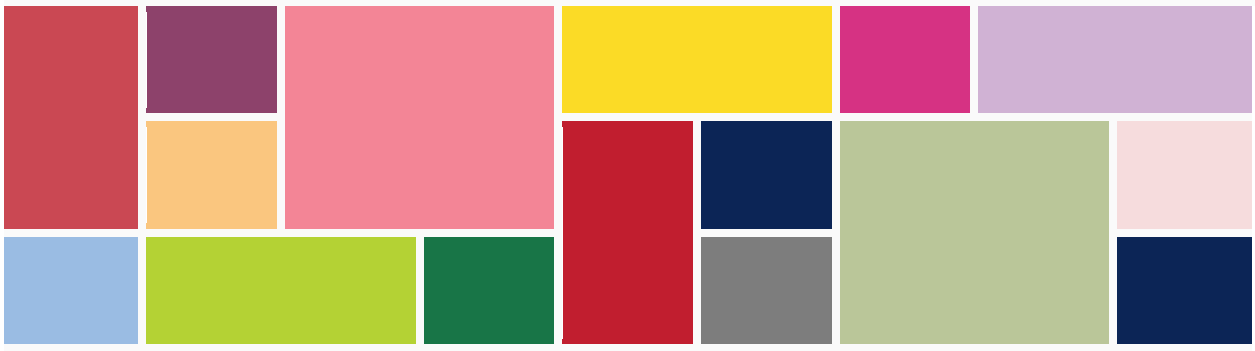
Standards-Based Management and Recognition for Child Health:

A Synthesis of Initial Experiences in Guinea and Zimbabwe

Authors:
Dyness Kasungami
Serge Raharison
Michel Pacque
Savitha Subramanian



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Abbreviations

ANC	Antenatal Care
COPE	Client-Oriented, Provider-Efficient Services
DHE	District Health Executive
EmONC	Emergency Obstetric and Newborn Care
FP	Family Planning
IMCI	Integrated Management of Childhood Illness
IMNCI	Integrated Management of Neonatal and Childhood Illness
IP	Infection Prevention
MCHIP	Maternal and Child Health Integrated Program
MCSP	Maternal and Child Survival Program
MNCH	Maternal, Newborn, and Child Heath
MNH	Maternal and Newborn Health
MOH	Ministry of Health
ORS	Oral Rehydration Salts
PBF	Performance-Based Financing
PDQ	Partnership Defined Quality
PI	Performance Improvement
QI	Quality Improvement
RED	Reaching Every District
SBM-R	Standards-Based Management and Recognition
UNICEF	United Nations Children's Fund
USAID	United Nations Agency for International Development
WHO	World Health Organization

Executive Summary

Improving the quality of care for child health services is an important step toward increasing the impact of available services and reducing preventable post-neonatal and child deaths, given the challenge of limited resources. Due to weak health systems, health care workers are not always able to follow technical guidance for high-impact interventions because of a to lack of skills caused by inadequate supervision, training or job aids, and support—such as availability of drugs and diagnostic tools. The lack of health systems support and the resulting poor work environment also leads to poor attitude and behavior among health care workers. Despite these challenges, quality or performance improvement approaches can change the attitude of providers and increase client utilization of services and therefore increase the impact of available health services.

The purpose of this review is to find out how the Standards-Based Management and Recognition (SBM-R®) approach has been applied in two countries, Zimbabwe and Guinea, to improve the quality of care for child health. The Maternal and Child Survival Program (MCSP) Child Health Team will learn about the process, challenges, and lessons learned in applying SBM-R to child health. Since the SBM-R approach is one of many quality improvement approaches, the findings will: (1) inform a process of developing an approach to improving child health services that is responsive to the unique needs of this technical area, which can be adapted and implemented in MCSP-supported countries; and (2) inform the application of SBM-R to child health, including adaptation in countries where it is the preferred approach in other health service areas.

The United States Agency for International Development (USAID) has supported quality improvement projects addressing the maternal, newborn, and child health (MNCH) technical areas for more than a decade. Most approaches have worked well in a project context, but were not scalable or sustainable beyond the project's time and place. This is due to quality improvement/performance improvement (QI/PI) strategies requiring resources significantly beyond what was available, in addition to a substantial change in service delivery mechanisms that had proven unable to overcome contextual limitations. To understand the different approaches to improving the quality of MNCH services among USAID-funded projects, USAID commissioned a systematic review in 2010. This review found that despite the use of different terminology, ultimately most models used a cyclical process involving measuring a performance gap, understanding the causes of the gap, followed by testing, planning, and implementing interventions to close the gap.

Over the five years of implementation, the Maternal and Child Health Integrated Program (MCHIP) prioritized quality improvement along with a scale-up of high-impact MNCH interventions. The most common QI/PI approach used was SBM-R. The core process of SBM-R consists of setting performance standards, implementing those standards, measuring progress, and rewarding achievements. Implementation of SBM-R is built around three training modules,[1] and, like other QI/PI approaches, uses the cyclical process with a distinct step of "recognition" of individuals or facilities for improved performance upon correct completion of the process.

SBM-R has been implemented in 16 MCHIP-supported countries in the following technical areas: maternal health, newborn health, infection prevention (IP), HIV, and malaria, for which the approach has been tested and replicated. Two countries, Guinea and Zimbabwe, piloted the use of the SBM-R approach to improving the quality of case management for childhood illness. The purpose of this review is to report on the initial experience, the results, and lessons learned in applying the SBM-R approach for childhood illness under MCHIP.

[1] Standards- Based Management and Recognition—A Field Guide. Necochea and Bossemeyer, 2005. http://www.jhpiego.org/files/SBMR%20FieldGuide.pdf

Guinea

In Guinea, MCHIP tested the use of SBM-R for six months in three urban health centers—Dabola, Mandiana, and Diakolidou—to improve health worker adherence to the Integrated Management of Newborn and Child Illnesses (IMNCI) algorithm.

The SBM-R intervention involved:

1. Developing performance standards by a small team composed of IMNCI and SBM-R specialists. These standards were endorsed by the national committee of validation of SBM-R, which included pediatricians and nongovernmental organization stakeholders working in the field of child health.
2. Training a team, each comprised of a district supervisor, the primary provider of case management of childhood illness, and their substitute,[2] in the application of the performance standards that are based on the IMNCI algorithm as developed by the national IMNCI and SBM-R trainers. The training ran for three days.
3. Identifying performance gaps against the performance standards and developing a plan of action to address the gaps.
4. Supervising and coaching two health care workers on the use of IMNCI standards by the district supervisor.
5. Evaluating the performance of the two health care workers against their baseline assessment (the IMNCI standards) at the end of the three-day training (post-training performance) and the first periodic assessment four weeks after training.

Performance was assessed using direct case management observation and simulation in the absence of actual sick children. The supervisors were able to provide weekly onsite coaching and mentoring over a four-week period since each of the health facilities was located in the same town as the district management team.

Zimbabwe[3]

In Zimbabwe, MCHIP tested the use of SBM-R over three years in 21 health facilities—the 17 health facilities already implementing SBM-R for maternal and newborn health and four additional facilities.

The SBM-R process involved:

1. Developing clinical performance standards based on the IMNCI guidelines for sick, young infants (0-2 months) and children 2–59 months. Project staff and national IMNCI trainers from the Ministry of Health and Child Welfare set the standards.
2. Training staff who provided case management services to sick children in the 21 health facilities on SBM-R and orientation for district supervisors on the performance standards. Staff from the 17 health facilities implementing SBM-R for MNCH and the supervisors were trained in the full process of implementing SBM-R for IMNCI. Those from the additional four facilities were oriented to developing standards, conducting self-assessment against agreed standards of performance and root-cause analysis of identified problems, and developing a local action plan.
3. Implementing the action plans (by health facility staff) and supportive supervision by the district health executive teams.

[2] The substitute is often a person trained on the job to provide services in the absence of the primary provider.
[3] Detailed report in Annex 2

4. Conducting period assessments. Two external, period assessments were done in 2012 and 2013 in addition to the baseline assessment that was done in 2011. Performance was assessed through direct case management observation by IMNCI trainers.

To develop this synthesis of initial experiences in applying SBM-R to child health, each country's SBM-R case study was reviewed and findings were summarized across key thematic areas: how SBM-R was implemented, approach to capacity building, leadership ability, monitoring, reporting and recognizing performance, and estimating the cost of the approach for child health. These thematic areas reflect components that are key to replication, scalability, and sustainability of the approach. Based on the synthesis of findings, the following key messages and refinement/adaptions to SBM-R for child health are recommended.

Key Messages

1. The implementation of the SBM-R approach in Guinea and Zimbabwe, as documented, lacks fidelity to the steps of SBM-R implementation as described in the Jhpiego SBM-R manual.[4]
2. The findings from this review are inconclusive as to whether SBM-R is an appropriate quality improvement approach for child health, though it is clear that the approach needs modifications to suit the needs of case management of childhood illness.
3. The SBM-R approach in Guinea and Zimbabwe improved clinical skills of health workers and adherence to applying performance standards.
4. These case studies do not provide information on what motivated the staff to apply the performance standards. Understanding the motivating factors will help in scaling up SBM-R and potentially other QI/PI approaches.
5. Implementation of SBM-R for child health did not include outcome measures, which is a major limitation on comments about the success and impact of the approach on child health indicators.
6. Both case studies are based on health facilities with more than one staff member. Adaptations also need to include applications of the approach to low volume/single staff health facilities.
7. The process and findings of this synthesis present the challenge of negotiating leadership for cross-cutting technical approaches among multiple project partners working in the same country. MCSP partners need to examine how cross-cutting technical approaches, like quality of care, are implemented across the program in supported countries. Specifically, issues of leadership and capacity to address needs of partner organizations and different technical areas should be discussed and future strategies agreed upon.

Recommendations for QI/PI Approaches

- Quality improvement practitioners should recognize that there is no single approach that works for all country contexts.
- Any QI/PI approach should build on existing approaches to increase the likelihood of acceptance by health workers and to leverage resources.
- Implementing partners must recognize differences in how services are delivered for different technical areas and adapt each approach to ensure that only necessary changes are proposed to the flow of services.
- Any QI/PI approach should focus on influencing health outcomes at minimum additional cost.

[4] Necochea E, Bossemeyer D. Standards-Based Management and Recognition—A Field Guide. Baltimore, MD: Jhpiego: 2005.

Recommendations for Implementation of SBM-R for Child Health Services

- Monitoring and reporting results from self and peer assessments in routine health management information systems
- Focusing on high-impact activities, using a manageable number of performance standards, and applying weighting of verification criteria to recognize gradual improvements
- Defining and measuring improvements that focus on both processes and health outcomes
- Creating standards that reflect client perspectives on quality
- Using participatory design, structured implementation, and process documentation to learn and decide what approaches work in what context and why
- Collecting data on both the cost of implementation and possible cost savings resulting from increased adherence to performance standards in pilot projects and studies

Recommendations for MCSP

- MCSP should define roles and responsibilities for technical areas versus leadership for cross-cutting areas (such as quality, which addresses different technical areas, e.g., maternal and newborn health). This will clarify accountability for quality of work and products of the technical advisers working for different organizations.
- MSCP should ensure that country teams develop a single plan for implementing activities for cross-cutting areas that clarifies responsibilities and provides both technical and financial capacity for implementation.

Introduction and Background

From 2008 to 2014, the United States Agency for International Development's (USAID) Maternal and Child Health Integrated Program (MCHIP) supported countries to introduce and scale up evidence-based, high-impact maternal, newborn, and child health (MNCH) interventions and thereby to contribute to a reduction in maternal and child mortality in USAID-supported countries. In order to reduce mortality, programs must focus on **both coverage and quality** of high-impact interventions. Better quality of services has impact on both the immediate outcome and subsequent care-seeking behavior of clients. In this sense, quality should address both the technical content, as well as the overall experience of the client throughout the process of receiving service.

High-impact interventions for leading causes of post-neonatal and child mortality are well-defined, but coverage has not increased at the expected rate. In too many countries, coverage has even stagnated (e.g., use of oral rehydration salts (ORS) for the management of diarrheal diseases). Challenges to increasing coverage and quality of services in these countries are due to weak health systems, limited additional resources, and a dearth of local champions. In addition, caregivers who have the choice to seek care from unregulated private sector providers are often reluctant to seek care in the public health sector due to perceived poor quality of services offered.

Health care workers are not always able to follow technical guidance for high-impact interventions due to lack of skills, which is caused by a lack of supervision, training or job aids, and support such as availability of drugs and diagnostic tools. The lack of health systems support and the resulting poor work environment also leads to poor attitude and behavior among health care workers.

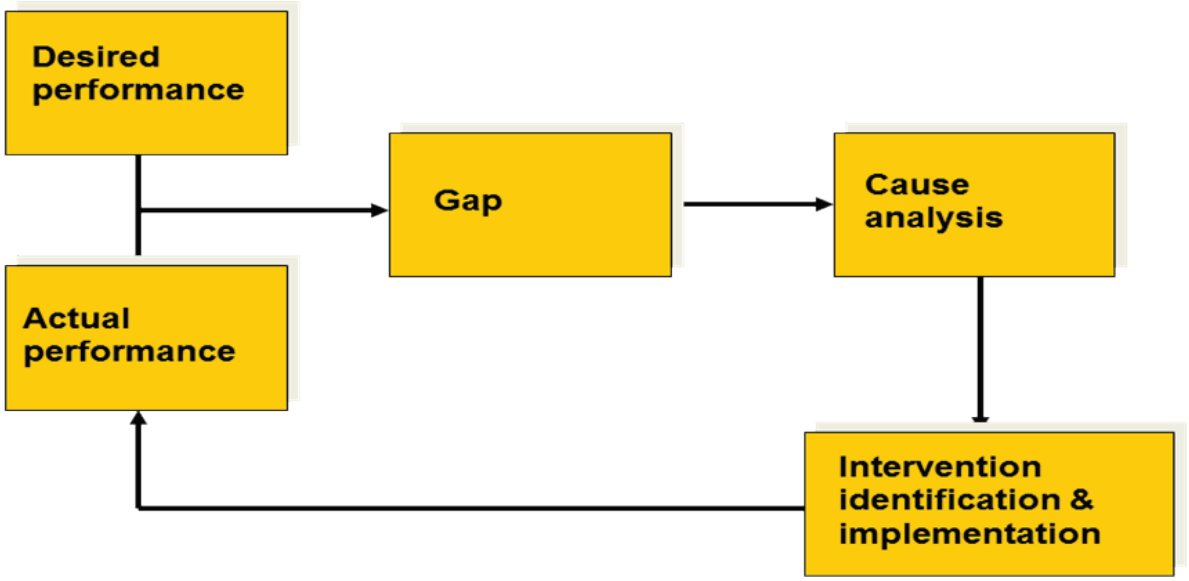
Improving quality of care for child health services is thus an important step for increasing the use of services and the impact of available services and limited resources, and for reducing preventable post-neonatal and child deaths. USAID has supported quality improvement projects addressing MNCH technical areas for more than a decade. Most approaches have worked well in a project context, but have not been scalable and sustainable beyond the project area and period. This is a result of approaches to quality improvement/performance improvement (QI/PI) strategies that required resources significantly beyond what was available and approaches that required a substantial change in service delivery mechanisms and therefore were unable to overcome contextual limitations.

To understand the different approaches to improving quality of MNCH services among USAID-funded projects, USAID commissioned a systematic review in 2010. This review found that despite the use of different terminology, ultimately most models used a cyclical process involving:

- Measuring a performance gap;
- Understanding the causes of the gap;
- Testing, planning, and implementing interventions to close the gap; and
- Studying the effects of the interventions; and
- Planning additional corrective actions in response.[5]

[5] "Finding Common Ground: Harmonizing the application of different QI models in Maternal, Newborn, and Child Health Programs" by Tawfik et al., 2011, available at http://www.hciproject.org/node/2048

Figure 1. Framework for continuous performance improvement, adapted from the International Society for Performance Improvement



Common approaches used for child health services include COPE® (Client-Oriented, Provider-Efficient Services), Improvement Collaborative, Partnership Defined Quality (PDQ), and Reaching Every District (RED). Ultimately, performance improvement is about closing the gap between current and desired performance (based on agreed-upon standards). This process has to be designed to respond to the local health system context and challenges. Leadership and champions for QI/PI are important ingredients among providers who have come to accept poor quality services as a standard and who see QI/PI initiatives as "additional" work in a system that neither recognizes nor rewards performance improvement. The purpose of this review is to find out how the SBM-R approach has been applied in two countries, Zimbabwe and Guinea, to improve the quality of child health care. Since the SBM-R approach is one of many others, the findings will inform a process of developing an approach to improving child health services that is responsive to the unique needs of the technical area and that can be adapted and implemented in Maternal and Child Survival Program (MCSP)-supported countries.

Quality Improvement and Performance Improvement under MCHIP

Over the five years of implementation, MCHIP prioritized quality improvement along with supporting scale up of high-impact MNCH interventions. The most common QI/PI approach used was the Standards-Based Management and Recognition (SBM-R®) approach. The core process of SBM-R consists of setting performance standards, implementing those standards, measuring progress, and rewarding achievements. Implementation of SBM-R is built around three training modules[6] and, like other QI/PI approaches, uses the cyclical process with a distinct step of "recognition" of individuals or facilities for improved performance at the end of the process. This step is unique to SBM-R and, when done consistently, motivates health workers to continue the quality improvement cycle.

MCHIP has primarily supported the introduction of SBM-R, mobilization of human and financial resources and an initial roll-out. SBM-R has been implemented in 16 MCHIP-supported countries in the following

[6] Standards- Based Management and Recognition—A Field Guide. Necochea and Bossemeyer, 2005. Available at http://www.jhpiego.org/files/SBMR%20FieldGuide.pdf

technical areas: maternal, newborn, infection prevention, HIV, and malaria, for which the approach has been tested and replicated. Use in child health is still in pilot phase.

MCHIP'S Experience with SBM-R and Quality Improvement and Performance Improvement for Child Health Services

Under MCHIP, Guinea and Zimbabwe expressed interest at the November 2011 MCHIP Program Learning Meeting held in Washington, D.C., and piloted the use of the SBM-R approach to improve quality of case management for childhood illness. For the purposes of this document, applying SBM-R to improve the quality of case management for childhood illness is synonymous with applying the approach to child health. The detailed country reports for Guinea and Zimbabwe are included as Annexes I and II, respectively.

Guinea[7]

Guinea started implementing SBM-R in 2009 with MCHIP[8] support to strengthen the quality of emergency obstetric and newborn care (EmONC), family planning (FP), and infection prevention. By the first quarter of 2014, the total number of health facilities implementing SBM-R reached 60.

In October 2013, MCHIP tested the use of SBM-R in three urban health centers—Dabola, Mandiana, and Diakolidou—to improve health worker adherence to the Integrated Management of Neonatal and Child Illnesses (IMNCI) algorithm. These three urban sites, in three districts, completed three modules of the SBM-R process and had at least two visits for follow-up on EMONC, FP, and infection prevention. One of the facilities, Diakolidou, obtained the official recognition of attainment of standards from health authorities.

By the start of the SBM-R intervention, the primary provider of case management services in each health facility had received formal training in IMNCI. Testing the SBM-R approach for child health was implemented over a six-month period and involved developing the national SBM-R performance standards based on IMNCI, and training of three district supervisors and five health workers in pairs (except for one facility where only one provider was trained).

The SBM-R intervention involved:

1. Developing the performance standards by a small team composed of national IMNCI and SBM-R specialists. These standards were validated by a group of national experts composed of members of the national committee of validation of SBM-R within MCHIP, the quality improvement team comprising of pediatricians, and NGO stakeholders working in the field of child health.
2. Training a team, each comprising of a district supervisor, the primary provider of case management of childhood illness, and their substitute,[9] in the application of the performance standards that are based on the IMNCI algorithm as developed by the national IMNCI and SBM-R trainers. The training was completed in three days.
3. Identifying performance gaps and developing a plan of action to address the gaps.
4. Supervising and coaching the two health care workers on the use of IMNCI standards by the district supervisor.

[7] Detailed report in Annex 1.
[8] MCHIP Standards Based Management and Recognition (SBM-R) Documentation Paper: Linking Quality Improvement Scores to Service Outputs and Outcomes, 2013 (Program report)
[9] The substitute is often a person trained on the job to provide services in the absence of the primary provider.

5. Evaluating the performance of the two providers against the set IMNCI standards before training (the baseline assessment), at the end of the three-day training (post-training performance), and the first periodic assessment four weeks after training.

Performance was assessed using direct case management observation and simulation in the absence of sick children. The supervisors were able to provide onsite coaching and mentoring over a four-week period since each of the health facilities was located in the same town as the district management team. Therefore, doing supervision did not involve extensive logistics and planning.

Zimbabwe[10]

Zimbabwe started implementing SBM-R for maternal and newborn health (MNH) and infection prevention in 2010 in 17 health facilities in Mutare and Chimanimani in Manicaland province. One official recognition ceremony was held in December 2013. Use of the SBM-R approach for child health built upon this experience.

Applying the SBM-R approach to improving the quality of child health services started with a baseline assessment in 2011 in 21 health facilities—the 17 health facilities already implementing SBM-R for MNH and four additional facilities.

The SBM-R process involved:

1. Developing clinical performance standards based on the IMNCI guidelines for sick young infants (0–2 months) and children ages 2 to 59 months. Setting standards was done through a consultative process that included national IMNCI trainers from the Ministry of Health and Child Welfare and support by MCHIP staff.
2. Training staff who provided case management services to sick children in the 21 health facilities on SBM-R and orientating district supervisors to the performance standards. Staff from the 17 health facilities implementing SBM-R for MNH and the supervisors were trained in the full process of implementing SBM-R, while those from the additional four facilities were only oriented to developing standards, conducting self-assessment against agreed standards of performance and root cause analysis of identified problems, and developing a local action plan.
3. Implementing the action plans (by health facility staff) and providing supportive supervision by the district health executive teams.
4. Conducting period assessments. Two external period assessments were conducted in 2012 and 2013, in addition to the baseline assessment that was done in 2011. Performance was assessed through direct case management observation by IMNCI trainers.

Findings and Limitations

As both projects were designed and implemented independently by different teams, comparing the findings of implementation of the SBM-R approach to improve child health in Guinea and Zimbabwe has limits. The Zimbabwe report is a case study, based on review of relevant MCHIP Zimbabwe project reports and there was no implementation protocol for SBM-R for child health and only limited systematic documentation of the process. The Guinea experience is based on a small-scale prospective study implemented by the MCHIP team. Moreover, in the case of Guinea, the number of health facilities is very small and the period of

[10] Detailed report in Annex 2

implementation too short to provide insight into the process and results over a longer period. During this review, we did not come across detailed documentation of the experience of the 17 versus the four health facilities in Zimbabwe. This was a missed opportunity to learn from applying SBM-R in different health facility contexts. Furthermore, both countries have not systematically followed all the SBM-R guidelines and steps during implementation to allow for attribution of improvements in quality to the approach. However, in Guinea, there is information on the cost of implementing the approach and implementation of SBM-R in Zimbabwe provides some insight into how the approach could be implemented on a larger scale. And, to the extent that both countries sought to apply SBM-R to child health, building on existing SBM-R for MNH, family planning, and infection prevention, some methods were similar and conclusions can be drawn.

Synthesis of Key Findings from Guinea and Zimbabwe

The results in this synthesis are grouped into three areas: (1) the implementation process, (2) building capacity to implement and leadership to drive scale-up, and (3) monitoring, reporting, and recognizing good performance for sustainability. The key findings are summarized in Table 1.

Table 1. Synthesis of Key Findings from the Two Country Case Studies of the SBM-R Approach and Child Health

Key elements of the adaptation of SBM-R approach to improve the quality of case management for childhood illness	
Guinea	**Zimbabwe**
Implementation Process	
1. SBM-R for maternal and newborn health and infection prevention	
Start date: 2009 SBM-R implemented in 60 health facilities Technical areas: (1) emergency obstetric and newborn care, (2) family planning, and (3) infection prevention Established SBM-R national committee to develop strategies, lead tool development across all technical areas, monitor the implementation, and assess and validate the performance.	Start date: 2010 SBM-R implemented in 21 health facilities in two learning districts Technical areas: (1) antenatal care, (2) labor and delivery, (2) postpartum care, (3) family planning, (4) prevention of mother-to-child transmission of HIV, (5) infection prevention, (6) malaria prevention and treatment, and (7) infrastructure and support systems. Established national steering committee and program supported development of a national strategy on quality (may not have been finalized under MCHIP).
2. SBM-R for case management of childhood illness	
SBM-R for child health adapted four years after SBM-R was introduced for MNH and implemented in three urban health facilities that were already implementing SBM-R for MNH and FP. Limited scale (three health facilities) and duration of implementation (six month for child health), but overall, the approach was more established. Guinea has the opportunity to reflect on implementation challenges from MNH and FP and adapting solutions for child health.	SBM-R for child health adapted one year after SBM-R was introduced for MNH and implemented in 21 health facilities—17 of them already implementing SBM-R for MNH and FP. Three years of implementation of the full cycle of SBM-R (2011 to 2013). There is limited process documentation of each step of SBM-R implemented in the sites. There is no documentation of facility-based/provider-led aspects of SBM-R. Largely focused on project-led interventions of training and periodic assessments.
3. Implementation strength	
Limited number of facilities (three) in three districts for "learning." Systematically documented and included coaching by the district supervisors. This implementation forms a basis for developing a scale-up plan.	Achieved 29% coverage of eligible health facilities in two districts in three years. Baseline and two external periodic assessments have been conducted one year apart and project-funded. While providing trends in changes in health facility adherence to performance standards, there is no documentation of the quality improvement activities undertaken by the health facility and District Health Executive (to inform a "facility-led quality improvement process"). There is reference to self and peer assessments in the project reports, but not on how those "internal" findings compare to the periodic external assessments.

Key elements of the adaptation of SBM-R approach to improve the quality of case management for childhood illness	
Guinea	**Zimbabwe**
Capacity building and leadership development	
1. Health worker training	
SBM-R as an approach is well-established and expanding for MNH, but there are a limited number of staff to spearhead SBM-R for child health. In each facility, there is one primary provider trained on IMNCI and one or two substitute providers trained through peer-coaching using the SBM-R standards.	SBM-R as an approach was well established for MNH over a relatively short period of time. Some health workers providing case management for childhood illness were not included in full SBM-R training. This can limit their appreciation of the approach and their ability to influence other providers as champions.
2. Leadership	
Ministry of Health (MOH) was late to recognize that IMCI training only is not enough to improve quality of services for child health. Therefore, it took four years before SBM-R could be adapted for child health as the first deliberate attempt to address quality of care for child health. To date, it is technically led by the SBM-R National Committee but relies heavily on external resources (MCHIP staff and funding). UNICEF and WHO are supporting child health programs but most investments go to IMCI trainings.	Approach has support from the Ministry of Health. SBM-R for child health may have lagged behind on account of technical capacity—both MCHIP project and MOH—and leadership challenges specific to the child health unit. MCHIP project made quality of care a priority, but also seemed to have found an unmet need for focus on quality overall. The project created champions for SBM-R at some of the implementing health facilities particularly for MNH. The MOH is developing a national strategic plan to focus on quality across all technical areas and has adopted SBM-R as the approach.
Monitoring, reporting, and recognizing performance	
1. SBM-R performance standards for child health services	
Training focused on provider clinical skills based on IMNCI standards. Total 134 *performance standards.* "Support systems" has a specific set of six standards covering overall service organization items, namely, (1) patient flow, (2) equipment, (3) drugs, (4) supplies, (5) data quality and use, and (6) implication in community health activities.	Training focused on provider clinical skills based on IMNCI standards; total of 38 standards (11 for young infants under two months and 28 for 2–59 months). The performance standards and, therefore, results do not include health system support[11] (e.g., drugs, supplies) and are not recorded/reported as part of SBM-R assessments.
2. Impact of SBM-R on adherence to performance standards—case management skills	
The primary output measure is "individual provider's adherence to the IMNCI algorithm.'" Immediate results indicate a remarkable improvement in adherence to performance standards for both staff formally trained in IMNCI (primary provider) and those coached on the job (substitutes). The promising results may, however, be attributed to the intensity of support—weekly support—and the knowledge of being part of a pilot program.	The primary output measure is "number of health facilities meeting at least 60% of the performance standards." Over the two periodic assessments, the project recorded 79% of HF (target was 60%) meeting at least 80% of performance standards. Trends in adherence to performance standards are impressive.

[11] Although the first periodic assessment included availability of drugs, the findings are not included in the database for SBM-R and no standards were found on health systems support.

Key elements of the adaptation of SBM-R approach to improve the quality of case management for childhood illness	
Guinea	**Zimbabwe**
3. Impact of SBM-R on child health outcomes	
No list of indicators was developed to measure outcomes as a result of SBM-R implementation. Limited duration of implementation.	No indicators were developed to measure outcomes despite three years of implementing SBM-R for child health.
4. Recognition of performance	
Short period of implementation does not include the "recognition" phase for improved performance. However, since recognition is part of the SBM-R cycle, the team could integrate and hold one recognition event for improving quality of MNCH services in the three pilot health facilities, and eventually beyond, depending on availability of resources. While the first wave of recognition included all three MNH technical areas (EmONC, FP, and IP), the SBM-R National Committee has not reached consensus on how the addition of IMNCI will be officially recognized.	Over the three years of SBM-R implementation, one recognition event has been held. Since recognition is for the health facility, it is assumed that recognition for improved quality of case management for childhood illness was part of the overall recognition event. Given the difference in trajectory of implementation of SBM-R for MNH and CH, and the possibility of improvements not being consistent across all the technical areas, further look into how recognition is given is warranted to ensure that all health workers are "recognized" for the effort.
Cost of intervention	
The initial cost of laying the foundation of SBM-R and of implementing the package of MNH standards ran about $4,200 per health facility. Adding child health performance standards to this existing SBM-R platform cost on average $2,400 per health facility. The cost per facility includes: (1) the training of one primary provider in IMCI for six days, (2) the on-site training of two providers and one local supervisor on the use of SBM-R standards for three days, and (3) the weekly supervision and on-site mentoring/coaching by supervisors.	No cost information has been captured or referenced in any of the documents reviewed.

Discussion: Lessons Learned in Applying SBM-R to Child Health and the Way Forward

This synthesis discusses lessons learned grouped into four areas: the implementation process; capacity building for implementation and leadership to drive scale-up; monitoring, reporting, and recognizing good performance for sustainability; and a brief note is made on cost and cost analysis.

The synthesis overall provides insight into how SBM-R has been applied to child health as a technical area in Guinea and Zimbabwe. The results indicate a marked improvement in health providers' (Guinea) and health facilities' (Zimbabwe) adherence to established performance standards. The major difficulty in conducting this synthesis comes from the limited scale and duration of implementation in Guinea and the limited process documentation in Zimbabwe, despite a bigger scale and longer duration of implementation. Furthermore, both countries did not systematically follow all the SBM-R guidelines and steps during implementation to allow for the attribution of the quality improvements to the approach. Lastly, even in Zimbabwe, with its longer implementation timeframe, the projects did not set or collect outcome indicators for child health as an end for quality improvement.

Implementation Process

Both countries introduced SBM-R to child health by building on the positive experience of applying the approach to MNH, FP, and infection prevention. In both countries, priority was given to using SBM-R in health facilities already implementing the approach for MNH/FP. The decision to use SBM-R was primarily driven by the need to avoid using different approaches to quality improvement in the same facilities. While adopting the SBM-R approach is reasonable in this context where it was already in use, the design and implementation also needed to account for differences in the technical areas and how services, (e.g., labor and delivery versus case management for a sick child) are provided.

In both countries, the development of the standards, training and supervision, and all other related activities mobilized a large number of staff, both from their respective MOH and their technical assistance project. In Guinea, the case study reported that the district supervisors neglected the non-SBM-R health facilities because the follow-up of the pilot sites was time-consuming. While plausible in the early implementation phase, there is no analysis to suggest that the process that requires this level of effort can be scaled up and sustained by the MOH in the absence of support from a project or the likely scenario of another project focusing on a different issue. In Zimbabwe, the limited documentation also missed the opportunity to compare implementation in the 17 health facilities implementing SBM-R for MNH/FP and child health versus the four implementing SBM-R for child health only. Similarly, in Guinea, there was no documentation of how challenges faced during the application of SBM-R to MNH/FP and solutions applied were used in adapting SBM-R to child health. These are some areas that could be improved upon during the next phase of applying SBM-R to child health services.

Despite the existence of a clear SBM-R implementation framework and training modules, application of SBM-R to child health lacked a clearly developed implementation plan, timeframes, resources, and expected outcomes in

both countries. Thus, the implementation lacked the rigor reported in the application of SBM-R to MNH/FP that has distinguished Jhpiego as a technical leader in MNH/FP and the use of the SBM-R approach.

The quality improvement approach for child health in Zimbabwe focused on assisting health workers to adhere to the IMNCI protocol in managing sick infants and children.

Prior to the MCHIP intervention, health workers—whether trained in IMNCI or not—rarely managed sick children according to IMNCI protocols.

[MCHIP Zimbabwe end of project report, June 2014]

The number of performance standards and the expectation that all would be applied during each single case management encounter was reported to be burdensome. Among the disadvantages of SBM-R mentioned by providers of child health services in both countries was the high number of performance standards and verification criteria that had to be satisfied, and the "all-or-none"[12] rather than a "weighting" approach to the verification criteria in grading the adherence to standards.

In the case of Zimbabwe, implementation of one cycle of SBM-R (completing the three training modules) seems protracted over a three-year period compared to a recommended cycle of 7–12 months.[13] While reflecting real life situations of competition for resources and time, the implementation lacked fidelity and limits attribution of results.

Application of SBM-R to child health did not include standards for health system support relevant to child health and, if in fact implemented, progress was not measured and reported as part of the "performance standards" along with provider skills. This seems to suggest, wrongly, that improving quality of care is only about changing health worker attitude and behavior. It also fails to acknowledge that availability of equipment and supplies, job aids, supervision, etc., which create the right work environment and support practice of appropriate clinical skills.

Building Capacity for Implementation and Leadership

Technical Capacity to Implement SBM-R

Applying SBM-R to child health services was negotiated and applied as a learning exercise in ongoing programs, in the case of Guinea, nearly four years after the first introduction of SBM-R. Despite quality of care being a cross-cutting theme under MCHIP, field implementation was split along technical area and lead partner. This split extended to engagement with MOH counterparts where MNH/FP (often the reproductive health unit) and the child health units functioned separately. In both countries, there was no clear process of internal (project) technical capacity building to ensure leadership and capacity to implement SBM-R as the quality improvement approach across the MNCH technical areas, including child health. As a result, child health technical staff are less familiar with and unable to lead implementation of SBM-R for child health.

Health Worker Training

In both countries, most health workers in the target sites were already familiar with the concept of quality improvement and also with the SBM-R approach due to its early application to MNH interventions. In some health facilities, the same health workers involved in MNH/FP and infection prevention activities provided child health services. In this respect, in Guinea, three days of orientation to SBM-R and the IMNCI-based

[12] To qualify for "adherence to a standard," the provider has to meet all the verification criteria. Missing one step is equal to failing the standard regardless of the impact of the step on the overall care or health outcome.
[13] Taking stock of MCHIP efforts around quality improvement and quality assessment, April 2011.

performance standards were adequate for staff to learn and implement SBM-R for child health. Similarly, in Zimbabwe, health workers already trained in SBM-R for MNH/FP and later oriented to SBM-R for child health found it easier to assimilate and apply the principles to child health services than those without prior exposure to SBM-R for MNH/FP.

Applying SBM-R to child health in facilities already using the approach can thus potentially reduce the duration and, therefore, the cost of training. However, staff receiving orientation to SBM-R need ongoing support to develop and maintain skills to do problem analysis to identify root causes unique to each technical area. The plan to implement SBM-R should also include establishing markers of implementation strength (for both quality and quantity) of SBM-R to ensure change in overall quality and health outcomes. For example, many facilities experience staff movement or absence, and consistent quality will only be achieved if a critical mass of providers is able to implement the agreed upon performance standards. While leadership by champions is important, implementation of SBM-R should be a facility-wide endeavor, with active involvement of all staff members.

While short-duration orientation to SBM-R for child health is appropriate where health workers are already implementing SBM-R for MNH/FP, more onsite support to develop skills in self-assessment, problem analysis, and planning interventions is required.

Both countries need to find or support champions for improving quality of care for child health services in the MOHs. In the case of Guinea, expansion of SBM-R should be driven by an understanding of what other quality improvement approaches may be used in non MCHIP/MCSP-supported districts and should ensure that there is harmonization and focus on outcomes. In Zimbabwe, the government has established a quality improvement unit and will be developing a national quality improvement plan. To develop capacity for implementation and scale-up of SBM-R, efforts should focus on establishing functional, facility-wide quality improvement teams to ensure that no technical area lags behind. Lastly, both countries need continuous learning to ensure that SBM-R is adapted and adjusted to link to health outcomes for children.

Monitoring and Recognizing Performance

Monitoring Performance

Both countries reported, based on an external assessment, improved adherence to the agreed performance standards over the period of implementation. This suggests that when awareness is created, performance standards are shared and a monitoring system is introduced, providers will make a conscious effort to adhere to the standards. Monitoring performance is part of the quality improvement process. In Zimbabwe, with a longer duration of implementation, two external periodic assessments were conducted, in addition to the baseline assessment. These were led by the project and were resource intensive, hence the one-year interval between these exercises. In keeping with the SBM-R approach, performance trends should be tracked based both on self and external assessments. MCHIP Zimbabwe has created a database to track progress in performance improvement. However, the database only captures data from external assessments. The self-assessments should complement the more intensive and more spaced external assessments. Monitoring should also include tracking the implementation of solutions to identified problems. In the first six months of implementation, Guinea was able to maintain the pre-established calendar for the pilot in

The lack of reference to findings of self-assessments in the Zimbabwe case study was observed. The self-assessments (and/or peer assessments) are a core principle of the SBM-R approach and should therefore be monitored as part of implementation.

the three health facilities. The Zimbabwe experience suggests that maintaining such a resource-intensive process is a challenge at the larger scale.

By design, both countries have prioritized clinical aspects of care and did not report changes in health systems support (e.g., availability of drugs and supplies necessary for quality care). Guinea has a set of six standards pertaining to health system support. These standards were clearly more difficult to achieve compared to the clinical skills over the short period of implementation. Both countries also did not have data on health outcomes associated with the SBM-R intervention. Some outcomes suggested for future monitoring include the number of children that received the correct prescription for pneumonia, fever, and diarrhea; the number of children that received the correct prescription and left the facility with the medication (health system); and under-five facility-based all-cause mortality.

Recognizing Performance

Both countries report recognition events being held to recognize facilities for improvements in MNH/FP. Since this event often involves senior leadership from the MOH, it is likely that recognition events will be sparse and difficult to sustain with scale-up. As part of SBM-R implementation, district managers could create local recognition events with prizes. It is not clear, however, how facilities and or individual health workers should be recognized for improvements in quality of care if performance in one area does not meet the "recognition" mark.

To promote a paradigm shift and further focus on quality of care, the highest leadership should be involved at district, provincial, and national levels. Ultimately, countries should aim to provide incentives so that providers see quality of care as primary to service delivery and not as an extra. Examples of incentives are performance-based financing schemes, retaining portions of user fees where applicable, and increased reimbursements from insurance schemes resulting from higher service utilization.

Cost Analysis

The Guinea case study provided rough estimates of introducing SBM-R for child health in a health facility. With a budget reaching a total of $2,100 to $2,700 to add child health services in just three facilities, on top of an initial investment of about $4,200 to build the foundation of SBM-R, serious questions were raised about the scalability of the model and the capacity of the MOH to continue with a program. Moreover, the estimate is only based on training and supervision over a four-week period. In Zimbabwe, cost of implementing SBM-R was not tracked, but one could assume that the economy of scale could lead to some cost-reduction. While potentially complex, cost and cost analysis should be part of the learning phase of any quality improvement approach. Further studies on costs should include both the cost of implementation and possible cost savings and/or increased revenues resulting from increased adherence to performance standards (e.g., in case of revenues from performance-based financing or reimbursements from health insurance schemes based on utilization of services where applicable). This could form a strong "business case" for facility managers for supporting quality improvement if they could see how it could help them stretch scarce resources. Similarly, at higher levels, managers and policy makers are likely to support interventions that not only increase quality, but also save resources.

Conclusions and Recommendations

The case studies provide some insight into the application of the SBM-R approach to improving the quality of child health services. Overall, the approach had an immediate positive influence on provider's adherence to agreed performance standards. Lack of a strong implementation plan with clear process documentation limits the findings of these case studies as good examples of applying SBM-R to child health and, therefore, does not allow us to draw firm conclusions on its scalability and sustainability. However, to the extent that SBM-R applies the basic principles of the QI/PI cycle, and to the extent that where the approach is already being used for MNH/FP, we can conclude that it can be adapted to fit the context and technical area of child health. More systematic documentation and a longer duration of implementation, which includes defined health systems support and outcomes measures, are required to support adaptation of SBM-R to child health services. This is planned in Zimbabwe under the MCHIP Associate Award (2014–2017).

Future adaption of the SBM-R approach to child health should reduce complexity so that the process can be led by local teams. Priority should be given to reducing the number of standards needed to make the quality improvement process manageable. Measurement of progress should not solely rely on external evaluations and recognitions. Monitoring and reporting results from self and peer assessments could be included in routine health management information systems.

Currently, assessment criteria are not weighted in relation to the impact each criterion has on the ultimate health outcome for the child being assessed and managed. If during the assessment, a provider missed one (or more) criterion, she/he is given a zero, indicating that the standard was not achieved. Weighting the verification criteria will recognize gradual improvements and could boost the morale of staff to continue trying. Additional attention should thus be given to defining and measuring improvements and should also focus on both processes and health outcomes.

Health outcomes, and not the quality improvement process, should be the goal. Therefore, it is important to recognize that more than one QI/PI approach can address the local needs or the needs of different technical interventions. Participatory design, with input from local stakeholders, structured implementation, and process documentation is key to learning and deciding what approaches work in what context and why. Local context should thus dictate which approach to adopt and adapt based on suitability rather than relying on external organizations to pick approaches or promote brands.

Little is known about the cost of implementing SBM-R. To inform, raise awareness, and get high-level managers and policy makers to support quality improvement interventions, pilot projects/studies should include both the cost of implementation and possible cost savings resulting from increased adherence to performance standards. This could equally form a strong "business case" for facility managers and local decision makers for supporting quality improvement.

Key Messages

1. The implementation of the SBM-R approach in Guinea and Zimbabwe, as documented, lacks fidelity to the steps of SBM-R implementation as described in the Jhpiego SBM-R manual.[14]
2. The findings from this review are inconclusive as to whether SBM-R is an appropriate quality improvement approach for child health, though it is clear that the approach needs modifications to suit the needs of case management of childhood illness.
3. The SBM-R approach in Guinea and Zimbabwe improved clinical skills of health workers and adherence to applying performance standards.
4. These case studies do not provide information on what motivated the staff to apply the performance standards. Understanding the motivating factors will help in scaling up SBM-R and potentially other QI/PI approaches.
5. Implementation of SBM-R for child health did not include outcome measures, which is a major limitation on comments about the success and impact of the approach on child health indicators.
6. Both case studies are based on health facilities with more than one staff member. Adaptations also need to include applications of the approach to low volume/single staff health facilities.
7. The process and findings of this synthesis present the challenge of negotiating leadership for cross-cutting technical approaches among multiple project partners working in the same country. MCSP partners need to examine how cross-cutting technical approaches, such as quality of care, are implemented across the program in supported countries. Specifically, issues of leadership and capacity to address needs of partner organizations and different technical areas should be discussed and future strategies agreed upon.

Recommendations for QI/PI approaches

1. QI practitioners should recognize that there is no single approach that works for all country contexts.
2. Any QI/PI approach should build on existing approaches to increase the likelihood of acceptance by health workers and to leverage resources.
3. Implementing partners must recognize differences in how services are delivered for different technical areas and adapt each approach to ensure that only necessary changes are proposed to the flow of services.
4. Any QI/PI approach should focus on influencing health outcomes at the minimum additional cost.

Recommendations for Implementation of SBM-R for Child Health Services

1. Include monitoring and reporting results from self and peer assessments in routine health management information systems.
2. Focus on high-impact activities, use a manageable number of performance standards, and apply weighting of verification criteria to recognize gradual improvements.
3. Define and measure improvements that focus on both processes and health outcomes.
4. Include standards that reflect client perspectives on quality.

[14] Necochea E., Bossemeyer D. Standards-Based Management and Recognition—A Field Guide. Baltimore, MD: Jhpiego: 2005.

5. Use participatory design, structured implementation, and process documentation to learn and decide what approaches work in what context and why.
6. Collecting data on both the cost of implementation and possible cost savings resulting from increased adherence to performance standards in pilot projects and studies.

Recommendations for MCSP

1. MCSP should define roles and responsibilities for technical areas versus leadership for cross-cutting areas, such as quality, that address different technical areas, e.g., maternal and newborn health. This will clarify accountability for quality of work and products of the technical advisers working for different organizations.
2. MSCP should ensure that country teams develop a single plan for implementing activities for cross-cutting areas that clarifies responsibilities and provides for both technical and financial capacity for implementation.