MESH-QI

IMPLEMENTATION GUIDE

Mentorship and Enhanced Supervision for Healthcare and Quality Improvement

Partners In Health

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Acknowledgements

We are grateful for the contributions of the editors and all collaborators, MESH-QI mentors and technical advisors, PIH's Communications and Global Learning and Training teams. The MESH-QI program was developed with tremendous financial support from the Doris Duke Charitable Foundation as well as the Hickey Foundation. We would like to acknowledge the support of our partners in the Rwandan Ministry of Health who are integral to MESH-QI's success and the staff at the health centers who are committed to continuous improvement of the care and health of the populations in Southern Kayonza and Kirehe.

Recommended citation

Manzi, A., Kirk, C. Hirschhorn LR, Mentorship and Enhanced Supervision for Healthcare and Quality Improvement (MESH-QI) Implementation Guide. Partners In Heath 2017.

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COVER Women's health mentor Leoncie Mukanzabikeshimana with mother and newborn at Rusumo Health Center, Kirehe, Rwanda. *Photo by Cecille Joan Avila / Partners In Health*

PREFACE

PROBLEM

Globally, the shortage of skilled health care workers compromises the delivery of quality health services to populations most in need.

In many settings around the world, skilled health care workers can neither provide care that meets the needs of patients, nor meet technical standards expected of their work. In low-resource settings, health care workers are often in short supply. Task-shifting to lower skilled workers to meet patients' needs can further reduce quality. Pre-service training of health care workers does not align with the increased scope of their work. Lack of skills and knowledge, inadequate systems, shortage of supplies, and limited motivation all drive the quality gap.

Large and often expensive post-degree training programs in specific care protocols sometimes are offered to address this gap. These trainings often occur in centralized locations, to introduce health care workers to care protocols and develop new skills. But increasing evidence shows that applying skills in clinical settings, with effective support and supervision, is the most successful, sustainable approach to improving practice.[1-3]

APPROACH

In 2010, with support from the Doris Duke Charitable Foundation's African Health Initiative, Partners In Health/Inshuti Mu Buzima (PIH/IMB) began a collaboration with the Rwandan Ministry of Health to improve the quality of care delivery and systems, through the **Mentorship and Enhanced Supervision for Healthcare and Quality Improvement** (MESH-QI) program. MESH-QI aims to use best training and support practices to improve care in response to this persistent quality gap. Applied in a number of domains—including HIV, non-communicable diseases, mental health, and maternal and child health—the model enables mentors to visit health centers to provide one-on-one clinical mentorship for nurse mentees; on-site education sessions for facility staff; quality improvement coaching; and data collection, all to improve programs and the quality of patient care.

MESH-QI bridges the "know-do" gap and reinforces health care workers' training, skills, knowledge and support. The program improves care in rural health centers through integrated clinical mentorship, systems-focused quality improvement, and data use.

IMPACT

Since MESH-QI's implementation, PIH/IMB has seen improved quality of care across a broad spectrum, from screening to diagnosis and treatment.[4] MESH-QI has connected nurse mentors with advanced training to nurses at rural health centers, to improve individual patient care and systems. Adapting MESH-QI to support district hospitals is boosting system analysis, and enabling a larger focus on the design and implementation of improvement projects. Results have included dramatic improvements in care, processes, and patient safety.[5] Rwanda's Ministry of Health has used MESH-QI to inform a national model of HIV mentorship and establish national guidelines for mentorship in maternal and child health. Other PIH sites globally are replicating the MESH-QI model, and adapting to address site-specific challenges such as staffing structures, available care, standardization and accreditation, supply chain issues, patient retention and adherence to treatment.

PURPOSE

This Implementation Guide provides direction to organizations and governments that are developing integrated clinical mentorships and quality improvement programs. The guide is based on experiences from implementing and continuously improving MESH-QI in Rwanda, and informed by early lessons learned from adaptations in multiple settings.

The guide includes an introduction to the MESH-QI model; five sections, corresponding to phases of implementation and monitoring and evaluation of a MESH-QI program, with the goal of adapting MESH-QI to a new setting; and Annex, a practical resource guide that includes valuable reference documents, job descriptions and protocols for diverse settings.

The guide includes examples of the model and lessons learned through the PIH/IMB experience. However, the MESH-QI model is most effective when customized to local contexts based on each organization's goals for impact and system improvement.

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INTRODUCTION

BACKGROUND

Established in 1987, Partners In Health (PIH) provides a preferential option for the poor in health care. PIH establishes long-term relationships with sister organizations based in settings of poverty, with the ultimate goal of bringing the benefits of modern medical science to those most in need. PIH draws on the resources of leading medical and academic institutions and on the lived experience and strengths of the world's poorest and sickest communities. PIH collaborates with local ministries of health to design and implement comprehensive, health-systems-strengthening programs inspired by the accompaniment model, while also building public-private partnerships that are essential to sustaining health care delivery systems and infrastructure.

In many low-resource settings, health systems struggle with labor shortages, insufficiently trained frontline health care workers, and inadequate systems. These factors can contribute to overall poor quality of care. The widespread use of task-shifting to deliver core clinical services means more complex services are delivered by fewer well-trained providers—in other words, nurses and other providers sometimes need to fill the roles of higher-level health care workers. These workers, who need effective training, are instead often met with expensive, one-time training modules that lack reinforcement and support in authentic settings. Increasingly, educators are recognizing that training must be followed by supportive supervision, to ensure knowledge translates into practice and motivate delivery of the best care possible.

Providers also can face system-level challenges beyond their control, and need system-wide improvements to facilitate quality care delivery. The MESH-QI model builds from examples of clinical training in developed countries that incorporate extensive mentorship in pre-service and in-service training. In MESH-QI, ongoing supportive mentorship is paired with continuous, facility-based quality improvement to address systems' gaps.[6]

Leoncie Mukanzabikeshimana, Women's Health mentor, and Beatrice Mureburayire, mentee. Rusumo Health Center, Kirehe District, Rwanda.
Photo by Cecille Joan Avila / Partners In Health

MESH-QI APPROACH

THE MODEL TO IMPROVED CARE

MESH-QI focuses equally on clinical mentorship, systems-focused quality improvement (QI), and data driven improvements to quality of care. These three building blocks interrelate to establish an effective implementation model to improve care and engage caregivers, teams, and leaders.

CLINICAL MENTORSHIP
Individual clinical mentors strengthen existing care delivery and improve supervision practices to provide direct guidance and feedback to health care workers.

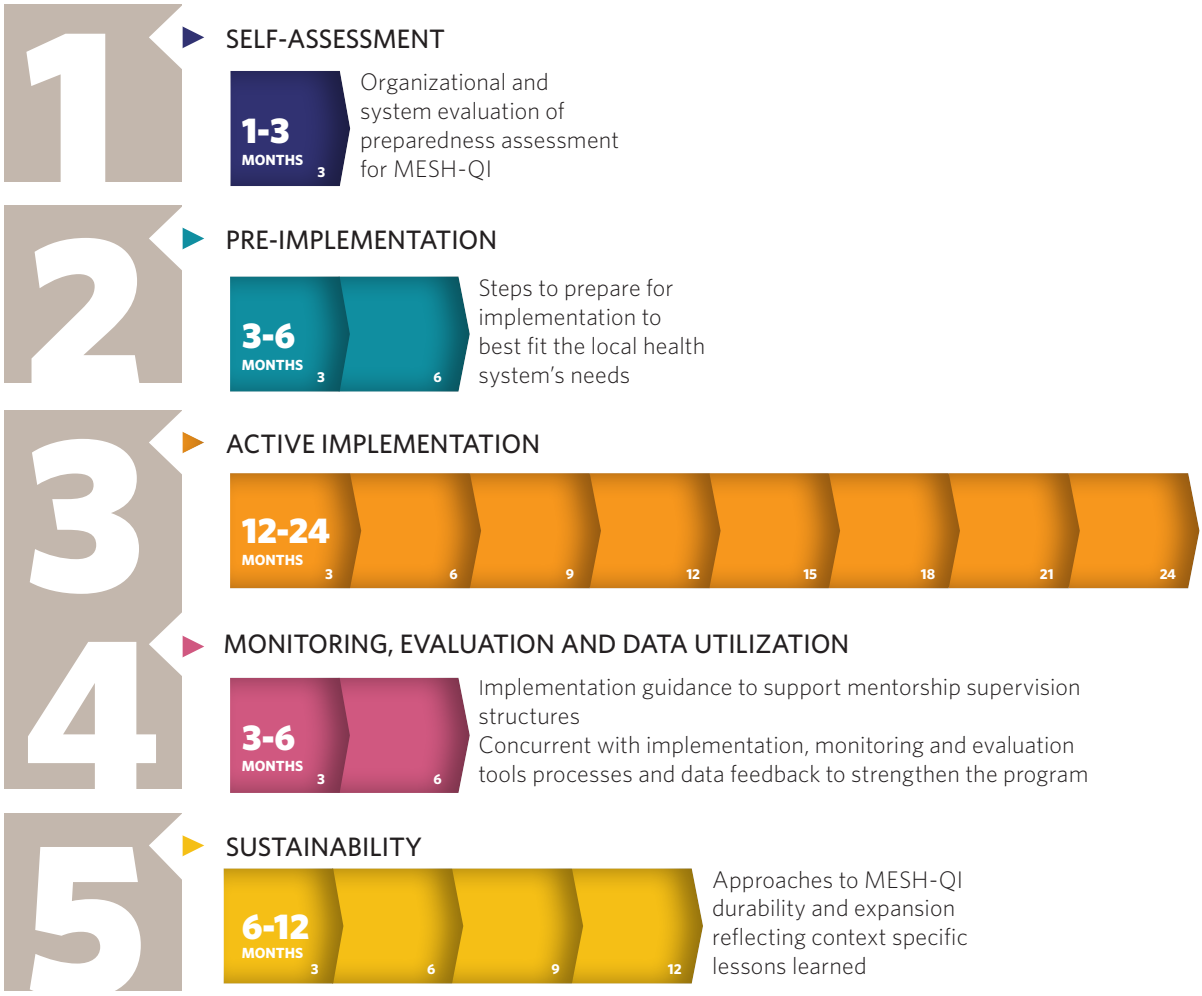
SYSTEMS-BASED QUALITY IMPROVEMENT COACHING
Systems-based QI coaching provides routine, ongoing supportive supervision and guidance through a systems approach to clinical care. This approach strengthens QI teams as well as leaders and health care workers.

DATA-DRIVEN PRACTICE
Data-driven practice supports health care workers to use, interpret, and make decisions grounded in information.

Data are used in the moment by mentors and as planning tools by program directors and health system leaders.

FIVE KEY MESH-QI ACTIVITIES

The timeline below offers general guidance for small to medium scale MESH-QI implementation. The five phases and the months associated with successful program development will vary based on contextual factors, scale, and geography.



MESH-QI established In 2009, the Rwandan Ministry of Health (MOH) established MESH-QI to support efforts to task-shift and decentralize care. Since then, the model has expanded geographically and in scope of services by empowering nurses, ensuring training in key MOH protocols, and engaging in ongoing supervision and coaching to improve the quality of primary care services. PIH/IMB collaborated with the MOH to provide intensive, on-site supervision and mentorship, utilizing nurses with more advanced training in key clinical areas. MESH-QI can be used across clinical domains to build capacity and improve quality of care. As the capacity of nurses at health centers has expanded, MESH-QI has been adapted to focus on improving quality of care at district hospitals. Throughout this guide, Rwanda-based MESH-QI examples demonstrate actual implementation experiences.

Mentors in the model are expert nurses who spend the majority of their time working alongside nurse mentees at health centers to improve mentees' clinical skills and confidence. The program relies on data-driven decision-making at every step. Mentors help collect routine data about the health facilities and use structured checklists to gather quality of care information during their visits to health centers. These data, in conjunction with feedback from nurses and health center administrators, inform quality improvement projects that address health system gaps. Ongoing data collection measures the progress of nurse mentees and quality improvement projects. Nurse mentors were hired as district hospital staff supervisors. Those nurses were integrated into the existing district hospital structure and trained to provide mentorship in their core areas of care. Clinical foci included the Integrated Management of Childhood Illness, women's health, HIV, and a pilot project for the Integrated Management of Adolescent and Adult Illness. Over time, the program in Rwanda has grown to new clinical domains including non-communicable diseases, mental health, nutrition, and neonatology, using the same core approach of integrated mentorship, QI coaching, and data use.

All Babies Count Mentor Merab Nyishime with patients. Rwinkwavu District, Rwanda. *Photo courtesy of Partners In Health*

2009

MESH-QI established by Rwandan Ministry of Health (MOH) with support from the Doris Duke Charitable Foundation's African Health Initiative.

2010

Implementation at Kirehe and Rwinkwavu District hospitals of MESH-QI model.
Nurse mentors hired as district hospital staff supervisors for HIV treatment and basic maternal and child health services.

2011

National mentorship guidelines for nurse mentors focus on Integrated Management of Childhood Illness (IMCI), women's health, HIV, and a pilot project for the Integrated Management of Adolescent and Adult Illness (IMAI).

2012

National mentorship program for HIV care and child health established by MOH based on a series of measurable successes.
National mentorship guidelines for maternal and child health informed by the MESH-QI approach of integrated mentorship and quality improvement.[7]
Mentors hired to train and orient national HIV mentors.
Program success demonstrated through quality assessment of changes in quality of care under nursing mentorship.
Expansion of disease-specific programs to non-communicable diseases, mental health, nutrition, and neonatology.

2013

Expansion into Butaro District Hospital catchment area reaching all three districts in which PIH/IMB works.
Expansion of NCD, Neonatology and Mental Health grows to include MESH-QI mentorship across services.

2014

Research demonstrates that MESH-QI improves quality of patient care [4] while being well received by nurse mentees.[8]

2015

Expansion of MESH-QI into Malawi and other PIH sites.
Adoption of Hospital-based MESH-QI by MOH.

2016

Scale-up to 30 districts for HIV. MESH-QI reaches all districts in Rwanda Biomedical Center.

2017

Scale-up of All Babies Count (ABC) to an additional 7 hospitals and 69 health centers.
Expansion of decentralized mental health services by Rwanda Biomedical Center using a MESH-QI approach.

Self-Assessment

This section offers questions and tools to assess an organization's capacity to implement MESH-QI.

SURVEY

When considering engaging in MESH-QI, sites must consider their most pressing needs before implementing the program. They must also consider obstacles to success. Based on a thorough self-assessment, site leadership can decide whether to move forward with the MESH-QI model. Site self-evaluation allows clear goal-setting relative to program adoption. It also allows the assessment team to identify existing resources to be leveraged to support the program.

A self-assessment site team should include leaders who are accountable for decision-making, individuals who influence site staff and hands-on care providers who deeply understand operations.

The following questions are essential for self-assessment and are relevant to pre-implementation, implementation, monitoring and evaluation, and sustainability through the MESH-QI cycle.

Clinical

What are the major contributors to mortality and morbidity in this setting?
Where is treatment available for these most common diseases?
What is the utilization rate of primary health care services?
What is known about the quality of care being provided?
What is known about patient's experience with care?
Considering clinical context allows the team to assess patient care priorities and establish whether a MESH-QI approach is appropriate.

Leadership

Who are the decision makers in the health system?
Is there capacity-building expertise among leadership or staff?
Do staff and leaders have the time to support new programming or new roles?
Are there organizational challenges at the individual provider or system level?
How is change perceived in the organization?
Are there examples of where change has been successfully introduced?
Successful implemenation requires engagement of leadership and recognition of organizational barriers to success.

Data

What data are available? Does data on quality of care exist?
How, if at all, is data used to improve care?
What technology and technological support exists within the site?
Are data or analytic support staff based at the site?
Sites must consider whether in-house expertise or interest exists with regard to data-driven approaches to analysis and utilization.

Operations

What are strengths and challenges for care delivery at the site?
How are skills assessed for the health care workers?
What is the baseline training level and how are skills matched to need?
What motivates health care workers to succeed?
Does site lack equipment, infrastructure, staff time, medical supplies, supervision, or clear protocols and guidelines?
Sites must recognize operational obstacles for success that would limit the viability of a MESH-QI implementation.

Policy

What are the priority areas for the Ministry of Health relative to the site?
What system-level funding and non-financial investments are available to support developing a MESH-QI program?
Are there existing technical policy groups or task forces that review and update operational guidelines and protocols?
Is the district or MOH committed to a QI framework?
MESH-QI is far more likely to succeed in the context of a supportive policy context. Identifying policy-level barriers is critical to the assessent process.

In addition to these assessment questions, sites may engage in literature review to understand context-specific best practices. WHO Monitoring the Building Blocks of Health Systems and national strategic plans for health are instructive guides in the self-assessment process. After evaluating factors including clinical needs, leadership, data, operations, and policy environment, a site may decide to move forward with Pre-implementation. Even if self-assessment does not result in MESH-QI implementation, it may provide insights to prepare for a future project.

Pre-implementation

Good planning is the key to success for MESH-QI. This section presents the steps required to prepare for implementation of MESH-QI including important considerations for adapting the model to best fit the local health system's needs.

15 Planning for mentorship
Key considerations for effective implementation
22 Engaging leadership
23 Team structure
27 Program design
Training

Pre-implementation activities are an investment in a successful MESH-QI program and provide an essential foundation for the Active Implementation and Evaluation phases that follow. A technical advisory (TA) team should be established when a site decides to launch a MESH-QI project. The TA team should include clinical and quality experts, who will collaborate with site leadership. The team will guide context-specific adaptation and implementation of the MESH-QI process.

During the baseline assessment, the TA team will engage with all relevant stakeholders, including health system leadership at the central and local levels, health care providers, organizational staff, and potentially, patients and community members. Core questions define whether the MESH-QI intervention is a good fit for an organization. Having made the commitment to implement MESH-QI, the Self-Assessment questions serve as a roadmap for program prioritization. After establishing the program design, the TA team will begin hiring and training coaches and mentors.

The model is predicated on the power of mentorship. Ideally, the MESH-QI model fosters health center mentorship and an environment where mentees are empowered to succeed. A key strength of the mentorship model is its ability to boost motivation, by enhancing self-efficacy and confidence among health care workers. Mentorship has the potential to improve population health outcomes in communities that have access to health care services. Depending on context, mentorship may need to be paired with demand-side interventions to increase utilization of primary health care services. While not every Self-Assessment will immediately result in full MESH-QI implementation, a mentorship program may still be an appropriate component of long-term site strategy.

If mentorship is deemed a priority, the site should create a program plan of preliminary activities leading to mentorship implementation. Plans can range from short-term activities lasting a few months to longer-term initiatives, depending on the status of the health system and specific site.

PREPARATION FOR MESH-QI IMPLEMENTATION: SITE-STRENGTHENING ACTIVITIES

Invest in infrastructure and human resources to ensure the health system has at least the minimum staffing and supplies needed to deliver adequate care.

Develop protocols to support structured care delivery and define clear expectations of health care workers.

Consult and coordinate with stakeholders to address larger systemic issues, such as remuneration delays or insufficient supplies at the facilities.

PLANNING

The next phase of Pre-Implementation is selection and hiring of coaches and mentors. MESH-QI mentors have specific roles and responsibilities. Program structures are determined based on context and program needs; however, certain core responsibilities such as coaching and data use are essential for all mentors. The TA team needs to identify mentors, mentees, and the scope of clinical mentorship that they'll undertake. For example, will the mentor focus on a single clinical domain with QI, or on broader primary health care mentorship?

Every health system has multiple leadership levels. The level at which mentors engage will determine the design of the mentorship program. For instance, mentorship in a referral facility with specialized staff and in-patient services would function very differently than mentorship at outpatient health care clinics.

The MESH-QI model generally focuses on outpatient care sites, and this implementation guide focuses delivering mentorship to primary outpatient health care providers. The following section details important planning considerations to inform mentor selection, scope of work, and work planning for MESH-QI. Throughout this process, key stakeholders should be actively engaged to co-create a MESH-QI program that is appropriate for a specific context and to ensure buy-in from health system leadership.

KEY CONSIDERATIONS

Developing a MESH-QI project requires a clear understanding of the facilities and context where mentorship is provided.

Clarity regarding existing supervision structures in the health system is essential to effective implementation. While much of this critical information likely will have been collected in the needs assessment, pre-implementation requires a deeper assessment of details to customize the MESH-QI for a particular context.

Sites may conduct a more formal baseline assessment to help identify the greatest needs and to measure outcomes of the anticipated program. The questions below will guide implementation and offer recommendations based on considerations of site readiness.

QI training session led by Anatole Manzi in Rwinkwavu, Rwanda. *Photo by Cecille Joan Avila / Partners In Health*

Q|A Will mentors report to the public health system or to the MESH-QI Site?

The TA team will need to determine whether to build a mentorship program within the existing system or to create a parallel complementary system of mentorship. Existing reporting structures and relationship between the institution and the health system will influence this decision.

IN RWANDA

MESH-QI mentors are embedded in the public health system and employed as part of the district hospital supervision team for all health centers in a district. Mentors report to hospital leadership rather than to the MESH-QI program leadership at PIH/IMB. This reporting structure was driven by a mandate to accompany the public health system rather than to operate in parallel and also to increase ownership and sustainability of the mentorship model. However, the structure came with challenges. The team did not have direct control over mentor selection. Once selected, the team did not consistently have impact on the mentor's day-to-day activities. Mentors are district hospital staff reporting to hospital leadership so may be asked to fulfill other responsibilities beyond their mentorship roles. To prevent this structure from negatively affecting the mentorship program, hospital leadership must appreciate and support the mentor's role from the outset of the program and develop a shared understanding and agreement related to the mentor's and MESH-QI model.

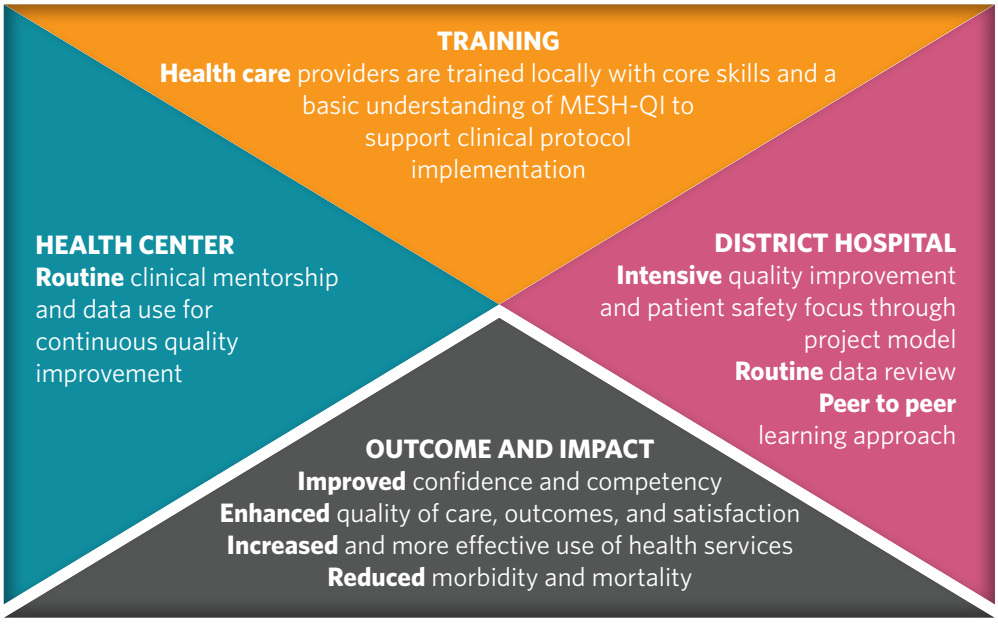
MENTORS REPORTING TO THE PUBLIC HEALTH SYSTEM As mentors demonstrate high-level clinical and systems problem-solving capabilities, facility leadership may ask them to intervene in other priorities, such as facilitating workshops and meetings or covering leadership responsibilities. If a site is sending mentors into a health system without direct control over their daily work, it can be valuable to develop a Memorandum of Understanding (MOU) to clarify the roles and responsibilities of each partner in supporting the implementation. This MOU can highlight mentor selection and how they work with existing supervisors, to avoid potential confusion or conditions on funding for the mentors.

MENTORS REPORTING TO MESH-QI SITES Alternatively, a MESH-QI organization can directly hire local mentors, who will report to site leaders while collaborating with health system leadership. This model offers direct site control over the mentor's activities, but can be challenging to sustain. This approach can also lead to resistance from mentees if mentors are not formally recognized by the health system, so ultimately, a parallel model may not strengthen the overall health system. There is a trade-off between control over a mentor's day-to-day activities but less coordination with the health system, versus being embedded there. This approach also comes with the risk that mentors are perceived as external agents with less investment in the health system. Overall, this model functions more effectively with a clear MOU between the MESH-QI site and the health system leadership to effectively facilitate mentors' work.

RECOMMENDATION

Whenever possible engage in joint coordination or integration of mentors into the existing public health system to improve viability and sustainability for the MESH-QI mentorship model.

MESH-QI FRAMEWORK



Q|A How will mentorship function relative to supervision?

Mentorship shares some common activities with traditional supervision—providing feedback, evaluation of health care workers, etc.—and current supervisors may become MESH-QI mentors. However, it is important to understand the existing supervision model at the MESH-QI site, in order to help differentiate mentorship from traditional supervision. Unlike most traditional supervisors, mentors invest a lot of effort in building a strong, safe relationship with mentees, by facilitating open communication about mentee challenges. While supervisors often assess whether staff are meeting expected standards, mentors play the role of facilitators to help improve the quality of care provided to patients. Mentors are never there to penalize mentees, rather, their role is to support mentees and help them grow in their knowledge, skills, and confidence as health care providers. It is often confusing to mentors, mentees, and others in the health system to differentiate the two roles, so clear effort is required to clarify how the roles complement each other, yet are not the same function. If a MESH-QI site decides to use existing supervisors as mentors, it's critical to ensure the distinction so current supervisors can be effective mentors and coaches.

LANGUAGE IMPACTS PERCEPTION OF MENTORSHIP It is important to understand the word for a mentor and a supervisor in the local language. For instance, in Kinyarwanda, Rwanda's local language, there are two distinct terms. For mentor, the term "abafashamyumvire" translates to "those who improve the understanding." On the other hand, the term for supervisor, "abagenzuzi," translates to "investigator." By speaking in clear, local terms, mentees, supervisors, mentors, and health system leaders can differentiate between the two approaches to supporting health care workers.

RECOMMENDATION

Consider the impact of language as it drives understanding of the role of mentors.

MENTOR | SUPERVISOR COLLABORATION If MESH-QI implementation creates a mentor who is in a separate role from the traditional supervisor, as in the Rwanda model, it's essential to deliberately plan how the two roles will work together. For example, when a supervisor visits a facility to do routine evaluations and get a snapshot of care delivery, the supervisor and mentor can meet to discuss areas in need of improvement based on the supervisor's observations and evaluation. The mentor uses this feedback, in addition to MESH-QI program and health facility data, to support mentees and improve reported gaps in care. As follow-up, the supervisor and mentor can schedule subsequent debriefing meetings to review data, share feedback and track progress.

RECOMMENDATION

Clarify relationships between existing reporting and the MESH-QI model to avoid confusion about roles and responsibilities.

Q|A How will staff roles and training impact the MESH-QI model?

Understanding who provides care is essential to identifying who will offer mentorship in the MESH-QI model. In the Rwanda implementation, peer-to-peer mentorship was very effective for building mentor relationships. For example, if nurses provide care, clinical mentors would ideally also be nurses. Having a hierarchy in a mentoring relationship, such as a physician mentoring a nurse, can pose challenges in developing successful mentoring interactions. Power differentials should be recognized and addressed before launching a mentorship program. If a site is considering a hierarchical model, the planners should understand existing dynamics for potential mentors and mentees, and how they might evolve in a mentor-mentee relationship. In Rwanda, training levels and mentor assignments varied within a site—among nurses, physicians, and clinical officers—and across settings.

With QI coaching, having mentors and mentees with comparable clinical backgrounds is less important. QI coaching involves multidisciplinary teams, so QI leadership with the ability to engage those teams becomes more critical than professional training or existing hierarchies. Since every system is different, understanding how various cadres of health care workers at MESH-QI sites interact can help determine the strongest model.

Understanding required pre- and in-service trainings for staff roles also informs the mentor selection process. Trainings can establish baseline skills. For example, in Rwanda, MOH certification in HIV care is required for nurses to deliver HIV services. In this case, it would be difficult for a mentee to build skills in HIV care if the nurse mentor lacked this knowledge. Ensuring a baseline level of training in care protocols enhances the value of mentorship. Staffing models also impact mentor structures. Whether a health facility staff member is routinely assigned to a specific service or, instead, rotates across many services will impact mentoring. If staff frequently rotate across services, it would be difficult to effectively mentor in a specific domain since effective mentorship requires continuity.

STAFF SHORTAGES' IMPACT ON IMPLEMENTATION

Mentoring relationships require mentors and mentees to spend extended periods of time together, which can be challenging in low-resource settings. There is little time for mentoring in understaffed facilities, and pressure exists for mentors to deliver clinical care when on mentorship visits. High turnover also limits mentors' ability to build mentee relationships that are essential for successful mentorship. But high turnover is a reality of work in low-resource settings, so finding ways to develop an effective program in that context is essential. Mentors may identify a few mentees to support in a facility, so that if one leaves, other skilled mentees still are available to provide services. The team can assess the causes of turnover with key stakeholders during the program development process.

RECOMMENDATION

Clarify staff model, roles, hierarchies, and training to reinforce the MESH-QI model.

Q|A How has mentorship been employed elsewhere in a health care system?

If a mentorship model has been engaged elsewhere in the health care system, it is valuable to know what challenges have been encountered and the strategies used to overcome them. Prior experience implementing mentorship, past lessons learned, and key stakeholder input can help inform how to adapt the MESH-QI program for a local context. The term "mentorship" is very broad. Establishing a clear, common understanding of the term may be necessary for stakeholders to understand how the current MESH-QI approach is similar or different from other approaches. MESH-QI is based on integrated clinical mentorship and systems-focused quality improvement that differs from models of supervision, coaching, and preceptorship.

Like mentorship, QI is a broad term applied in various ways in different organizations. Understanding which QI models may have been previously utilized, if any, is valuable in deciding how to model the MESH-QI. Depending on prior experience of health care workers with one model of QI, introducing a second model could potentially create confusion and tension. This is particularly true if stakeholders perceive that one model should be prioritized over another. If QI has already been taught, existing QI skills and teams can be leveraged when implementing MESH-QI.

RECOMMENDATION

Identify other mentorship and programs that can offer insights into experience and impact implementation.

Mentor Evariste Bigirimana with mentee and patient. Rwinkwavu District, Rwanda.
Photo by Anatole Manzi / Partners In Health

Q|A How will geography impact the MESH-QI model?

Very dispersed health systems can be challenging for MESH-QI since facilities may be difficult to routinely access. In such situations, the team can create a "home base" for mentors, at a centrally located facility. In Rwanda, district hospitals are the health system tier above health centers. The country's comparatively small size makes traveling from hospitals to health centers feasible. But it's not always easy, given the limited availability of transportation. In cases where facilities are very far apart, mentors may need to make extended facility visits to justify the travel. Week-long mentorship visits, rather than day visits, may be preferable.

It is also important to know if access to facilities varies with the seasons. The way mentors reach facilities—by organizational vehicles, motorcycles, or public transportation, for example—also can affect access. In some seasons, options such as motorcycles may be unsafe given road conditions. Road infrastructure may make some facilities completely inaccessible during some times of the year, presenting a challenge for maintaining mentorships. Technology can help circumvent geographic barriers, with options such as phone mentoring and online video conferences, where bandwidth is sufficient.

RECOMMENDATION

Recognize the impacts of geography and accessibility in program planning, and develop strategies for consistent engagement despite geographic challenges.

Q|A How will program goals influence the MESH-QI model scale?

Goal-setting will define the scale of the mentorship program. Mentorship success depends on building one-on-one relationships between a mentor and a mentee. This takes time to establish and requires frequent contact between a mentor and mentee, particularly early in the mentoring relationship. Sites must consider the scale of the mentorship program when determining the number of mentors to hire. The program's size also will depend on the program's ultimate goals. For example, if the goal is to reduce maternal mortality, all care providers need the ability, opportunity, and motivation to deliver quality maternal health care at primary health care facilities and district hospitals. However, if the goal is to build skills and competencies among newly hired nurses in family planning services, the scope of mentorship may be narrower and require fewer mentors. Once a relationship has been established, ongoing mentor-mentee contact through phone calls or regular cross-facility meetings can support a less resource-intensive model, while maintaining program scale.

RECOMMENDATION

Create a staff design model that corresponds to goals of the program and goals of other entities in the health care system.

Q|A How do facility service offerings affect program planning?

Developing a MESH-QI program requires evaluations of infrastructure, facilities, equipment, and supplies. Successful mentorship requires operating in an environment where health care workers have the basic tools to deliver care. Understanding the elements, inputs, and resources available at a site can help identify barriers to success and comparison to baseline norms.

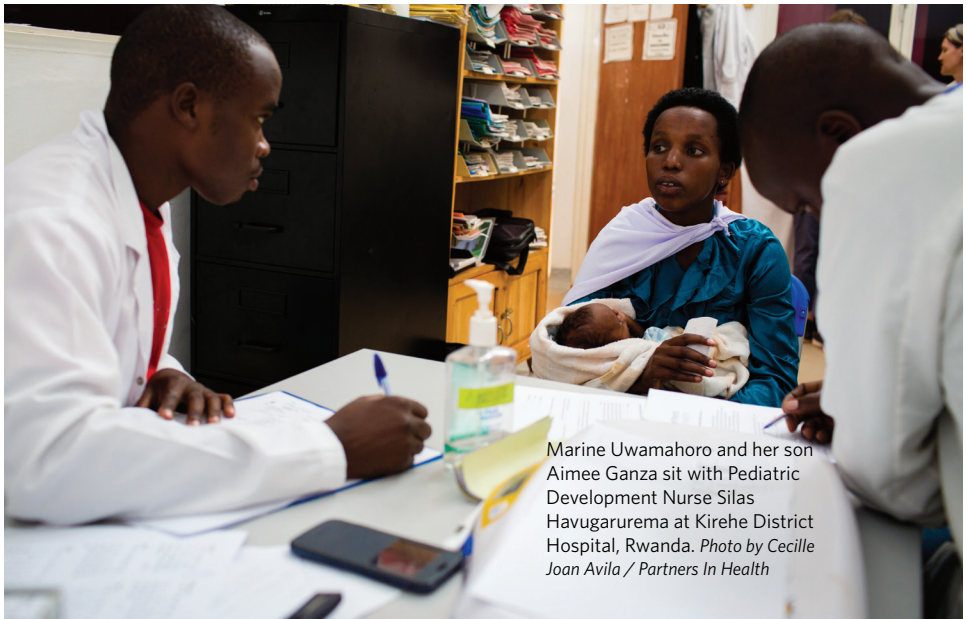
RECOMMENDATION

Engage collaboratively to assess a facility's capabilities and limitations in supporting implementation.

ENGAGING LEADERSHIP

Engagement of health center leadership is critical throughout the assessment, implementation, and evaluation of a MESH-QI program. Leadership collaboration should begin as early as possible during the needs assessment, planning, and adaptation phases, to ensure buy-in of key stakeholders. Engagement will differ among stakeholders, but in order to develop a successful MESH-QI, heads of facilities, at a minimum, should be oriented to the program and understand the role of mentors as well as their own sponsorship role in implementation. Leaders must appreciate mentors as assets who can help improve quality of care and health outcomes among patients. Training health facility leaders in skills such as quality improvement and data supports their investment in these activities. Early involvement of health system leadership is essential for reviewing and clarifying:

- **Existing staffing** and job responsibilities
- **Priorities** for quality improvement
- **Team structure** to support the model
- **Appropriate mentorship** frequency and goals
- **A communication plan** to establish the MESH-QI implementation partnership



Marine Uwamahoro and her son Aimee Ganza sit with Pediatric Development Nurse Silas Havugarurema at Kirehe District Hospital, Rwanda. *Photo by Cecille Joan Avila / Partners In Health*

TEAM STRUCTURE

Team success depends on how mentors fit into or complement existing supervision systems. Success also depends on establishing a team configuration that supports high quality mentorship and QI. Successful teams can take many forms, but share a common commitment to improving population health through collaboration and evaluation.

Some mentorship programs have employed expatriate mentors in the absence of available local mentors. However, the MESH-QI approach has focused on using local mentors for peer-to-peer mentorship. Expatriate mentors, whose positions are often short-term, would not serve the model effectively. Expatriates can be useful in providing technical support to the local mentors in the absence of specific clinical expertise. Expatriate trainers also can enhance local clinical expertise without detracting from the peer-to-peer mentorship model that is at the core of MESH-QI.

SELECTING MENTORS After assessing systems, staffing, and supervision models, and establishing leadership buy-in, the TA team should be prepared to define the level of health care professionals to hire as mentors, to refine their scope of work, and to draft initial job descriptions. Job descriptions should include relevant qualifications for mentors, distinct from traditional supervisors. Clinical and non-clinical attributes are essential to a mentor's success. Non-clinical skills such as problem-solving, approachability, humility, and willingness to learn and improve are critical success factors. Required QI skills and experience also should be incorporated when describing these positions.

At this point, sites should determine the number of mentors required for the MESH-QI to succeed. This staff complement will be based on the number of facilities to be supported, the frequency of visits expected at each facility, time spent each week conducting mentorship visits, and the availability of resources to support the roles.

IN RWANDA

Staffing In Rwanda, the approach to staffing has depended on the clinical domain of mentorship. For services routinely provided at health facilities, such as HIV care and maternal and child health, the Rwanda model aimed for **mentors spending 80% of their time conducting health facility visits (i.e., four days per week) and mentors visiting each facility about once per month.** This meant mentors could provide a day of mentorship to about 16 facilities each month if they achieved the ideal of four visits per week. Local obstacles such as transport limitations and geographic remoteness of some facilities made achieving this ideal difficult.

Reporting In Rwanda, MESH-QI has become embedded in the public health system, with local mentors hired through district hospitals. Mentors have supported lower-level health centers, much like other hospital supervisors provide oversight to health centers throughout the district. The approach was chosen to promote sustainability and health system ownership of the program; however, there have been challenges that come with integrating mentors into the system. A parallel approach may be more appropriate for some contexts. Regardless of organizational structure, **each team needs a clear reporting and communication structure with necessary supports for mentors to succeed.** Mentors themselves need mentorship to succeed. Routine communication supports both the public health system and program leadership. A clear communication strategy of what gets reported to whom, when, and how, can help ensure data and information are shared and available for use by all relevant leadership.

When innovative programs for mental health and non-communicable diseases were introduced at health centers in Rwanda, mentors visited health facilities much more frequently, to support mentees' delivery of these new, task-shifted services. In these situations, mentors were expected to visit the health centers weekly. As a result, relatively more mentors were required to cover the same number of facilities, compared to HIV and maternal and child health services.

DETERMINING MENTORS' SCOPE OF WORK An important component of MESH-QI is that mentors provide side-by-side clinical mentorship to bolster the skills and confidence of mentees. Mentors also support facility-based, multidisciplinary teams to address system challenges through systems-focused QI. In this model, the impact of mentorship is beneficial at both individual and facility levels. At the facility level, when overall system functioning is improved, all health care workers operating in that environment have greater opportunities to provide quality care. However, assessing the domains of clinical mentorship requires evaluating the priorities for each setting, the capabilities of mentors in different clinical areas, and the delivery of QI mentorship. QI implementation may require different roles and responsibilities for mentors and health facility staff to design and implement improvement projects. The sections below outline considerations for the scope of work for clinical and QI mentors. After context and scope of work are considered at this stage of project development, initial job descriptions for MESH-QI mentors should be developed and discussed with all relevant stakeholders.

DIRECT CLINICAL MENTORSHIP Clinical mentors need clear scopes of work, which should evolve from assessments of clinical coverage and logistical constraints. Each program needs to identify the content that mentors should provide and how mentorship is delivered. Mentors may engage in a generalist primary care approach, for example, by addressing the broad lifespan and needs of a patient, and corresponding to integrated, patient-centered care. Alternatively, mentors may focus solely on a specific clinical area, such as non-communicable diseases, HIV, etc.[9]

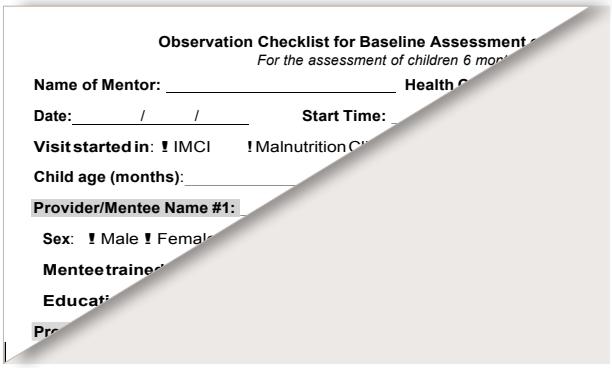
Content expertise is critical to mentoring in a specific clinical domain. But a single mentor may not have the broad expertise to provide mentorship on all clinical issues that patients present at a health facility. Additionally, a broad primary care approach to mentorship could create a hiring challenge, since it can be difficult to find mentors who are equally skilled across different clinical domains. Clear clinical protocols that guide care delivery can address this challenge. These protocols can support mentors by informing observation and facilitating mentee feedback. Additionally, initial training for mentors can help prepare them for cross-domain mentorship. Sites should consider which domains can be integrated more easily than others. For example, acute child illness, antenatal care, or chronic disease care may be more easily managed by one mentor, compared to more specialized areas such as mental health or labor and delivery, which might benefit from more specialized mentors.

The alternative—a mentor focusing on a specific clinical domain—can be easier to implement. However, this approach limits the clinical services that may benefit from

mentorship. In both models, it is important to remember that "soft skills" often make a clinical mentor truly effective. Communication, active listening, and relationship-building are critical to successful mentorship.

How care is provided at a facility will affect how mentorship is provided. For example, at many basic care facilities in low-resource settings, algorithms are used to make diagnoses (i.e., Integrated Management of Childhood Illness protocols). At higher-level facilities, such as hospitals, significantly more clinical reasoning may be required to make a diagnosis and treatment plan. This implementation guide focuses on mentorship in places where there are very clear guidelines for quality care, and standards to which all health care providers should adhere. The extent of protocol development, training, and adherence in implementation is likely to vary across settings, thus mentorship programs must be developed to meet the needs of a specific context. MESH-QI planning teams need to understand the set of services provided at the health facility and the protocols that dictate how care is provided, in order for the model to succeed.

Checklists reinforce content specific mentorship. The National Nutrition Protocol in Rwanda specifies the activities required during nutrition visits for patients enrolled in the out-patient malnutrition clinic. The protocol lists exams, lab tests, medications, etc., to be administered to the patient. Mentors can use these guidelines to observe whether the protocol is being followed correctly. For example, did a patient enrolled in the Supplementary Feeding Program (SFP) receive Vitamin A, folic acid, iron, mebendazole, and a measles vaccination on their first visit, as described in the protocol? If not, mentors have to understand the reasons why the mentee did not follow protocol. Was the barrier logistic (a medication stock out) or skill-based (the mentee did not know to administer the protocol)? See Annex for full nutrition guidelines.


Observation Checklist for Baseline Assessment
For the assessment of children 6 mon
Name of Mentor: _____ Health C
Date: ___/___/___ Start Time: _
Visit started in: ! IMCI ! Malnutrition Cl
Child age (months): _____
Provider/Mentee Name #1: _____
Sex: ! Male ! Femal
Mentee trained
Educati
Pr

SYSTEM-FOCUSED QUALITY IMPROVEMENT

In addition to providing clinical mentorship, MESH-QI mentors are responsible for recognizing system issues, such as inadequate staffing or inefficient procedures. These issues can lower the quality of care delivered at health facilities. Mentors can help staff generate ideas to address these system issues. Therefore, mentors must be critical thinkers who help health center staff analyze root causes of problems at facilities, and offer the creativity to develop solutions. However, systems-focused quality improvement cannot be the sole responsibility of mentors. It requires buy-in from health system leadership, management of the health facility, and front-line health workers who develop and implement changes. Effective teams are critical to systems improvement, so before launching a QI project, the site needs to establish facility-based QI teams to work with mentors and test ideas for improving the quality of care. The mentor will coach these QI teams, but the teams themselves are responsible for creating, implementing, and evaluating QI projects.

For some clinicians, this type of systems-based thinking requires additional training, to look at causes of poor quality of care and know how to act on the results. Systems thinking and root cause analysis are seldom part of the standard training for clinicians and, therefore, likely must be taught to both mentors and mentees. With a growing number of QI initiatives within and across countries, it is important to identify existing analytic capacity and QI approaches currently in use at the site—such as "Plan, Do, Study, Act" (PDSA) or "Six Sigma." By working to expand leading literature and implementation models from global QI leaders—such as the Institute for Healthcare Improvement, HEALTHQUAL International, and the University Research Co., LLC—Partners In Health has developed core competencies for staff expected to engage in quality improvement initiatives. These core competencies can be used and adapted to build a foundation of quality improvement skills.

Based on the mentors and the setting of care, sites should consider what portion of mentor time will be dedicated to side-by-side clinical mentorship, versus systems-focused quality improvement. This breakdown of time may evolve as programs mature. At first, more time may be spent in clinical mentorship activities and less time in QI. This split may gradually shift, over time, to more QI coaching. Clinical mentorship time is very valuable in building individual relationships and ensuring that mentees feel adequately supported to perform their day-to-day work. Along with clinical support, mentors may introduce QI methods and support QI teams to develop change ideas. Introducing clinical support and QI support simultaneously can help ensure that both of these core aspects of a mentor's job are seen as equally important.

DATA USE AND FEEDBACK A core component of MESH-QI is using data to guide mentorship and quality improvement. To do so, mentors use direct observation checklists during mentorship. These serve the dual purpose of guiding mentor feedback to the mentee and collecting data on the quality of care at health facilities. The checklists are based on clinical care protocols and can help mentors identify weaknesses during site visits, and track progress, over time, in mentee adherence to protocols. In order to make effective use of this data, mentors must have basic data interpretation skills and be able to communicate with health facility leadership about data. Similarly, quality improvement projects should include a data collection plan to determine baseline conditions and monitor progress in improving the quality of care over time. Mentors also should coordinate with existing monitoring and evaluation teams to review and use data from other relevant sources, including national health information systems, death audits, and other surveys. Mentors also facilitate data-sharing and interpretation, and design QI interventions and mentorship priority interventions to address identified gaps.

PROGRAM DESIGN

RESOURCE REQUIREMENTS There are several costs to consider when planning MESH-QI health center mentorship. Budgets should include human resources costs, supplies, travel, and other relevant direct costs. While the list below includes typical MESH-QI budget items, every adaptation of MESH-QI is different. Budgets should be context- and site-specific, depending on scale and incremental costs versus task-shifting among existing staff.

Planning Staff time allocated for needs and capacity assessment and stakeholder engagement. This effort may require replacement staffing, or affect productivity in other site functions.

Implementation staffing Salary for mentors and for supporting staff including program management and logistics.

Implementation materials Training course and module fees, computers and software to meet specific program needs, printing of materials for distribution.

Incidentals Per diems and refreshments for trainings and stakeholder engagement workshops, as defined by standard site policies and miscellaneous fees.

WORK PLANNING The planning and adaption phases occur before the start of MESH-QI implementation, and require significant time investment. The actual time allocation will vary, depending on human resource capacity and scope of the MESH-QI adaptation. Further, developing Memorandums of Understanding and obtaining necessary permissions for conducting mentorship within a health system can take a considerable amount of lead-time. Tools such as GANTT charts can help planning teams identify and plan specific activities that are needed to adapt and launch a MESH-QI program, and estimate an appropriate context and site-specific timeline.

TRAINING

Launching a MESH-QI program requires training in clinical protocols and quality improvement for key stakeholders, mentors, and even mentees, to address skills and knowledge gaps that were identified during the preliminary needs assessment. On-going knowledge and skills assessments should be performed during mentor visits, to evaluate provider strengths and weaknesses. The assessments can include knowledge tests, case studies, or simulation exercises. Results can help identify training needs that are critical for mentorship and clinical practice. In general, TA teams should include a quality improvement expert who leads the training of mentors.

CORE SKILLS Being a MESH-QI mentor requires diverse skills, so all mentors should be familiar with quality improvement, data use, and the clinical protocols on which they'll be providing mentorship. "Soft skills" such as communication, active listening, adult learning methodologies, and relationship-building are essential for mentors to support mentees and build their strengths, knowledge, and confidence.

These skills can be difficult to teach and require significant practice to implement. Job descriptions and recruitment of mentors should include these skills. Ideally, program leaders should hire mentors who possess some of these soft skills. (See Annex for job descriptions). Mentors also require ongoing support to refine their mentorship skills. In the Rwanda model, the free, online I-TECH curriculum on clinical mentorship was adapted for training MESH-QI mentors (see Annex for link). The I-TECH curriculum focuses on HIV mentors and may need to be adapted for other settings.

QI METHODOLOGY In order for mentors to identify quality gaps and help health facility staff develop and track QI projects, they need to understand the QI methodology. Partners In Health has promoted the use of the Model for Improvement and "Plan, Do, Study, Act" (PDSA) cycles because of their simplicity and applicability in health care. Mentors are trained to analyze root causes, identify and test ideas for change, and collect data to monitor progress. QI coaches help transfer these skills to QI teams at the health facilities, where teams of health center staff are implementing QI projects. All Partners In Health sites have developed an outline for teaching core QI competencies (see Annex). The outline can be adapted to the specific needs of MESH-QI mentors and health facility staff. Mentors should be well-versed in these competencies and it may be advantageous for the health facility QI teams to be trained in the same content during teaching sessions in mentorship visits.

DATA ANALYSIS Mentors must be trained in basic data interpretation skills, in order to interpret the data they are collecting in mentorship and quality improvement. In addition, mentors should be able to use routinely collected data in the health system to identify priority areas for mentorship or quality improvement.

Beyond their own ability to interpret data, training mentors must involve communicating and sharing data with others in accessible language. These skills create an important data feedback loop among mentors, mentees, health facility leaders, MESH-QI program staff, and health system leadership, each of whom will likely have varying degrees of comfort with data. Mentors may need training in how to visually present data or how to discuss data in easy-to-understand language. These skills will help teams make sense of the story told by the data.

CLINICAL SKILLS Mentoring mentors ensures the adequacy of their skills, knowledge, and practices. Whether engaging specialized mentors or a primary care model, mentors must be trained in the clinical protocols that they will support and in the routine updates to those protocols. Mentors must be certified in standard government protocols before teaching or mentoring others.

Mentors also must maintain their clinical skills to succeed in their roles. Providing opportunities for mentors to deliver direct patient care outside of mentorship can support this need. Higher-level clinicians or experts can help reinforce a mentor's skills and give support in challenging problem-solving situations. "Mentoring of mentors" is particularly important in a broad primary health care model, where skills reinforcement and training ensure that mentors remain experts in their fields.

MENTEE TRAINING Mentorship provides critical support following pre-service and in-service trainings, and translates classroom content to real world practice. MESH-QI was specifically developed to address gaps that exist in didactic, classroom-based trainings that are common in low-resource settings. Mentoring is most effective when mentees have had initial training in clinical care protocols and mentorship begins soon after the training. Depending on the mentor's qualifications and government requirements for training, the mentors may be able to lead these trainings near facilities where mentorship will be provided. This efficient planning reduces mentee time away from work and costs of organizing the trainings.

Minazi Health Center, Gakenke District, Rwanda. *Photo by Catherine Kirk / Partners In Health*

Active Implementation

This section presents implementation steps and activities and offers practical guidance on establishing a successful model.

31 Settings of care
32 Role of mentors
36 Tools for implementation
37 Troubleshooting and common challenges

SETTINGS OF CARE

MESH-QI was designed to provide ongoing, integrated clinical mentorship and quality improvement for decentralized primary health care centers that provide predominantly outpatient care. However, the core principles of the program—to ensure health care workers have the skills, knowledge, and opportunity to provide high-quality services—can be relevant to other levels of the health system, such as at district hospitals. The operationalization of MESH-QI at various systemic levels looks slightly different in practice, recognizing differences between in-patient, physician-led care and outpatient, nurse-led services. The figure below outlines some of the key similarities and differences between hospitals and health centers in Rwanda. These factors informed PIH's adaptation of MESH-QI to district hospitals, which had a stronger emphasis on systems-focused quality improvement teams than on one-to-one clinical mentorship.

KEY DIFFERENCES IN SETTINGS OF CARE

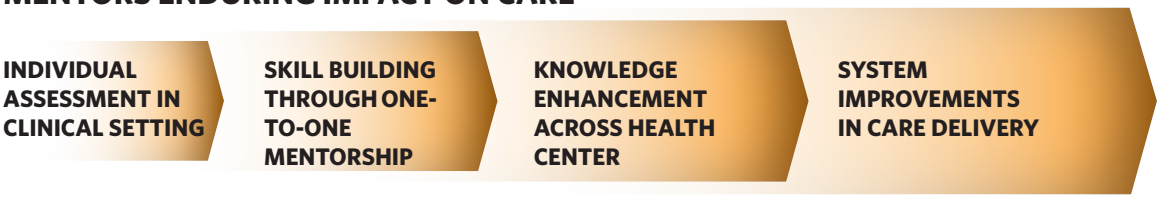
Health Center	Hospital
Primarily staffed by nurses	More diverse staffing led by physicians
Predominantly algorithmic diagnosis and treatment complemented by clinical reasoning	Predominantly clinical reasoning and advanced diagnosis complemented by algorithms
Primary health care competencies	Advanced clinical competencies
Limited peer support	Variable peer support

Hospitals present greater diversity in care teams and require a higher level of clinical reasoning than health centers. Additionally, patient flow differs in inpatient and outpatient settings, and mentorship needs to be responsive to those differences. Hospital implementation must support clinical decision-making and a deepening of clinical skills in settings such as clinical rounds and bedside teaching. More diverse care teams in the hospital setting make direct peer-to-peer mentorship less feasible. Mentors may support multidisciplinary teams that include nurses, doctors, and allied health professionals. Sites must identify and provide additional supports for mentors to be successful in supporting the full team. Alternatively, a narrower scope of mentorship can support one cadre of staff, such as nurses, in the hospital.

ROLES OF MENTORS

Mentor responsibilities begin in the health center setting, assessing quality. Through a skill-building process, they expand to improving knowledge across care settings and ultimately improving systems, with enduring impact on care delivery.

MENTORS ENDURING IMPACT ON CARE



Mentors observe patient consultations using observation checklists to assess quality of care delivery. Occurs every 4-6 weeks.

Mentors address urgent issues in the clinical setting. Post consultation discussions focus on strengths, opportunities, and mentee skill building.

Mentors develop on-site learning sessions to address knowledge and training gaps among health center nurses.

Mentor-driven evaluations including facility assessments identify system gaps which can be addressed through MESH-QI improvement projects.

MENTOR HEALTH CENTER ACTIVITIES Given their many responsibilities, mentors benefit from structured guidance on allocating their time for mentorship and quality improvement when they visit health facilities. Mentors can use tools such as a visit guide, case studies and simulation models to best manage their visits and maximize their impact. The guidance below describes how mentors can spend their time during a typical health facility visit. Each MESH-QI program should establish simple standard operating procedures (SOPs) to guide mentors in their daily work.

FREQUENCY OF HEALTH CENTER VISITS Mentors spend a significant amount of time visiting health facilities to provide mentorship and QI coaching. The amount of time spent should based on what is most appropriate and feasible within the site context. There is no exact guide for how often a mentor should visit a facility. Data on where the quality gaps are greatest can guide the frequency of visits. Mentors need to meet with mentees often enough to build a strong working relationship. Visits may occur more frequently in the beginning of MESH-QI implementation and be reduced overtime. If mentorship is successful and mentees reach a level of competence, the frequency of visits can decline over time, toward periodic check-ins. Mentors can then focus on newer mentees. Mentor debriefing and program monitoring and evaluation can help inform decisions on the frequency of mentorship.

BEST PRACTICES FOR MENTORS

Guidance	Approach
Schedule visits based on urgent needs at a facility, such as staff turnover or concerning data.	An increase in severe pediatric malaria patients referred from a specific health center requires a visit, to understand the cause and provide mentorship or QI coaching. The visit may include mentorship to make sure nurses are identifying and treating malaria before cases become severe. Urgent systems interventions should be considered to make sure malaria diagnostic kits are available. Ongoing QI can help avoid future problems.
Support the adoption of new protocols or updates of existing protocols and guidelines.	If the national criteria for starting HIV patients on ARVs changes, mentors should schedule visits to confirm mentees have all the up-to-date information and are correctly applying the new protocol in the clinic.
Provide routine support for QI projects.	Mentors can decide how often to visit based on the facility team's skill level in QI. As QI teams master the PDSA process, coaching visits may be less frequent, but can still happen on a regular schedule.
Incorporate feedback from other supervisors that visit the health facilities.	Supervisors, M&E leads, or other health system providers that oversee health center activities may identify needs that require a mentor response.
Provide follow-up visits based on pre-established mentorship plans.	If mentors commit to bi-weekly follow-up visits, they should maintain this schedule.
Integrate mixed approaches measuring quality of care.	When no cases are present, integrate chart review, case studies, and vignettes to support assessment.

Claudine Nyiramana brings her daughter Genevieve Uwimana to Butaro District Hospital, in Rwanda, for a follow-up appointment with Dr. Cyprien Shyirambere. *Photo by Cecille Joan Avila / Partners In Health*

MENTOR SITE VISITS MESH-QI program procedures will help mentors establish clear expectations for facility-based activities. A monitoring and evaluation framework measures the success of the mentor's activities and practices. While mentors may engage in numerous activities, not all activities are done at each visit. Mentors must use their time effectively to support health center teams in the most needed areas—and use data to identify those needs—such as clinical mentorship, teaching, and QI coaching.

POTENTIAL MENTOR ACTIVITIES

Clinical mentorship one-to-one clinician support and mentorship.
Coaching with facility teams on system-focused quality improvement.
On-site teaching including didactic sessions or simulations.
Skills Assessment through clinical vignettes to evaluate core skills.
Knowledge assessment using cases and vignettes to assess knowledge of mentees and monitor mentee progress.
Record review to measure quality of care when the mentor is not present.
Facility assessment to monitor staffing, equipment, or supply issues.
Leadership engagement reflecting on mentorship models, knowledge enhancement, and system improvement.

Mentors benefit from a menu of activities that can serve as a guide for visits. This guide can list activities that should be completed at every visit. However, the guide should not function as a strict set of rules. As the program evolves, so will the mentor's role, based on the needs of the mentee and site.

Part of the mentor's job is to use data in daily work and routinely share information with mentees and health facility leadership during mentorship visits. Data-driven practices are essential to a successful model and rely on the aggregation of data to improve training and care.

VISIT GUIDE EXAMPLE

Before the visit

Inform the head of the facility of the timing and goals of the visit.
Share a schedule and objectives with the mentee.
Prepare tools including checklists, teaching materials, etc.

During the visit

Greet the head of the health facility and discuss goals for the day.
Observe when patient volume is highest, typically mornings.
Mentor providing feedback when observing patient consultations.
Meet with QI teams to review progress on QI projects, develop new projects, and provide coaching.
Engage in other activities such as record reviews and teaching sessions when patient volume is lower.

Ending the visit

Debrief with the mentee about the day and agree upon areas for the mentee to focus on before the next visit. Be sure to emphasize the strengths of the mentee.
Check out with the head of the health facility and provide feedback on observations.
Discuss progress of mentees and ongoing challenges. Agree on when the next mentorship visit will be conducted.

MENTORING THE MENTOR To be most effective in their roles, mentors require reinforcement of their roles and skills. This can include clinical support from "mentors of mentors" and their own supervisors, an effective coordination system, and MESH-QI program leadership guidance. Structured debriefings and evaluations are critical to success.

Mentors benefit from an intentional approach to debriefing after site visits, to reflect on health facilities and activities. These structures may rely on the availability of clinical experts—on-site or via teleconference—to review complicated clinical cases, program monitoring and evaluation data, and peer learning opportunities. These structures should be scheduled routinely. Effective examples are monthly meetings between mentors and technical advisors and quarterly mentor meetings that bring all mentors together to discuss successes and challenges. Whenever possible, opportunities to discuss key issues with health system leadership and other key health system stakeholders should be used to ensure they also are engaged in problem-solving strategies for the MESH-QI program.

EVALUATION Mentors should routinely be evaluated to ensure they are providing high-quality mentorship. Planning joint visits with "mentors of mentors" and the mentors themselves creates an observation structure, demonstrating how mentorship works and identifying specific strengths and weaknesses. This is particularly important

as individuals begin as mentors, and can provide guidance on how to differentiate themselves from traditional supervisors. Mentees can also provide perspective on the mentor and how mentorship is meeting their needs.

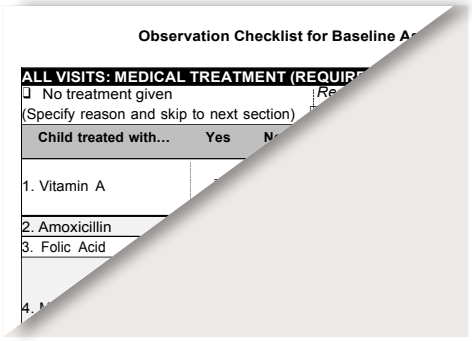
Even with excellent planning and a highly skilled team, mentors may encounter challenges executing the model or resistance to mentorship from the mentees. Mentors benefit from accessible technical advisors, strong program leadership and coordination to address challenges that arise. In order for the program to be successful, the team must be responsive to the challenges faced in implementation.

The next section of this guide focuses on developing a monitoring and evaluation (M&E) framework for the MESH-QI program, to critically evaluate whether it is achieving its goals. Mentors and mentees will discuss what is working and what isn't, both qualitatively (from experience) and quantitatively (based on data), in order to continuously improve the MESH-QI program.

TOOLS

A number of tools for program implementation and monitoring support MESH-QI's goals of improving quality of care delivered and patient health outcomes.

OBSERVATION CHECKLISTS Observation checklists are an effective tool that help mentors develop their roles and collect useful data for program monitoring. Mentors can use checklists to document mentee activities, based on local standardized protocols. These checklists should be developed based on setting-specific clinical care protocols. Checklists depend on the mentor's scope of work and may differ by site, and within sites. For example, Maternal Child Health Mentors in Rwanda use different checklists depending on whether they are observing antenatal care, maternity services, post-natal care, a malnutrition clinic, or Integrated Management of Childhood Illness visits. Checklists help mentors identify weaknesses and give mentees on-the-spot feedback. They also help track progress over time, by serving as data-collection tools and clinical mentorship tools. Checklists must be easy for mentors to use. When possible, mentors should help develop and pilot checklists to gain usability feedback. Training mentors on how to use the checklists ensures they are used appropriately and consistently. (see Annex for sample checklists).

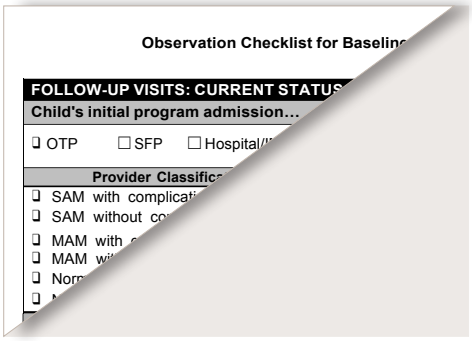

Observation Checklist for Baseline A

ALL VISITS: MEDICAL TREATMENT (REQUIR

❑ No treatment given

(Specify reason and skip to next section)

Child treated with...	Yes	N
1. Vitamin A		
2. Amoxicillin		
3. Folic Acid		
4.		


Observation Checklist for Baselin

FOLLOW-UP VISITS: CURRENT STATUS

Child's initial program admission...

❑ OTP ☐ SFP ☐ Hospital/

Provider Classific

❑ SAM with complicati

❑ SAM without co

❑ MAM with

❑ MAM wi

❑ Norm

❑

TEACHING AIDS While most of a mentor's time will be spent providing clinical mentorship and quality improvement coaching, mentors may use teaching sessions to address specific knowledge gaps among health care workers. Curriculum, clinical case studies, simulation exercises, clinical vignettes, and other materials for mentors can help make these teaching sessions most effective. As part of their clinical mentorship training, mentors should be trained in basic adult learning theories to apply in their practice, making these teaching opportunities most effective.

REPORTING TOOLS Beyond direct observation of patient care, reporting systems for mentors provide clear information on mentee activities. The data collection approach is detailed in the Monitoring, Evaluation and Data Utilization section of this guide.

TROUBLESHOOTING

Effective mentor models require sites to have enough of the "4 S's" (Space, Staff, Stuff, Systems) to function effectively. If there is not enough staff, then there will be a shortage of mentees, and those mentees will lack time to engage in the process. Similarly, if there is a lack of supplies, or "stuff"—such as medical equipment and medications—then staff cannot succeed in their roles. Ensuring systems are in place for rational staffing models that support quality care delivery will also increase efficiency and effectiveness. Systems QI coaching can help overcome some of these gaps by developing an advocacy plan or district-wide solutions, to ensure the facilities most in need receive investments in "space, staff, and stuff" to deliver quality care.

TRANSPORTATION Given limited resources, mentors often need to coordinate transportation with other people going to a given site. The mentorship program requires day-long visits at health facilities, but shared transportation may pressure mentors to finish their work earlier than planned. Additionally, sharing transport with colleagues can cause mentors to have limited access to facilities that are further away. Vehicles are sometimes used for other priorities, which can result in cancellations of scheduled mentoring visits. To address these conflicts, mentors can work with site leadership to emphasize the specific nature of their roles and identify how best to share resources without compromising the mentorship model.

TURNOVER Turnover of mentors and mentees is a significant challenge for implementation and sustainability of a MESH-QI program. Turnover may be due to several factors that can push and pull staff from their roles. In the Rwanda context, working from remote or isolated health facilities, demand for staff with advanced degrees, and insufficient compensation were the major factors leading to staff turnover. During exit interviews, mentors and mentees highlighted that the MESH-QI program improved their skills and confidence in clinical and QI practices, which made them more competitive in the job market.

HEALTH SERVICE UTILIZATION Workload at health facilities increases with incidence of common diseases, and can decline because of barriers to care. These realities reduce mentors' opportunities to focus on skill-building and feedback. Increased incidence of malaria and pneumonia may be seasonal. Mentors must recognize these demands and challenges when scheduling their visits. In contrast, some factors may lead to limited health facility utilization, including lack of health insurance, or geographic and seasonal barriers such as rainy seasons. Since these patterns reduce patient volume at heath facilities, mentors may observe fewer cases, limiting opportunities for feedback to mentees. These lulls in care can offer time to focus on systems-level QI projects, or review records . Extra mentorship visits may be scheduled to make up for the missed opportunities after particularly busy clinic days. Mentoring schedules and structures should be flexible enough to adapt to the different factors that affect mentee availability.

COMPENSATION, INCENTIVES AND BENEFITS Due to the nature of the work, which involves sustained relationships with clinicians, mentors can be called by mentees during the night or on weekends. Mentors may receive phone calls that require unplanned, urgent visits to health facilities. Mentors should be compensated for their flexibility, but estimating the appropriate compensation for support may be difficult and resources for incentives are limited. Also, mission fees and other related incentives can be difficult to predict, depending on health facilities needs. While incentives should be offered appropriately, budget constraints may affect the ability to compensate mentors for their extra time commitments.

ALLOCATING TIME: MENTORSHIP v. QI Helping mentors focus equally on mentorship and QI can be challenging. Mentors may default to clinical mentorship if they lack confidence in their QI skills, or because it is difficult to motivate QI teams at health centers. Historically, QI had not been an integral part of the MOH's focus in Rwanda. However, the MOH commitment to QI at health centers has increased over time, creating an incentive for mentors to equally support clinical and QI efforts. As QI information and progress has been communicated more effectively, the MOH has correspondingly demonstrated increased interest in sustaining QI projects.

In Rwanda's MESH-QI, the Ministry of Health determined standard salaries for nurse mentors. Partners In Health and partner hospitals estimated monthly incentives to facilitate a mentor's work. Monthly expenses would vary depending on the number of visits, whether visits included overnight stays, transportation methods, and the frequency of phone calls mentors needed to make to mentees for remote support. However, in order to streamline the support process, the Rwanda model established average cost estimates, creating standard stipend rates for meals, accommodations, communication fees. and other expenses. The resulting stipend rates were consistent across all mentors.

Monitoring, Evaluation, and Data Utilization

The section offers tools, processes, and data models to strengthen MESH-QI implementation and impact.

41 Monitoring and Evaluation Framework in MESH-QI
45 Data collection tools and approaches
52 Data utilization and analysis
54 Training for M&E
55 Costing methodologies

MESH-QI is built on quality improvement principles that are grounded in data. Data helps identify quality gaps that need strengthening and can explain the main causes of these gaps, including systems and provider behavior. Data also can determine appropriate program goals, and help monitoring and evaluation exercises. Data can be applied to specific areas of improvement and across a MESH-QI model, to answer questions such as:

Is care improving, and how?

Are mentors visiting facilities?

Are health care workers feeling supported in improving care delivery?

Can issues be identified and addressed through data collection?

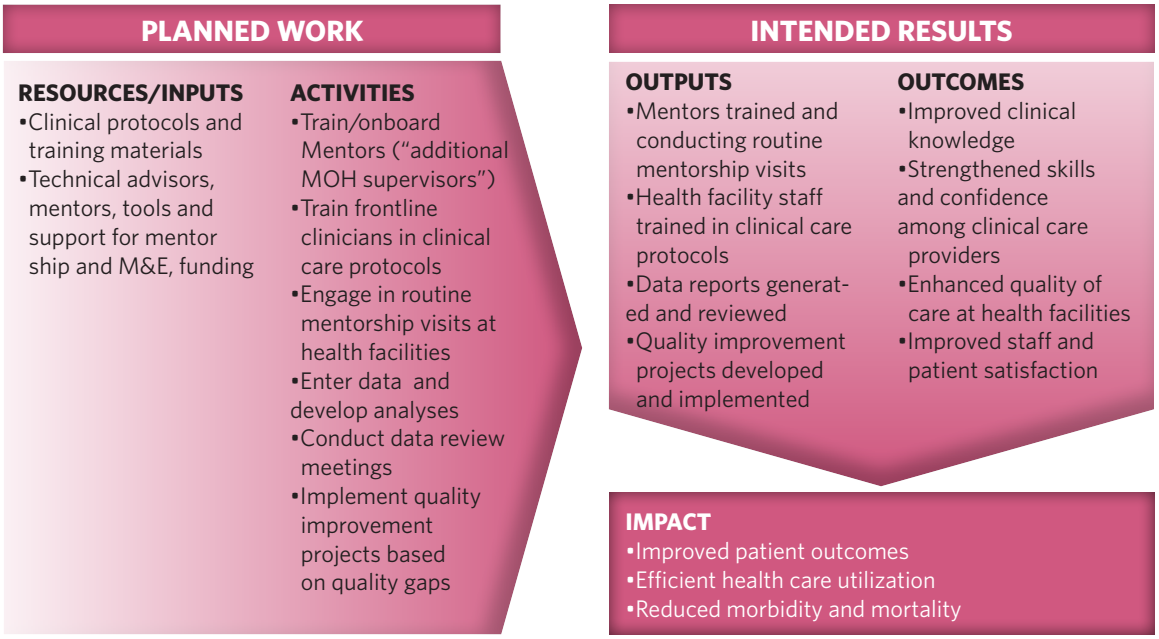
Mixed-methods monitoring and appropriate qualitative methods can supplement more common quantitative monitoring and evaluation plans, to sufficiently answer these questions. Collection captures not just what is happening but also how and why, guiding program implementation and strengthening understanding of where adaptation is needed. Ideally, the majority of data collection, particularly quantitative data, should be derived from routine collection. Other metrics and measurement approaches need to be streamlined as much as possible to reflect the level of evidence needed and resources available. Individuals collecting data must have the skills and support to ensure data are of adequate quality and to transform the data into information, knowledge, and ultimately to action. It is essential that data are collected and compiled in a timely and effective manner to support analytic processes and program improvement.

Often in low- and middle-income countries capacity constraints limit collection and utilization of data. In order for information to be integrated in decision making most effectively, users must have access to information in a timely manner, have the capacity to interpret, and have the ability to apply the information to improve the program. In health care settings with limited resources, data recipients can be overwhelmed by too much data or data of questionable quality. As a result, data collected may be left unused in decision-making. The MESH-QI program created information feedback loops in which data are not just collected, but are used by the program and other stakeholders to improve the quality of health care and strengthen the health system. Use of data to inform decisions at every level – from conducting a needs assessment and informing MESH-QI adaptation, to mentor feedback to the nursing consultations, to the district health manager and MESH-QI program managers – can help strengthen health system components and lead to improved quality and more effective program implementation. These data can also be used for programmatic evaluations to help understand remaining gap and successes and to provide evidence for expanding the program to new geographic areas or new domains.[4, 7]

This section of the implementation guide describes the components necessary for an internal M&E system to collect and use data to monitor, evaluate, and strengthen a MESH-QI program.

M&E FRAMEWORK

MESH-QI LOGIC MODEL



LOGIC MODELS Logic models are an effective tool that offer a map for monitoring and evaluation (M&E) planning. There are many resources freely available on how to develop a logic model including the W.K. Kellogg Foundation's Logic Model Development Guide.[10] Logic models help to identify the most important indicators to monitor adaptation of MESH-QI. Because MESH-QI is an approach that needs to be adapted to varying local contexts, the conceptual model for programs is likely to vary. The key to success at any site is to clearly layout the logical flow of the MESH-QI, including where work will focus and what the logical outcomes and impact of the program's activities will be.

KEY CONTEXTUAL FACTORS WHICH WILL INFLUENCE MESH-QI IMPLEMENTATION

Geography Distance of health facilities from patient population: whether health facilities are very far or very close may influence frequency and duration of visits.

Supervisory system A strong existing supervision system may need simple modifications to expand training and integrate MESH-QI as opposed to requiring new supervision positions.

Resource inputs and results: Tracking inputs (resources) activities (processes) of the program and their immediate outputs (what health centers and health care workers are receiving and doing).

Because the intention of MESH-QI is to improve quality of care, it is important to monitor quality of care indicators, focusing on process performance measures such as appropriate use of medications, correct diagnoses, and system changes such as stock outs rates to ensure the program is having the intended outcomes.

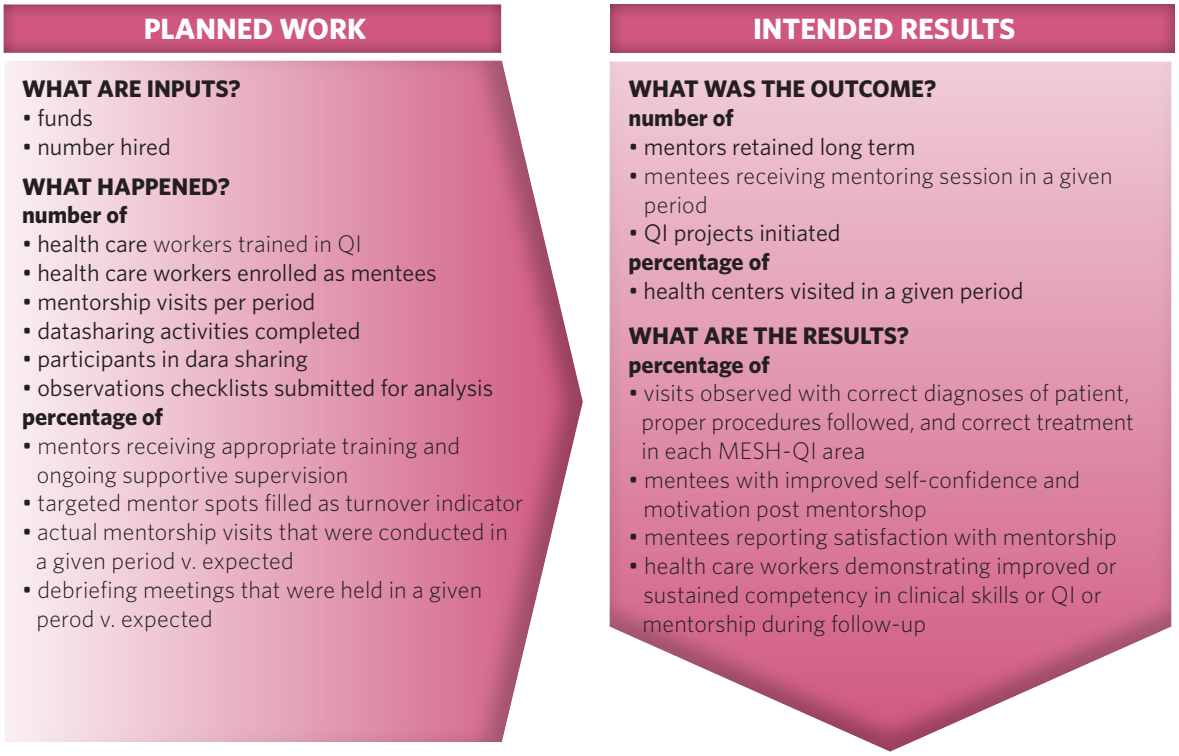
MESH-QI programs target both system and individual change, tracking QI activities and projects is essential to success. The ultimate impact of improved health outcomes is difficult and expensive to measure and may be more appropriately the focus of research studies or impact evaluations rather than QI monitoring and evaluation. However, an evidence-based logic model reflecting detailed contextual factors which need to be addressed can improve quality of care. Areas targeted through mentorship should ideally translate to improved health outcomes.

DETERMINING KEY INDICATORS MESH-QI can be applied to support diverse clinical domains, so each program needs to develop indicators that are appropriate and useful to the individual context. When designing indicators, considerations should include inputs, processes/activities, outputs, and outcomes that are necessary for a program to be successful. Identifying key indicators at all phases of the logic model supports understanding whether or not a program is functioning as anticipated and if the outcomes are as expected. Existing accessible sources of data such as routine health information systems can be leveraged to support key indicator development. While this may include an initial investment to improve data quality, there are benefits to developing indicators that are integrated into the national data system since this will ultimately allow analyses across the health system.

While specific key indicators depend on the individual MESH-QI program, the below list includes examples of indicators to consider. Indicators should be mapped to the MESH-QI program logic model and indicators should be Specific, Measurable, Actionable, Relevant, and Time bound ("SMART"). To the extent possible, indicators should leverage routinely collected health information and nationally collected indicators. However, it is likely that additional information included on quality of care delivered at the level of patient-provider interaction will be needed to build an effective model.

Outcome indicators are most likely to vary depending on the specific areas of mentorship. For instance, indicators needed to track the quality of care in an adult chronic care clinic are very different from indicators needed to track outpatient visits for acute bouts of child illness. If the MESH-QI is operating across several different clinical domains, it can be helpful to track several indicators that support monitoring progress across the entire program. The outcome indicators listed below are sufficiently general to apply across different clinical areas.

MESH-QI LOGIC MODEL: SAMPLE INDICATORS



Program leadership needs to prioritize which indicators to track based on priorities and feasibility given available resources. A good process for developing indicators is to start by brainstorming all potential indicators that would be useful to monitor and evaluate the MESH-QI program. Then consulting key stakeholders helps to refine the list to the essential indicators to track routinely.

While some MESH-QI programs hope to measure the impact of the program on patient outcomes and population health, measuring impact is complicated. It requires higher-level evaluation skills and is more expensive than routine M&E assessment. Measuring population impact requires assessment of accessible resources, collection of necessary data, and sufficient sample size to detect statistically valid impact. In addition, many factors impacting populations and outcomes may not be atrributable to a given intervention. It's essential to understand how to evaluate the degree to which the intervention caused or contributed to change. This analysis may require implementation science methods using counterfactuals, interrupted time series, or other quasi-experimental designs. While routine and periodic evaluations are performed internally to inform continuous improvement of the program, an external evaluator may be required to assess the long-term popuation impact of the MESH-QI program. A thorough impact evaluation demonstrating the effect of MESH-QI on patient outcomes, for example change in mortality rates, requires rigorous implementation design. Random selection of the intervention as well comparison or control sites may be required. Such rigorous evaluation designs are costly and also require ethical assessments. While these approaches are not necessary for routine MESH-QI M&E, there are many resources available to support designing impact evaluations. The World Bank's freely available **Impact Evaluations in Practice** handbook is an especially useful tool in this process.

IDENTIFYING TARGETS FOR KEY INDICATORS Once the list of key indicators for the adapted MESH-QI program is established, targets for the expected processes, outputs, and outcomes will follow. Target setting requires determining desired results of the MESH-QI program within a specific time frame. The target may be based on baseline data, past trends, national targets, or standard performance protocols while keeping in mind what can be realistically achieved given capacity constraints and the specific context. Often a program will choose an initial target which is a "stretch goal" and one which can likely be achieved with moderate effort, then revisit and increase that goal. If programs already exist to address gaps such as performance-based financing (PBF) or results-based financing (RBF), harmonization with national or subnational indicators and targets will be an important consideration for goal setting.

All Babies Count Mentor Merab Nyishime (left) with mentee in Rwinkwavu, Rwanda. *Photo courtesy of Partners In Health*

GUIDING PRINCIPLES FOR DEFINING LOGIC MODEL INDICATORS

Keep the indicator list short

More indicators require more review time and often mean higher costs of data collection. A report that is excessively long is unlikely to be used by the program manager or others.

Use existing data

Aim to use well-tested internal data as much as possible recognizing the complexity of validating data quality.

Organize indicators logically

Categorize indicators by processes, outputs, and outcomes when approaching measurement in the organization.

- **Processes** – measure whether the program is being implemented as designed.
- **Outputs** – measure the direct results of the program activities.
- **Outcomes** – measure the benefits of program activities and outputs on health care provision and mentees. Outcomes are often changes in knowledge, skills, attitudes, or behaviors.

Make indicators SMART

- **Specific** – clearly define who, what, where, and when.
- **Measurable** – able to be counted, calculated, or observed.
- **Actionable** – responsive to program activities.
- **Relevant** – linked to an outcome in the logic model based on theory, research, or professional expertise.
- **Time bound** – measurable at established intervals.

Get input from various stakeholders

Rely on insights of clinicians and others working in the organization.
Do not waste time monitoring areas known to be successful.
Allow the M&E team to advise on how easy or difficult indicators will be to collect.
Gain buy in from health system leadership by tracking indicators that are seen as a priority to the health system.

DATA COLLECTION

A key component of the MESH-QI program is the collection of data across many programmatic areas related to quality of care at health facilities.. Effective feedback loops ensure data is returned to mentors, clinicians providing care, and leadership at the health system and district levels. Ultimately collected data supports informed decision making. The section below outlines how data collection feedback loops can be developed, beginning with what information to collect and which strategies can be used to ensuring effective data utilization.

ORGANIZATIONAL READINESS FOR M&E The MESH-QI program is most valuable for organizations that have the capacity to monitor, evaluate, and respond to results. Available data and collected information offer a baseline and a road map forward. In order to establish feedback loops for data utilization, an organization must at the minimum have a system for M&E that includes: data collection, entry, management, and quality checking; data analysis; and feedback for use.

If an organization does not have an M&E program in place, then one must be established in order to move forward with this important aspect of MESH-QI. MESH-QI implementation emphasizes monitoring components while evaluation capacity is secondary. A number of resources provide guidance on establishing M&E teams and systems. The M&E plan for MESH-QI depends on the capacity of the M&E team and system overall. All M&E plans should aim to be both effective and as simple as possible. If an organization is launching M&E for the first time, it is best to develop a simple M&E plan focusing on a short list of essential indicators while ensuring high quality data collection, entry, analysis, and use for those few essential indicators. Over time as M&E capacity grows, it is advisable to measure process, outputs, and outcomes continually, while keeping in mind the simplest system to assess what the program is achieving in order to continuously improve. M&E resources are included in the Annex Resource Guide.

TIMING OF DATA COLLECTION To observe change, it is helpful to establish a baseline prior to launching the program. The baseline can help to evaluate program outcomes, yet it requires an additional investment in data collection before launching the MESH-QI. More rigorous evaluations at baseline and periodically throughout the program by external evaluators can assess the quality of care provided. However, relying on routinely collected data for the program evaluates progress over time.

AVAILABILITY OF ROUTINELY COLLECTED DATA If a program site has an M&E system in place, currently collected data should be reviewed to clarify if it will be helpful for monitoring the MESH-QI program. Existing data collected might include health information systems for the health facilities or national health system or electronic medical records systems at the facilities, which can provide patient level information. It is important to balance convenience and efficiency of using existing systems with gathering information relevant for program evaluation. Data quality needs to be sufficient for monitoring, a different threshold than is required for research. National health information systems typically provide aggregate information on patient volume, catchment populations, and staffing levels at facilities for various diseases. This can be useful for planning purposes and to estimate program coverage, but there are usually strict policies regarding access to routinely collected health facility/health system data. It's essential to review these policies to determine whether data can be made available to monitor the MESH-QI program.

NEW DATA COLLECTION While national health management information systems and electronic medical records (EMR) exist in some countries, they are limited in the information that they provide for programmatic evaluation particularly

around care processes. Depending on what data is available to monitor and evaluate the MESH-QI program, it is likely that the MESH-QI team will have to plan for new routine data collection. Additionally, as described in the section on mentorship, tools such as observation checklists can both guide mentorship and generate data for M&E. Observation data is critical to assess changes in the quality of care provided by mentees.

New data collection requires developing procedures and systems for data collection and management including data collection tools and databases for entering and storing data. Some organizations have existing departments or teams, such as an M&E team, to take on these responsibilities with the necessary expertise to establish such systems and tools. If an organization does not, it's critical to identify an individual or group with the skills necessary and time available to support the MESH-QI team to do this work. Alternatively, it may be necessary to hire an individual with this skill set. Planning for new data collection can be time consuming requiring brainstorming relevant metrics, mapping out approaches to data collection, and developing tools to aggregate and present data. The upfront investment of time is worthwhile as it often results in high quality data and an effective road map for the MESH-QI.

PROCESS FOR PLANNING NEW DATA COLLECTION

Identify key questions to be answered at the different levels: mentor, facility, district program.
Determine the key indicators to collect and how these indicators can be measured with the greatest efficiency possible based on key questions.
Adapt existing tools or develop new tools to measure key indicators. Use the design phase to consider how these tools will be used in the field to save significant time and resources throughout the project.
Pilot test the tools and all steps of data collection including how information will be collected, aggregated, and reported back to the team.
Test all reports formats and processes.
Confirm what to include in a database based on final data collection tools.
Develop a database for managing data whether in Excel or Epi Info or other software.
Train appropriate team members on data collection tools and the database.
Establish clear responsibilities for data collection, entry, and management.

DEVELOPING DATA COLLECTION TOOLS Developing effective data collection tools and observation checklists takes time. Ideally they can be adapted from existing tools. Before developing tools and checklists, it's essential to identify the program's key indicators and outcomes and to develop a plan to measure progress against them. Tools should be oriented toward end users and designed in a simple user-friendly way since inconsistent collection and poorer quality data may result if data collection tools are burdensome.

Depending on context and resources, the team will need to decide whether paper-based data collection or mobile data collection (i.e., smartphones or tablets) is most efficient and feasible. Some advantages of paper-based data collection include that less technical skills are required to develop and implement them and they do not require access to power-sources. However, paper-based data collection requires human resources for data entry. This extra step creates an additional opportunity for errors, takes more time and may include incremental labor costs. Mobile data collection is advantageous as it combines data collection and data entry into a single-step. This single process method can improve data quality and make data accessible quickly if mobile phone networks or wireless internet is available.[12, 13] Some programs allow for exporting reports instantly within the data collection program which can improve data feedback during a mentorship visit as the mentor can provide a summary of the day's observation to the mentee in real time. However, mobile data collection requires an up-front investment in supplies as well as the technical skills for building mobile data collection tools.

Once the MESH-QI team has identified the indicators to measure, the team or M&E designee can draft a data collection tool and gather feedback from those who will be using them. Key questions to consider when evaluating tools include:

Are they easy to understand?

Can they realistically be completed?

Do they capture the information needed?

The tool can be reviewed and edited with feedback from mentors and others who will work with it such as the M&E team. The process should include updating the data collection tools and piloting them in a real situation. Collecting data with mentors and practicing the data entry process can reveal if language in the tools is ambiguous or ineffective. Additionally, pilot testing can resolve database bugs prior to implementation of the monitoring system. Reviewing the data collected in the pilot tests can also help to identify potential measurement issues .

DATA COLLECTION TOOLS FOR MENTORSHIP Appropriate effective tools for gathering data for the specific M&E framework also support mentors in providing data-driven mentorship and QI coaching. Examples of MESH-QI tools are contained in the Annex and are available for download. Additional examples of tools for mentorship that can be adapted include the WHO's Safe Childbirth Checklist.[14] When considering which tools are necessary for MESH-QI, it is important to think about the purpose of the tool (i.e., is it purely data collection/reporting or is it data collection to support mentors on the job?). This will help inform exactly what level of data detail is needed and when it might be completed by the mentor, whether during the visit or after.

ACTIVITY LOGS Activity logs track the specific activities of the mentors such as which facility are they visiting, what happens in general at the facility (service provision, staffing, and supplies), what are they doing during their visit, and are they working on a QI project at the facility.

These logs are very helpful for observing the intensity of mentorship among facilities and for monitoring the mentor's productivity. The logs are also used to gather information about the facility. Mentorship is helpful for building competencies and confidence, but there are often systems issues that can impede the quality of care. The facility checklist section of the activity log can help to identify issues such as staffing challenges, or stock outs that may prevent even the best trained nurse from delivering high quality care. Issues that are identified in the facility checklist may inform QI project development or may require direct advocacy to health facility leadership to resolve.

OBSERVATION CHECKLISTS One key component of the MESH-QI program is the use of observation checklists during the mentorship visits. These checklists allow the mentor to document what is happening during the mentorship visit including questions like: Is the clinician asking important questions during consultation? Has the clinician taken and documented vital signs? Does the mentor agree with the mentee's diagnosis of the patient?

When aggregated, these checklists serve to evaluate the overall success of the program in improving quality of care. They are also important tools during the mentorship encounter. The mentor uses the checklists to identify issues to be discussed with the nurse mentee or to highlight areas where the mentee is excelling. When a mentor sees that a nurse is not providing the correct treatment, the mentor can step in and ensure that the patient receives appropriate care. Observation checklists are specific to the clinical area being observed and follow local guidelines and protocols on care provision. They should be developed in close collaboration with expert clinicians and local stakeholders from the health facilities or health system leadership.

DATABASE CREATION Once data collection tools are finalized, a database is needed to store and manage data. If the MESH-QI is using electronic data collection, the database can be created automatically by the data collection platform. However with an electronic collection tool it's important to confirm that data can be easily extracted into automated or customized reports and downloads. A paper-based data collection requires a database platform that is easy for the team to use and is standard to most operating systems. Microsoft Excel or Microsoft Access, as well as open source options such as Epi Info or Open MRS-based databases, are commonly used tools. Decisions on database software should be guided by affordability and organizational capacity to use that software, as well as where, how, and by whom data will be entered. The usability of the software for data entry, data management, and data extraction should be evaluated to determine which platform is best for the organization.

Designing a robust, accessible database at the project launch will save time and reduce the risk of challenges throughout the project. The database should be easy to understand by those working with the data – from entry to reporting to analysis. The more simply information can be generated from the database, the more effective it will be for timely utilization. As with data collection tools, no database will be perfect when it is first developed. Developers and end users should practice entering data into the database to identify any glitches. Necessary corrections should be made to

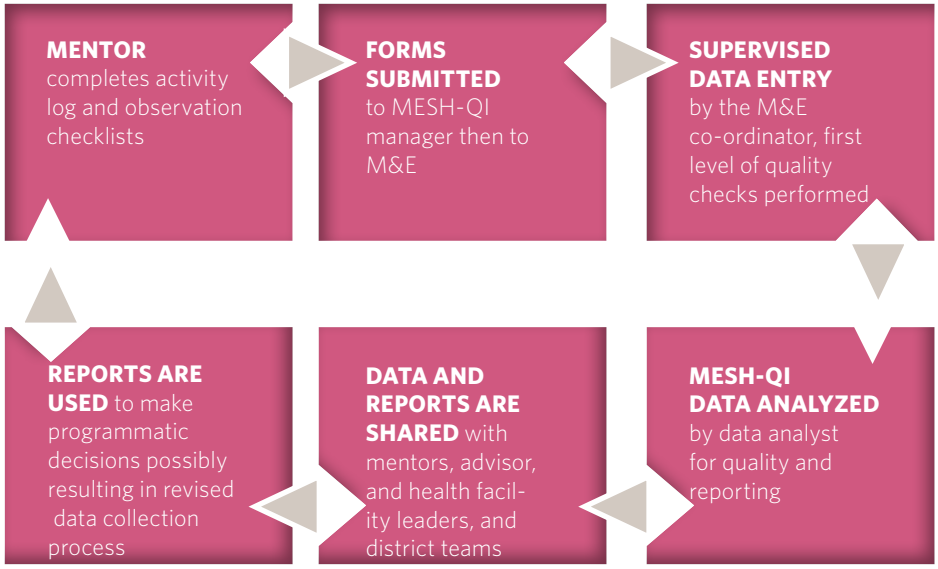
the database, and it should be retested to confirm that any glitches are fixed and the database can be considered ready for use.

DATA MANAGEMENT As with all aspects of MESH-QI, planning is essential for data management. Before beginning active data collection, the team should have a plan in place for data management. The plan should include clear roles and responsibilities so that all data are handled securely, are cleaned properly, and are quality checked so the information feedback loop functions efficiently. Depending on the scope of information that the MESH-QI program seeks to review, different members of the team will be involved in various steps of this process. Communicating the importance of each team member's contribution to the overall system can help make sure that each component of data management works smoothly.

ENSURING DATA QUALITY Measuring data quality is essential for ensuring that decisions are made using trustworthy data. Poor data quality results in poor decision-making. Therefore a plan for checking data quality is an essential part of the data management system. Electronic data capture can help to automate checks for consistency, correctness, and completeness. Quality is essential to effective MESH-QI implementation, yet it's important to consider the elements implicit in quality.

MESH-QI MENTOR COMMUNICATION LOOP

The data flows and the controls in place ensure quality collection and a continuous improvement loop.



KEY ELEMENTS OF DATA QUALITY

Is it complete? Completeness refers to whether all data elements have been collected and included in a collection tool. Some common problems with completeness are missing information in the observation checklists and missing data in the database. Completeness is easy to assess but requires working with data officers and mentors to determine causes of issues as they arise.

Is it valid? Validity refers to whether the information being collected is logical and reasonable. For example, an entry of 40kg for the weight of a newborn would be considered invalid, since it is impossible for a human newborn to weigh 40kg. It is possible to limit validity errors through range checks in data collection system. Some tools like Microsoft Excel and Access offer functions to set validity ranges and checks for outlier values (typically +/- 3 standard deviations from the mean).

Is it reliable? Reliability refers to the similarity in information collected from two sources. With the MESH-QI system outlined here, there may be a paper source and an electronic source. Reliability assessments measure how well information from differing sources agrees. Lot Quality Assurance Sampling (LQAS) is an effective method to test validity across a large number of data items.[16]

Is it accurate? Accuracy refers to how well information collected reflects the reality on the ground. This is extremely difficult to measure since under ideal circumstances it would require an observer viewing all consultations and cross-checking other records to see whether information is the same as data collected elsewhere. Alternatively sample sets can be tested for accuracy. Given the resources and time needed for accuracy assessments, it is sufficient to focus efforts on completeness, validity and reliability.

DATA ANALYSIS AND REPORTING A routine system for analyzing and reporting on selected indicators is required for timely data sharing and use. If data are collected electronically, exploring a minimum set of automatically generated reports can accelerate data distribution and use. Some database tools such as Epi Info and Microsoft Access offer simple automated analysis tools and visuals. These require technical set up but contribute to the adoption of data reports among MESH-QI team members. The Rwanda MESH-QI team created easy to understand data visualizations through Microsoft Excel dashboards that encouraged data adoption. District Health Information Software (DHIS) is an open source software platform for reporting, analysis and dissemination of data for all health programs used in more than 40 countries around the world. The growing use of DHIS-2, which includes dashboard capacity, can be leveraged to ensure data use for improvement in MESH-QI.

DATA UTILIZATION

TRAINING ON MESH-QI A key aspect of MESH-QI is putting data to use and ensuring it is understood and used by diverse stakeholders. In some contexts, health care workers may review and use data to inform decisions. However, in many low-resource settings data-informed decision-making may be a less familiar approach for members of the health system. Training on data use is an important step to engage the MESH-QI team and frontline health workers with the mentorship/quality improvement program.

CONSIDERATIONS OF SITE-BASED DATA TRAINING NEEDS

Who uses data routinely at the site? Health workers? Administrators?

How are data used in their site activities?

Does the site collect or generate data?

Does the site review, interpret, or use data for decisionmaking?

Depending on the familiarity of the team, health workers and health administrators working with data will require different levels of preparation and training. It is common for health workers and administrators to produce a lot of data; however, many do not routinely review the data or put it to use for decision-making. Ensuring that all participants are competent and comfortable using data will be essential for effective integration data in program assessment, decision-making, and improvement. The next section on training describes core competencies for staff and key stakeholders to support program success.

SUCCESSFUL SHARING OF DATA

Direct observation and use of the checklist informs real-time feedback from a mentor to a mentee. This is the primary level of data sharing.

Mentors and program leadership share data on mentee progress and QI efforts with leadership at health centers and supervising hospitals. This leads to both program improvement and identification of areas of further opportunity.

Data collection informs adaptations to the program driving improvements in the quality of care. Gaps identified through M&E inform revisions to protocols, procedures, and policies as appropriate.

A key to successful data use is to link opportunities to share data with concrete action steps. Data sharing opportunities require allocated time to discuss action steps that should be taken based on the nature of data being shared. These discussions also help to ensure the data is well understood and hold people accountable for taking action to improve the situations.

USING DATA FOR QUALITY IMPROVEMENT Continuous quality improvement (CQI) is a key component of the MESH-QI program. CQI is an approach to quality management that builds upon traditional quality assurance methods by emphasizing the organization and systems. It focuses on "process" rather than individuals; it recognizes both internal and external partners; it promotes the need for objective data to analyze and improve processes. Good QI requires good data. Data can be used to identify problem areas for QI interventions and are necessary to monitor improvements. It is best to use existing data for QI to reduce the burden of additional data collection. However, depending on the QI intervention this may not be feasible. The key to successful QI is to constantly review data and to respond to what the data shows with targeted interventions. In addition, it's important to remember that using routine data for CQI involves a culture shift and requires buy-in of stakeholders in the process. Although data are available they may not be accepted automatically for CQI. Maintaining engagement of stakeholders throughout the program through data sharing is critical to support this culture shift.

DATASHARING AND FEEDBACK When the M&E framework and data collection tools and processes are in place, the final step in implementing a successful MESH-QI is to ensure that data is understood, applied in decision making, and shared with the health workers delivering care, the original collectors the data. Data sharing can take many forms. To ensure the data is understood, it is important for the sharing process to be active and engaging. Creating face-to-face forums for discussing data can be more successful than relying solely on written communication. The MESH-QI program provides several opportunities for sharing data with the team as well as with a broader stakeholder audience.

MESH-QI mentor debriefing meetings convene mentors across content areas, their supervisor(s), and clinical experts as needed. These meetings can serve as forums to discuss implementation challenges and dive deep into programmatic and quality of care data. Together, mentors and technical advisors review indicators to discuss trends, progress, and issues. Examining data related to the health facility and clinical domains

IN RWANDA

In the case of Rwanda MESH-QI, the health system was decentralized to the district level so MESH-QI held district-level data sharing meetings. These meetings brought together a diverse audience and focused on both challenges and successes of the program. The data presented was aggregated to give a picture across the entire district rather than focusing on individual facilities. However, more in-depth data was presented based on what was deemed both illustrative and important. The meetings were an important space to discuss broader systems issues requiring support of health system leadership. In Rwanda, meetings were initially planned quarterly. The frequency was burdensome for stakeholders so were shifted to a semi-annual schedule. Data was integrated into other routine meetings to increase the timeliness of data sharing.

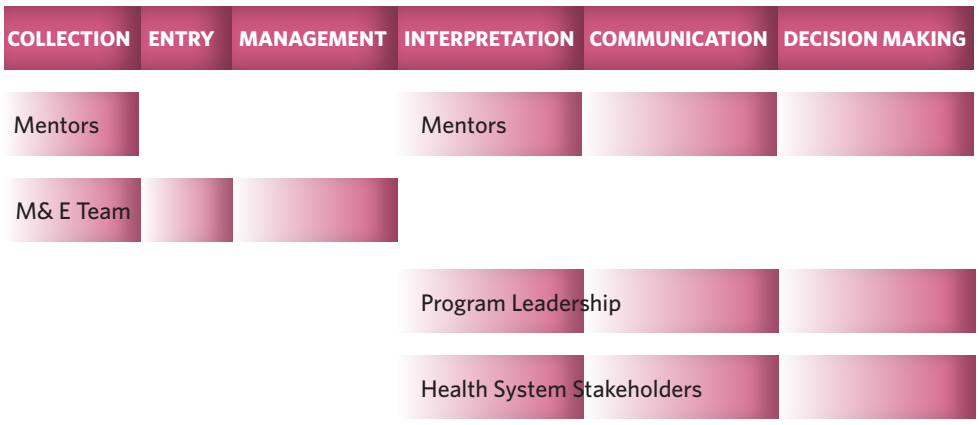
is critical to identifying areas of weakness that can be addressed through MESH-QI. At the same time, the review meetings can identify concerns where larger efforts such as district-wide stock-outs are at issue. While these may not be resolved by the MESH-QI, they can be clearly identified through the process. Debriefing meetings also offer time to discuss data quality issues that may have been noted when entering or analyzing observation checklists. Broader data sharing meetings are an opportunity to engage with key stakeholders and decision makers in the health system. Depending on the structure of the program, the audience will vary.

TRAINING

To ensure high quality data collection and utilization, training of key stakeholders and team members involved in the data collection and sharing process is essential. In MESH-QI, all stakeholders should receive some degree of training; however, core competency needs vary depending on the level of involvement. Each application of the MESH-QI model is unique and team structures will vary based on what data are needed, by whom and on what schedule. Regardless of the team structure, the MESH-QI leadership will need to make sure team members have the skills necessary to ensure quality data are used effectively.

Below is a breakdown of the required competencies by stakeholder type for the MESH-QI program in Rwanda. Each team needs to identify parties to the program and M&E team to ensure that all six competencies are addressed. On a highly skilled staff, several individuals may have skills in all six areas. Yet it is important distribute tasks so that individual are not overburdened. For instance, the program director may have extensive experience in data collection and data management, but his or her expertise is needed in other program areas and responsibilities will need to be delegated to another team member. The example below considered the minimum skills required for the Rwanda MESH-QI program to function well. The use of electronic data collection potentially shifts individual responsibilities since mentors both collect and enter data simultaneously. The table below presents the data skill levels required by different participants in the MESH-QI implementation.

SKILL MIX REQUIREMENTS



COSTING

Collecting data on implementation costs of the MESH-QI adaptation supports planning for expansion and identifying inefficiencies. Quality costing exercises require upfront planning rather than relying on a retrospective review of expense data. Program expenses may be explicit. However, often in-kind costs such as material donations and volunteer contributions of time are overlooked and are difficult to capture retrospectively. An effective costing approach requires understanding the true cost of implementation accounting for all of the in-kind costs, staff time including both direct and indirect staff allocation, transportation costs, and direct program costs. A detailed costing guide has been developed as companion to this guide for costing analysis of programs. In addition, Larson and Wambua have also written an easy-to-follow process for costing programs.[16]

A formal costing of the Integrated Management of Childhood Illness MESH-QI program from Rwanda was conducted in 2014. This evaluation was based on a previous study that reported that the proportion of observed children under-five correctly diagnosed and treated improved significantly from 56% to 92% and 78% to 98%, respectively.[4] The costing evaluation reported that the additional costs of MESH-QI for these improvements was US$1.08 per patient. The incremental cost per patient correctly diagnosed and treated was $2.99 and $5.38, respectively (Unpublished data).

OTHER CONSIDERATIONS MESH-QI requires that data is a core part of MESH-QI from the start. Each context is different and one approach does not fit all. The purpose of being a data-driven program regardless of context is to adapt to the particular needs of the health system. As the program evolves over time to respond to changing needs in context – such as policies and strategy changes, availability of technical support, and health facility/system priorities – the M&E system should also remain nimble enough to provide the relevant information despite the evolving priorities.

Sustainability, Spread and Learning

This section describes opportunities following a successful MESH-QI implemention including how the model can endure and expand and what can be learned through the process.

SUSTAINING AND SPREADING MESH-QI After successful MESH-QI implementation sustaining and spreading constitute an important next phase. Both depend on a number of factors including the quality of the initial program design, coaching and supervision, supportive leadership and accountability, an ongoing measurement and feedback loop, and essential resources. Each of these core components steps can be considered programmatically as they are described throughout this toolkit, and also as catalysts to program expansion.

Pre-Assessment and Active Implementation design Consideration of sustainability and spread begins at the Pre-Assessment phase. The essential questions related to readiness for MESH-QI are also clarifying for future activities. After assessment, MESH-QI implementation must be designed with regard to local context, health system structure, and priorities. The intentional design of the MESH-QI is the most important predictor of sustainability and ultimately spread. Implementers must clarify how initial investments can be sustained. MESH-QI can be resource-intensive, for example recruiting many coaches and mentors, accelerates the improvements. However, the likelihood that a site can fully cover salary, transportation and other costs diminishes as programs move from active implementation to sustainability and spread phase. Therefore designing MESH-QI from the outset with attention to how it can endure is critical. For example developing an sustainable labor model will allow program growth.

Supportive leadership and accountability Leadership is an important determinant of sustainability and spread of the MESH-QI. Leadership should demonstrate genuine program support since they largely control the ability to allocate budgets and address foundational facility and system needs. As captured in the Pre-Assessment, facility readiness is necessary to sustain and adopt MESH-QI. From hospital directors to MOH policy makers, the voices of leaders facilitate program adoption and spread.

Measurement and feedback loop Program implementers should be aware that measurement and feedback loops are essential to sustain the MESH-QI. These components track on the progress and inform potential adjustments. They also facilitate the adoption and expansion of the MESH-QI program. Yet site expansion may require adaptions of the program not just adoption. The need to modify the MESH-QI will be evident based on quantitative and qualitative information collected.

Resource availability While staff, stuff, space, and systems are important to develop and implement the MESH-QI intervention, sustainability requires relatively less resources once the systems performance has improved. In contrast, spread may require additional resources. Where possible, the original implementers can use resources from the launch implementation site. For example, mentors or QI coaches from the initial implementation sites can be deployed to support other sites that adopt the MESH-QI model. Similarly, vehicles, training supplies and modules can be used to support the new adopters. Leveraging expertise and experience allows sustainability while using lesser resources. In contrast spread requires incremental resources and also requires a full self-assessment for readiness.

While sustainability is about retaining gains and ensuring that MESH-QI has been integrated in the existing system, spread is often made easier by adopting the change package already tested and building on knowledge from original implementation. This approach allows implementers to expand MESH-QI projects more efficiently and cost-effectively.

LESSONS AND CHALLENGES MESH-QI is an approach to help strengthen health systems by focusing simultaneously on building human capacity to deliver high-quality care and on improving the systems in which health care workers operate in order to support patient-centered care. However, MESH-QI alone will not strengthen the health system. The 4S's are all essential – staff, stuff, space, and systems – and MESH-QI succeeds only when it is used to enhance the basic health system foundation of infrastructure and sufficient staffing. Layering on mentorship and systems-focused QI in the absence of this basic foundation, may only serve to frustrate and reduce motivation of health care workers who are already under pressure.

In conjunction with the PIH model of accompaniment in the local public health system, implementation of MESH-QI requires a strong relationship with the central MOH. Being part of central technical working groups or other avenues for informing national-level decisions in health programs or policy, catalyzes MESH-QI implementation. It is important to be active and visible and to have close and continued collaboration with national-level decision makers. These relationships enable a thorough understanding of national strategy which is important when adapting MESH-QI to a new context. Without this close relationship from the start, sustainability of MESH-QI would be very difficult.

MESH-QI is an approach that sometimes challenges the status quo in global health development work where large-scale trainings and off-site per diems, are the norm. An approach like MESH-QI builds on global evidence of effective skills transfer; however, in under-resourced settings the lack of direct incentives to participate can be a barrier for engaging mentees. Overall, the Rwanda MESH-QI showed that health care workers can be motivated by having a dedicated mentor and support system to help them do their job better. Ongoing advocacy for a mentorship approach will be an important piece of ensuring the success and sustainability of MESH-QI in any context.

LOOKING FORWARD This Implementation Guide is part of an overall process to share PIH/IMB's experience implementing MESH-QI in Rwanda with other organizations. Other PIH country sites that have expressed interest in adapting a model of data-driven, integrated clinical mentorship, and QI to improve the quality of care provided in their health systems can utilize this guide. The MESH-QI model is already being expanded to other PIH sites including Malawi and Liberia.

References, Resources and Annex

This section provides a collection of cited sources, available external resources, and tools and rubrics to facilitate MESH-QI implementation.

REFERENCES

[1] Rowe AK, Savigny D, Lanata CF, Victora CG. How can we achieve and maintain high-quality performance of health workers in low- resource settings? Lancet. 2005;366:1026-35.

[2] Horwood C, Vermaak K, Rollins N, Hakins L, Nkosi P, Qazi S. An Evaluation of the Quality of IMCI Assessments among IMCI Trained Health Workers in South Africa. PLoS One. 2009;4(6):e5937.

[3] Pariyo GW, Gouws E, Bryce J, Burnham G, Team UIIS. Improving facility-based care for sick children in Uganda: training is not enough. Health Policy and Planning. 2005;20(Suppl 1):i58-i68.

[4] Magge H, Anatole M, Cyamatare FR, Mezzacappa C, Nkikabahizi F, Niyonzima S, et al. Mentoring and quality improvement strengthen integrated management of childhood illness implementation in rural Rwanda. Archives of Disease in Childhood. 2014; epub.

[5] Ingabire W, Preine PM, Hedt-Gauthier BL, Hirschhorn LR, Kirk CM, Nahimana E, et al. Roadmap to an effective quality improvement and patient safety program implementation in a rural hospital setting. Healthcare. 2015;3:277-82.

[6] Manzi A, Magge H, Reddit V, Karamaga A, Niyonzima S, Drobac PC, et al. Nurse mentorship to improve the quality of health care delivery in rural Rwanda. Nursing Outlook. 2012;61(3):137-44.

[7] Kirk CM, Sweeney C, Gupta N, Drobac PC, Manzi A. MESH-QI Mentoring and Enhanced Supervision for Health Care and Quality Improvement in Rwanda. . PIH Reports. 2015;2(1).

[8] Manzi A, Magge H, Hedt-Gauthier BL, Michaelis AP, Cyamatare FR, Nyirazinyoye L, et al. Clinical mentorship to improve pediatric quality of care at the health centers in rural Rwanda: a qualitative study of perceptions and acceptability of health care workers. BMC Health Serv Res. 2014;14(275).

[9]World Health Organization. WHO global strategy on integrated people-centered health services 2016-2026. Geneva: World Health Organization, 2015.

[10] W.K. Kellogg Foundation. Using Logic Models to Bring Together Planning, Evaluation, and Action: Logic Model Development Guide. Michigan, USA: W.K. Kellogg Foundation, 2004.

[11] Gertler PJ, Martinez S, Premand P, Rawlings LB, Vermeersch CM. Impact Evaluation in Practice. Washington, D.C.: World Bank; 2010.

[12] Teng JE, Thomson DR, Lascher JS, Raymond M, Ivers LC. Using Mobile Health (mHealth) and Geospatial Mapping Technology in a Mass Campaign for Reactive Oral Cholera Vaccination in Rural Haiti. PLoS Negl Trop Dis. 2014;8(7):e3050.

[13] Thriemer K, Ley B, Ame SM, Puri MK, Hashim R, Chang NY, et al. Replacing paper data collection forms with electronic data entry in the field: findings from a study of community-acquired bloodstream infections in Pemba, Zanzibar. BMC Res Notes. 2012;5(113).

[14] World Health Organization, Ariadne Labs. WHO Safe Childbirth Checklist Implementation Guide. Geneva: World Health Organization, 2015.

[15] Mitsunaga T, Hedt-Gauthier B, Ngizwenayo E, Farmer DB, Karamaga A, Drobac P, et al. Utilizing community health worker data for program management and evaluation: Systems for data quality assessments and baseline results from Rwanda. Social science & medicine (1982). 2013;85:87-92.

[16]Larson BA, Wambua N. How to calculate the annual costs of NGO-implemented programmes to support orphans and vulnerable children: a six-step approach. J Int AIDS Soc. 2011;14(59).

RESOURCES

I-Tech Clinical Mentoring Toolkit (2008) curriculum on clinical mentorship was adapted for training MESH-QI mentors. http://www.go2itech.org/HTML/CM08/index.html

Partners In Health. (2012). Unit 12: Using Monitoring and Evaluation for Action. Program Management Guide. Boston, MA: Partners In Health. http://www.pih.org/library/pih-program-management-guide/unit-12-using-monitoring-and- evaluation-for-action

UNAIDS. (2009). 12 Components Monitoring and Evaluation System Strengthening Tool. Geneva, Switzerland: UNAIDS. http://www.unaids.org/sites/default/files/sub_landing/files/2_MERG_Strengthening_Tool_12_Compo nents_ME_System.pdf

WHO (2010). Monitoring the building blocks of health systems: a handbook of indicators and their measurement strategies offers a toolkit. http://www.who.int/healthinfo/systems/WHO_MBHSS_2010_full_web.pdf

WHO Monitoring and Evaluation resources: http://www.who.int/hiv/strategic/me/en/

WHO Safe Childbirth Checklist (2015). http://apps.who.int/iris/bitstream/10665/199177/1/9789241549455_eng.pdf

W.K. Kellogg Foundation's Logic Model Development Guide (2006). https://www.wkkf.org/resource-directory/resource/2006/02/wk-kellogg-foundation-logic-model-development-guide

ANNEX

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JOB DESCRIPTION: CLINICAL MENTOR

Mentorship Enhanced Supervision for Healthcare and Quality Improvement Program

Position: Clinical Mentor - Women's Health

Background

The Women's Health (WH) Clinical Mentor, under the supervision of District Hospital Director and working closely with health center Monitoring and Evaluation Officer, and the Women's Health Technical Advisory Team, will be responsible for providing routine supervision, clinical mentoring, teaching, and collecting clinical program data for quality improvement for Women's Health services provided at district health centers.

General responsibilities

- Report to the Medical Director and to complete monthly mentoring reports as summaries of their activities for evaluation
- Travel to district health centres for mentoring visits (approximately 80% of time)
- Perform clinical and administrative duties at the district hospital (approximately 20% of time)
- Coordinate closely with Chief Nursing Officer and MESH-QI Program Manager to arrange logistics and to schedule health center mentoring visits and clinical work.
- Work closely on a monthly basis with the WH Technical Advisory Team to improve their mentoring skills and knowledge of Women's Health issues
- Attend monthly debriefing meetings with other mentors and to share mentoring experiences for program improvement
- Attend regular coordination meetings with supervisors, health center directors, the MESH-QI Program Manager, and the hospital administration to discuss quality improvement issues at health centers

Specific Responsibilities

- Observe the provision of care by health center clinicians in the Antenatal Care, Family Planning, Labour & Delivery, and Post-Partum and other MCH services
- Complete case management observation forms based on observed nurse-patient interactions
- Provide direct feedback to clinicians and recommendations on how to improve their assessment, diagnosis, and management of the patient according to the Emergency Obstetric and Neonatal Care and other Ministry of Health's guidelines related to Women's Health
- Review retrospectively the ANC and FP registers, partographs, and maternity register in order to assess routine (non-observed) practice and documentation procedures
- Complete a facility checklist identifying systems issues related to WH services and to notify the health center directors and other appropriate operations teams who can respond to issues
- Lead teaching sessions on relevant WH clinical topics and/or procedures, physical exam skills, etc.
- Facilitate group discussions on standardized WH case scenarios
- Be available by phone or in person for consultation on complicated cases or clinical decisions
- Work closely with the hospital and M&E Teams to ensure that clinical data collected on site visits is used to inform direct quality improvement efforts for WH services at health centers

CORE COMPETENCIES OF HEALTH FACILITIES STAFF TRAINED QUALITY IMPROVEMENT

Health facility Staff trained in QI will attain the follow five competencies. Each competency is described with themes, principles and training examples to demonstrate the competency.

I. Understand quality improvement concepts and principles and link the process of quality improvement to facility accreditation.
II. Analyze systems and processes to identify, understand, and prioritize problems and change ideas using QI tools.
III. Develop process and outcome indicators and understand performance measurement.

IV.. Support data collection and use to monitor QI projects.

V. Develop and test improvements using PDSA cycles through the model for improvement.

I. Understand quality improvement concepts and principles and link the process of quality improvement to facility accreditation

Themes

• Quality, quality improvement (QI), quality assurance (QA), performance measurement, difference between QA audits and QI implementations, dimensions of quality in health care, the importance of teamwork and capturing the patient experience.
• QI is a practical process and relates directly to MOH QI requirements for hospital accreditation.

Principles

• Strengthen systems of care by analyzing processes and systems, not individuals and anecdotes.
• Base actions on accurate and measurable data.
• Continuously engage in the process of testing ideas and measuring incremental changes.
• Focus on improving the experience of the patients.
• Coordinate the team of people who develop and test change as process implementers.
•Learn from and share with others. Do not reinvent the wheel.
• QI is not about investigating and punishing people when something goes wrong it's about a just and collaborative culture.
• Process can also influence Quality Control (QC) activities such as Quality Audit using the set of standards benchmark such as MOH guidance.

Training Ideas

• Ask participants to share their individual definitions of quality and then use the conceptual frameworks to channel these ideas. Begin with concrete definitions and examples. Prepare case scenario/studies for small group discussions to help team to assimilate the meaning beyond the theory and beyond their past.
• Develop simulation based on Rwanda hospital accreditation. Engage in the steps from standards/protocol development to QI implementation and ongoing QA.
• Assign a central MoH officer to be interviewed on QI and QA standards.
• Ask participants to prepare questions relevant to their facilities and reflective of their understanding of QI and QA to query the MOH representative.
• Requires 1 facilitator per group of 6 students.
•Ask participants with experience in accreditation to share challenges and successes and to highlight practices that can be identified as QI, QI and Measurement, etc.

CORE COMPETENCIES

II. Analyze systems and processes to identify, understand, and prioritize problems and change ideas using QI tools.

Themes

- Creating functional definitions: what is a system, what is a process, what is a problem.
- How to create understanding of "chain of events" in order to identify problems and how to use data from that approach to drive change.
- The role of measurement and particularly the existing data management system can never be over stated. Tools and methodology for prioritizing gaps identified within the system (Priority matrix, Multi-criteria Matrix, etc.)

Principles and Tools

- Identify the process (Process Map/Flow chart).
- Describe the process (Root Cause Analysis, Fishbone, Pareto, driver diagrams).
- Construct the new process (Brainstorm, Flow chart, new standards, change hypothesis).
- Implement and test the new process (PDSA cycle).

Training Ideas

Students as team teachers on concepts and sequence of QI activities. Create tables with key indicators in advance of training exercise. Small groups work to develop working definition and authentic implementation examples for class presentation. These requires at least three facilitators if we have less than 20 participants.

III. Develop process and outcome indicators and understand performance measurement.

Themes

- The link between processes and outcomes and the role of monitoring to help evaluate outcomes.
- The distinction between indicators and outcomes to get away from focusing on outcome indicators.
- Good indicators Pertinent, Accurate, Improvable, Specific, Relevant, Realistic, or adopt a well-known reference (NCQ, IHI, etc).

Principles and Tools

- Logic Model
- Process Indicator
- Outcome Indicators
- SMART Indicators : Specific, Measurable, Actionable, Relevant, and Time
- QI measures: outcome, process and balancing measures

Training Ideas

Develop presentation: Why measure, what to measure, key terms –Numerator, Denominator, percent, ratio, proportion etc. Attention should focus on median calculation.

CORE COMPETENCIES

IV. Support data collection and use to monitor QI projects.

Themes

QI projects built on effective data collection support analysis, effective data presentation, and interpretation. Developing data quality effectively is an essential competency of a QI Coach.

Principles and Tools

- Understanding the difference between change ideas and change packages (coaches and teams)
- Developing a change package (coaches and teams)
- Interpreting results of a QI project (coaches)
- Sustaining a change in QI (coaches and teams)
- Patient safety and patient centeredness

V. Develop and test improvements using PDSA cycles through the model for improvement.

Themes

- Staff must be able to identify and prioritize change ideas and test them through the PDSA cycle.
- Identifying ideas does not mean always creating new ideas. Teams can learn from successes elsewhere and implement those in their own sites.
- Prioritize high impact low resource changes and identify which changes are within their authority and control.
- Formulate improvement theories or hypothesis ready to be tested. Use a scoring method or vote to weigh and categorize causes as vital v. useful. This is the main purpose of using Pareto diagram.

Principles and Tools

- QI Tools - Prioritization Matrix: The table with scores brings a more objective decision. Eisenhower matrix is very easy to use when you have a limited number of criteria.

https://www.youtube.com/watch?v=aR6o3vdcGIA
https://www.youtube.com/watch?v=suGXZ1869qc

Training Ideas

- Prepare a table with two or three criteria and for demonstration before providing a PDSA with a current version with has many criteria.
- Demonstrate PDSA: Be able to plan the way to test the change idea/carry out the cycle: set aim/objectives, predictions, who will do what, how, when and where, design a data collection plan: what, who, when, how, where. What to do during "do" phase? What to do during "study" phase? What to do during "act" phase?
- Ask participants to present PDSA in the context of the Improvement model and as a powerful tool to implement incremental change.

IMPLEMENTATION TOOLS

What	Why	Who|When	How
QI Project Tracker p. 69-71	Assess the progress of the QI projects overtime and track the implementation of key deliverables	Mentor Every mentoring visit focusing on QI	Mentor meets with QI team at health facility Mentor completes the form summarizing the status of the projects MESH-QI management team reviews the status and works with the mentor to elaborate a project support plan as needed
Mentor Activity Log p. 72-74	Paper report of mentor activities, case observation, teaching sessions, etc.) and general observations on clinical & operational issues	Mentor Every mentoring visit	Mentor completes form during HC visit and reviews it with health facility leadership and mentee at conclusion of visit Mentor photocopies form and submits original and copy to MESH-QI management team weekly MESH-QI management team reviews and enters key activities/issues into "Mentoring Visit Record" MESH-QI management team provides feedback to mentors and/or health facility teams
Observation Check List *Antenatal Care Labor and Delivery* *Post-Natal* *Post-Partum* *IMCI* *U5 Malnutrition* *Chronic Respiratory Disease* *Diabetes* *Hypertension*	Assessment of mentee's practices/ adherence to protocols (evaluation, diagnosis, management) through direct observation of clinical care	Mentor Every health facility visit	Mentor reviews strengths and weaknesses with nurse mentee during HC visit Mentor submits checklists to MESH-QI management team every week MESH-QI management team tallies checklists and enters into "Mentoring Visit Record" If possible, Tech Advisor reviews subset of checklists for data quality and clinical issues/ patterns and provides feedback to mentor to guide mentoring
Knowledge Questionnaire and Case Scenario	Assessment of mentee's knowledge administered on-site at health facility	Mentor Baseline, Every 3-6 months	Mentor submits to MESH-QI management team for review & data entry Technical advisors review data to identify key areas for intervention Technical advisors generate brief report to compare baseline and subsequent data points
Mentoring the Mentor Tool p. 119	Evaluation of mentor's communication, mentoring, and problem-solving skills; basis for formal performance review and informal mentor development	MESH-QI manager and/ Technical Advisors who arequalified as Mentor or mentors | Biannually at minimum. Can be used more frequently	MESH-QI management team/Techmical Advisor provide immediate feedback to mentor MESH-QI management team incorporates evaluation into the formal technical performance review of mentor Individual mentor scores by category can be compared at different time points to evaluate mentor development as part of overall program evaluation

About the QI Tracking Tool

This tool is to be used by both technical advisors/mentors to support QI coaching and monitor the progress of QI projects.
Each mentor will complete the tool on the days they provide QI coaching on a specific project.
During monthly meetings, mentors should discuss QI projects they visited in the past month.
During these meetings, the QI Tracking Tool should be updated to have a final version that both mentors can use for the next month.

How the Tool is Organized

Every health facility has its own tab, in blue, where the mentors will track QI Projects at each facility.
There is a section on the tab for each facility to describe the project and also a section to record progress on progress during follow-up coaching.

Project Description Section

The areas in green are to be completed everytime there is a new project or a new change idea being tested.

Column Title	Description	What to enter
Health Facility	The health facility where the project is being implemented.	Select from a drop-down menu the name of the health facility.
Clinical Domain (Health Center)	The clinical service where the QI project is being implmented at the health center.	Select from a drop-down menu the clinical area. Select "Other" if the clinical service is not listed.
Hospital Department	The hospital department implementing the QI project.	Select from a drop-down menu the hospital department. Select "Other" if the department is not listed.
Project Aim	The aim of the facility's QI project. This is what the facility is hoping to improve.	Type in the project aim. Be clear and specific.
Change Idea Tested (Specific Change Activities)	The change idea the facility is testing. These are the specific activities they are trying to improve processes.	List out the change ideas that are being tested. Be clear in the specific activities the health center teams are doing.
Source of Idea	This describes the source of the idea for each project and whether or not the project is new or old.	Select the appropriate response option from the pull-down menu: "New project, original change idea" is when the project aim is entirely new for the facility and the change idea is one that they come up with on their own. "New project, idea adopted from other HF" is when the project aim is entirely new for the facility and the change idea is one that they adopted from another health facility. "Old project, new change idea" is when the facility has the same project aim as they have had before, but they are testing a new change idea that they come up with on their own. "Old project, new change idea adopted from other HF" is when the facility has the same project aim as they have had before, but they are testing a new change idea that they adopted from another health facility.
Date Started	Date the project with these change ideas was started.	Enter the date of the QI team developed this QI Project with these specific change ideas. This should be the date the intervention started.
Project Outcome Indicator	The outcome indicator being targeted by the project.	Enter the outcome indicator, with a clear indicator definition.
Data Source	The source of data for the outcome indicator.	Enter the data source for the outcome indicator. This could be routinely collected data, such as HMIS or patient registers. Or this could be a data source developed specifically for the QI project.
Baseline Measurement	The status at baseline for the outcome indicator.	Enter the baseline measurement for the outcome indicator.
Goal	The target the team hopes to achieve through QI.	Enter the target for the outcome indicator.
Is there a clear data collection plan?	QI projects need to have a clear data collection and monitoring plan that includes monitoring of processes and outcomes.	Select either "Yes" or "No" from the pull-down menu.
Primary Mentor	The main support person for this QI project. This could be a MESH-QI mentor, hospital staff, PIH/IMB staff, etc.	Enter the name of the primary mentor.

Follow-Up Section

The areas in blue are to be completed everytime you follow-up with a QI team to provide QI coaching.

Column Title	Description	Response Options
Date	Date of the follow up visit.	Enter the date you visited the QI team.
Completed by	Name of person who conducted follow-up QI coaching.	Enter the name(s) of the individual(s) who completed the follow-up.
Project Status	The status of your project during the visit.	Select the status of the project from the pull-down menu: "Ongoing, with original plan" if the QI team is actively working towards their project aim with the change ideas as they had originally planned. "Ongoing, with small modifications" if the QI team is actively working towards their same project aim, but has made small changes to their change ideas/activities. "Concluded - successful" if the QI team has stopped the project with the change ideas and it was completed successfully (i.e., reached their goal). "Concluded - not successful" if the QI team has stopped the project with these specific change ideas because it was not working or teams were inactive and abandonned the project. "Inactive" if the QI team has not been working on their project (i.e., the project has been dormant). "Integrated into routine practice" if the project has been successful and the change ideas have been integrated into the routine practice for the clinical service or hospital department.
Is data collection plan being implemented?	Whether or not the data collection/monitoring plan is being implemented.	Select from the pull down menu if the data collection/monitoring plan is being implemented "routinely" (i.e., as they intended), "intermittently" (i.e., the plan was weekly data collection but they are only doing it monthly) or "never."
Comments	Comments about the follow-up visit.	Enter any comments that you think are important to document. These could include particular successes the team is having, challenges the QI team is having, areas of needed follow-up, etc. This section should include any information that would be helpful for the MCH Mentor Team for follow-up on QI projects.

QI Project Tracker		
Health Facility		
Clinical Domain (Health Center)		
Hospital Department		
Project Aim		
Change Idea Tested (Specific Change Activities)		
Source of Idea		
Date Started		
Project Outcome Indicator		
Data Source		
Baseline Measurement		
Goal		
Is there a clear data collection plan?		
Primary Mentor		
FOLLOW-UP	Date	
	Completed by	
	Project Status	
	Is data collection plan being implemented?	
	Comments	
FOLLOW-UP	Date	
	Completed by	
	Project Status	
	Is data collection plan being implemented?	
	Comments	
FOLLOW-UP	Date	
	Completed by	
	Project Status	
	Is data collection plan being implemented?	
	Comments	
FOLLOW-UP	Date	
	Completed by	
	Project Status	
	Is data collection plan being implemented?	
	Comments	
FOLLOW-UP	Date	
	Completed by	
	Project Status	
	Is data collection plan being implemented?	
	Comments	

Mentor activity Log

Health facility: _____ Mentor: _____ Clinical Services: ☐Pedi pre/ART,☐ Adult Pre/ART ☐ PMTCT ☐WH
Start Date_____End date_____ ☐NCD ☐ MH ☐ IMCI ☐ IMAI ☐ Other _____
Objective:_____

CASE OBSERVATION

Date & Time	Name & training of nurse observed	No. Hours	No. Cases Observed	Consult Type	Key Strengths	Key Weaknesses	Plan for Improvement

Mentor activity Log

TEACHING SESSIONS

Date	Participants (Name & Training)	No. Hours	Teaching Objective/Topic	Teaching Method(s) (Check all that apply)	Comments/ Recommendations for Next Visit
			☐ Clinical ☐ Operational SPECIFY:	☐ Lecture ☐ Case scenarios ☐ Demonstration ☐ Discussion ☐ Role play ☐ Documentation review ☐ Other:_____	
			☐ Clinical ☐ Operational SPECIFY:	☐ Lecture ☐ Case scenarios ☐ Demonstration ☐ Discussion ☐ Role play ☐ Documentation review ☐ Other:_____	
			☐ Clinical ☐ Operational SPECIFY:	☐ Lecture ☐ Case scenarios ☐ Demonstration ☐ Discussion ☐ Role play ☐ Documentation review ☐ Other:_____	
			☐ Clinical ☐ Operational SPECIFY:	☐ Lecture ☐ Case scenarios ☐ Demonstration ☐ Discussion ☐ Role play ☐ Documentation review ☐ Other:_____	

Mentor activity Log

FACILITY/SYSTEMS ISSUES and UPDATES

***The questions listed below are basic questions that should be asked at each visit. Please ask additional questions and include other comments to fully assess the situation.*

CATEGORY	Brief description of the issues	ACTIONS TAKEN and/or PLAN FOR IMPROVEMENT (if applicable)
General ☐Management ☐ New trainings ☐Care delivery ☐ Changes in PBF ☐Protocol changes ☐ Changes in mutuelle ☐Other to be specified ☐None		
Patient volume & diagnoses ☐ Volume ☐ Complaints and causes (e.g. New diseases) ☐ Satisfaction ☐ Other to be specified ☐None		
Clinic operations (schedule, patient flow) ☐Patient wait times, ☐ Availability of service ☐Timing of consultations ☐ Other to be specified ☐None		
Staffing ☐Misalignment between training background and clinical responsibility ☐New nurse hires or quits ☐Number of nurses working at health facility during time of visit ☐ Other to be specified ☐None		
Medications/ Equipment ☐Any major shortages of medications ☐Equipment or other supplies ☐ Other to be specified ☐None		
Facility ☐Any issues with infrastructure waste disposal ☐ Patient privacy ☐Water access ☐ Waste disposal ☐Hygiene ☐Other to be specified ☐None		
Records/ Documentation ☐Adequate amount of Case management forms/registers ☐Accurate and appropriate completion of patient documentation ☐Other related issues to be specified ☐None		
OTHER Any changes that have made providing care less effective? ☐Yes ☐No If Yes, specify		

Antenatal Care (ANC) Observation Checklist

Name of Mentor: _____ **Health Center:** _____

Date:_____/____/_____ **Consultation Start Time:** _____

ANC Visit Number: ☐ 1st ☐ 2nd ☐ 3rd ☐ 4th ☐ Sick visit ☐ Other, specify: _____

Mentee Name: _____ **Is he/she a new mentee?** ☐ No ☐ Yes

Mentee trained in SONU/EmONC? ☐ Yes ☐ No **Education Level**: ☐ A2 ☐ A1 ☐ A0

Mentee's Sex: ☐ Male ☐ Female **Training**: ☐ Nurse ☐ Midwife ☐ Other

A. FIRST ANC VISIT CONSULTATION (SKIP TO SECTION C IF NOT FIRST ANC VISIT)				
Did the provider assess correctly and completely for…	**Yes Assessed**	**Not Assessed**	**Mentor Intervened**	**Results**
1. Gestational age	☐	☐	☐	weeks
2. Mother's age	☐	☐	☐	
3. Gravida	☐	☐	☐	
4. Para (live, stillbirths, abortions)	☐	☐	☐	☐ N/A, first pregnancy
5. Previous C-sections	☐	☐	☐	☐ N/A, first pregnancy
6. History of pregnancy complications (pre-term labor, pregnancy induced hypertension, pre-eclampsia/eclampsia, PPH, pro-longed labor, or gestational diabetes).	☐	☐	☐	☐ N/A, first pregnancy
7. History of anemia	☐	☐	☐	
8. HIV status	☐	☐	☐	
9. Height	☐	☐	☐	☐ N/A, no equipment
Did the provider ask if the woman…	**Yes Asked**	**Not Asked**	**Mentor Intervened**	**Results**
10. Has any underlying medical conditions	☐	☐	☐	
11. Has had previous surgeries	☐	☐	☐	
12. Is taking any medications (including herbs) currently	☐	☐	☐	

B. FIRST VISITS: LAB TESTS (SKIP TO SECTION C IF NOT FIRST ANC VISIT)				
Did the provider order the following labs...	**Yes Ordered**	**Not Ordered**	**Test Not Available**	**Mentor Intervened**
1. HIV	☐	☐	☐	☐
2. Syphilis (RPR)	☐	☐	☐	☐
3. Hemoglobin (taux d'hémoglobine)	☐	☐	☐	☐
4. Albumin (recherche d'albumine)	☐	☐	☐	☐
5. Blood type (groupe sanguin)	☐	☐	☐	☐

Antenatal Care (ANC) Observation Checklist

C. FOLLOW-UP ANC VISIT CONSULTATION					
Did the provider…	**Yes Assessed**	**Not Assessed**	**Mentor Intervened**	**No records available**	**Results**
1. Assess correctly gestational age	☐	☐	☐	☐	wks
2. Review prior visit information (such as previous weight, patient history, etc.)	☐	☐	☐	☐	
3. Ask if there have been any changes since the last visit	☐	☐	☐		

D. ALL VISITS: DANGER SIGNS					
Did the provider check correctly and completely for...	**Yes Assessed**	**Not Assessed**	**Not Applicable**	**Mentor Intervened**	**Check if Present**
1. Headaches	☐	☐		☐	☐ Present
2. Blurry vision	☐	☐		☐	☐ Present
3. Facial swelling	☐	☐		☐	☐ Present
4. Convulsions	☐	☐		☐	☐ Present
5. Fever	☐	☐	☐ No equipment	☐	☐ Present
6. Bleeding	☐	☐		☐	☐ Present
7. Loss of fluid	☐	☐		☐	☐ Present
8. Painful contractions	☐	☐		☐	☐ Present
9. Decreased fetal movement (after 20 weeks gestation)	☐	☐	☐ GA <20wks	☐	☐ Present

E. ALL VISITS: ASSESSEMENT OF THE WOMAN					
Did the provider assess the mother correctly and completely for…	**Yes Assessed**	**Not Assessed**	**No Equipment**	**Mentor Intervened**	**Results**
1. Pulse	☐	☐	☐	☐	
2. Blood Pressure	☐	☐	☐	☐	
3. Weight	☐	☐	☐	☐	kg
4. Weight gain (for 2nd, 3rd, and 4th ANC visits) reviewed by comparing today's weight to weight at prior visit	☐	☐	☐	☐	☐ N/A, 1st visit
5. MUAC	☐	☐	☐	☐	mm
6. Anemia	☐	☐		☐	
7. Respirations/breaths per minute	☐	☐	☐	☐	
8. Tetanus vaccination is up to date and provides vaccine if needed	☐	☐	☐	☐	
9. Height (taken at current visit or measurement from 1st visit reviewed)	☐	☐	☐	☐	☐ N/A, no equipment

Antenatal Care (ANC) Observation Checklist

F. ALL VISITS: ASSESSMENT OF THE FETUS (≥ 20 weeks)					
Did the provider assess the fetus correctly and completely for…	**Yes Assessed**	**Not Assessed**	**Not Applicable**	**No Equipment**	**Mentor Intervened**
1. Fundal height (≥20 weeks)	☐	☐	☐	☐	☐
2. Fetal heart rate (≥20 weeks)	☐	☐	☐	☐	☐
3. Fetal movement (≥20 weeks)	☐	☐	☐	☐	☐
4. Fetal position (≥20 weeks)	☐	☐	☐	☐	☐

G. ALL VISITS: BIRTH PLANNING			
Did the provider discuss with the woman…	**Yes Asked**	**Not Asked**	**Mentor Intervened**
1. If she has a birth plan and the details of the plan*	☐	☐	☐
2. Danger signs that require seeking care at the health center immediately**	☐	☐	☐
3. If she has a plan in the case of emergency complications	☐	☐	☐
4. If she has and is using a mosquito net	☐	☐	☐

***A birth plan includes:** (1) identifying a place for birth; (2) identifying a competent provider and knowing how to contact that provider; (3) A plan on how to get to the provider); (4) Identify a person to accompany the woman to the place of provider; (5) Determine who will care for the family while the woman is away; (6) Identify the person who will authorize the woman to go to the maternity; (7) set aside the money needed for delivery (and transport); (8) prepare necessary materials for delivery (soap, clean cloths, sheet, sanitary towels, etc.)

****Danger signs include:** vaginal bleeding, smelly vaginal discharge, vaginal fluid flow, painful urination, persistent vomiting, pelvic pain, visual disturbances or headaches, fainting/seizures, lethargy or tiredness, respiratory problems, night blindness, disappeared or decreased fetal movements, and anything else that may concern them

H. ALL VISITS: COUNSELING			
Type of Counseling	**Yes Provided**	**Not Provided**	**Mentor Intervened***
1. Individual counseling	☐	☐	☐
2. Group counseling	☐	☐	☐

If provided, the quality of counseling today was…	**1 (Poor)**	**2**	**3**	**4**	**5 (Very good)**
	☐	☐	☐	☐	☐
	Incorrect information or judgmental				Correct and comprehensive counseling

**Note: Mentor should intervene if the provider is giving incorrect information, incomplete information, etc. Topics for counseling may include the following:*

- Danger signs during pregnancy.
- Counseling on having an accomagnateur/partner in the delivery room.
- Consequences of using alcohol or tobacco during pregnancy
- Prevention of HIV, STIs
- Prevention of mother to child transmission of HIV (PMTCT)
- Client-centered and gestational age appropriate advice on nutrition, micronutrients, rest, and physical work
- Malaria prophylaxis
- Breastfeeding
- Family planning

Antenatal Care (ANC) Observation Checklist

I. DIAGNOSIS AND TREATMENT PATIENT FOLLOW-UP		
	Mentee Decision	**Mentor Decision**
Diagnosis	☐ **None** ☐ Urinary tract infection ☐ Malaria ☐ Pneumonia ☐ Moderate or severe anemia ☐ Other, specify: _____	☐ **None** ☐ Urinary tract infection ☐ Malaria ☐ Pneumonia ☐ Moderate or severe anemia ☐ Other, specify: _____
	☐ **Mentor corrected diagnosis**	
Complications of Pregnancy	☐ **No complications** ☐ Amnionitis ☐ Septic abortion ☐ Threatened or incomplete abortion ☐ Ectopic pregnancy ☐ Placental abruption ☐ Placenta previa ☐ Uterine rupture ☐ Gestational hypertension ☐ Mild or severe pre-eclampsia ☐ Premature rupture of membranes (PROM) ☐ Preterm PROM (pPROM) ☐ Other, specify: _____	☐ **No complications** ☐ Amnionitis ☐ Septic abortion ☐ Threatened or incomplete abortion ☐ Ectopic pregnancy ☐ Placental abruption ☐ Placenta previa ☐ Uterine rupture ☐ Gestational hypertension ☐ Mild or severe pre-eclampsia ☐ Premature rupture of membranes (PROM) ☐ Preterm PROM (pPROM) ☐ Other, specify: _____
	☐ **Mentor corrected identification of complications**	
Treatment	☐ **None** ☐ IV antibiotics ☐ Oral antibiotics ☐ Anti-malarials ☐ IV fluids ☐ Diazepam ☐ Mebendazole ☐ Iron ☐ Tetanus vaccine ☐ Folic Acid ☐ Other, specify: _____	☐ **None** ☐ IV antibiotics ☐ Oral antibiotics ☐ Anti-malarials ☐ IV fluids ☐ Diazepam ☐ Mebendazole ☐ Iron ☐ Tetanus vaccine ☐ Folic Acid ☐ Other, specify: _____
	☐ **Mentor corrected treatment**	

Antenatal Care (ANC) Observation Checklist

J. PATIENT TRANSFERS AND FOLLOW-UP		
	Mentee Decision	**Mentor Decision**
Other Follow-Up or Transfers	☐ **None** ☐ Urgent transfer to district hospital ☐ Requires delivery at a hospital or higher level facility ☐ Admit to Health Center ☐ Requires more frequent follow-up ☐ Provide bed net ☐ Other, specify: _____	☐ **None** ☐ Urgent transfer to district hospital ☐ Requires delivery at a hospital or higher level facility ☐ Admit to Health Center ☐ Requires more frequent follow-up ☐ Provide bed net ☐ Other, specify: _____
	☐ **Mentor corrected other follow-up plan**	

K. WRAP-UP FOR ALL VISITS				
Did the provider…	**Yes**	**No**	**Not Applicable**	**Mentor Intervened**
1. Remind woman about rendez vous date?	☐	☐	☐	☐
2. Treat the woman with respect throughout the consultation.	☐	☐	☐	☐
3. Answer concretely all of the woman's questions.	☐	☐		☐
4. Use standard ANC forms for documentation.	☐	☐		☐

Consultation End Time: _____

LABOR & DELIVERY OBSERVATION CHECKLIST

Name of Mentor: _____ **Health Center:** _____

Date:_____/ ___/____ _____

Mentee Name: _____ **Is he/she a new mentee?** ☐ No ☐ Yes

Mentee trained in SONU/EmONC? ☐ Yes ☐ No **Education Level**: ☐ A2 ☐ A1 ☐ A0

Mentee's Sex: ☐ Male ☐ Female **Training**: ☐ Nurse ☐ Midwife ☐ Other

A. ADMISSION ASSESSMENTS			
Time at admission: _____			
Did the provider assess correctly and completely for…	**Yes Assessed**	**Not Assessed**	**Results**
1. Blood pressure	☐	☐	
2. Temperature	☐	☐	
3. Pulse	☐	☐	
4. Number of ANC Visits	☐	☐	☐0 ☐1 ☐2 ☐3 ☐4+
5. Gravida	☐	☐	
6. Para	☐	☐	
7. Last menstrual period (LMP)	☐	☐	
8. Gestational age	☐	☐	weeks
Did the provider assess correctly and completely for the following danger signs…	**Yes Assessed**	**Not Assessed**	**Results**
9. HIV status	☐	☐	
10. Bleeding	☐	☐	
11. Leaking of fluid	☐	☐	
12. Severe headache and/or blurry vision	☐	☐	
13. Decreased fetal movement	☐	☐	
14. Dizzinessa and anemia diagnosed by palmar pallor?	☐	☐	
Did the provider assess the correctly and completely for…	**Yes Assessed**	**Not Assessed**	**Results**
15. Fetal heart rate	☐	☐	
16. Fetal presentation	☐	☐	☐Vertex ☐Breach ☐Other: _____
17. Frequency of contractions (number per 10 min)	☐	☐	
18. Duration of contractions (in seconds)	☐	☐	
Did the provider complete the vaginal exam correctly and completely for…	**Yes Assessed**	**Not Assessed**	**Results**
19. Cervical dilation	☐Correctly ☐Incorrectly		
20. Fetal descent	☐Correctly ☐Incorrectly		

LABOR & DELIVERY OBSERVATION CHECKLIST

21. Membranes status	☐Correctly ☐Incorrectly		
22. Amniotic fluid	☐Correctly ☐Incorrectly		
23. Washed hands before performing vaginal exam or other invasive procedure	☐	☐	
Did the provider…	**Yes Assessed**	**Not Assessed**	**Results**
23. Confirm that the mother or companion will call for help during labor if needed.	☐	☐	

B. LABOR MONITORING			
Did the provider…	**Yes**	**No**	**Results**
1. Give woman fluids during labor.	☐	☐	☐N/A, not observed
2. Fill out partogramme in real-time	☐	☐	☐N/A, not observed
3. Fill out partogramme completely	☐	☐	
4.Use partogramme to guide clinical decision-making	☐	☐	☐N/A, not observed

B. DETERMINATION AND TREATMENT AT ADMISSION		
	Mentee Decision	**Mentor Decision**
Determination	☐ **Normal, uncomplicated labor** ☐ Preeclampsia/eclampsia ☐ Preterm labor ☐ pPROM ☐ PROM ☐ Obstructed labor ☐ Choria amniotis ☐ Malaria ☐ Fetal distress ☐ Other, specify: _____	☐ **Normal, uncomplicated labor** ☐ Preeclampsia/eclampsia ☐ Preterm labor ☐ pPROM ☐ PROM ☐ Obstructed labor ☐ Choria amniotis ☐ Malaria ☐ Fetal distress ☐ Other, specify: _____
Treatment	☐ **None** ☐ Transfer to district hospital ☐ Administer IV antiobiotics ☐ Begin IV fluids ☐ Position woman on the left side ☐ HIV prophylaxis ☐ Other, specify: _____	☐ **None** ☐ IV antibiotics ☐ Oral antibiotics ☐ IV fluids ☐ Diazepam ☐ Mebendazole ☐ Other, specify: _____

LABOR & DELIVERY OBSERVATION CHECKLIST

C. MONITORING OF DELIVERY			
Did the provider…	**Yes, Done**	**No, not done**	**Not Applicable**
1. Prepare all of the necessary supplies and equipment, for example, steril scissors, a cord time, clean blanket to dry the baby, gloves, and alcohol-based sanitizer.	☐	☐	
2. Maintin a sterile field throughout delivery	☐	☐	
3. Prepare 10U oxytocin before delivery	☐	☐	
4. Give mother instructions on pushing technique	☐	☐	
5. Explain all procedures clearly to woman	☐	☐	☐
6. Never apply fundal pressure during delivery	☐	☐	
7. Support pereneum at crowning	☐	☐	☐
8. Assessed for nucal cord *and* manage appropriately	☐	☐	
9. Clap umbilical cord with sterile clamp or scissors	☐	☐	
10. Give oxytocin 10U IM immediately after delivery	☐	☐	
11. Provide controlled cord traction with uterine guarding	☐	☐	
12. Deliver placenta within 30 minutes of birth and inspect for compleness	☐	☐	
13. Uterus massaged for retraction	☐	☐	
14. Vaginal bleeding assessed	☐	☐	
15. Perineal and vaginal lacerations assessed and repaired if necessary	☐	☐	
16. Local anesthesia administered for repairs	☐	☐	☐
17. Initiatived appropriate treatment if excessive vagical bleeding persists (assess, call for help, IV access)	☐	☐	☐
18. Correctly disinfects instruments, gloves, etc.	☐	☐	☐

Time of Delivery: _____

LABOR & DELIVERY OBSERVATION CHECKLIST

D. Essential Newborn Care			
Did the provider…	**Yes, Done**	**No, not done**	**Not Applicable**
1. Dry the newborn and place on mother's chest skin-to-skin immediately	☐	☐	
2. Cover infant with clean, dry cloth	☐	☐	
3. Correctly assess APGAR	☐	☐	
4. Suction infant as necessary	☐	☐	☐
5. Infant assessed for hematoma/caput	☐	☐	
6. Breastfeeding initiated within one hour of birth	☐	☐	
7. Measure height	☐	☐	
8. Measure birth weight	☐	☐	
9. Measure head circumference	☐	☐	
10. Provide tetracycline eye ointment within 1 hour of birth	☐	☐	
11. Administer Vitamin K	☐	☐	
12. Provide prophylactic NVP if necessary	☐	☐	☐ N/A, not HIV exposed

POSTNATAL FOLLOW-UP VISIT CHECKLIST

Name of Mentor: _____ **Health Center:** _____

Date:_____/____/_____

Mentee Name: _____ **Is he/she a new mentee?** ☐ No ☐ Yes

Mentee trained in SONU/EmONC? ☐ Yes ☐ No **Education Level**: ☐ A2 ☐ A1 ☐ A0

Mentee's Sex: ☐ Male ☐ Female **Training**: ☐ Nurse ☐ Midwife ☐ Other

Date of Delivery:_____/____/_____ **Time of Delivery**: _____

Place of Delivery: ☐ Hospital ☐ Health Center ☐ Home ☐ Other: _____

Gestational Age: _____ **PNC Visit Number**: ☐1 ☐2 ☐3 ☐4

A. ASSESSMENT OF THE BABY		
Did the provider correctly and completely…	**Yes Assessed**	**Not Assessed**
1. Check the umbilical cord	☐	☐
2. Take baby's temperature	☐	☐
3. Weigh the baby	☐	☐
4. Check for adequate weight gain		
5. Observe breastfeeding	☐	☐
6. Assess for danger signs (poor breastfeeding, jaundice, fast breathing, hypo or hyperthermia)	☐	☐
Did the provider correctly and completely counsel the mother on…	**Yes**	**No**
7. Breastfeeding	☐	☐
8. Danger signs in the newborn (poor breastfeeding, yellow skin, fast breathing, cold or hot to the touch)	☐	☐

B. ASSESSMENT OF THE MOTHER		
Did the provider correctly and completely…	**Yes Assessed**	**Not Assessed**
1. Review maternal health history (gravida, para, live and deceased children, etc.)	☐	☐
2. Review birth information (term/preterm, complications, etc.)	☐	☐
3. Assess for danger signs in the mother	☐	☐
Did the provider correctly and completely counsel the mother on…	**Yes**	**No**
4. Post-partum Family Planning	☐	☐
5. Danger signs in the mother	☐	☐

Post-Partum Observation Checklist

Name of Mentor: _____ **Health Center:** _____

Date:_____/ ___/____ ____

Mentee Name: _____ **Is he/she a new mentee?** ☐ No ☐ Yes

Mentee trained in SONU/EmONC? ☐ Yes ☐ No **Education Level**: ☐ A2 ☐ A1 ☐ A0

Mentee's Sex: ☐ Male ☐ Female **Training**: ☐ Nurse ☐ Midwife ☐ Other

Date of Delivery:_____/ ____ ___/____ ____ **Time of Delivery**: _____

Place of Delivery: ☐ Hospital ☐ Health Center ☐ Home ☐ Other: _____

A. PARTOGRAMME REVIEW			
Did the provider…	**Yes**	**No**	**Comment**
1. Fully complete the partogramme	☐	☐	
2. Fill out the partogramme in real time	☐	☐	☐N/A, partogramme not filled
3. Were post-partum/post-natal checks documented at the appropriate time	☐	☐	☐N/A, partogramme not filled

B. HIV CARE			
Did the provider…	**Yes**	**No**	**Comment**
1. Verify the woman's HIV status	☐	☐	
2. If HIV+, verified that woman is on ART	☐	☐	☐N/A
3. If HIV+, does baby receive Nevirapien syrup	☐	☐	☐N/A

C. MATERNAL VITAL SIGNS AND EXAM			
Did the provider correctly and completely assess…	**Yes Assessed**	**Not Assessed**	**Comment**
1. Temperature of mother	☐	☐	
2. Pulse of mother	☐	☐	
3. Blood pressure of mother	☐	☐	
4. Mother experiencing any pain	☐	☐	
5. Assess nutritional status of the mother (MUAC or BMI)	☐	☐	
6. Breast exam (colostrum, nipples, latch, suckling)	☐	☐	
7. Voiding of mother	☐	☐	
8. Houman's signs	☐	☐	
9. Amount of bleeding	☐	☐	

Post-Partum Observation Checklist

D. ASSESSMENT OF BABY			
☐ Not applicable - time for discharge (use Section G)			
Did the provider correctly and completely assess…	**Yes Assessed**	**Not Assessed**	**Comment**
1. Temperature of baby	☐	☐	
2. Respiration rate of baby	☐	☐	
3. Jaundice	☐	☐	
4. Voiding/urination of baby	☐	☐	
5. Meconium	☐	☐	
6. Umbilical cord for any signs of bleeding or infection	☐	☐	

E. DIAGNOSIS AND TREATMENT/MANAGEMENT		
	Mentee Decision	**Mentor Decision**
Diagnosis	☐ **No complications** ☐ Uterine atony ☐ Post-partum hemorrhage (PPH) ☐ Vaginal or cervical laceration ☐ Retained placenta ☐ Retained placental fragments ☐ Preeclampsia or eclampsia ☐ Puerperal sepsis ☐ Other, specify: _____	☐ **No complications** ☐ Uterine atony ☐ Post-partum hemorrhage (PPH) ☐ Vaginal or cervical laceration ☐ Retained placenta ☐ Retained placental fragments ☐ Preeclampsia or eclampsia ☐ Puerperal sepsis ☐ Other, specify: _____
Treatment or Management	☐ **Routine PP/PNC care** ☐ IV fluids initiated ☐ IV antibiotics given ☐ IV Uterotonic (i.e., oxytocin) ☐ Uterine massage ☐ Magnesium sulfate ☐ Attempt repart of laceration ☐ Attempt manual removal of placenta or plancental fragment ☐ Bimanual compression of uterus ☐ Transfer to district hospital ☐ Other, specify: _____	☐ **Routine PP/PNC care** ☐ IV fluids initiated ☐ IV antibiotics given ☐ IV Uterotonic (i.e., oxytocin) ☐ Uterine massage ☐ Magnesium sulfate ☐ Attempt repart of laceration ☐ Attempt manual removal of placenta or plancental fragment ☐ Bimanual compression of uterus ☐ Transfer to district hospital ☐ Other, specify: _____

F. COUNSELLING			
Did the provider correctly and completely…	**Yes**	**No**	**Comment**
1. Counsel on nutrition for mother	☐	☐	
2. Counsel on breastfeeding	☐	☐	
3. Counsel on family planning	☐	☐	

Post-Partum Observation Checklist

G. NEWBORN DISCHARGE ASSESSMENT			
☐ Not applicable - not time for discharge			
Did the provider complete the following tasks before discharge…	**Yes, Done**	**No, not done**	**Comment**
1. Check for any danger signs	☐	☐	
2. Check the umbilical cord	☐	☐	
3. Take baby's temperature	☐	☐	
4. Weigh the baby	☐	☐	
5. Observe breastfeeding	☐	☐	
6. Counsel on breastfeeding	☐	☐	
7. Counsel on danger signs in the newborn	☐	☐	*Danger signs in the newborn include: fast or difficult breathing, fever, unusually cold, difficulty feeding, less activity than normal, or the skin becomes yellow*
8. Counsel on danger signs for the mother	☐	☐	*Danger signs in the mother include: Bleeding, severe abdominal pain, severe headache or issues with vision, breathing difficulty, fever or chills, or difficulty with urination*
9. Discuss a follow-up plan with the mother	☐	☐	
10. Confirm that mother/compainion will seek help if any danger signs appear for the mother or baby after discharge	☐	☐	
11. Discuss and offer family planning options to the mother.	☐	☐	
10. Confirm that the baby and mother stayed in the health facility for 24 hours after delivery.	☐	☐	

IMCI Observation Checklist: Children Aged 2 months to 5 years

Name of Mentor: _____ **Health Center:** _____ **Date:**____/____/____

Start Time: _____ **Visit type:** ☐ First Visit ☐ Follow-up **End Time:** _____

CHILD INFORMATION

Child age (months): _____ **Child's Sex**: ☐ Male ☐ Female

MENTEE INFORMATION

Mentee Name: _____ **Is this a new mentee**? ☐ Yes ☐ No

Mentee trained in IMCI? ☐ Yes ☐ No **Level**: ☐ A2 ☐ A1 ☐ A0

Mentee's Sex: ☐ Male ☐ Female

A. EVALUATION

Did the provider measure the child's…	Yes Assessed	Not Assessed	No Equipment	Mentor Intervened	Results
1. Weight	☐	☐	☐	☐	Kg
2. Height/Length	☐	☐	☐	☐	Cm
3. Temperature	☐	☐	☐	☐	°C
4. MUAC	☐	☐	☐	☐	Mm
5. Plot child's weight-for-height/length on growth chart.	☐	☐	☐	☐	
6. Plot child's height/length-for-age on growth chart.	☐	☐	☐	☐	

B. GENERAL DANGER SIGNS

Did the provider ask if the child…	Yes Assessed	Not Assessed	Mentor Intervened	Results, check if danger sign is present
1. Cannot drink	☐	☐	☐	☐ Present
2. Vomits all he eats	☐	☐	☐	☐ Present
3. Had convulsions	☐	☐	☐	☐ Present
4. If not alert, check if child is lethargic or unconscious	☐	☐	☐	☐ Present

*Presence of any of the above danger signs requires URGENT action.

C. ASSESSMENT, CLASSIFICATION, AND TREATMENT

Condition	Mentee Assessment	Mentee Classification (select all)	Mentor Classification (select all)	Did mentee give the correct treatment?
Cough or respiratory problems	☐ Yes, mentee assessed ☐ Not assessed by mentee	☐ Severe pneumonia or severe disease ☐ Pneumonia ☐ Cough or cold (no pneumonia) ☐ NOT CLASSIFIED	☐ Severe pneumonia or severe disease ☐ Pneumonia ☐ Cough or cold (no pneumonia) ☐ NOT CLASSIFIED	☐ Yes ☐ No If no, was there a stock out of correct treatment? ☐ Yes ☐ No
	☐ Present ☐ Not present			
	☐ **Mentor intervened in assessment**	☐ **Mentor corrected child's classification**		☐ **Mentor intervened in treatment**
		☐ N/A, no cough or breathing difficulties present		
	A complete assessment of respiratory problems includes: • *Ask long the symptoms have been present* • *Breaths per minute while the child is calm to assess for rapid breathing: rapid breathing is classified as 2 up to 12 months: 50+ breaths/min or 12 mos to 5 years: 40+ breaths/min* • *Look for in drawing chest* • *Look/listen for stridor* •			

Condition	Mentee Assessment	Mentee Classification (select all)	Mentor Classification (select all)	Did mentee give the correct treatment?
Diarrhea	☐ Yes, mentee assessed ☐ Not assessed by mentee	☐ Severe dehydration ☐ Some dehydration ☐ No dehydration	☐ Severe dehydration ☐ Some dehydration ☐ No dehydration	☐ Yes ☐ No If no, was there a stock out of correct treatment? ☐ Yes ☐ No
	☐ Present ☐ Not present	☐ Severe Persistent Diarrhea ☐ Persistent Diarrhea ☐ Bloody Diarrhea ☐ NOT CLASSIFIED	☐ Severe Persistent Diarrhea ☐ Persistent Diarrhea ☐ Bloody Diarrhea ☐ NOT CLASSIFIED	
	☐ **Mentor intervened in assessment**	☐ **Mentor corrected child's classification**		☐ **Mentor intervened in treatment**
		☐ N/A, no diarrhea present		
	A complete assessment of diarrhea includes: • *Ask long the symptoms have been present* • *Ask if the child has had diarrhea for 14 days or more in the past 3 months* • *Look for signs of dehydration (lethargy, agitation, sunken eyes, unable to drink, or slow return of pinched skin)* • *Blood in the stool*			

Condition	Mentee Assessment	Mentee Classification (select all)	Mentor Classification (select all)	Did mentee give the correct treatment?
Fever	☐ Yes, mentee assessed ☐ Not assessed by mentee	☐ Severe malaria ☐ Severe febrile disease ☐ Simple malaria with digestive sympt. ☐ Simple malaria ☐ No malaria	☐ Severe malaria ☐ Severe febrile disease ☐ Simple malaria with digestive sympt. ☐ Simple malaria ☐ No malaria	☐ Yes ☐ No If no, was there a stock out of correct treatment? ☐ Yes ☐ No
	☐ Present ☐ Not present	☐ Serious & complicated measles ☐ Measles & eyes/mouth complications ☐ Measles ☐ NOT CLASSIFIED	☐ Serious & complicated measles ☐ Measles & eyes/mouth complications ☐ Measles ☐ NOT CLASSIFIED	
	☐ Mentor intervened in assessment	**☐ Mentor corrected child's classification**		**☐ Mentor intervened in treatment**
		☐ N/A, no fever present		
	A complete assessment of fever includes: • *Ask long the symptoms have been present. If present for 7 or more days, has the fever been present every day?* • *Test for malaria (GE/RDT) and assesses for signs of severe malaria (such as dark urine, abnormal bleeding, jaundice, or other danger signs) and digestive symptoms (moderate diarrhea or minor vomiting).* • *Assess for signs of measles in the last 3 months (such as cough, runny nose, red eyes).*			

Condition	Mentee Assessment	Mentee Classification (select all)	Mentor Classification (select all)	Did mentee give the correct treatment?
Ear problems	☐ Yes, mentee assessed ☐ Not assessed by mentee	☐ Mastoiditis ☐ Acute ear infection ☐ Chronic ear infection ☐ No ear infection ☐ NOT CLASSIFIED	☐ Mastoiditis ☐ Acute ear infection ☐ Chronic ear infection ☐ No ear infection ☐ NOT CLASSIFIED	☐ Yes ☐ No If no, was there a stock out of correct treatment? ☐ Yes ☐ No
	☐ Present ☐ Not present			
	☐ Mentor intervened in assessment	**☐ Mentor corrected child's classification**		**☐ Mentor intervened in treatment**
		☐ N/A, no ear problems present		
	A complete assessment of ear problems includes: • *Ask if the child has an earache, if there is any drainage, how long the symptoms have been present.* • *Ask if the child has had ear discharge in the past.* • *Observe if there is any pus, pain around the tragus, or a painful swelling behind the ear.*			

Condition	Mentee Assessment	Mentee Classification (select all)	Mentor Classification (select all)	Did mentee give the correct treatment?
Anemia	☐ Yes, mentee assessed ☐ Not assessed by mentee	☐ Severe anemia ☐ Moderate anemia	☐ Severe anemia ☐ Moderate anemia	☐ Yes ☐ No
	☐ Present ☐ Not present	☐ No anemia ☐ NOT CLASSIFIED	☐ No anemia ☐ NOT CLASSIFIED	If no, was there a stock out of correct treatment? ☐ Yes ☐ No
	☐ Mentor intervened in assessment	**☐ Mentor corrected child's classification**		**☐ Mentor intervened in treatment**
		☐ N/A, no pallor/anemia present		
	A complete assessment of anemia includes: • *Assessment of palmer pallor*			

Condition	Mentee Assessment	Mentee Classification (select all)	Mentor Classification (select all)	Did mentee give the correct treatment?
Malnutrition	☐ Yes, mentee assessed ☐ Not assessed by mentee	☐ Severe acute malnutrition (SAM) with medical complications ☐ Moderate acute malnutrition (MAM) with complications	☐ Severe acute malnutrition (SAM) with medical complications ☐ Moderate acute malnutrition (MAM) with complications	☐ Yes ☐ No
	☐ Present ☐ Not present	☐ SAM without complications ☐ MAM without complications ☐ Chronic malnutrition* ☐ Underweight ☐ No malnutrition ☐ NOT CLASSIFIED	☐ SAM without complications ☐ MAM without complications ☐ Chronic malnutrition* ☐ Underweight ☐ No malnutrition ☐ NOT CLASSIFIED	*If the child is **acutely** malnourished and aged 6 months or older, please switch to using the malnutrition checklist.*
	☐ Mentor intervened in assessment	**☐ Mentor corrected child's classification**		**☐ Mentor intervened in treatment**
		☐ N/A, not malnourished		
	A complete assessment of malnutrition includes: • *Observe if child has oedema* • *Measure child's anthropometrics: weight-for-height/length* • *Weight-for-age* • *Height/length-for-age* • *MUAC* ***NB: According to the National Nutrition Protocol (2012), only children with acute malnutrition can be enrolled in the SFP Malnutrition Program. However, IMCI says to refer children with severe chronic malnutrition to SFP. Until the nutrition protocol is revised, we advise you to make a determination together with the health center nurse on individual cases of chronic malnutrition.***			

Observation Checklist for Baseline Assessment of U5 Malnutrition at HC

For the assessment of children 6 months and over only

Name of Mentor: _____ **Health Center:** _____

Date:_____/_____/_____ **Start Time:** _____ **End Time:** _____

Visit started in: ☐ IMCI ☐ Malnutrition Clinic **Visit type:** ☐ First Visit ☐ Follow-up

Child age (months): _____ **Child's Sex**: ☐ Male ☐ Female

Provider/Mentee Name #1: _____

Sex: ☐ Male ☐ Female **Is this your first time to work with this mentee?** ☐ Yes ☐ No

Mentee trained in nutrition? ☐ Yes ☐ No If yes, what year: _____

Education: ☐ Nurse ☐ Nutritionist ☐ Social Worker ☐ Other _____ **Level**: ☐ A2 ☐ A1 ☐ A0

Provider/Mentee Name #2: _____ ☐ N/A, only one provider

Sex: ☐ Male ☐ Female **Is this your first time to work with this mentee?** ☐ Yes ☐ No

Mentee trained in nutrition? ☐ Yes ☐ No If yes, what year: _____

Education: ☐ Nurse ☐ Nutritionist ☐ Social Worker ☐ Other _____ **Level**: ☐ A2 ☐ A1 ☐ A0

ALL VISITS: ANTHROPOMETRICS

Did the provider measure the child's…	Yes Assessed	Not Assessed	No Equipment	Mentor Intervened	Result
1. Weight	☐	☐	☐	☐	Kg
2. Height/Length	☐	☐	☐	☐	Cm
3. MUAC	☐	☐	☐	☐	Mm

ALL VISITS: HISTORY

Did the provider ask about the child's….	Yes Assessed	Not Assessed	N/A	Mentor Intervened	Comment
1. Food or fluid intake in past few days (for example, in the past 3 days)	☐	☐		☐	
2. Usual diet	☐	☐		☐	
3. Diarrhea	☐	☐		☐	
4. Vomiting	☐	☐		☐	
5. History of fever	☐	☐		☐	
6. If <2 years, frequency of breastfeeding	☐	☐	☐	☐	Child is breastfed: ☐ Yes ☐ No
7. If <2 years, duration of breastfeeding	☐	☐	☐	☐	

ALL VISITS: ASSESSMENT OF DANGER SIGNS

Did the provider examine the child for…	Yes Assessed	Not Assessed	Mentor Intervened	Tick if Present
1. High fever* (axillary ≥37.2°C; rectal ≥38.0°C) or hypothermia (axillary <35.0°C; rectal <35.5°C)	☐	☐	☐	☐ Fever ☐ Hypothermia
2. Not alert, very weak, unconscious, convulsions	☐	☐	☐	☐ Present
3. Dehydration**	☐	☐	☐	☐ Present
4. Severe anaemia	☐	☐	☐	☐ Present
5. Difficult or fast breathing	☐	☐	☐	☐ Present
6. Oedema +++	☐	☐	☐	☐ Present
7. Intractable vomiting	☐	☐	☐	☐ Present
8. Moderate to severe skin lesions	☐	☐	☐	☐ Present

**High fever may indicate that the child has an infection or malaria. Infection and malaria are danger signs.*

***Dehydration: based primarily on recent history of diarrhoea, vomiting, fever or sweating and recent appearance of clinical signs of dehydration as reported by the caregiver. Dehydration may also indicate shock, which is a danger sign.*

Observation Checklist for Baseline Assessment of U5 Malnutrition at HC

Did the provider perform an appetite test to examine…	Yes Assessed	Not Assessed	Mentor Intervened	Result
12. Poor appetite/anorexia	□ Using RUTF □ Caregiver report	□	□ Using RUTF □ Caregiver report	□ Normal □ Abnormal/Poor

ALL VISITS: OTHER PHYSICAL EXAM

Did the health worker examine the child for…	Yes Assessed	Not Assessed	Mentor Intervened
1. Eye signs of Vitamin A deficiency	□	□	□

ALL VISITS: LABORATORY (MAY NOT APPLY FOR ALL FOLLOW-UP VISITS)

Did the health worker order the following labs?	Yes Ordered	Not Ordered	Test Not Available	N/A	Mentor Intervened	Result
1. Blood sugar/Glycemia	□	□	□	□	□	□ Hypoglycemia*
2. Hemoglobin	□	□	□	□	□	□ Severe anemia*
3. HIV	□	□	□	□	□	
4. TB	□	□	□	□	□	
5. Other_____	□	□	□	□	□	

**Hypoglycemia and severe anemia are danger signs.*

ALL VISITS: CHILD RECORD REVIEW

Did the provider review…	Yes Assessed	Not Assessed	Mentor Intervened
1. Child's immunization card or ask about immunization history	□	□	□
2. Child's carnet/ifishi for prior visit or treatment information	□	□	□

FIRST VISIT: DIAGNOSIS AND PROGRAM ADMISSION

Provider Classification	Mentor Classification	Mentor Intervened
□ SAM with complications □ SAM without complications □ MAM with complications □ MAM without complications □ Severe chronic malnutrition □ Moderate chronic malnutrition □ Not malnourished □ Not assessed	□ SAM with complications □ SAM without complications □ MAM with complications □ MAM without complications □ Severe chronic malnutrition □ Moderate chronic malnutrition □ Not malnourished □ Not assessed	□
Provider Program Admission	**Mentor Program Admission**	**Mentor Intervened**
□ OTP □ SFP □ Chronic malnutrition program □ Hospital/IMU □ Not admitted *(explain below)*	□ OTP □ SFP □ Chronic malnutrition program □ Hospital/IMU □ Not admitted	□

If <u>not admitted</u> into a program by the mentee, please select the reason: □

□ Child not malnourished

□ Non-nutrition day, caregiver was asked to return on a nutrition day

□ Other _____

Note for mentor – classification of malnutrition

Severe Acute Malnutrition (SAM)

- Weight-for-height (WFH) or Weight-for-length (WFL) of ≤-3 SD *or*
- MUAC of <115mm or <120mm if HIV or TB positive *or*
- Presence of bilateral pitting oedema

Moderate Acute Malnutrition (MAM)

- Weight-for-height (WFH) or Weight-for-length (WFL) of > -3 and ≤ -2 SD *or*
- MUAC of ≥ 115mm and ≤ 125 mm or ≥120 mm et ≤130 mm if HIV or TB positive

Observation Checklist for Baseline Assessment of U5 Malnutrition at HC

Note for mentor continued – classification of malnutrition

Severe Chronic Malnutrition

- Weight-for-age (WFA) ≤-3 SD (and normal weight-for-length/height) *or*
- Height-for-age or Length-for-age ≤-3 SD

Moderate Chronic Malnutrition

- Weight-for-age (WFA) > -3 and ≤ -2 SD (and normal weight-for-length/height) *or*
- Height-for-age or Length-for-age > -3 and ≤ -2 SD

Not Malnourished

- Weight-for-height (WFH) or Weight-for-length (WFL) of >-2 SD *or*
- Weight-for-age >-2 SD *or*
- Height-for-age or Length-for-age >-2 SD *or*
- MUAC of >125mm or >130mm if HIV or TB positive *or*
- No bilateral pitting oedema present

Any child with malnutrition danger signs should be transferred to the hospital immediately.

ALL VISITS: MEDICAL TREATMENT (REQUIRES MEDICAL ASSESSMENT)

☐ No treatment given
(Specify reason and skip to next section)

Reason:
☐ Treatment given at prior visit ☐ No nurse available ☐ Other

Child treated with…	Yes	No	Stock Out	N/A	Mentor Intervened	Notes for Mentor
1. Vitamin A	☐	☐	☐	☐	☐	N/A if… • already had Vitamin A in past 6 months • child has oedema
2. Amoxicillin	☐	☐	☐	☐	☐	
3. Folic Acid	☐	☐	☐	☐	☐	
4. Mebendazole	☐	☐	☐	☐	☐	N/A if… • dewormed in past 6 months and no symptoms • child less than 12 months • other treatment specified based on stool sample
5. Iron	☐	☐	☐	☐	☐	
6. Measles Vaccination	☐	☐	☐	☐	☐	N/A if… • child already immunized
7. Other	☐	☐	☐	☐	☐	

Was the correct treatment given? ☐ **Yes** ☐ **Yes, given stock outs** ☐ **No**

FOLLOW-UP VISITS: CURRENT STATUS AND PROGRAM ENROLLMENT	
Child's initial program admission…	**Date of admission to program**
□ OTP □ SFP □ Hospital/IMU □ Not admitted □ Chronic malnutrition program	_____ / _____ / _____

Provider Classification	Mentor Classification	Mentor intervened
□ SAM with complications □ SAM without complications □ MAM with complications □ MAM without complications □ Severe chronic malnutrition □ Moderate chronic malnutrition □ Not malnourished □ Not assessed	□ SAM with complications □ SAM without complications □ MAM with complications □ MAM without complications □ Severe chronic malnutrition □ Moderate chronic malnutrition □ Not malnourished □ Not assessed	□

Provider Program Decision	Mentor Program Decision	Mentor intervened
□ Transfer to OTP □ Transfer to SFP □ Transfer to Chronic malnutrition program □ Transfer to Hospital/IMU □ Discharge □ No change	□ Transfer to OTP □ Transfer to SFP □ Transfer to Chronic malnutrition program □ Transfer to Hospital/IMU □ Discharge □ No change	□

Notes for mentor – classification of malnutrition

Severe Acute Malnutrition (SAM):

- Weight-for-height (WFH) or Weight-for-length (WFL) of ≤-3 SD *or*
- MUAC of <115mm or <120mm if HIV or TB positive
- Presence of bilateral pitting oedema

Moderate Acute Malnutrition (MAM)

- Weight-for-height (WFH) or Weight-for-length (WFL) of > -3 and ≤ -2 SD *or*
- MUAC of ≥ 115mm and ≤ 125 mm or >120 mm et ≤130 mm if HIV or TB positive

Severe Chronic Malnutrition

- Weight-for-age (WFA) ≤-3 SD (and normal weight-for-length/height) *or*
- Height-for-age or Length-for-age ≤-3 SD

Moderate Chronic Malnutrition

- Weight-for-age (WFA) > -3 and ≤ -2 SD (and normal weight-for-length/height) *or*
- Height-for-age or Length-for-age > -3 and ≤ -2 SD

Not Malnourished

- Weight-for-height (WFH) or Weight-for-length (WFL) of >-2 SD *or*
- Weight-for-age >-2 SD
- Height-for-age or Length-for-age >-2 SD
- MUAC of >125mm or >130mm if HIV or TB positive
- No bilateral pitting oedema present

Note for mentor – Reasons for change in program:

OTP to Hospital/IMU:

- Child loses weight for three consecutive weeks
- Child does not gain weight after 4 weeks
- Medical condition deteriorates
- Increase in bilateral pitting oedema
- Target weight has not been reached after 3 months in the program

Observation Checklist for Baseline Assessment of U5 Malnutrition at HC

Note for mentor continued – Reasons for change in program:
OTP to SFP: • Minimum stay of 6 weeks for new admissions or after inpatient stabilization • No oedema for two consecutive visits and • Weight-for- length/height is > -2 SD and MUAC > 115 mm • No weight loss for two consecutive visits
SFP to Hospital/IMU: • Child loses weight for three consecutive weeks • Medical condition deteriorates
SFP to Discharged: • All patients should remain in the program for **at least** 10 weeks • After 10 weeks, discharge should be made when Weight-for-length/height > -1 SD and MUAC > 125mm for two consecutive weeks
SFP to Chronic Malnutrition Program: • After discharge from SFP, if child has weight-for-length/height >-1 SD, but weight-for-age or height/length-for-age ≤-2 SD, transfer to Chronic Malnutrition Program
Chronic Malnutrition Program to Discharged: • Once a chronically malnourished child has been involved in the program for 1 year, and has shown no decrease in weight-for-age for two consecutive months they may be discharged from the program
Chronic Malnutrition Program – Reassessment of interventions needed: • Any child presenting with two consecutive months of decline in Weight-for-age should immediately be reassessed for medical problems, household and socio-economic status, and supplementary feeding.

ALL VISITS: FOOD SUPPLEMENTS			
Was food distributed?	**If yes, type of food provided**	**If yes, was food distribution appropriate*?**	**If no or not appropriate, was there a stock out of food?**
□ Yes □ No	□ RUTF □ Sosoma/CSB □ Sugar □ Oil □ Other:	□ Yes □ No, wrong quantity □ No, wrong food □ N/A, no food provided	□ Yes □ No □ N/A
When was the last time the child received a food package?		Date _____ □ N/A (this is the first food package for this child)	
Was milk distributed?		□ Yes □ No	

***Appropriate food distribution refers to:**

2 week supply = 3 kg SOSOMA, 500 ml oil, 500 g sugar
1 month supply= 6 kg SOSOMA, 1000 ml (1 Liter) oil, 1000 g sugar
See RUTF table for appropriate number of packets based on a child's weight.

Observation Checklist for Baseline Assessment of U5 Malnutrition at HC

ALL VISITS: COUNSELLING AND FOLLOW-UP						
	Yes		**No**		**Mentor Intervened***	
Individual counseling	☐		☐		☐	
Group counseling	☐		☐		☐	
If provided, the quality of nutrition counseling today was…	**1 (Poor)**	**2**	**3**	**4**	**5 (Very good)**	
	☐	☐	☐	☐	☐	
	Incorrect information or judgmental				Correct and comprehensive counseling	

**Note: Mentor should intervene if the provider is giving incorrect information, incomplete information, etc. Topics for counseling may include the following:*

- Safe and accurate preparation of food package
- Complementary feeding
- Meal planning
- Hygiene and sanitation
- Prevention and recognition of signs and symptoms of diarrhoea, malaria, and respiratory illness
- Breastfeeding up to 24 months
- Importance of food package as treatment exclusively for the malnourished child
- When and where to access health services
- Mutuelle membership
- Importance of the role of the father in the prevention of malnutrition
- Marasmus and kwashiorkor
- Family planning or birth preparation

Did the provider…	**Yes**	**No**	**N/A**	**Mentor Intervened**
Remind caregiver about rendez-vous date?	☐	☐	☐ Discharged from malnutrition program ☐ Child transferred to hospital/IMU	☐

If the child was referred to district hospital/IMU… ☐ N/A		
Was the caregiver willing to go?	☐ Yes (go to **B**)	☐ No (go to **A**)
A. If no, what is the reason stated for not wanting to go?	☐ Does not think child needs to go to hospital, ie. not sick enough ☐ Feels child is improving on current regimen of food packages and/or milk ☐ Financial burden to be away from home ☐ Lack of mutuelle ☐ Other home responsibilities make it too difficult, ie. other children at home ☐ Other: _____	
B. If yes, any barriers to transport?	☐ Yes, financial ☐ Yes, other: _____	☐ No

NCD MESH Mentor Observation Checklist

Chronic Respiratory Disease

NCD MESH observation checklist_asthma v8_11 April 2016_RB

Site	Health Center Name: _____ Date of Visit (dd/mm/yyyy): _____/_____/_____ Mentor's Name: _____ Observation Start Time (24h): _____:_____	**Patient Characteristics**	Patient Age: _____ Patient Sex: [ ] M [ ] F [ ] Other Dg: _____ Visit Type: [ ] First/Initial [ ] Follow-up
Provider	Provider's Name: _____ Education Level: [ ] A0 [ ] A1 [ ] A2 [ ] Other Field of Training (select all that apply): [ ] HIV [ ] NCD [ ] MH [ ] PC Number of patients provider has seen today before this visit: ___		

A	**History - *First Visit Only (did the provider ask:)*** *(DO NOT mark anything in this section if this is a follow-up visit)*	**Asked?**	**Mentor Comments** (optional if box is blank)
A1	When (at what age) the patient was first diagnosed with chronic respiratory disease or started experiencing symptoms of chronic respiratory disease?	[ ] Y [ ] N	
A2	Whether the patient has a family history of chronic respiratory disease?	[ ] Y [ ] N	
A3	Whether the patient has ever been treated for TB?	[ ] Y [ ] N	
A4	Whether the patient experiences acid reflux symptoms - burning sensation in chest/esophagus, belching acid liquid, ikirungurira? *(Provider must ask about at least 2 of these 3 symptoms - if they don't, mark NO)*	[ ] Y [ ] N	
A5	Whether the patient experiences allergic rhinitis symptoms - recurrent sneezing, runny nose and congestion? *(Provider must ask about at least 2 of these 3 symptoms - if they don't, mark NO)*	[ ] Y [ ] N	
A6	Whether the patient smokes or has ever smoked? *(N/A for patients less than 15 years old)*	[ ] Y [ ] N [ ] N/A	
A7	Whether the patient drinks or has a history of drinking alcohol?	[ ] Y [ ] N	
A8	Whether the patient has been tested for HIV before and HIV status?	[ ] Y [ ] N	Documented [ ] Y [ ] N
A9	Whether the patient is currently taking any CRD medication, or has taken any CRD medication in the past 3 months?	[ ] Y [ ] N	
A10	For patient's and alternate (closest family member) contact phone number?	[ ] Y [ ] N	Documented [ ] Y [ ] N
A11	For patient's residence address, to the umudugudu level?	[ ] Y [ ] N	Documented [ ] Y [ ] N
B	**History - *All Visits (did the provider ask:)***	**Asked?**	**Mentor Comments** (optional if box is blank)
B1	Whether the patient has had new or worsened respiratory symptoms in the past month (or since their last follow-up visit)?	[ ] Y [ ] N	
B2	The number of times in a week, over the past month, the patient woke up with shortness of breath?	[ ] Y [ ] N	
B3	Whether the patient has increased their use of salbutamol inhaler during the past month? *(N/A if patient is not prescribed salbutamol inhaler)*	[ ] Y [ ] N [ ] N/A	
B4	Whether the patient has missed any dose of medication in the past month (or since their last follow-up visit)? *(N/A if patient is not on regular scheduled medications)*	[ ] Y [ ] N [ ] N/A	
B5	Whether the patient has had any recent hospitalizations (e.g. since their last follow-up visit)?	[ ] Y [ ] N	

Chronic Respiratory Disease

B6	For childbearing female patients, whether patient may be pregnant? *(N/A if patient is less than 12 years old or over 50 years old)*	[ ] Y [ ] N [ ] N/A	

C	Physical Exam - *All Visits (did the provider check:)*	Checked?	Documented?	Correct technique?	Mentor Comments (optional if box is blank)
C1	Blood pressure?	[ ] Y [ ] N	[ ] Y [ ] N	[ ] Y [ ] N	
C2	Respiratory rate?	[ ] Y [ ] N [ ] N/A	[ ] Y [ ] N [ ] N/A	[ ] Y [ ] N [ ] N/A	
C3	Oxygen saturation? *(N/A if NO worsened respiratory symptoms {asked in B1, B5} for follow-up visit; N/A if there are no diagnostic tools available - note this in comments)*	[ ] Y [ ] N [ ] N/A	[ ] Y [ ] N [ ] N/A	[ ] Y [ ] N [ ] N/A	
C4	Peak flow? *(N/A for follow up visit)*	[ ] Y [ ] N [ ] N/A	[ ] Y [ ] N [ ] N/A	[ ] Y [ ] N [ ] N/A	
C5	Height? *(N/A for follow-up visit if patient is older than 18)*	[ ] Y [ ] N [ ] N/A	[ ] Y [ ] N [ ] N/A	N/A	
C6	Weight?	[ ] Y [ ] N	[ ] Y [ ] N	N/A	BMI documented? *(N/A for follow-up visits)* [ ] Y [ ] N [ ] N/A
C7	Lungs and heart auscultation with stethoscope? *(N/A if for follow-up visits if NO worsened respiratory symptoms)*	[ ] Y [ ] N [ ] N/A	[ ] Y [ ] N [ ] N/A	[ ] Y [ ] N [ ] N/A	

D	Impression, Plan and Treatment - *First Visit*	Provider	Mentor	Agreement?
D1	Is diagnosis appropriate (including suspected diagnosis)?	*(select all that apply)* [ ] Asthma/known asthma [ ] COPD [ ] Bronchiectasis [ ] Pneumonia or bronchitis [ ] Pulmonary TB [ ] Allergic rhinitis [ ] Gastric reflux [ ] Other _____	*(select all that apply)* [ ] Asthma/known asthma [ ] COPD [ ] Bronchiectasis [ ] Pneumonia or bronchitis [ ] Pulmonary TB [ ] Allergic rhinitis [ ] Gastric reflux [ ] Other _____	[ ] Y [ ] N Specify modifications:
D2	For diagnosis that is **NOT** asthma, COPD or bronchiectasis, did provider give the appropriate treatment orientation?	[ ] Antibiotics [ ] Antihistamine for allergies [ ] Antihistamine for reflux [ ] Requested TB sputum [ ] Other _____ [ ] N/A, diagnosis is CRD	[ ] Antibiotics [ ] Antihistamine for allergies [ ] Antihistamine for reflux [ ] Requested TB sputum [ ] Other _____ [ ] N/A, diagnosis is CRD	[ ] Y [ ] N Specify modifications:
	Impression, Plan and Treatment - *All Visits*	**Provider**	**Mentor**	**Agreement?**
D3	For patients with asthma or COPD, what is the classification of CRD severity?	[ ] Intermittent [ ] Mild persistent [ ] Moderate persistent [ ] Severe persistent [ ] Severe uncontrolled [ ] N/A, not CRD	[ ] Intermittent [ ] Mild persistent [ ] Moderate persistent [ ] Severe persistent [ ] Severe uncontrolled [ ] N/A, not CRD	[ ] Y [ ] N Specify Modifications:

Chronic Respiratory Disease

NCD MESH observation checklist_asthma v8_11 April 2016_RB

D4	For patients in **severe respiratory distress** (agitated, unable to speak in sentences, RR > 30, peak flow < 150, O2 sats < 90%), did provider administer appropriate emergency treatment at the HC?	[ ] Salbutamol inhaler [ ] Salbutamol IV [ ] Aminophylline IV [ ] Referred to DH [ ] Other _____ [ ] N/A, not in severe respiratory distress	[ ] Salbutamol inhaler [ ] Salbutamol IV [ ] Aminophylline IV [ ] Referred to DH [ ] Other _____ [ ] N/A, not in severe respiratory distress	[ ] Y [ ] N Specify modifications:
D5	For patient not referred to DH ward, did provider make appropriate medication adjustments?	[ ] Correct 1st prescription [ ] Change prescription (e.g for patients coming from other clinics) [ ] Continue same regimen [ ] Step up regimen [ ] Step down regimen [ ] No medications needed [ ] N/A, patient admitted	[ ] Correct 1st prescription [ ] Change prescription (e.g for patients coming from other clinics [ ] Continue same regimen [ ] Step up regimen [ ] Step down regimen [ ] No medications needed [ ] N/A, patient admitted	[ ] Y [ ] N Specify modifications:
D6	Did provider give appropriate follow-up?	[ ] RDV in _____ weeks [ ] Refer to DH [ ] Discharge from clinic (non NCD diagnosis)	[ ] RDV in _____ weeks [ ] Refer to DH [ ] Discharge from clinic (non NCD diagnosis)	[ ] Y [ ] N Specify modifications:
D7	For patients not referred, did provider document and communicate next RDV date?	Documented [ ] Y [ ] N Communicated [ ] Y [ ] N [ ] N/A, patient referred	Specify modifications:	

E	**Counseling and Teaching - *All Visits***	**Provider**	**Mentor Comments** (optional if box is blank)	
E1	Did provider counsel patient about his/her disease (including avoidance of disease triggers)?	[ ] Y [ ] N		
E2	Did provider counsel patient on smoking cessation? *(N/A if patient is not a smoker)*	[ ] Y [ ] N [ ] N/A		
E3	Did provider counsel patient on danger signs associated with their disease (fever, severe dyspnea, cough, unable to speak a full sentence) and tell patient to return to clinic if they develop?	[ ] Y [ ] N		
E4	For new prescription or where changes in medications made, did provider counsel patient about medication dosing (including teach back)?	[ ] Y [ ] N [ ] N/A, patient not on medications OR no med changes		
		Provider	**Mentor**	**Agreement?**
E5	Did provider counsel & observe **patient's technique** of inhaler use?	[ ] Yes, correct [ ] Yes, incorrect [ ] No, did not observe [ ] N/A, no prescription for inhaler	[ ] Yes, correct [ ] Yes, incorrect [ ] No, did not observe [ ] N/A, no prescription for inhaler	[ ] Y [ ] N Specify modifications:

F	**Referencing**	**Done?**
F1	Did provider read NCD guide or other printed reference material(s) (e.g. algorithms, medication tables) during this visit?	[ ] Yes, references used: _____ [ ] No [ ] References unavailable [ ] No, because provider understands protocol

NCD MESH Mentor Observation Checklist

Chronic Respiratory Disease

NCD MESH observation checklist_asthma v8_11 April 2016_RB

Summative Comments by Mentor:

Observation end time (24h): _____:_____ Approx time used for mentoring: _____ (min)

(observation ends when you are done filling out this checklist)

Mentor's signature _____

MESH Mentor Observation Checklist

Diabetes

NCD MESH observation checklist_DM v8_11 April 2016_RB

Site	Health Center Name: _____ Date of Visit (dd/mm/yyyy): _____/_____/_____ Mentor's Name: _____ Observation Start Time(24h): _____:_____	**Patient Characteristics**	Patient Age: ____ Patient Sex: [ ] M [ ] F [ ] Other Dg: _____ Visit Type: [ ] First [ ] Follow-up
Provider	Provider's Name:_____ Education Level : [ ] A0 [ ] A1 [ ] A2 [ ] Other Field of Training (select all that apply): [ ] HIV [ ] NCD [ ] MH [ ] PC Number of patients provider has seen today before this visit: ___		

A	**History - *First Visit Only (Did the provider ask:)*** (DO NOT mark anything in this section if this is a follow-up visit)	**Asked?**	**Mentor Comments** (optional if box is blank)
A1	When (at what age) the patient was first diagnosed with diabetes or started experiencing symptoms of diabetes?	[ ] Y [ ] N	
A2	Whether the patient has a family history of diabetes?	[ ] Y [ ] N	
A3	Whether the patient smokes or has ever smoked? *(N/A for patients less than 15 years old)*	[ ] Y [ ] N [ ] N/A	
A4	Whether the patient drinks or has a history of drinking alcohol?	[ ] Y [ ] N	
A5	Whether the patient has been tested for HIV before and HIV status?	[ ] Y [ ] N	Documented [ ] Y [ ] N
A6	Whether the patient is currently taking any DM medication, or has taken any DM medication in the past 3 months?	[ ] Y [ ] N	
A7	For patient's and alternate (closest family member) contact phone number?	[ ] Y [ ] N	Documented [ ] Y [ ] N
A8	For patient's residence address, to the umudugudu level?	[ ] Y [ ] N	Documented [ ] Y [ ] N
B	**History - *All Visits (did the provider ask:)***	**Asked?**	**Mentor Comments** (optional if box is blank)
B1	Whether the patient has had any visual problems in the last 3 months (or since their last follow-up visit)?	[ ] Y [ ] N	
B2	Whether the patient has had symptoms of hypoglycemia - dizziness, sweating, transient blurry vision that's relieved by eating - in the last 3 months (or since their last follow-up visit)? *(Provider must ask about at least 2 of these 3 symptoms – if they don't, mark NO)*	[ ] Y [ ] N	
B3	Whether the patient is experiencing any peripheral neuropathy - burning sensation or numbness in feet or hands?	[ ] Y [ ] N	
B4	Whether the patient has missed any dose of medication in the past month (or since their last follow-up visit)? *(N/A if patient is not on regular scheduled medications)*	[ ] Y [ ] N [ ] N/A	
B5	Whether the patient has had any recent hospitalizations (e.g. since their last follow-up visit)?	[ ] Y [ ] N	
B6	For childbearing female patients, whether the patient could be pregnant? *(N/A if patient is less than 12 years old or over 50 years old)*	[ ] Y [ ] N [ ] N/A	

C	**Physical Exam - *All Visits (did the provider check:)***	**Checked?**	**Documented?**	**Correct technique?**	**Mentor Comments** (optional if box is blank)
C1	Blood pressure?	[ ] Y [ ] N	[ ] Y [ ] N	[ ] Y [ ] N	
C2	Height? *(N/A for follow-up visits if patient is older than 18)*	[ ] Y [ ] N [ ] N/A	[ ] Y [ ] N [ ] N/A	N/A	

Diabetes

NCD MESH observation checklist_DM v8_11 April 2016_RB

C3	Weight?	[ ] Y [ ] N	[ ] Y [ ] N	N/A	BMI documented? *(N/A for follow-up visits)* [ ] Y [ ] N [ ] N/A
C4	Foot exam (visual) for sores and infections?	[ ] Y [ ] N	[ ] Y [ ] N	[ ] Y [ ] N	
C5	Foot exam for neuropathy *(N/A if NO monofilament or this visit is less than 1 year since last visit)*	[ ] Y [ ] N [ ] N/A	[ ] Y [ ] N [ ] N/A	[ ] Y [ ] N [ ] N/A	
C6	Blood sugar?	[ ] Y [ ] N	[ ] Y [ ] N	[ ] Y [ ] N	
C7	Listen to patient's heart and lungs with stethoscope? *(N/A for follow-up visit if patient had NO dyspnea, chest pain or leg edema)*	[ ] Y [ ] N [ ] N/A	[ ] Y [ ] N [ ] N/A	N/A	

D	**Impression, Plan and Treatment - *First Visit***	**Provider**	**Mentor**	**Agreement?**
D1	Is diagnosis appropriate (including suspected diagnosis)?	[ ] Type I/known Type I [ ] Type II/known Type II [ ] Diabetes in the setting of pregnancy [ ] Other _____	[ ] Type I/known Type I [ ] Type II known Type II [ ] Diabetes in the setting of pregnancy [ ] Other _____	[ ] Y [ ] N Specify modifications:
	Impression, Plan and Treatment - *All Visits*	**Provider**	**Mentor**	**Agreement?**
D2	For patient with HTN comorbidity or positive urine protein, did provider prescribe ACEI correctly?	[ ] Y [ ] N [ ] N/A (no HTN comorbidity or positive urine protein)	[ ] Y [ ] N [ ] N/A (no HTN comorbidity or positive urine protein)	[ ] Y [ ] N Specify modifications:
D3	For patient showing signs of **hyperglycemia emergency/DKA** (drowsiness, fruity smell to breath, nausea/vomiting, hypotension or blood sugar > 400) did provider request appropriate emergency treatment?	[ ] IV fluids [ ] Insulin [ ] Refer to DH [ ] No treatment initiated [ ] N/A, no hyperglycemic emergency	[ ] IV fluids [ ] Insulin [ ] Refer to DH [ ] No treatment initiated [ ] N/A, no hyperglycemic emergency	[ ] Y [ ] N Specify modifications:
D4	Did provider conduct appropriate investigation?	[ ] Urine dipstick [ ] Blood glucose [ ] HbA1c [ ] Creatinine [ ] Pregnancy test [ ] Ophthalmology [ ] N/A, not needed [ ] N/A, stock out/test not available	[ ] Urine dipstick [ ] Blood glucose [ ] HbA1c [ ] Creatinine [ ] Pregnancy test [ ] Ophthalmology [ ] N/A, not needed [ ] N/A, stock out/ test not available	[ ] Y [ ] N Specify modifications:
D5	For patient not referred to DH ward, did provider make appropriate medication adjustments?	[ ] Correct 1st prescription [ ] Change prescription (e.g for patients coming from other clinics) [ ] Continue same regimen [ ] Step up regimen [ ] Step down regimen [ ] No medication needed	[ ] Correct 1st prescription [ ] Change prescription (e.g for patients coming from other clinics) [ ] Continue same regimen [ ] Step up regimen [ ] Step down regimen [ ] No medication needed	[ ] Y [ ] N Specify modifications: *Did provider consider BMI for treatment? [ ] Y [ ] N

MESH Mentor Observation Checklist

Diabetes

NCD MESH observation checklist_DM v8_11 April 2016_RB

		[ ] N/A, patient referred, admitted, or discharged	[ ] N/A, patient referred, admitted, or discharged	
D6	Did provider give appropriate follow-up?	[ ] RDV in _____ weeks [ ] Refer to DH [ ] Discharge from clinic (non NCD diagnosis)	[ ] RDV in _____ weeks [ ] Refer to DH [ ] Discharge from clinic (non NCD diagnosis)	[ ] Y [ ] N Specify modifications:
D7	For patients not referred did provider document & communicate next RDV date?	Documented [ ] Y [ ] N Communicated [ ] Y [ ] N [ ] N/A, patient referred	Specify modifications:	

E	**Counseling and Teaching – *All visits***	**Provider**	**Mentor Comments** (optional if box is blank)
E1	Did provider counsel patient on his/her disease (including diabetic diet)?	[ ] Y [ ] N	
E2	Did provider counsel patient on smoking cessation? *(N/A if patient is not a smoker)*	[ ] Y [ ] N [ ] N/A	
E3	Did provider counsel patient on danger signs associated with their disease (hyperglycemia & hypoglycemia)?	[ ] Y [ ] N	
E4	For new prescription or where changes in medications made, did provider counsel patient about medication dosing (including teach back)?	[ ] Y [ ] N [ ] N/A, not on medications OR no med changes	

F	**Referencing**	
F1	Did provider read NCD guide or other printed reference material(s) (e.g. algorithms, medication tables) during this visit?	[ ] Yes, references used: _____ [ ] No [ ] References unavailable [ ] No, provider understands protocol

Summative Comments by Mentor:

_____

_____

_____

_____

_____

Observation end time (24h): _____:_____ Approx Time used for mentoring: _____ (min)

(observation ends when you are done filling out this checklist)

Mentor's signature _____

Hypertension

NCD MESH observation checklist_HTN v8_16 April 2016_RB

Site	Health Center Name: _____ Date of Visit (dd/mm/yyyy): _____/____/_____ Mentor's Name: _____ Observation Start Time(24h): _____:_____	**Patient Characteristics**	Patient Age: ____ Patient Sex: [ ] M [ ] F [ ] Other Dg: _____ Visit Type: [ ] First/Initial [ ] Follow-up
Provider	Provider's Name: _____ Education Level: [ ] A0 [ ] A1 [ ] A2 [ ] Other Field of Training (select all that apply): [ ] HIV [ ] NCD [ ] MH [ ] PC Number of patients provider has seen today before this visit: ___		

A	**History - *First Visit Only (did the provider ask:)*** (DO NOT mark anything in this section if this is a follow-up visit)	**Asked?**	**Mentor Comments** (optional if box is blank)
A1	Whether the patient has a family history of hypertension?	[ ] Y [ ] N	
A2	Whether the patient smokes or has ever smoked *(N/A for patients less than 15 years old)?*	[ ] Y [ ] N [ ] NA	
A3	Whether the patient drinks or has a history of drinking alcohol?	[ ] Y [ ] N	
A4	Whether the patient likes adding salt to food (dietary salt intake)?	[ ] Y [ ] N	
A5	Whether the patient has been tested for HIV before and HIV status?	[ ] Y [ ] N	Documented [ ] Y [ ] N
A6	Whether the patient is currently taking any HTN medication, or has taken any HTN medication in the past 3 months?	[ ] Y [ ] N	
A7	For patient's and alternate (closest family member) contact phone number?	[ ] Y [ ] N	Documented [ ] Y [ ] N
A8	For patient's residence address, to the umudugudu level?	[ ] Y [ ] N	Documented [ ] Y [ ] N
B	**History - *All Visits (did the provider ask:)***	**Asked?**	**Mentor Comments** (optional if box is blank)
B1	Whether the patient has had symptoms of heart failure - leg edema, dyspnea, orthopnea - in the last month (or since their last follow-up visit)? *(Provider must ask about at least 2 of these 3 symptoms – if they don't, mark NO)*	[ ] Y [ ] N	
B2	Whether the patient is currently experiencing severe headache, blurred vision, dyspnea, or chest pain? *(Provider must ask about at least 2 of these 3 symptoms – if they don't, mark NO)*	[ ] Y [ ] N	
B3	Whether the patient has missed any dose of medication in the past month (or since their last follow-up visit)? *(N/A if patient is not on regular scheduled medications)*	[ ] Y [ ] N [ ] N/A	
B4	Whether the patient has had any recent hospitalizations (e.g. since their last follow-up visit)?	[ ] Y [ ] N	
B5	For childbearing female patients, whether patient may be pregnant? *(N/A if patient is less than 12 years old or over 50 years old)*	[ ] Y [ ] N [ ] N/A	

C	**Physical Exam - *All Visits (did the provider check:)***	**Checked?**	**Documented?**	**Correct technique?**	**Mentor Comments** (optional if box is blank)
C1	Blood pressure?	[ ] Y [ ] N	[ ] Y [ ] N	[ ] Y [ ] N	
C2	Height? *(N/A for follow up visits if patient is older than 18)*	[ ] Y [ ] N [ ] N/A	[ ] Y [ ] N [ ] N/A	N/A	
C3	Weight?	[ ] Y [ ] N	[ ] Y [ ] N	N/A	BMI documented? *(N/A*

Hypertension

NCD MESH observation checklist_HTN v8_16 April 2016_RB

					for follow-up visits) [ ] Y [ ] N [ ] N/A
C4	Legs for edema? *(N/A for follow-up visit where patient has NO respiratory or cardiac symptoms)*	[ ] Y [ ] N [ ] N/A	[ ] Y [ ] N [ ] N/A	[ ] Y [ ] N [ ] N/A	
C5	Listen to patient's heart with stethoscope? *(N/A for follow-up visit where patient has NO respiratory or cardiac symptoms)*	[ ] Y [ ] N [ ] N/A	[ ] Y [ ] N [ ] N/A	[ ] Y [ ] N [ ] N/A	
C6	Listen to patient's lungs with stethoscope? *(N/A for follow-up visit where patient has NO respiratory or cardiac symptoms)*	[ ] Y [ ] N [ ] N/A	[ ] Y [ ] N [ ] N/A	[ ] Y [ ] N [ ] N/A	

D	**Impression, Plan and Treatment - *First Visit***	**Provider**	**Mentor**	**Agreement?**
D1	Is diagnosis appropriate (including suspected diagnosis)?	[ ] HTN/known HTN [ ] HTN in the setting of pregnancy [ ] Heart failure [ ] Chronic kidney disease [ ] Other _____	[ ] HTN/known HTN [ ] HTN in the setting of pregnancy [ ] Heart failure [ ] Chronic kidney disease [ ] Other _____	[ ] Y [ ] N Specify modifications:
D2	If diagnosis **other** than HTN, did provider give the appropriate referral to DH?	[ ] Y [ ] N [ ] N/A, diagnosis is HTN	[ ] Y [ ] N [ ] N/A, diagnosis is HTN	[ ] Y [ ] N Specify modifications:
	Impression, Plan and Treatment - *All Visits*	**Provider**	**Mentor**	**Agreement?**
D3	For patients with HTN, what is the classification of HTN severity?	[ ] Stage I, no risk factors [ ] Stage I, with risk factors [ ] Stage II [ ] Stage III [ ] Controlled with medication [ ] N/A, not HTN	[ ] Stage I, no risk factors [ ] Stage I, with risk factors [ ] Stage II [ ] Stage III [ ] Controlled with medication [ ] N/A, not HTN	[ ] Y [ ] N Specify Modifications:
D4	Does patient meet criteria for a **complicated case** of HTN, requiring referral to DH NCD Clinic (criteria include suspected secondary HTN, uncontrolled HTN, renal failure, pregnancy)?	*(select all that apply)* [ ] Yes, suspicion of secondary HTN [ ] Yes, uncontrolled HTN after 3 visits [ ] Yes, renal failure [ ] Yes, pregnancy [ ] Yes, other _____ [ ] No, not complicated case	*(select all that apply)* [ ] Yes, suspicion of secondary HTN [ ] Yes, uncontrolled HTN after 3 visits [ ] Yes, renal failure [ ] Yes, pregnancy [ ] Yes, other _____ [ ] No, not complicated case	[ ] Y [ ] N Specify modifications:
D5	For patients with **hypertensive emergency** (BP > 180/110 AND danger signs such as headache, blurred vision, dyspnea, hematuria, chest pain), did provider administer appropriate emergency	[ ] Nifedipine 20 po [ ] Nifedipine 10 po (short acting) [ ] Captopril 25 po [ ] Hydralazine 25 po [ ] Lasix 20 IV or 40 po [ ] Refer to DH	[ ] Nifedipine 20 po [ ] Nifedipine 10 po (short acting) [ ] Captopril 25 po [ ] Hydralazine 25 po [ ] Lasix 20 IV or 40 po [ ] Refer to DH	[ ] Y [ ] N Specify modifications:

Hypertension

	treatment at the HC?	[ ] N/A, no hypertensive emergency	[ ] N/A, no hypertensive emergency	
D6	For patient with positive urine protein, did provider prescribe ACEI correctly?	[ ] Y [ ] N [ ] N/A, no positive urine protein	[ ] Y [ ] N [ ] N/A, no positive urine protein	[ ] Y [ ] N Specify Modifications:
D7	For patient not referred to DH ward, did provider make appropriate medication adjustments?	[ ] Correct 1st prescription [ ] Change prescription (e.g for patients coming from other clinics) [ ] Continue same regimen [ ] Step up regimen [ ] Step down regimen [ ] No medications needed [ ] N/A, patient admitted	[ ] Correct 1st prescription [ ] Change prescription (e.g for patients coming from other clinics) [ ] Continue same regimen [ ] Step up regimen [ ] Step down regimen [ ] No medications needed [ ] N/A, patient admitted	[ ] Y [ ] N Specify Modifications:
D8	Did provider make appropriate lab requests?	[ ] Urine dipstick [ ] Blood glucose [ ] Creatinine [ ] Pregnancy test [ ] Other _____ [ ] N/A, no tests needed [ ] N/A, stock out/test not available	[ ] Urine dipstick [ ] Blood glucose [ ] Creatinine [ ] Pregnancy test [ ] Other _____ [ ] N/A, no tests needed [ ] N/A, stock out/test not available	[ ] Y [ ] N Specify modifications:
D9	Did provider give appropriate follow-up?	[ ] RDV in _____ weeks [ ] Refer to DH [ ] Discharge from clinic (non NCD diagnosis)	[ ] RDV in _____ weeks [ ] Refer to DH [ ] Discharge from clinic (non NCD diagnosis)	[ ] Y [ ] N Specify modifications:
D10	For patients not referred, did provider document and communicate next RDV date?	Documented [ ] Y [ ] N Communicated [ ] Y [ ] N [ ] N/A, patient referred	Specify modifications:	

E	**Counseling and Teaching – *All Visits***	**Provider**	**Mentor Comments** (optional if box is blank)
E1	Did provider counsel patient about his/her disease (including low salt diet)?	[ ] Y [ ] N	
E2	Did provider counsel patient on smoking cessation? *(N/A if patient is not a smoker)*	[ ] Y [ ] N [ ] N/A	
E3	Did provider counsel patient on danger signs associated with their disease (severe headache, blurred vision, dyspnea, leg edema), and tell patient to return to clinic if they develop?	[ ] Y [ ] N	
E4	For new prescription or where changes in medications made, did provider counsel patient about medication dosing (including teach back)?	[ ] Y [ ] N [ ] N/A, not on meds or no changes	

F	**Referencing**	**Done?**
F1	Did provider read NCD guide or other printed reference material (e.g. algorithms, medication tables) during this visit?	[ ] Yes, references used: _____ [ ] No [ ] References unavailable [ ] No, provider understands protocol

MESH Mentor Observation Checklist

Hypertension

NCD MESH observation checklist_HTN v8_16 April 2016_RB

Summative Comments by Mentor:

Observation end time (24h): _____:_____
(observation ends when you are finished with checklist)

Approx Time used for mentoring: ___ (min)

Mentor's signature _____

Maternal/Neonatal Health Knowledge Questionnaire

Name: _____ Date: _____
Health Center: _____ Level A2 ___ A1 ____ A0 ___
Training: Nurse ____ Midwife ____ Other_____

Trained in SONU? No ___ Yes ___ (If yes, what year: _____)
Trained in IMCI? No ___ Yes ___ (If yes, what year: _____)
Trained in ENC? No ___ Yes ___ (If yes, what year: _____)
Trained in HBB? No ___ Yes ___ (If yes, what year: _____)

1. The information obtained from the antenatal history can help the provider:
    a. Plan for childbirth
    b. Identify existing problems
    c. Identify health education and counseling needs
    d. All of the above

2. Pregnant women should receive educational messages about which of the following?
    a. Personal hygiene, rest, and exercise during pregnancy
    b. Diet and nutrition during pregnancy
    c. Danger signs during pregnancy
    d. All of the above

3. When counseling a pregnant woman about nutrition, be sure to:
    a. Ask her what she eats in a typical day to determine if her diet is adequate
    b. Tell her to eat the same amount of food that she ate before her pregnancy
    c. Recommend that she weigh herself once a week
    d. Inform her that only very anemic women need iron/folate supplements

4. When Mrs. K. was admitted in labor at 10 AM the following were found: cervix dilation: 5 cm; contractions: 3 in 10 minutes lasting 20–40 seconds; fetal head: 4/5 palpable; membranes intact; fetal heart rate: 138 beats per minute. At 2 PM the following were found: cervix: 7 cm; contractions: 5 in 10 minutes lasting 30 seconds; fetal head: 2/5 palpable; membranes intact; fetal heart rate: 168 beats per minute. Which is the most probable diagnosis?

    a. Obstructed labor
    b. Fetal distress
    c. Preterm labor
    d. Fetal pelvic disproportion

5. Which is the most appropriate intervention?

    a. Prepare for vacuum extraction
    b. Encourage the mother to empty her bladder
    c. Sedate the mother so that she can rest
    d. Transfer the mother to the district hospital

6. When cervical dilation passes the alert line, what actions should the provider take?
    a. Evaluate the frequency and duration of contractions
    b. Evaluate cervical dilation
    c. Evaluate fetal descent and condition (fetal heart rate, molding, amniotic fluid)
    d. Evaluate for dehydration
    e. Evaluate the woman's psychological status
    f. All of the above

7. Which of the following will help to decrease the risk of infection during childbirth?
    a. Performing frequent vaginal examinations
    b. Rupturing membranes as soon as possible in the first stage of labor
    c. Routine catheterization of the bladder before childbirth
    d. Reducing prolonged labor

8. A woman with a ruptured uterus has which of the following signs and symptoms:
    a. Rapid maternal pulse
    b. Persistent abdominal pain and suprapubic tenderness
    c. Fetal distress
    d. all of the above

During routine ANC clinic, you see a patient who is a 34 year old G4P2 at 24 weeks gestation. She has no significant medical or obstetrical history and denies any headache, blurry vision, bleeding, or loss of fluid. She reports positive fetal movement. Her vital signs are as follows:
Temp 36.7, Pulse 76, Respirations 18, BP 14/9. FHR 147.Her urine dip is 2+ protein, negative glucose, negative ketones.

9. What would be your diagnosis for this patient?
    a. No complications, normal pregnancy
    b. Pregnancy Induced Hypertension
    c. Mild Pre-Eclampsia
    d. Severe Pre-Eclampsia

10. What would be your plan of care for this woman?
    a. Continue with routine prenatal care
    b. Counsel on more frequent ANC visits for assessment of danger signs
    c. Start the woman on an oral anti-hypertensive medication
    d. Give an anti-convulsant and prepare to induce delivery

A few weeks later, you see this woman again in ANC clinic. Today she is complaining of a headache and her vital signs are as follows: Temp: 36.7, Pulse: 82, Respirations: 18, BP: 15/11. Her urine dip is 3+ protein, negative glucose, negative ketones.

11. What is your new diagnosis for this patient?
    a. Pregnancy-Induced Hypertension
    b. Mild Pre-Eclampsia
    c. Severe Pre-Eclampsia
    d. Eclampsia

12. What would be your plan of care for this woman?
    a. Counsel the woman on more frequent ANC visits for assessment of danger signs
    b. Start the woman on an oral anti-hypertensive
    c. Give an anticonvulsant IM or IV
    d. Give anti-hypertensive, give an anti-convulsant, and admit for observation until gestation
        reaches full-term
    e. Give anti-hypertensive, give an anti-convulsant, and prepare to induce delivery;
        may also give steroids if gestation is less than 34 weeks.

13. For a patient receiving Magnesium Sulfate, the drug should be held if:
    a. Respirations are less than 16/min
    b. hyperreflexia is present
    c. reflexes are absent
    d. blood pressure increases above 110mmHg
    e. A and C only
    f. All of the above

14. Evaluation for signs of worsening pre-eclampsia would include:
    a. blood pressure
    b. urine dip for proteinuria
    c. assessment of reflexes for hyperreflexia
    d. urine output for oliguria
    e. all of the above

A 26 y/o G3P1 at 38 weeks gestation presents to the HC reporting that she has been having moderate labor pains for the past 6 hours. Her cervix is 2cm dilated and fetal descent is at 3/5. Her membranes are not ruptured. FHR is 146 bpm. Vital signs are as follows: Temp 36.5, Pulse 90, BP 13/8, Resp 20.

15. What would you do for this woman?
    a. Assess her contractions yourself by palpation for a full 10 minutes
    b. Re-check her cervix in 2 hours for signs of progress
    c. Diagnose false labor and send her home
    d. Rupture membranes and induce with Oxytocin
    e. A and B only
    f. None of the above

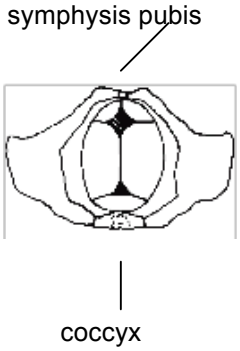
A 32 y/o G5P3 at 40 weeks gestation is laboring at the HC. She has no significant medical or obstetrical history. Fetus is vertex by palpation. Her labor progresses as follows:
0800: 4cm dilated, descent 4/5, FHR 136, Ctx 2q10min, 20 seconds each
1200: 6cm dilated, descent 4/5, FHR 140, Ctx 2q10min, 30 seconds each
1600: 8cm dilated, descent 3/5, FHR 140, Ctx 2q10min, 30 seconds each

16. What would your diagnosis be?
    a. Prolonged latent phase
    b. Cephalopelvic Disproportion
    c. Inadequate uterine contractions
    d. Malpresentation

17. Before treating this woman, what would you do?
    a. Rule out obstruction by assessing caput, molding
    b. Rupture membranes and assess fetal well-being via FHR and amniotic fluid (meconium)
    c. Assess woman for signs and symptoms of shock
    d. A and B only
    e. All of the above

18. What would your treatment for this woman entail?
    a. Refer to DH for caesarean section
    b. Delivery baby via ventouse
    c. Augment labor with oxytocin and reassess progress in 2 hours
    d. Continue monitoring labor for the next 4 hours or until signs of fetal distress or shock

19. Identify this presentation and the treatment it would require:



    a. Occiput Anterior, expectant management of normal labor
    b. Occiput Posterior, allow woman to change positions to facilitate rotation
    c. Brow Presentation, deliver by caeasarean-section
    d. Face Presentation, deliver by forceps

20. Circle the 3 most common causes of neonatal mortality:
    a. congenital anomalies
    b. birth asphyxia
    c. prematurity
    d. infection

21. All of the following are strategies to prevent neonatal infection, EXCEPT:
    a. hand-washing prior to cervical examination
    b. maternal antibiotics for prolonged rupture of membranes
    c. placing baby immediately on warming table
    d. immediate kangaroo mother care for breathing infants
    e. umbilical cord cut with sterile scissors

22. All of the following are causes of birth asphyxia EXCEPT:
    a. lack of stimulation after delivery
    b. prolonged labor
    c. tight nuchal cord
    d. induction of labor for post-dates pregnancy
    e. placental abruption

23. All of the following steps should be done for a suspected preterm delivery EXCEPT:
    a. maternal glucocorticoids
    b. immediate transfer of mother to District Hospital
    c. preparation of warmer, mask, and suction for possible resuscitation
    d. avoid kangaroo mother care if baby is born

24. In order to prevent birth asphyxia, an emergency c-section should be performed in less than _____ minutes from the time of detection of fetal distress:
    a. 10 minutes
    b. 30 minutes
    c. 1 hour
    d. 2 hours

25. True or False: Most newborns requiring resuscitation require chest compressions.

26. True or False: If I am alone with a baby with a low heart rate, I should stop ventilation and perform chest compressions.

27. All of the following are danger signs in a newborn infant EXCEPT:
    a. hypothermia
    b. jaundice
    c. poor breastfeeding
    d. bulging fontanelle
    e. extension of arms and legs when awakened from sleep

28. Which of the following is NOT a safe and effective way to treat hypothermia:
    a. Dry baby, keep clothes and blanket dry
    b. Avoid drafts and cold surfaces
    c. Put a hat on the baby
    d. Cover the baby's face with a blanket
    e. Provide Kangaroo Mother Care

29. The most important intervention after drying, suctioning and stimulating an infant who remains apneic is:
    a. Effective bag mask ventilation
    b. Chest compressions
    c. More vigorous stimulation
    d. Thermoregulation
    e. Epinephrine

30. Which of the following is NOT a reliable sign of respiratory distress in the newborn:
    a. Grunting
    b. Retractions
    c. Apnea
    d. Nasal flaring
    e. Respiratory rate 30 to 60

31. Which of the following is NOT a contraindication for Kangaroo Mother Care (KMC)?
    a. Severe respiratory distress
    b. Hemodynamic instability
    c. Systemic signs of sepsis
    d. Stable newborn on supplemental oxygen via nasal cannula
    e. All of the above responses are contraindications for KMC

32. Which of the following is (are) risk factor(s) for neonatal infection?
    a. Maternal fever during labor
    b. Foul smelling amniotic fluid
    c. Prolonged rupture of membranes
    d. Preterm labor
    e. All of the above

33. Which of the following are causes of low birthweight or prematurity?
    a. maternal infection
    b. maternal malaria
    c. poor maternal nutrition
    d. multiple pregnancies
    e. all of the above

34. Maternal glucocorticoids help support:
    a. hypoglycemia in mothers
    b.hypoglycemia in babies
    c. brain development in preterm infants
    d. lung maturity in preterm infants

Mentoring of the Mentor Tool

Date of Activity			Location		Start Time	End Time	Duration of Mentorship Visit	Name of Mentor of Mentors	ABC Mentor Observed	Activities Completed								
Day	Month	Year	Hospital Catchment Area	Health Facility Visited						Case Observation	Simulations	QI Coaching	Register Review	Data Validation	Equipment	On-site Teaching	Other	Describe other
1	*January*	*2017*	*Mibilizi DH*	*EXAMPLE HC*	*8:10*	*14:00*	*5:50*	*Merab*	*Marie Claire*	*Yes*	*Yes*	*Yes*	*No*	*No*	*No*	*No*	*Yes*	*Completed the equipment survey together for midline evaluation.*
										No	No	No	No	No	No	No	No	
										No	No	No	No	No	No	No	No	
										No	No	No	No	No	No	No	No	
										No	No	No	No	No	No	No	No	
										No	No	No	No	No	No	No	No	
										No	No	No	No	No	No	No	No	
										No	No	No	No	No	No	No	No	
										No	No	No	No	No	No	No	No	
										No	No	No	No	No	No	No	No	
										No	No	No	No	No	No	No	No	
										No	No	No	No	No	No	No	No	

Date of Activity			Mentor's Strengths	Mentor's Weaknesses	Plans for Improvement
Day	Month	Year			
1	*January*	*2017*	*Very good facilitating the team QI meeting. Was able to help the team brainstorm change ideas without just giving them ideas.*	*Interrupted the mentee too much during mentorship. While the suggestions were all technically correct, the mentee looked frustrated in front of the patient.*	*Debriefed about how to give feedback and decide when to interrupt during the consultation and when to save feedback for after the patient has left the room.*

Mentoring of the Mentor Tool

Date of Activity			For each clinical area observed select the best response on a scale of 1 (not at all) to 5 (very much): The mentor demonstrated a strong foundation in clinical knowledge, judgment, and skill in this area.				
Day	**Month**	**Year**	ANC	Labor and Delivery	Post-partum Care	Newborn Care	NCU Care (Hospital Only)
1	*January*	*2017*	*4*	N/A - not observed	N/A - not observed	*5 - Very much*	N/A - not observed
			N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed
			N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed
			N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed
			N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed
			N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed
			N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed
			N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed
			N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed
			N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed
			N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed
			N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed

Date of Activity			For each area observed select the best response on a scale of 1 (not at all) to 5 (very much):							Rate on a scale of 1 (Poor) to 5 (Very good)	OVERALL COMMENTS
Day	Month	Year	The mentor demonstrated good working relationships with the mentee(s) and health facility staff.	The mentor provided constructive and supportive feedback to mentees.	The mentor identified deficits in quality of care for MCH services (e.g., areas for clinical improvement).	The mentor provided appropriate technical assistance regarding systems-level change at the site (e.g., QI coaching).	The mentor demonstrated good ability to work with and interpret data.	The mentor demonstrated good problem solving skills (outside of specific QI projects).	The mentor keeps accurate records of mentorship visits, using appropriate tools.	Overall rating of this individual's mentorship skills (both clinical and QI).	
1	*January*	*2017*	*3 - Somewhat*	*2*	*5 - Very much*	*5 - Very much*	N/A - not observed	N/A - not observed	*5 - Very much*	*3 - Average*	*Need to work on feedback to mentees, but she was very receptive of this feedback and agreed to be more thoughtful about improving her practices.*
			N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed		
			N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed		
			N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed		
			N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed		
			N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed		
			N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed		
			N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed		
			N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed		
			N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed	N/A - not observed		