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Maternal and Child Survival Program

Strengthening the Routine Immunization System through a Reaching Every Child–Quality Improvement Approach in Uganda

A How-To Guide

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About MCSP

The Maternal and Child Survival Program (MCSP) is a global United States Agency for International Development (USAID) cooperative agreement to introduce and support high-impact health interventions with a focus on 32 high-priority countries with the ultimate goal of preventing child and maternal deaths. The Program is introducing and supporting high-impact, sustainable reproductive, maternal, newborn and child health (RMNCH) interventions in partnership with ministries of health and other partners. Visit www.mcsprogram.org to learn more.

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Contents

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Organization	Contribution
USAID	Funding, collaboration, and guidance that allowed John Snow, Inc. (JSI) to implement REC-QI and strengthen RI in Uganda
Bill & Melinda Gates Foundation	Supporting SS4RI and expansion of REC-QI in Uganda
MCSP and its predecessor, Maternal and Child Health Integrated Program (MCHIP), of USAID	Supporting start-up and ongoing development of the guide
Ministry of Health, Uganda (MOH)/Uganda National Expanded Programme on Immunisation (UNEPI)/Quality Assurance Department	Guiding development of this document, embracing JSI's QI approach, and fostering an environment for sustainability
JSI headquarters	Technical guidance and input
The 5 MCHIP districts (Busia, Iganga, Kabale, Kapchorwa and Rukungiri)	Supporting and implementing REC-QI approaches in Uganda

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Abbreviations

ADHO	assistant district health officer
AEFI	adverse events following immunization
ANC	antenatal care
CAO	chief administrative officer
CR	child register
DCCT	district cold chain technician
DHO	district health officer
DHT	district health team
DHMT	district health management team
DOR	dropout rate
DQSI	data quality self-assessment and improvement
DTO	district technical officer
EPI	Expanded Programme on Immunisation
HC	health center
HF	health facility
HMIS	health management information system
HSD	health sub-district
HUMC	health unit management committee
HW	health worker
JSI	John Snow, Inc.
LC1	Local Council 1
MCHIP	Maternal and Child Health Integrated Program
MCSP	Maternal and Child Survival Program
MOH	Ministry of Health
OJT	on-the-job training
OPL	operational level
PCV	pneumococcal conjugate vaccine
PDSA	Plan-Do-Study-Act
PNC	postnatal care
QI	quality improvement
QIT	quality improvement team
QRM	quarterly review meeting
QWIT	quality work improvement team
REC-QI	Reaching Every Child through Quality Improvement

RED	Reaching Every District
RI	routine immunization
RSST	regional supportive supervision team
SAS	senior assistant secretary
SC	sub-county
SS	supportive supervision
SS4RI	Stronger Systems for Routine Immunization
TOT	training of trainers
UBOS	Uganda Bureau of Statistics
UNEPI	Uganda National Expanded Programme on Immunisation
USAID	United States Agency for International Development
VHT	village health team
VIMCB	Vaccine and Injection Materials Control Book
WHO	World Health Organization

Executive Summary

The ambitious goal of the Uganda National Expanded Programme on Immunisation (UNEPI)— "to ensure that every child and high-risk group is fully vaccinated with high-quality and effective vaccines against target diseases according to recommended strategies"—has yet to be achieved, despite commendable increases in vaccine coverage over the last few years. Although the Reaching Every Child (REC) strategy for immunization has been in place for more than a decade, many districts and health facilities (HFs) face challenges in implementing it, partially due to inadequate guidance on *how* to fully and sustainably put REC into operation.

The Reaching Every Child through Quality Improvement (REC-QI) approach combines the REC strategy and quality improvement (QI) tools and techniques, which provide practical methods that allow Expanded Programme on Immunisation (EPI) stakeholders to explore obstacles to REC implementation, to develop possible solutions and share learning for sustainability and scale-up. It advances REC from a "what to do" strategy to a "how-to" approach for strengthening the routine immunization (RI) system.

The REC-QI:

- Strengthens planned and budgeted routine EPI activities, such as microplanning and supportive supervision; fits within existing local government health service delivery system
- Does not have large additional costs, and enables effective use of available resources by addressing the root causes of pressing problems
- Engages stakeholders, such as local government leaders, who that have been overlooked in the past
- Helps managers allocate tasks to the appropriate level
- Generates data for better decision-making at all levels
- Incorporates continuous information exchange so that lessons and solutions can be applied in new settings and to the approach as well

This guide, based on experiences introducing REC-QI in Uganda and Ethiopia, provides guidance on how to conduct REC-QI. It supplements but does not replace the current national REC strategy. UNEPI, hospital, district health team, and health sub-district staff are the intended users of the guide.

An overview introduces readers to REC-QI concepts and explains how to use various QI tools and techniques. These include but are not limited to: systems thinking, quality work improvement teams (QWITs), a model for improvement that provides a framework for guiding QI, Plan-Do-Study-Act cycles to test change ideas for improvement, tools for analyzing root causes of problems, and peer learning. It explains how REC-QI processes correspond to REC components.

The guide then outlines in detail the three stages for introducing REC-QI in districts: 1) orient; 2) establish and strengthen; and 3) sustain. Depending on the district-specific strengths and weaknesses, the estimated time to complete the three stages is 1–2 years.

REC-QI introduction topics include macromapping, an enhanced Reaching Every District Categorization Tool, data quality self-assessment and improvement, microplanning, QWIT formation and management, integrated quarterly review meetings that include non-traditional stakeholders, and community and leader engagement. A section on monitoring and evaluation highlights the importance of assessing how key elements of REC-QI contribute to a stronger RI system and suggests corresponding indicators.

REC-QI shows promise in resolving many of the shortcomings noted in the Comprehensive EPI Evaluation of 2015.[1] It addresses challenges such as the lack of reliable target population data for microplanning and performance tracking at lower levels; inadequate monitoring at all levels; inadequate

[1] *Uganda Comprehensive EPI, Surveillance, Immunization Financing Review and Post Introduction Evaluation of Pneumococcal Vaccine 23 Feb–6 Mar 2015. Executive Summary, Recommendations and Road Map*. 2015.

supportive supervision at lower levels; and limited use of data for informing programmatic action. Adding QI to REC offers an iterative improvement approach for building an immunization system strong enough to sustain high-coverage RI.

Introduction

Like many countries, Uganda adopted the Reaching Every District (RED) strategy for immunization, introduced by the World Health Organization and partners in 2002.[2] Adapted to Reaching Every Child (REC) in Uganda, the strategy aims to improve immunization coverage and effectiveness, with a focus on poorer-performing districts and health facilities (HFs). In addition, the strategy called attention to the importance of strengthening the routine immunization (RI) system to achieve the goal of the Uganda National Expanded Program on Immunization (UNEPI): "to ensure that every child and high risk group is fully vaccinated with high quality and effective vaccines against target diseases according to recommended strategies."

However, the 2007 RED evaluation and the EPI reviews of 2010 and 2015 found that while REC was being put in place in principle, in-depth continued focus on its five components at district and lower levels was lacking.[3] The same reports also noted challenges in implementing the approach, especially at the HF level. These limitations contribute to problems often found in the EPI program, including regular stock-outs of vaccines, nonfunctional cold chains, irregular supervision, very limited use of data for action, and less-than-optimal community involvement. Overall guidance on *how* to fully and sustainably implement REC was inadequate.

The Reaching Every Child through Quality Improvement (REC-QI) approach arose as a response to these gaps. REC-QI combines the full REC strategy and quality improvement (QI) tools and techniques so that districts and national authorities can learn and implement strategies needed to optimize REC. The purpose of REC-QI is to build the capacity of EPI stakeholders to understand obstacles to REC implementation, develop possible solutions, and share learning for sustainability and scale-up. It also focuses on methods to sustain gains made in strengthening RI.

This guide encapsulates the experience and lessons from introducing REC-QI in Uganda and Ethiopia, as well as from global experience in strengthening immunization programs. In Uganda, REC-QI began in 2013, based on earlier work with the Africa Routine Immunization System Essentials project in Masaka District, which was funded by the Bill & Melinda Gates Foundation and implemented by JSI. With support from the United States Agency for International Development's (USAID) Maternal and Child Health Integrated Program (MCHIP) and currently the Maternal and Child Survival Program (MCSP), REC-QI, in collaboration with UNEPI, is being introduced in 15 districts. Together with its "sister project," Stronger Systems for Routine Immunization–Uganda (SS4RI), as many as 26 districts throughout Uganda will undertake REC-QI by 2019.

This document provides guidance for conducting REC-QI. UNEPI, hospital, district health team (DHT), and health sub-district (HSD) staff are the intended users of the guide. The guide does not directly target health workers at lower-level health facilities. Staff of partner organizations and others with an interest in improving and strengthening RI systems may also find it useful.

The guide supplements but does not replace the current national REC strategy. This is a "living document" and will be revised as new lessons are learned during its use. Comments, feedback, and suggestions for improvement are welcome and should be addressed to the Chief of Party, MCSP and SS4RI, Dr. Gerald Ssekitto Kalule, at gssekitto@ug.jsi.com.

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[2] *Implementing the Reaching Every District Approach: A Guide for District Health Management Teams*. Revised August 2008.World Health Organization.

[3] *Uganda Comprehensive EPI, Surveillance, Immunization Financing Review and Post introduction Evaluation of Pneumococcal Vaccine 23 Feb-6 Mar 2015.Executive Summary, Recommendations and Road Map*. 2015. Ministry of Health; WHO et al. *In-Depth Evaluation of the REACHING EVERY DISTRICT APPROACH in the African Region*. 2007. World Health Organization [Uganda RED implementation Evaluation 2007 and the Uganda detailed EPI review 2010 report]

Overview of Reaching Every Child through Quality Improvement

REC-QI aims to turn REC into an approach that can put all five REC components solidly in place. The five REC components are:[4]

- Planning and management of resources
- Reaching target populations
- Linking services with communities: partnering with communities to promote and deliver services through regular meetings between communities and health staff
- Supportive supervision
- Monitoring for action

REC-QI adds few new activities to REC programming, and all activities are built into existing REC work plans.

QI Concepts, Tools, and Processes Used in REC-QI

Familiarity with QI methods facilitates an appreciation of the value that QI can bring to strengthening RI systems. The basic process, methods, and tools used by REC-QI are common to QI efforts in health care and other sectors throughout the world. However, they have been adapted for the specific context of RI and the health system in Uganda. Descriptions of the methods and tools used in REC-QI follow in the text below.

Definition of QI

QI is *"a cyclical process of measuring a performance gap; understanding the causes of the gap; testing, planning, and implementing interventions to close the gap; studying the effects of the interventions; and planning additional corrective actions in response."*[5]

Systems thinking

Sustainable and affordable RI system strengthening is a process of bringing about *changes in a complex system within which RI operates.* A system is made of multiple components, and the performance of each component is dependent on the performance of the other components. Systems thinking ensures that different components synergistically work to lead to desired outcomes. For example, the enhanced RED Categorization Tool aggregates performance of all HFs in the sub-county to categorize that sub-county's performance. The better-performing individual HFs in the sub-county therefore must support the underperforming HFs to improve the overall sub-county performance/category. This kind of peer learning about local solutions is integral to system strengthening.

Figure 1 below represents a national RI system. Service delivery is at the center of the system—pointing to the fundamental importance of continuously reaching all eligible women and children to fully protect them against all vaccine-preventable diseases. Surrounding service delivery are the other system elements; composed of human resources, cold chain system management, communication and community partnership, and data quality and use; that are linked together and influence service delivery. In addition, other systems, such as social, welfare, government, and the global environment, influence the EPI system.

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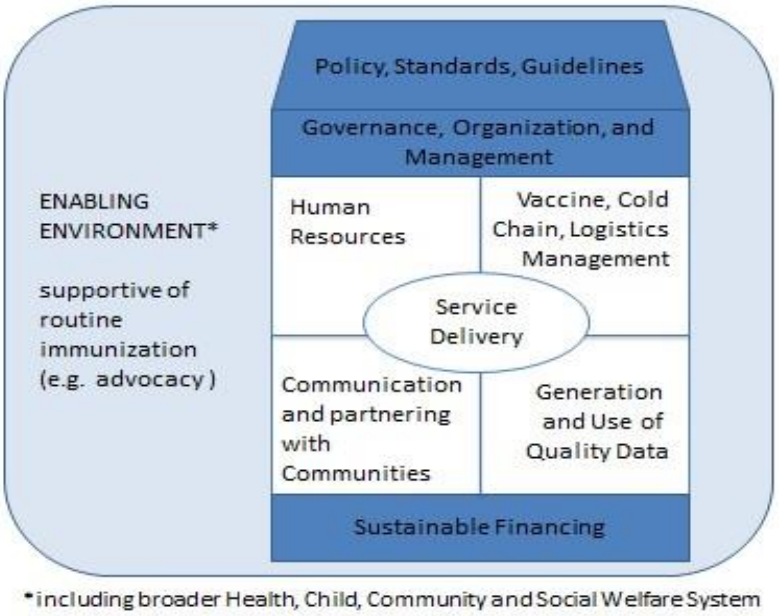
[4] *REC [RED] Uganda Health Facility Guide*. No date

[5] Tawfik Y, et al. *Finding Common Ground: Harmonizing the Application of Different Quality Improvement Models in Maternal, Newborn, and Child Health Programs*. Technical Report. USAID Health Care Improvement Project. Bethesda, MD: University Research Co., LLC (URC). 2010

Another way of understanding the EPI system is to describe its various levels of implementation (national, regional, district, facility, and community), which must operate in harmony with each other and the other components for the system to be functional. In addition to health system elements, REC-QI deliberately engages stakeholders outside the health system, such as district and local leaders, to enhance an enabling environment for RI. All components must be adjusted and balanced continuously for the system to be able to deliver high-quality RI. QI methods help identify system elements that need adjusting and changes that can strengthen system functioning.

Figure 1. The Uganda EPI System Components



Quality work improvement teams

Quality work improvement teams (QWITs) oversee and partake of actions to overcome programmatic problems. At its core, QI requires team work. A QWIT draws on the knowledge, skills, experience, and perspectives its members to make lasting improvements. QWITs meet regularly to identify and analyze areas in need of improvement, propose solutions, and test the change ideas. QWITs are specific to programs, e.g., immunization, and have representative(s) on the general quality improvement team (QIT) for each HF.

In REC-QI, the QWITs are formed from existing structures, such as health unit management committees (HUMCs), village health teams (VHTs), health facility (HF) staff, and local council (LC1), as possible. There are QWIT teams at three levels: district and HSD; management, which focuses on processes and procedures; and community/HF, which focus on improving service delivery. Before QWITs initiate improvement efforts, they are orientated to their roles and responsibilities and familiarized with the methods and tools involved in the QI process.

Model for Improvement

The Model for Improvement is a framework to guide and accelerate QI. It has two parts:

- Three fundamental questions, which can be addressed in any order
- The Plan-Do-Study-Act (PDSA) cycle, which guides assessment to determine if a change is an improvement

Fundamental questions for improvement

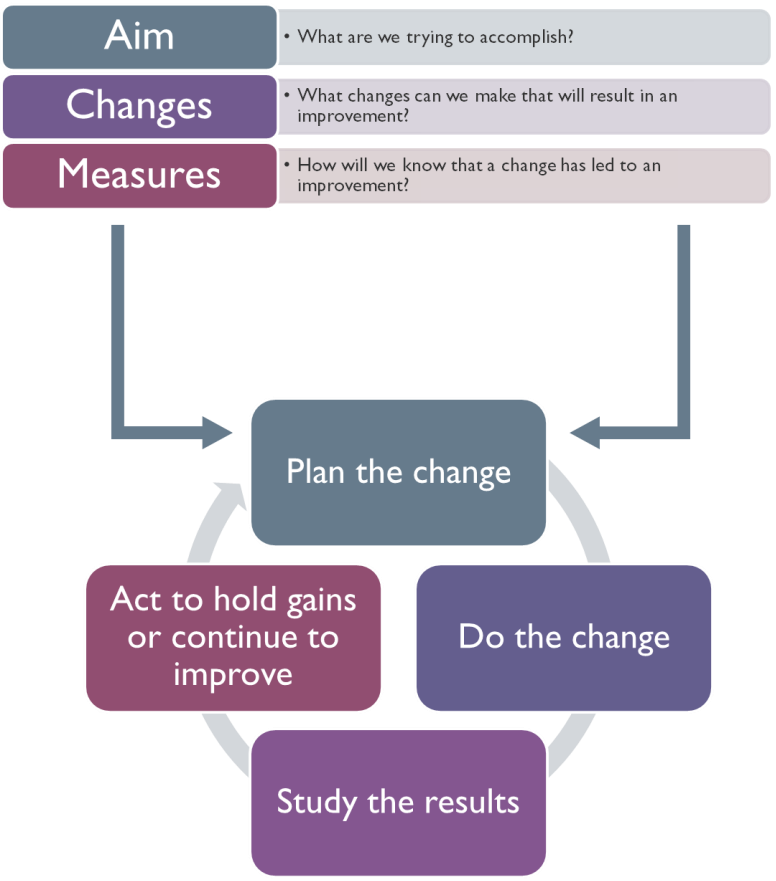
Aim: Improvement requires deciding what a team is trying to accomplish. The aim should be time-specific and measurable. It should also define the specific population or system that will be affected, based on the identified priority problem.

Outcome measures: Teams use quantitative measures to determine if they are on the path to achieving their aim.

Change ideas: Ideas for change may come from the insights of those who work in the system, from change concepts or other creative thinking techniques, or by applying the experience of others who have improved.

Process measures: Teams use quantitative/qualitative data to verify if: 1) the change took place; and 2) the change is on the pathway to achieving the aim.

Figure 2. The QI Model for Improvement



Model for Improvement
(3 fundamental questions; PDSA cycles)

Plan-Do-Study-Act cycles

The PDSA is a rapid cycle of 1–3 months to test change ideas that address prioritized root causes of a problem. The PDSA is a form of *learning in action*, and a way to achieve learning and *change in complex systems*.

Change ideas are not guaranteed to lead to improvement—they must be tested. The teams then need to decide if the change ideas should be adopted, adapted, or abandoned. PDSA cycles may lead to the identification of additional problems and change ideas, which can then be tested through more cycles. Or, they may suggest that new solutions to the original problems should be tested. District, HSD, and HF QWITs conduct repeated rapid PDSA cycles.

The steps in the PDSA cycle are:

P—Make a **plan** of action that includes:

- Objectives
- Predictions about what will happen when the test is conducted
- Who will do which task, when he or she will do it, and how and where
- Responsibilities and plan for data collection

D—Do (conduct) the plan:

- Implement the "change idea"
- Document changes, problems, and unexpected observations
- Check data quality and begin data analysis

S—Study the results of implementing the plan:

- Complete data analysis

- Consider qualitative data and other information
- Compare data to predictions
- Summarize lessons

A—Act on the findings. Decide:

- Did the change lead to an improvement?
- Was the improvement significant?
- Did the change produce any unintended effects? Did other factors affect the outcomes?
- What changes will we test in the next PDSA cycle?

Table 1 below provides more detail on actions in the "A" step of a PDSA cycle.

Table 1. Actions and Next Steps in "A" of the PDSA Cycle

Action	Description	Next Plan
Continue testing	Further testing on proposed change ideas	Continue the cycle on the same change idea starting from the P-part of the cycle
Adopt	Team ready to engage management to make the new change permanent in the system	Select other problems to solve and share the experience so that others can improve their RI systems
Adapt	Modify proposed change idea	Modify the change idea process and test it again or add change ideas to support the original idea
Abandon	Drop and develop alternative change ideas to test	Start from proposed solutions/change ideas to address the problem

QI tools and techniques

Process mapping

A process map (as shown in Table 2 below) is a critical examination of how a task is accomplished. It involves comparing the *ideal* with the *actual* process, enabling the users to identify and address the gaps. By identifying inefficiencies, the map aligns the actual to the ideal. Process maps help identify problems and generate solutions by answering questions such as:

- Is the process standardized, or are the people working in different ways?
- Are steps repeated or out of sequence?
- Are there unnecessary steps?
- Are there steps during which errors are frequent?

Table 2. Example of Process Mapping: Packing Vaccines in the Vaccine Carrier

S/N	Activity description		Identified gap?
	Standard/ideal	Actual practice	
Preparations			
1	Pre-cooling diluents (storing with vaccines in the fridge)	Not pre-cooling diluents	yes
2	Cleaning and drying the vaccine carrier and sponge	Cleaning and drying the vaccine carrier and sponge	
3	Conditioning ice packs	Not conditioning/using ice packs	yes
Packing in the carrier			
4	Placing ice packs in vaccine carrier chambers	Placing ice packs in vaccine carrier chambers	
5	Packing vaccines in polythene bags	Vaccines not packed in polythene bags (vaccine vials dropped directly into carrier)	yes
5	Placing vaccines in the vaccine carrier according to heat/cold sensitivity	Place vaccines in the vaccine carrier according to heat/cold sensitivity	
6	Inserting thermometer into vaccine carrier	Not inserting thermometer	yes
6	Placing dry sponge over the packed vaccine	Placing dry sponge over the packed vaccine	
7	Closing vaccine carrier tightly	Closing the vaccine carrier tightly	

Root cause analysis

The concept of analyzing underlying causes within a whole system is also central to QI. Problem analysis is also an important part of REC microplanning.

Root cause analysis is an efficient and effective way of understanding a problem. For example, in REC-QI, the RI dropout rate (DOR) is considered a symptom that needs deeper local context analysis of contributors to this quality concern.

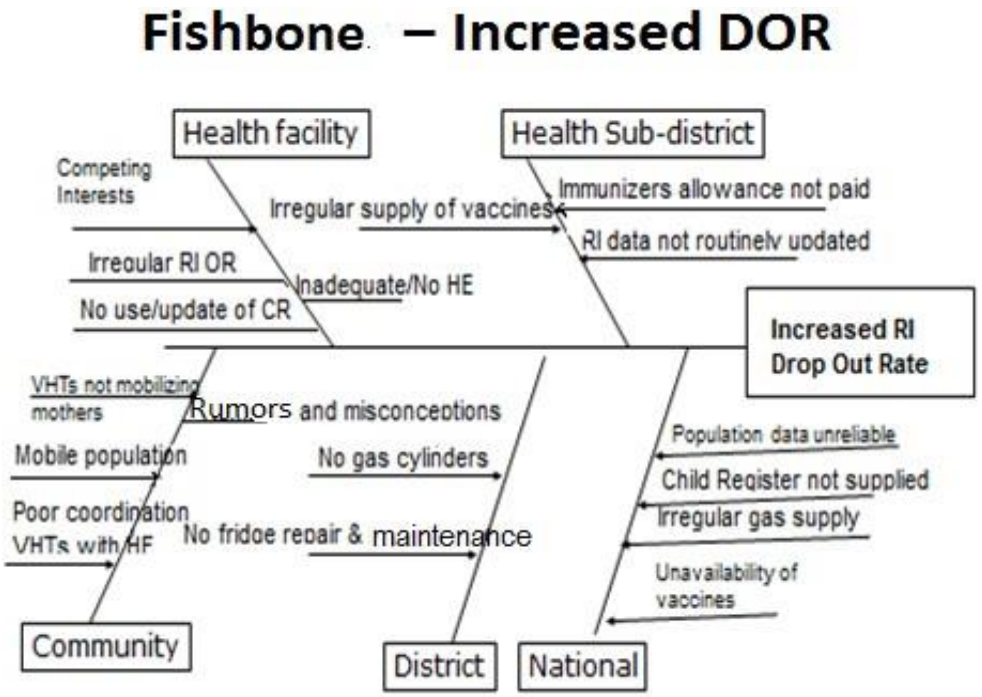
The Fishbone (or Cause and Effect Diagram) helps a team generate possible causes of a problem, classify those causes, and drill down to the underlying causes of the problems. The fishbone diagram analyzes the causes of the "increased DOR" problem at five main areas/levels of health system where the causes and root causes could be. The diagram helps answer the question, "Are dropouts mainly because of challenges at the national, district, HSD, HF and/or community level?"

Note that root cause analysis should focus on underlying causes at the **local level** (the level that is conducting the analysis) so that these causes can be addressed within the means of that level. Issues that need to be addressed at a higher level should be reported to that level.

Criteria for prioritizing the root cause to analyze:

- Ability to solve the problem through available resources (with minimal or no external support)
- Urgency of the root cause: the planning team considers it the most pressing
- Capacity of the intervention to have the most impact on the aim

Figure 3. Example of Root Cause Analysis Using the Fishbone Tool



Abbreviations:
CR = child register
OR = outreach
HE = health education
HF = health facility
RI = routine immunization
RI OR =routine immunization outreach
VHT = village health team

Peer learning

Gaining knowledge and skills from people who have similar responsibilities and objectives is called peer learning. It involves helping others learn and, in doing so, learning oneself. In REC-QI, peer learning takes place through integrated quarterly review meetings (QRMs), QWIT meetings, exchange visits, and other activities.

Coaching

The technique of building capacity for improvement is called coaching. Coaching calls for mentoring, open information exchange, collaboration between the coach and health workers (HWs) and/or QWIT members to improve performance and meet objectives. Coaching is a way to provide on-the-job training. In REC-QI, trained supervisors serve as coaches and mentors.

REC plus QI

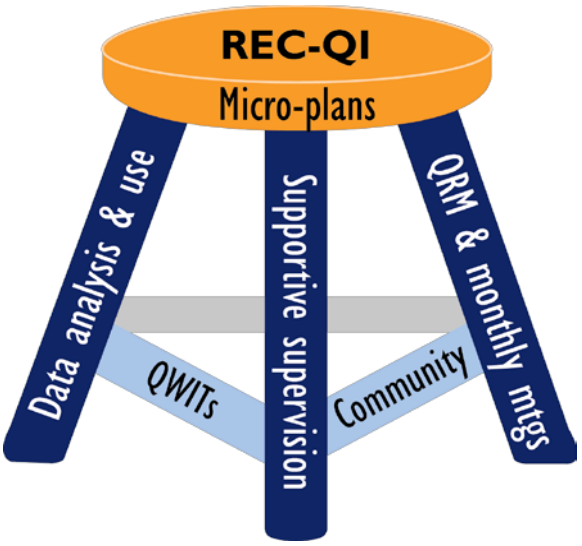
REC-QI is the whole REC strategy plus enabling QI tools, methodologies, concepts, and innovations/local solutions to make REC implementation feasible. REC-QI seeks to enable managers, HWs, and communities to plan, implement, and assess efforts toward reaching every child.

The addition of QI to REC addresses a missing (and important) element in the REC strategy—*how* to prioritize the many problems in RI. Existing REC tools do not offer guidance on how to make these decisions. Tools such as fishbone and process mapping, which are essential components of REC-QI, can help a team to accomplish this critical step.

REC-QI guiding principles

REC-QI is grounded in the following principles for sound, equitable, and high-quality health programming. Many international agencies and global health institutions endorse these guiding principles.

Figure 4. Conceptual Representation of REC-QI Processes



- Each level of the health system ***focuses on problems within its means*** and reports problems outside its means to the appropriate level.
- *A* ***"bottom-up"*** approach focused on the perspectives of communities, village health teams (VHTs), health facilities, and districts to inform the higher levels.
- Interventions and processes that are ***feasible and affordable in the specific context*** to facilitate spread.
- *Use of* ***appropriate technology*** that does not require costly equipment or maintenance or capacity beyond that of the typical HF personnel.
- *REC* ***tasks are assigned to health system levels based on capacity.*** REC tasks require different levels of equipment, staff time, skills, and knowledge. Therefore, specific REC tasks should be assigned to a health system level that has appropriate capacity.
- ***System strengthening*** for sustained and effective immunization coverage, rather than a rapid unsustainable rise in reported results.
- ***Continuous learning and improvement.*** Lessons learned are used to continuously improve the approach and processes.
- ***Broad stakeholder participation in EPI,*** including involvement of non-traditional stakeholders outside the health sector.

- ***Equal emphasis on the three essentials in RI*** (HWs, vaccines, and children with their caretakers) for vaccination to take place.

REC-QI essential processes

Rather than setting up new structures or bringing in new cadres of staff, REC-QI focuses on processes that strengthen or maintain the REC practices that are already in place and helps to establish practices that are not yet in place. The stool (see Figure 4) provides a conceptual representation of the essential REC-QI processes, combining the REC components with QI. Table 3 summarizes the REC-QI processes that correspond to the REC components.

Table 3. REC Components and Corresponding REC-QI Processes

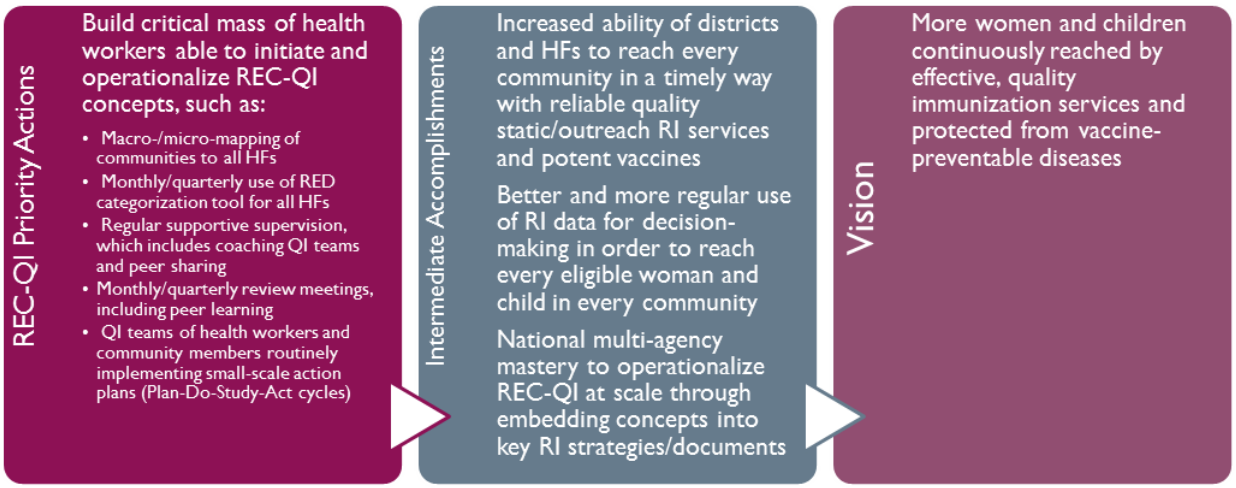
REC Component	REC-QI Processes that Strengthen REC and the RI System
Effective planning and management of resources to ensure better management of human, financial, and material resources at every governing level	• Mapping HF and RI service point catchment areas for target populations and more accurate vaccine forecasting • Use of enhanced RED Categorization Tool to identify broad RI system problems, including those for individual HFs • Identifying root causes of problems to develop and test locally feasible solutions • PDSA findings and supportive supervision reports to inform development and implementation of annual REC microplanning process • Quarterly review and updating REC microplans based on local data analysis and information • Using on-the-job training (OJT) in supportive supervision to follow up recommendations and support staff in need • Helping pre-service training institutions conduct high-quality immunization training
Reaching all target populations including underserved and unreached communities to gain access to services	• Identifying the underserved • Mapping outreach for underserved and unreached populations • Using the VHT CR to identify newborns, unimmunized children, and under-immunized children and tracing them for vaccination
Linking services to communities: partnering with communities to promote and deliver services through regular meetings between communities and health staff	• Involving community members as full participants in QWIT planning, implementation, monitoring • Including non-traditional stakeholders (e.g., district and sub-county leaders) in district and HSD integrated QRMs • Providing routine feedback from DHTs or HFs to local leaders (chief administrative officer [CAO], senior assistant secretary [SAS], and chairpersons) and community/VHTs
Monitoring for action: using tools and providing feedback for continuous self-assessment at all levels	• Ongoing analysis and use of local EPI data to inform decisions and using available resources at all levels • Routine data quality self-assessment and improvement (routine DQSI) • Sharing learning at QRMs and other regular meetings

REC Component	REC-QI Processes that Strengthen REC and the RI System
Supportive supervision (SS): providing local staff with on-site training, feedback, and follow-up by supervisors	• Coaching, mentoring, and OJT to HWs • Using SS checklists that emphasize problem-solving • Documenting and sharing SS findings at QRMs and following recommendations • Building SS capacity for HSD teams and HFs

Potential benefits and observed achievements of REC-QI in Uganda

Generally, REC-QI, which is based on the RED strategy, is intended to generate intermediate and long-term achievements as described in the pathway in Figure 5.

Figure 5. REC-QI Pathway toward Sustained High Immunization Coverage



The two mini case studies below demonstrate some of the many district performance changes documented during REC-QI implementation. (See Annex1 for complete REC-QI success stories.)[6]

Involvement of Local Leadership Helps Improve Immunization Services

Monitoring for action—using tools and providing feedback for continuous self-assessment at all levels—is a key component of REC. Broad participation in EPI, including involvement of non-traditional stakeholders outside the health sector, is a guiding principle of REC-QI.

Merging these two principals through REC-QI in Kabale District allowed the district health team (DHT) to realize that Nyamiryango Health Center (HC) II had not vaccinated a single child in six months, despite having a refrigerator, gas, vaccines, and other equipment.

The district chairperson learned of this failure at a QRM attended by political and religious leaders and HWs from all HCs in the district. The chairperson met with the HC in-charge and the district health officer (DHO) to find out why this had happened. After explaining the various challenges at the HF, the HC was supported to apply REC-QI practices to overcome the challenges.

The in-charge described what happened after that. "I am happy to note that after this meeting, the following achievements were registered at the health center. In September 2013, Nyamiryango HC II immunized 79 babies from birth to one year. In October, we immunized 121 babies from birth to one year from both static and

[6] Attribution studies to this effect have not been conducted.

outreach sites. In July and August, we conducted one outreach session each month, and in September and October, two outreach sessions were carried out each month." All of this was done using existing resources at the health center.

The Power of PDSAs and "Thinking outside the Box" in Solving Longstanding RI Problems

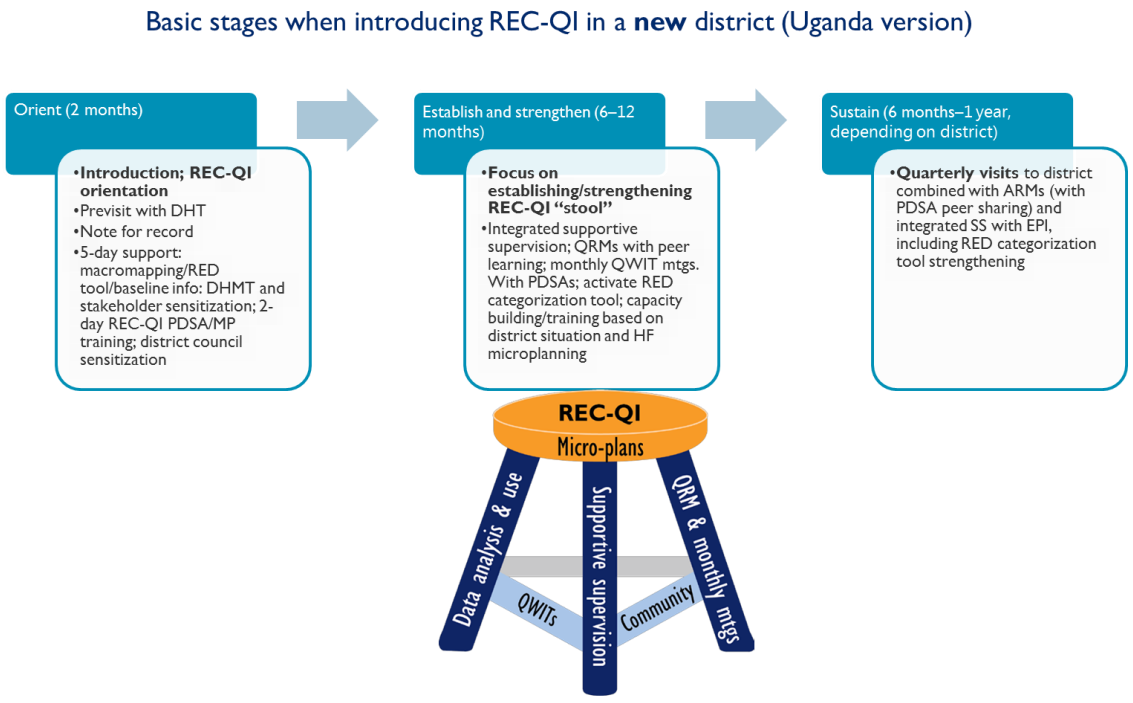
Data showed that Iganga District had poor access to RI (defined as <90% Penta 1 coverage). A root cause analysis found that the problem was irregular functioning of refrigerators resulting from a lack of standby gas cylinders at 38 HFs). This in turn was due to delays in procurement and delivery of standby gas cylinders because the district lacked authority to use available resources to obtain them. The QWIT, working with the DHO and the chief administrative officer, undertook a PDSA cycle focused on securing authority from the MOH to use its own funds to purchase cylinders. By engaging non-traditional stakeholders in improving RI, the district obtained eight standby gas cylinders using district funds, and an additional seven using contributions by the HF in-charges impress funds. Without external funding, the district reduced the shortage of gas cylinders from 38 to 5.

REC-QI Implementation Stages

Introducing REC-QI in districts is a systematic but flexible process. The term "introducing" covers the overall process of managing, implementing, evaluating, and sustaining activities related to strengthening RI in a district and nationwide.

Introduction entails three stages (see Figure 6 below). The purpose of the stages is to ensure that district HWs and leaders understand and adapt the REC-QI concepts into their RI system. The period for REC-QI implementation to realize its full potential may be longer than the period for introduction. Therefore, coverage and utilization results at the end of the introduction period may not measure the full potential of REC-QI approach.

Figure 6. Stages in Introducing REC-QI



Stage 1: Orient

Stage 1 encompasses activities to initiate the implementation of REC-QI in a district. The overall focus is orientation to REC-QI and its associated principles and practices, and the initiation of planning for implementation. This stage typically takes 1–2 months. Table 4 below shows the activities in this stage.

Table 4. Stage 1 Activities and Estimated Duration

Activity	Duration
1. Orienting DHT and briefing district leaders	1 day
2. Planning for REC-QI implementation	days (total)*
• Macromapping and populating the RED categorization tool (determining RED category)	1 day
• First integrated QRM (REC-QI Sensitization for District Health Staff and Other Stakeholders and Harmonization of the Macro Map)	1 day
• Training health workers on PDSA and REC microplanning	2 days
• District council sensitization	1 day

*The 5-day planning for REC-QI implementation activity coincides with a routinely planned QRM.

Orientation for the District Health Team (DHT) and Briefing District Leaders

Definition

- A meeting with the DHT to provide an overview of REC-QI and an understanding of the potential benefits. In addition, courtesy calls to district leaders focus on gaining and maintaining the support of important stakeholders for implementing REC-QI.

Purpose

- Orient the DHT and advocate for uptake of REC-QI implementation in the district.

Main activities

The REC-QI champion/advocate should:

- Review the sample agenda for DHT orientation and leaders' briefing.
- Provide a broad picture of the REC-QI approach:
- Background to REC-QI development
- Implementation stages
- Potential benefits
- District contributions and gradual takeover
- Discuss how REC-QI contributes to RI system strengthening and measurement rather than focusing on coverage to measure RI system strength.
- If there is agreement to pursue REC-QI, establish dates for the 5-day planning activities, which will coincide with the next planned QRM.
- Request data from the DHO and the district biostatistician as outlined in Annex 2. Collect and assemble data for the 5-day planning activity.

- Call the key district leaders (CAO, district chairperson, resident district commissioner, district secretary for health, and any others as advised by the DHO) to brief them on the approach and tentative decision by the DHT to implement.

Outputs

- Decision to pursue implementation of REC-QI or not
- If agreed to implement REC-QI, dates set for:
    - Assembly of baseline data
    - 5-day planning activities (to coincide with a scheduled QRM)

Planning for REC-QI Implementation

Day 1 of planning for REC-QI implementation (macromapping)

Definition

- Macromapping is the first activity in the REC-QI approach planning for RI in the district. It is an ongoing process of identifying and assigning communities (parishes) to HFs for high-quality health service delivery. Clear knowledge of HF catchment areas and populations is essential for REC microplanning. It takes 4 to 6 hours for the macromapping working committee to come up with the first draft.

Macromapping: A Summary

Work under the BASICS project in Nigeria and Nakasongola District of Uganda developed macromapping as a procedure to overcome a challenge in REC implementation: identifying the catchment area of each HF to "reach every child." The government of Uganda recommends one HF per parish and makes available total population figures for each parish. However, many parishes have more than one HF, while some have none. This justifies macromapping to facilitate reaching every community/child.

Macromapping entails three steps: 1) inputs/data, 2) drafting, and 3) harmonization.

Macromapping:

- Facilitates data-driven EPI microplanning by providing a clear idea of HF target populations and catchment areas
- Makes vaccine forecasting more accurate
- Increases the likelihood that every child receives needed vaccines
- Helps identify parishes that have been underserved or left out of RI so that actions can be taken to ensure services in the future
- Allows for RED categorization of HF

Purpose

- Help DHT identify and allocate communities (parishes) to HFs and assess RI performance.

Main activities

Preparation

- Form a working group of 7–10 people
- Before convening the working group on Day 1, the district biostastician enters the district population data from Uganda Bureau of Statistics (UBOS) for the previous year for each administrative unit (county/HSD, sub-county, and parish) in a spreadsheet.
- Merge the UBOS population data with a list of existing HFs in a macromapping Excel template (see Annex 3. Macromapping Tools).

- Use color coding to indicate if the HF has an EPI refrigerator (red = yes); conducts immunization (black = no); and picks up vaccine from another HF (blue = yes). (See Annex 3 for an example of a completed and coded draft macromap.)
- Macromapping working group members
    - District biostatistician
    - District EPI focal person
    - cold-chain assistant/cold-chain technician
    - DHO/assistant district health officer (ADHO), in-charge maternal and child health
    - District planner
    - District secretary for health
    - District surveillance focal person
        - HSD in-charge(s)
    - Any other person(s) knowledgeable about the geographical orientation of HFs, parishes, sub-counties (SCs), and HSDs in the district to ensure that new communities and parishes are included (e.g., those resulting from district divisions), which UBOS may not have known or included in the list.

Meeting

- Provide the working group with an overview of macromapping and its purposes (background, steps, and applications).
- Use the merged UBOS data and HF list to guide discussion to allocate parishes to HFs (macromapping).
- Start by completing list of parishes.
- Estimate the population of the new administrative units.
- Assign parishes to HFs using the following criteria:
    - Proximity of parish to the HF
    - Access to the HF by residents of the parish (geographical and socio-economic access)
    - Capacity of HF to serve the parish (transport; number of health workers; availability of adequate vaccines and ice packs)
    - HF previously providing health services in the parish.
- Use national population proportions (e.g., surviving infants 4.3 percent) to estimate the HF target populations for RI (children under 1 year) (see Annex 3).

Outputs

- Draft macro map of HF catchment areas and target populations

Afternoon of Day 1: Populating the Enhanced Reaching Every District (RED) Categorization Tool

Definition

- Use the target population data generated by the working committee in the morning to populate the enhanced RED Categorization Tool
- Participants in completing the RED Categorization Tool
    - District biostatistician
    - District EPI focal person
    - District cold chain assistant/district cold chain technician (DCCT)

Purpose

- Analyze district RI performance for a targeted period using the enhanced RED Categorization Tool.

Main activities

- Enter the data from the draft macromap and the doses of vaccines that the district biostatistician provided (previous 6 months) into corresponding columns in the enhanced RED Categorization Tool.

TIP: The RED Categorization Tool auto-calculates the coverage, unimmunized children, and RED category/broad problem (where access =Penta 1 and utilization =Penta 1–3 DOR values respectively)

- Analyze and plot the district RI monthly performance data for the previous one year on a chart to inform the baseline.

NOTE: Continue preparing for the 3-day training (days 2–4).

Outputs

- Analyzed EPI data using the RED categorization tool: Broad overview of RI problems.

Day 2 of planning for REC-QI implementation (sensitization on REC-QI and Determination of RED category)

Definition

- A one-day introduction to REC-QI and important elements of the REC-QI process for district health staff and non-traditional stakeholders.

TIP: This meeting is the first integrated quarterly RI review meeting in REC-QI implementation.

The World Health Organization (WHO) has established categories of EPI performance, which managers use to identify problems in immunization programming and propose solutions to them. Table 5 below shows the categories and the level of the problem.

Table 5. RED Categories and Problem Identification Criteria

RED category	Accessibility	Utilization	Problem level
1	Good	Good	No problem
2	Good	Poor	Poor utilization
3	Poor	Good	Poor accessibility
4	Poor	Poor	Poor accessibility and utilization

The categories are determined by calculating Penta 1 immunization coverage and DORs from Penta 1 to Penta 3 in a specific catchment area, using immunization data from the last 12 months. The cutoff points are: Penta 1 coverage >90% is good accessibility; < 90% is poor accessibility; Penta 1 to Penta 3 DOR: 0-10% is good utilization; and above 10% or below 0% is poor utilization.

The enhanced RED Categorization Tool is an Excel template that allows managers to analyze EPI performance by individual HFs, sub-counties, HSDs, and the district as a whole. The RED Categorization Tool uses the HF catchment areas and population data from the macromapping and the RI data from the district biostatistician on number of doses of different vaccines administered. After these data are entered, the enhanced RED tool automatically categorizes assigns each HF, sub-county, HSD, and district a category between 1 and 4 (see Annex 4 for more information).

Purposes

- Finalize the district macro map (harmonization).
- Increase understanding of the causes and find solutions to problems that affect RI programming in the district.
- Create broad support for improving RI by including stakeholders outside the health sector.

Preparation

- Consult sample agenda for the 5-day REC-QI training and planning.

Main activities

- Give an overview of REC-QI, emphasizing:
    - Objectives, rationale, concepts, process, estimated timelines, and achievements to date
    - REC-QI as an evidence-based, methodical process to strengthen RI
    - Rationale for building sustainable and equitable routine immunization *systems* (rather than focusing on increasing coverage)
    - The relationship between REC-QI and REC and its key components
    - Important processes in REC-QI: application of QI tools and methods to identify the causes of problems and test "doable" small-scale changes to solve them; sharing promising practices on a regular basis with peers

Participants in sensitization on REC-QI

- All HSD and HF in-charges with their EPI focal person
- DHT, district EPI person
- District secretary for health
- CAO, assistant chief administrative officer, in-charge health
- District community development officer, district education officer
- Sub-county chairpersons and SAS
- Other health partners (civil society organizations and IPs) in the district

TIP: Remember that non-traditional stakeholders at this session may be unfamiliar with RI concepts and vocabulary. Ask for questions and feedback throughout the overview and other sessions to assure understanding.

- Review and discuss the draft macro map prepared by the working committee on Day 1 to gain consensus from the HF in-charges and their leaders on the allocated HF catchment areas. If needed, adjust the catchment areas/parishes assigned to the HFs.
- If adjustments were made to the macro map, ask the biostatistician to recalculate the target population for each HF and share with participants in the same meeting.

- Encourage the HF in-charge to accept responsibility for health service delivery in the allocated parishes and target populations.

TIP: If a parish is served by two HFs, use previous HF data and knowledge to estimate the proportion of the parish population that can access each HF. This allocation is for planning, monitoring, and evaluation purposes only; regardless of allocation of parishes to an HF, people have the right to choose where to seek services.

TIP: The enhanced RED Categorization Tool, populated by the district biostatistician with support from national trainers, auto-incorporates the changes in categorization of the HF, sub-county, HSD, and district based on the harmonized catchment areas and target population.

- Explain that the catchment areas and target populations are the basis of REC microplanning and monitoring.
- Populate and complete the following REC microplan forms (see Annex 5. REC Microplanning Tools and Process for HFs):
    - Health demographic data
    - 1a: Situation analysis: socio-demographic characteristics
    - 1c: Situation analysis problem identification and priority setting (RED categorization)
    - 2a: situation analysis by using the RED components: strengths, causes of problems, and solution analysis for immunization interventions
    - 3a: Immunization coverage targets
- Each HF or office will receive a printed macro map to facilitate documentation and planning:
- Remind that macromapping will be updated annually following the local government planning cycle with changes in population, parish boundaries, the addition of new HFs, etc.
- Present baseline findings and discuss RI performance:
    - Present and explain the RED Categorization Tool prepared on Day 1.
    - Highlight the importance of examining RI performance at each level and in each HF because it is possible for a RED Category 1 district to have HSDs and/or HFs in lower categories (2, 3, or 4).
    - Present the baseline findings from the data collected during orientation.
    - Brainstorm a list of causes of the observed performance.
    - Ensure that non-traditional stakeholders have a voice in identifying causes and proposing solutions.
    - Ask leaders to comment on and commit to improving RI in the district. Document the commitments for follow-up.
- Dedicate time to discuss sustainability:
    - What does sustainable REC mean in the specific context?
    - What actions can stakeholders take on now and in the future to promote sustainable RI systems?
- Remind participants that only DHT, HSD, and HF staff need to stay for Days 3 and 4.

TIP: Guide the discussion of RED categorization so that the focus is on the performance and problems of the entire district, not on individual people. Working together to improve RI to save lives of the district children is everybody's responsibility.

Outputs

- Final district macro map of HF catchment areas.
- List of possible causes for the RI performance problems.
- Completed REC microplan forms 1a, 1c, 2a, 3a, and health and demographic data.

Days 3 and 4 of planning for REC-QI implementation (training teams in REC- QI, PDSA, and REC microplanning)

Definition

- The third day for planning for district REC-QI approach implementation is a "just-in-time" training for DHT, HSD, and HF staff on REC-QI planning, implementation, and monitoring. "Just-in-time" means training that delivers required knowledge and skills for immediate practical application.

Purposes

- Build HW capacity to use QI tools and techniques to improve RI performance sustainably
- Begin development of REC-QI PDSA cycles for DHT, HSD, and HF

Main activities

- Explain REC-QI implementation context and the key activities.
- Use the RED categorization tables and baseline findings, identify, and discuss the broad problems for each level.
- Prioritize the broad routine immunization problem for each HSD using baseline findings and the RED Categorization Tool.
- Work in groups to brainstorm and generate a list of possible causes, and analyze root causes of the prioritized problems using the Fishbone Tool.

NOTE: DHT and HSD analyze root causes of management issues related to the prioritized problem (with input from HF staff). Each HF identifies the root causes of the prioritized broad EPI problem of its respective HSD.

- Working in groups, use PDSA Cycle Model for Improvement to develop an improvement aim statement and outcome measures for the district and HSD.
- Working in groups, propose change ideas (possible solutions to problems), and develop process measures, action points, and related data to collect.

NOTE: For aim, outcome measures, and change ideas, each HSD selects a management root cause.

Health facilities select 2–3 service delivery root causes to address in the first PDSA cycle.

- Compile prioritized problems, aim statements, outcome measures, and other information for the district and each HSD in a draft RI improvement plan. Present draft to district council on Day 5 (see Annex 6. Sample Template for District RI Improvement Plan).
- Plan for QWIT formation and orientation at all levels and other subsequent activities (see Annex 7).
- Discuss how to keep sub-county leaders focused on improving routine immunization.

Outputs

- Draft RI improvement plan to share with district council.
- Draft PDSA plan (with aim, outcome measures, proposed changes, and data to be collected to monitor PDSA implementation) for each level of district health service delivery.
- Plan immediate steps on implementation of REC-QI, including:
    - Vaccine and other commodities/supplies forecasting using HF target populations from the macro map
    - HF QWIT formation
        - Brief QWITs on RI and plans
        - Further development of the PDSA: action points and assignments to the QWIT members
            - Date of follow-up SS visit
    - Ideas for increasing the sustainability of REC

Day 4 of planning for REC-QI implementation (Monitoring REC-QI Implementation)

Definition

- The DHT, HSD, and HF staff receive training on REC-QI monitoring and tools.

Purpose

- Build HW teams' capacity to monitor progress of REC-QI implementation

Main activity

Introduce the tools used in REC-QI:

- CR (see an example in Annex 9)
- Tally Sheet (see Annex 13)
- Health Unit EPI Attendance Monthly Summary form (see Annex 14)

Stage 2: Establish and Strengthen

Stage 2 focuses on putting REC-QI into operation in a district. The MOH/regional supportive supervision team (RSST) provides technical support to the DHT as needed. The DHT supports HSDs, which in turn support HFs. This stage builds the capacity of the district (DHT, HSD, HWs, VHTs, and leaders) to sustain REC-QI by encouraging managers and HWs to take a lead in planning, implementation, monitoring, and evaluation of the RI program.

The duration of Stage 2 and its corresponding activities depend greatly on the district health system context, as determined by the findings in the situation analysis (e.g., the RED category and the root causes). For example, a district that lacks cold-chain equipment and trained technicians is likely to require more time and support to fully implement REC-QI than a district that has a strong cold chain. Or a district with a cadre of HWs who are well trained in EPI may not need to conduct operational-level (OPL) training. As a systematic but flexible approach, REC-QI always considers the strengths and weaknesses of the specific situation in a district. This stage could last 6–12 months.

Table 6 below shows the activities in Stage 2.

Table 6. Stage 2 Activities with Responsibilities and Estimated Duration

Activity	Responsible person/level	Duration, frequency, or timing
1. Implementation of immediate steps after the 5-day activities in Stage 1	All levels	
2. First supportive supervision	DHT	5 days (total)
• Training on organizing focused integrated SS and checklist development		1 day
• Finalization of checklist and other logistics		1 day
• Field visits using updated checklists		2 days
• Reflection/review of field findings, report writing, and feedback to the DHO		1 day
3. Routine integrated SS	DHT/HSD	Quarterly DHT to HSD Monthly HSD to HF
4. VHT training-of-trainers (TOT)	HF	1 day
5. VHT orientation and HF Micromapping	HF	1 day
6. Community and leader engagement	All levels	Ongoing
7. QWIT and PDSA management and implementation	All levels	Monthly
8. Integrated QRMs and sharing outstanding PDSAs	DHT/HSD	Quarterly
9. Cold-chain maintenance	DHT/HSD	As needed
10. OPL training	DHT	As needed
11. Exchange visit(s)	DHT	After at least 2 QRMs
12. Sharing REC-QI best practices outside the district (with UNEPI/partners, region, and RSST)	DHT	Ongoing
13. Coordinate national, regional, and other district leadership	DHT	Ongoing

NOTE: "All levels" means DHT, HSD, and HF.

Implementation of Immediate Steps after the 5-day Activities in Stage 1

The immediate steps are:

- Setting the date for the first follow-on SS visit (See First Supportive Supervision below for more information on this 5-day activity)
- Forecasting vaccines and other supplies
- Forming and strengthening of HF QWITs
- Completing HF-level REC microplan tools (see Annex 5. REC Microplanning Tools and Process for HFs):
- Form 6b: HF-level monitoring tool
- Monitoring chart
- Chart for plotting the DOR

These activities set the stage for other activities in Stage 2 and are completed before the first SS visits by the different levels.

Vaccine and Other Supplies Forecasting

Definition

- Successful implementation of REC depends on effective and efficient logistics management, including vaccine and other supplies forecasting, ordering, storage, and distribution. District macromaps, which contain data on HF catchment areas and populations, allow accurate forecasting of vaccine and other supply needs. This activity is done preferably at the HSD level.

Purpose

- Produce accurate annual vaccine and other supplies forecasts, reducing the chances of stock-outs at HFs.

Main activities

- HSD EPI focal person completes (or updates) the annual forecast with monthly needs using macro map data.
- Make copies of the forecast to take to the HFs during the first SS to complete the HF REC microplan.
- Complete the following REC microplan forms:
    - 4a: Vaccine and other commodities supplies forecast
    - 4b: Injection and other supplies/materials forecast

NOTE: Each HF informs the HSD of its vaccine and other commodities stock on hand using the easiest means (e.g., SMS or telephone call) to help the HSD quantify health facility requirements.

Outputs

- Accurate annual and monthly vaccine forecasts
- Completed REC microplan forms 4a and 4b for each HF (see Annex 5. REC Microplanning Tools and Process for HFs)

Health Facility Quality Work Improvement Team (HF QWIT) Formation and Strengthening

Definition

- Forming the HF QWIT is the first step in REC-QI implementation at this level. The HF in-charge leads this process.

Purpose

- Involve community and parents in planning and management of RI services

Main activities

Convene an HW meeting to:

- Debrief on the 5-day activities
- Identify HW representatives to participate in the QWIT
- Select community representatives from the HF catchment area and to attend meetings no cost to the HF
- Hold QWIT meeting to:
- Brief members on the HSD aim, root causes to be addressed by the HF, and their roles and responsibilities (see Annex 7. Guidance on QWITs and PDSA Work).
- Discuss the root cause and complete the PDSA plan (aim, changes, process measures, action points).

NOTE: On a regular basis, the HF staff assess whether the desired change is taking place and the effect on the initial problem. For example, if the initial problem was low DPT-HepB-Hib 1 coverage (<90% or poor access), the HF staff calculates its DPT-HepB-Hib 1 coverage and informs the QWIT if the changes are improving the problem or not to guide their action (adapt, adopt, abandon).

Outputs

- List of QWIT members
- Outline of QWIT roles and responsibilities
- PDSA plan

First Supportive Supervision

Definition

A 5-day just-in-time supportive supervision system strengthening training, with field practice, facilitated by MOH Quality Assurance Department/RSST, UNEPI

Purposes

- Strengthen the SS system for RI
- Assist HF teams in forming QWITs and development of PDSAs

Preparation

Determine the number of participants to invite:

- The number of participants is based on the number of HFs to be supervised in the allocated time. For example, if two days are used to cover 20 HFs in the district, then a team of two supervisors will cover

two HFs per day. Therefore, five teams are needed, making a total of 10 supervisors (4 DHT, 2 HSD, and four from HC IIIs).

- Ensure that participants have the knowledge and skills to facilitate on-the-job training during SS.
- Develop agenda and schedule for first SS.

First Day of Supportive Supervision Training

Important Features of a Focused Supportive Supervision

- Addresses identified problems in RI.
- Includes only a few themes to allow supervisors more time for OTJ training.
- Can be changed to address new problems as they are identified.
- Links to the presentation of findings in the SS report.

Main activities

- Introduce REC and link SS to the RED components (pages 5–8 of *The* RED/REC Health Facility Guide).
- Introduce continuous quality improvement.
- Introduce SS concepts and practices.
- Discuss process mapping to identify gaps in the SS system.
- Present routine DQSI and how to integrate it into SS. (See Annex 8. Routine Data Quality Self-Assessment and Improvement)
- Discuss key planning steps:
- Identify need for SS.
- Guide participants through focused SS checklist development and identify key information to be analyzed and presented in the report (see Annex 10).
- Identify supervisors and teams.
- Schedule SS visits.
- Develop a budget with supervisors.
- Communicate with supervisees.

NOTE: To facilitate peer learning, assign supervisors to supervise HFs other than their own.

Outputs

- A focused integrated SS checklist
- Supervision teams
- SS budget
- Schedule of SS visits

Second Day of Supportive Supervision Training

Activities

Presentation and discussions on how to conduct SS:

- Providing on-the-job training (coaching and mentoring supervisees)
- Role-playing styles of supportive supervision
- Discuss how to provide feedback:
- Immediate discussion with HWs
- Document strengths, areas of improvement, recommendations, and support provided in the HF SS book

- Debrief with the DHO
- Write a report: outline how to write a report (see Annex 11)
- Discuss importance of follow-up on recommendations generated.
- Prepare for SS field visits:
- Confirm that supervisors, transport, funds, and all other logistics are in place. Take corrective measures if unforeseen changes have occurred.
- Distribute materials (notebooks, pens, checklist etc.) to teams.

Outputs

- Increased knowledge of focused SS
- SS materials checked and distributed to teams

Third and Fourth Days of Supportive Supervision Training (Field Practice)

Main activities

Conduct SS according to the developed schedule:

- Support HFs in formation of QWITs and further development of PDSAs.
- Ensure OTJ training and problem solving. Help staff fill identified gaps before the SS teams leave the HF.
- Refer gaps that the HF cannot fill immediately or at all to the appropriate level/office for action.
- Update supervisee on policy guideline and upcoming events. Submit completed checklists to lead supervisors.
- Instruct HF in-charges to work with LC1 chairpersons in the catchment areas to identify VHTs for subsequent orientation and community engagement in REC-QI.

NOTE: Ensure teams leave early for the field SS visits.

Outputs

- HF QWITs sensitized and supported to complete their PDSA plans
- Increased capacity to conduct focused SS
- Completed SS checklists

Notes on coaching a QWIT

- Assist with formation of QWIT, if not complete. (See also Annex 7. Guidance on QWITs and PDSA Work.)
- Support community involvement in QWIT (VHT and HUMC); encourage VHTs to express views.
- Support the QWIT to further analyze the root causes, develop change ideas, indicators, action points, and data to be collected.
- Review the QWIT minutes book and help them document the PDSA: aim, changes, process measures, action points, and data to be collected.

Fifth Day of Supportive Supervision Training (Reflection and Report Writing)

Main activities

- Review guidance on writing a supportive supervision report.
- Work in teams to analyze data and complete reports.
- Provide feedback to DHO on findings:

For this visit, include the status of formation of QWITs and development of PDSA plans in HFs.

Outputs

- SS report
- Enhanced district supervision team capacity to provide focused SS
- Improved understanding of RI performance issues at HFs

Routine Integrated Supportive Supervision

Definition

Trained supervisors, using a focused SS checklist, assess performance of RI, provide support to HF QWIT and PDSA implementation, give feedback, and provide coaching and OTJ training to supervisees routinely. This activity takes similar steps for SS as described in the training (first supportive supervision) above. Different levels of the health system conduct SS on different schedules as recommended by the MOH:

- RSST to districts and selected HSD—Quarterly
- DHT to HSDs and selected HF—Quarterly
- HSD to HFs—Monthly
- Internal HF SS—as scheduled

NOTE: The RSST supervises the DHT and selected HSDs/HFs or may join the DHT during the DHT SS.

Purpose

Support HF staff providing RI services following MOH/UNEPI policies, guidelines, and standards

Main activities

NOTE: Planning for SS should be completed at least 2 weeks before the actual date for the SS.

Follow the process outlined in the first supportive supervision (above):

- Plan support supervision
- Prepare the day before
- Conduct supportive supervision
- Provide feedback
- Follow up on recommendations made during SS
- During on-site support visits, supervisors and supervisees jointly:
- Review findings from the previous supervisory visit and actions to resolve identified issues.
- Discuss achievements in and challenges to fulfilling recommendations since the last SS.
- Administer the focused SS checklists to identify strengths and areas of improvement. Discuss, prioritize, and assess root causes of the identified problems.
- Provide OTJ training and coaching; e.g., if an HF has a problem with a monitoring chart, help the staff to draw the chart.

Outputs

NOTE: The outputs depend on the themes or objectives of the particular integrated SS visit.

- Problems resolved, e.g., drawing up RI monitoring charts
- SS report
- Improved staff competency and better approaches to improving RI

Training-of-Trainers for Village Health Teams

Definition

- A 1-day workshop to build capacity of trainers who orient VHTs on RI and facilitate HF micromapping. The trainers are DHT members and HF in-charges.

Purpose

- Equip trainees with knowledge and skills to facilitate the VHT orientation on RI and micromapping process.

NOTE: The VHT orientation and HF Micromapping follow the TOT, with one day between for HF in-charges to finalize preparations. Invite VHTs to the orientation prior to the TOT.

Activities

Participants in VHT TOT:

- All HF in-charges
- HF EPI FPs

- Use sample agenda for VHT TOT.
- Present and discuss the following:
  - Concepts and benefits of immunization
  - Updates on the current targeted vaccine-preventable diseases and the corresponding vaccines with RI schedule
  - Feedback on immunization performance, using data from the RED Categorization Tool
  - Formation and work of HF QWIT
  - Mapping villages to service delivery points (Micromapping) (see Annex 9. Micromapping)
  - Mobilization for immunization: VHT register, Child Health Card/Mother Passport, and key messages
  - Update on contraindications for immunization, side effects, adverse events following immunization (AEFI), and community case detection
  - VHT roles and responsibilities
  - Completing HF REC microplan forms 2a, 3a, 5a, and 5b (see Annex 5. REC Microplanning Tools and Process for HFs)
  - Identify supervisors for the VHTs orientation exercise
  - Finalize agenda for orientation.

Outputs

- Trainers who have the knowledge and skills to orient VHTs to RI and facilitate micromapping
- Schedule for VHT orientation
- Teams identified to support supervise the VHT orientation exercise

VHT Orientation and HF Micromapping

Definition

- A 1-day activity conducted at the HF to orient VHTs to RI and plan for this service in their area

Participants in VHT orientation and HF micro-mapping

- 2 VHTs per village of an HF catchment area
- Health assistants

Purposes

- Equip VHTs with knowledge and skills to support RI services in their catchment area/villages to include defaulter tracing
- Assign communities (villages) to service delivery points (outreach and static) so that every child is reached (see Annex 9. Micromapping)
- Identify under and/unserved communities
- Develop a predictable RI service delivery schedule
- Contribute to the HF REC microplan

Micromapping: a summary

Micromapping is the ongoing process of identifying and assigning of communities (villages) within an HF catchment area to RI service delivery points (static and outreach). HF staff work with community leaders (e.g., HUMC, VHTs, non-traditional leaders) to identify all villages and allocate them to RI service delivery points.

Micromapping has three basic steps:

- Collecting inputs to micromapping
- Forming a working committee to produce a draft micromap
- Harmonization/finalization

A critical output of micromapping harmonization is an RI schedule that maximizes access to services by all allocated villages. Figure 7 below is an example of an RI schedule.

Figure 7. Example of New RI Schedule

RUKUNGIRI DISTRICT - BUYANJA SUB-COUNTY Rubanga HC II Micro Map					
Plan/schedule for immunization agreed upon with VHTs					
	OLD PLAN	NEW PLAN/SCHEDULE			
S/N	Previous place, Day & time	New place	Day & week of month	Time of the day	Comments/VHT contact
1	Rubanga Static	Rubanga static	Every day	Whole day	
2	Nil	Omukihoona TC OR	Tuesday 2nd week	2 - 5.00 pm	
3	Nil	Rubanga Catholic Church OR	Wednesday 3rd week	2 - 5.00 pm	
4					
5					

Main activities

NOTE: Cross-check the updated list of villages in the HF catchment area to ensure that each village has been allocated to an HF.

- Use sample agenda for VHT orientation and Micromapping.
- Discuss the following topics:
  - Benefits of immunization and key messages
  - UNEPI vaccination schedule, diseases, and the corresponding vaccines
  - Update on contraindication for immunization, side effects, AEFI, and community case definition

- Feedback on HF immunization performance
- HF QWIT membership and roles
- Mapping villages to RI service delivery points—micromapping (see Annex 9).
- Developing predictable RI service delivery schedule
- Tools: child register (CR), VHT registers, Child Health Card/Mother Passport (use and interpretation)
- VHT roles and responsibilities

- Next steps:
  - Discuss, update, and complete HF REC microplan forms 2a (situation analysis) and 3a (coverage targets), which were started during the 5-day activity.
  - Identify influential people in the parishes and villages to complete HF REC microplan tool 5a (social mapping of stakeholders and partner analysis).
  - Transfer information from the RI service delivery schedule to HF REC microplan tool 5b (immunization session static and outreach plan for the HF).

A Reorganized CR for Each RI Service Delivery Point

The MOH recommends the CR as a primary data collection tool to track defaulters and unreached children, as recommended by the global *Immunization in Practice* modules relating to data tools.* In the REC-QI approach, the CR is reconfigured to be more user-friendly. Each RI static and outreach service point has its own CR, with separate sections for each village that registers all eligible children served. The CR also includes a section for visitors (see Annex 9 for an example).

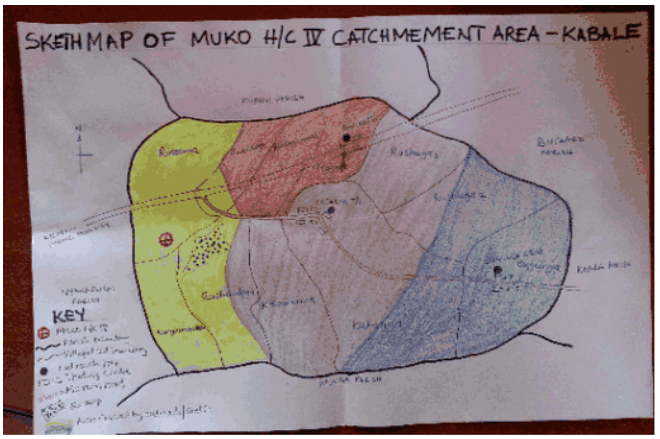
This arrangement of the CR facilitates retrieval of records for a continuing child, even if his/her health card is lost. The mother states the child's village and the HW opens that section to trace the child's records. In addition, when HWs communicate regularly with VHTs, defaulter children are easily identified from the different sections.

*WHO. *Immunization in Practice: A Practical Guide for Health Staff*. Geneva, 2004. www.who.int/immunization/documents/training/en/

Outputs

- Micromap: villages/communities per RI service delivery point clearly defined/listed
- Predictable RI service delivery schedule: location, day, and time of RI service delivery, plus VHT members' address and telephone.
- Plan for further engagement of VHTs
- Enhanced VHT ability to use CR, Child Health Card/Mother Passport for RI mobilization
- Updated village list for the HF catchment area
- Completed HF REC microplan forms

Figure 8. Example of Sketch Map of HF Catchment Area (Microplan Form 1b)



Finalized HF catchment area sketch map with service areas for each outreach and static services. (see Figure 8 above for an example)

NOTE: By the end of the VHT orientation, all HF REC microplan tools are complete except 6a- Summary Activity Plan and Budget for Reaching Every Community, which will be completed during the next SS (see Annex 5. REC Microplanning Tools and Process for HFs).

Follow-on activities

- Each HF completes Tool 6a.
- Aggregate HF REC microplans into an HSD or district REC microplan to facilitate management and support implementation of REC microplans at lower levels.
- Review and update REC microplans at integrated quarterly review meetings.

NOTE: Ensure that microplans and maps are finalized and shared at all levels.

Ongoing Community Engagement and VHT Liaison with Health Facilities

Definition

- Ongoing community engagement and VHT liaison with HFs refers to establishing and maintaining partnerships among community members and HWs. Partnerships are based on the principle that when communities are involved in planning, providing, and evaluating RI services, they will develop trust and ownership of those services.[97]

Purposes

- Involve caretakers and leaders in making decisions pertaining to RI service delivery
- Tailor services to local context and community needs

Activities

Use the following strategies to continuously engage the community:

- QWIT meetings
- VHT meetings with the HW at every outreach, 30–60 minutes before the immunization session (update CRs, identify children for follow-up, and provide general updates)
- Annual VHT update meeting with all VHTs in the HF catchment area to review performance, share successes and bottlenecks, and plan for better RI service delivery
- Involve of non-traditional stakeholders (political, civil, and opinion leaders) at all levels through monthly feedback and participation in QRMs. Solicit their support in resource and community mobilization, emphasizing that it is their role to help provide the service to the community
- Use the HC III monthly summary report (see Annex 12) to keep sub-county leaders informed and involved. Information may include:
    - Follow-up on data improvement teamwork
    - Previous month analyzed data, e.g., DPT-HepB-Hib 1 coverage if problem was poor access
    - Report on planned vs. conducted RI outreaches
    - Priority challenges HF that QWIT plan to handle
    - Priority challenge requiring sub-county leader attention

Outputs

- Updated HF CR reflecting happenings in the community, e.g., births/newborns, children vaccinated, RI defaulters and reasons, identification of unreached and hesitant communities
- Continued HW interaction with VHTs
- RI services tailored to community needs for increased uptake

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[7] WHO. *Immunization in Practice: A Practical Guide for Health Staff*. Geneva, 200

- Leaders regularly updated on status of RI service delivery

Implementation and Management of QWITs and PDSA Cycles

Definition

- QWIT teams for RI at district, HSD, and HF levels test a change idea by planning, implementing, observing the results, and acting on what is learned. PDSA cycles can lead to new "best practices," identification of additional problems, and discovery of potential solutions to be further tested.

NOTE: The MOH recommends that each HF have a QI team (QIT) to oversee all service delivery in the HF, with each health program, e.g., RI, also forming an HF QWIT. Each QWIT is represented at QIT meetings. QWITs have representatives from HWs, VHT, and community leaders. The QWIT does not have a permanent chairperson; at each meeting, the QWIT selects a person to serve as chair for the day, with the HW as the secretary. The QWIT plans, reviews, and re-plans for the success of PDSA.

NOTE: RI PDSA cycles focus on a single collective HSD improvement aim, established during the 5-day activity and REC microplanning process (or the REC microplan review process). However, each QWIT works on finding a solution to a root cause of the "bigger problem," based on context-specific priorities. Thus, HFs *simultaneously* test different changes and share progress during quarterly review meetings for peer learning and adoption by other HFs.

Purposes

- Identify context-specific problems, generate and test solutions
- Break overwhelming large problems into smaller manageable challenges that can be addressed by existing resources
- Plan and review PDSA implementation and take appropriate actions (adopt, adapt, or abandon)
- Continuously involve the community in service delivery

Main activities

- Set meeting dates for each HF QWIT to coincide with regular HF, HSD, and DHT monthly staff meetings. Keep meetings as short as possible—at most 2 hours.
- Identify solutions/change ideas that draw on existing "assets and strengths" through brainstorming, dialogue, exchanging experiences, and/or process mapping/redesigning.
- Select one change idea through consensus or majority vote method.
- Test the change idea using the PDSA model.
- Document the PDSA steps (see Annex 7. Guidance on QWITs and PDSA Work).
- District/HSD supervisor provides coaching, mentoring, and other guidance to support QWITs at the HF level.
- Continue the QI process through additional PDSAs according to the decision to "adopt, adapt, or abandon" and the HF REC microplan.
- Share QWITs findings and experiences at HF staff meetings, meetings at higher levels in the system, with local leaders, and at integrated QRMs.

NOTE: Bringing in community perspectives through VHTs, LC1, and other non-traditional stakeholders is critical to finding sustainable solutions to challenges relating to RI service delivery.

- Solicit VHT input and ideas during their meetings at a RI session and parlay the ideas to the QWIT.
- Provide feedback to the VHTs at the next month's RI session.

Outputs

- Regular review of PDSA implementation
- Feasible local solutions to larger problems in RI
- A decision to seek and test alternative solutions

Integrated Quarterly Review Meetings (QRMs)

Participants

HSD QRMs

- HSD in-charge and core staff
- HFs in-charges
- SC leaders (SAS, chairperson LC III, and secretary for health)
- Health IPs in the HSD

District health management team (DHMT) QRMs

- DHT members
- All HSD in-charges
  - District-based non-traditional stakeholders (district secretary health, assistant chief administrative officer, district chairperson, health implementing partners, and key opinion leaders)
- HF in-charges
- HSD heads
- District chairperson
- Secretary for health
- Sub-county leaders
- Other health partners in the district
- 6 HSD staff, SAS & chairpersons LC III, COs, HF EPI FP (about 55 participants).

Definition

In REC-QI, the integrated QRM brings together a range of stakeholders from various levels of the health system and outside the health system in a management meeting to share experiences, enable learning, and improve RI. The district and the HSD levels hold QRMs. QRMs are at the "act" phase of the PDSA cycle, during which decisions can be made to adopt, adapt, or abandon tested change ideas. The HSD QRM precedes the DHMT QRM.

Purposes

- Review progress on health work plan implementation, including RI, and provide opportunity for replanning
- Share tested local solutions (PDSAs) and facilitate peer learning
- Engage and gain support from non-traditional stakeholders on issues pertaining to health and RI

Main activities

- Prior to the meeting, analyze routine immunization performance using the RED Categorization Tool. (The QRM also addresses the various other program areas, e.g., antenatal care [ANC], institutional deliveries, TB intermittent preventive therapy for malaria.)
- At HSD QRM, prepare a presentation on RI PDSA and other program areas for each HF based on a predesigned format that includes changes, action points, activities to date, and progress toward goals.

  For the district QRM, prepare a summary report from each health sub-district to present to DHMT.

During the meetings:

HSD QRM

- Each HF presents its RI PDSA.
- Present the overall health situation in the HSD including but not limited to RED categorization/RI performance (HSD management).
- Present key findings in the previous SS and updates on health policy, guidelines, standards and upcoming events (HSD management).
- Discuss the presentation in plenary.
- Select outstanding PDSAs (both successful and unsuccessful PDSAs can inform the platform for learning) and plan next steps.
- Decide on support to be provided by the HSD management to HFs for better performance. Outstanding HFs may be asked to support weak facilities.
- Give leaders an opportunity to make comments and possible contributions to better health performance.

Criteria for Selecting Outstanding PDSAs

- Aligned to the HSD aim
- Clearly laid out PDSA plan (aim, change(s), process measures, action points, and appropriate data to be collected)
- PDSA implemented fully, i.e., reached the 'act' step
- Result: either improved the problem or did not

DHMT QRM

- Summarize key issues (successes, challenges, performance, and innovations) from the HSD QRM, including outstanding PDSA cycles.
- Present the overall health situation in the district, including but not limited to RED categorization and RI performance (DHT).
- Present key findings from the previous SS and update participants on policy, guidelines, standards, and upcoming events.
- Discuss presentations in plenary.
- Select outstanding PDSAs (successful and unsuccessful to inform learning platform) and set plans.
- Decide on support to be provided by the DHT to HSDs and selected HFs that need to improve performance. Outstanding HSDs and HFs may be asked to support those in need.
- Give an opportunity to make comments and possible contributions to better health performance.

ALL QRMS

- Start the meeting by reviewing the status of the action points from previous meeting.
- Review and update health work plan, including REC microplans.
- Prepare minutes of the QRM with action points and follow up through supportive supervision.

NOTE: If the HSD aim has been achieved, the QRM prioritizes another big problem and sets a new aim. The HSDs should document changes resulting from PDSAs that have contributed to achieving their aim.

Using information presented at the QRMs and in publications, the HSD, DHT, RSST, or MOH/UNEPI should prioritize poor-performing districts, HSD, or HF for special support (as described above).

Outputs

- Outstanding PDSAs selected for possible sharing at higher level and other districts.
- Revised work plans (including the REC microplan).
- Renewed participant commitment to improve health performance.
- Increased awareness of new practices and possibilities
- Documentation of potential best practices

Cold-Chain Maintenance

Definition

- A well-maintained vaccine supply chain ensures that vaccines are stored and transported within WHO-recommended temperature ranges from the time of manufacture until the point of administration.[10] The MOH/UNEPI conducts cold-chain maintenance. REC-QI strengthens the system by facilitating processes for the district cold-chain technician (DCCT) to seek support from UNEPI CCT on problems and possible spare equipment.

Purposes

- Support availability of potent RI vaccines
- Support functionality of the cold-chain system

Main activities

- The DCCT and assistants should:
- Inform UNEPI of the faults of EPI fridges and other cold-chain equipment in their districts and facilitate requests for spares from National Medical Stores.
- Develop and follow a maintenance plan.
- Conduct routine maintenance of cold-chain equipment.
- Ensure there is a functional gas cylinder tracking system within the district.
- Provide EPI monitoring charts (see Annex 16) and gas cylinder tracking form (Annex 15).
- For faults that cannot be resolved by the district cold chain assistant/DCCT:
    - Technically support DCCT to document faults in the cold-chain system that s/he cannot manage because of a lack of technical capacity or lack of spare parts. Orient DCCT to reporting process and format of the report for MOH/UNEPI.
    - Submit a written request for technical assistance and spare parts from MOH/UNEPI.
    - After reviewing the district report and getting clarification from the DCCT, MOH/UNEPI will order spares from National Medical Stores.
    - Support the district to repair cold-chain equipment reported (MOH/UNEPI).
    - Send equipment that cannot be repaired in the HSD/district to the MOH/UNEPI.

NOTE: To facilitate capacity-building, the UNEPI technicians should work with the DCCT on equipment repairs.

NOTE: Management-focused PDSAs can also resolve cold-chain challenges, such as the gas cylinder resupply and tracking system.

Outputs

- Robust plan for cold chain maintenance plan
- Report on faulty cold-chain equipment submitted to MOH/UNEPI
- Cold-chain equipment repaired with support from MOH/UNEPI cold-chain technician

Other topics covered:

- REC microplanning tools (Annex 5. REC Microplanning Tools and Process for HFs)
- Provide and discuss EPI monitoring charts (see Annex 16. EPI Monitoring Charts)
- Present and discuss routine DQSI (see Annex 8. Routine Data Quality Self-Assessment and Improvement). Point out that routine DQSI is an easy-to-use method of improving data quality that districts and HFs can conduct regularly.[8]
- Describe the REC-QI microplanning process (see Annex 5. REC Microplanning Tools and Process for HFs).
- Introduce micromapping (see Annex 9. Micromapping).

Day 5 of Planning for REC-QI Implementation (District Council Sensitization and Involvement in the Plan to Improve Routine Immunization)

Definition

- One-day meeting to engage district leaders in understanding and supporting improvements in RI

Purposes

- Familiarize district councilors, heads of departments, and other stakeholders on REC-QI
- Solicit inputs, advice, and support for RI improvement plan from the various stakeholders

Main activities

- Prepare an agenda based on the sample agenda in the training guide.
- Give an overview of REC-QI approach.
- Show and discuss the macromap of HF catchment areas.
- Present the baseline findings and the broad RI problems based on RED categorization.
- Introduce and explain the draft district plan to improve RI:
    - Solicit input, advice, support, and endorsement of the district RI improvement plan.
    - Encourage leaders to think about how to sustain REC-QI and the improvements therein.
    - Explain the next steps of REC-QI introduction to the district.

[8] WHO. Immunization in Practice: A Practical Guide for Health Staff. Geneva, 2004.

Outputs

- Leaders' statements of commitment and support for the RI improvement plan documented

Operational-Level Training on Immunization in Practice

Definition

- This training bridges the gap between pre-service training and in-service roles and responsibilities of HWs. This 5-day refresher training builds capacity of operational-level (OPL) HWs on the day-to-day EPI tasks at district, HSD, and HF levels.
- OPL training is a RED-designed in-service capacity-building activity. REC-QI improves on the processes for effective capacity-building by adding key REC-QI concepts, e.g., tailoring content to trainees' capacity, and just-in-time routine DQSI OJT in supportive supervision. The training uses a variety of participatory methods and devotes ample time for practical sessions to enable trainees to improve skills.

Purpose

- Equip health workers with knowledge and skills to effectively manage and deliver RI services.

NOTE: Group participants by related cadres, e.g., enrolled nurses/midwives could be trained with nursing assistants.

Main activities

- Use sample agenda for OPL EPI Training for Health Workers to plan the training and prepare an agenda.
- Include the following themes/sessions:
    - Overview of UNEPI and its policy and standards; include how EPI fits into the broader health system and how they impact each other.
    - Overview of district RI-related performance (RED categorization and how to use the generated information to develop an REC microplan.
    - Introduction to immunity and its applications to RI.
    - EPI target diseases.
    - Uganda immunization schedule and Child Health Card/Mother Passport.
    - Introduction and use of gas tracking mechanism.
    - Cold-chain management (routine care of the EPI fridge, reporting faults to the appropriate level, packing vaccines).
    - Vaccine management and other EPI logistics (routine ordering, bundling, temperature monitoring, Vaccine and Injection Materials Control Book [VIMCB], tally sheet, HMIS 105).
- Planning for EPI services: just-in-time training:
    - Mapping HF catchment areas, enhanced RED Categorization Tool, REC microplans, vaccine forecast, predictable RI schedule.
    - Introduction to QI (QI principles, 5 whys), QI model, ladder of change, PDSA cycles
    - Problem-solving strategies (identification, root cause analysis using fishbone tool, prioritization, setting aims, ideas for improvement, changes/measures).
    - The change concept and barriers and enablers to change and leadership.
- Introducing new vaccines
- Injection safety and health care waste management
- Introduction to the REC strategy and importance of this strategy in Uganda

- REC community engagement/involvement (working with the community and keeping leaders involved)
- Use of data for action (CR, EPI monitoring charts, routine DQSI and improvement), practical demonstration of immunization session
- Introduction to EPI disease surveillance
- Field visits and reports:
    - Preparation for field visit and report writing
    - Conduct field visit
- Presentation of field reports and discussion
- Brainstorming session—what can be done to improve RI? (planning and reorganizing immunization for sustained and affordable improvements)

Outputs

- Updated RI knowledge and skills among trained HWs in conducting RI
- Improved ability of HWs to identify problems associated with RI performance
- Improved HW knowledge and skills in the use of key EPI tools (CR, EPI monitoring charts, VIMCB, gas cylinder tracking form, enhanced RED categorization).

Exchange Visit(s)

Definition

- This is a 3–5 day visit by one district with little REC-QI experience to another district with more experience. It could also be an internal (i.e., within a district) visit by one HSD to another HSD or HF to share experiences and local solutions with each other: peer learning. The districts (or HSDs/HFs) in each exchange should have similar contexts (topography, culture) and face similar challenges to RI service delivery.

Visiting Team Participants

5–10 people, depending upon visit objectives

Purpose

- Enable districts, health sub-district, and HF to share REC-QI implementation experiences, challenges, and solutions.

Activities

- Discussion between hosting and visiting districts/HSD/HFs to agree on the schedule.
- Areas of focus might include:
    - Composition and function of QWIT (involvement of non-traditional stakeholders)
    - Process of problem identification and analysis, PDSA development, implementation, and progress
    - Data management (collection, storage, and use)
- Include classroom and field visits in the schedule.
- Possible field visits include SS, QRMS, QWIT meeting, or HF visit.
- Ensure the visit is participatory; do not overload with sessions/discussions.
- Set aside time for discussing what was observed in the field visit.
- Keep the discussions objective. Ensure that they do not lead to a comparison between the two districts'/HSD's/HFs' performance, but rather provide an opportunity for learning.

Host district

- Prepare according to the agreed upon schedule.
- Identify facilitators to lead discussion areas as identified in the schedule.
- Identify HFs to visit.

Visiting district

- Ensure that the participants are well prepared for the visit.
- Set learning objectives.
- Identify facilitators to lead specific discussions.
- Review and share experiences.
- Develop a plan to put in practice what is learned.

Outputs

- A plan to put into practice what has been learned from the exchange.
- Solutions for some REC-QI challenges.

Sharing REC-QI Best Practices outside the District [with Uganda National Expanded Program on Immunization (UNEPI)/Partners, Region, and RSST]

Definition

- The main purpose of REC-QI is to operationalize REC implementation in Uganda, and the approach is relatively new. This is an opportunity to discuss, improve, and facilitate scale- up in the country.

Purpose

- Scale up REC-QI best practices to other health facilities and districts in Uganda for equitable RI services.

Activities

- QRMs
- Exchange visits
- Incorporate REC-QI into national documents
- Present at various forums, e.g., conferences
- Involve RSST
- Publish articles, news pull-outs, and success stories
- Disseminate REC–QI "How-To Guide"
- Involve EPI partners in uptake of REC-QI approach(s)

Outputs

- REC-QI approach concepts presented, discussed, and adopted

Coordination in the Implementation of REC-QI

Definition

- Coordination is the ongoing process of ensuring that different REC-QI functions and activities of different groups and departments within MOH are harmoniously accomplished in an efficient and organized manner so as to meet the objectives of REC-QI. Coordination is one of the key functions of managers at the different levels.

Purposes

- Promote partnership and team spirit through regular communication, meetings, and participation in implementation of planned activities.
- Provide guidance on how to implement planned activities.
- Optimize use of resources through integration of activities.
- Motivate performance improvements in RI
- Improve awareness of REC-QI through regular interactions and peer learning with other districts, levels of the health system, and local leaders.

At the national level

The MOH/UNEPI in conjunction with national EPI partners coordinates REC-QI implementation.

At the district level

The DHO coordinates REC-QI activities.

At HSD and HF levels

The in-charges coordinate REC-QI activities.

Coordination between MCSP and districts, HSD, and HFs is for technical purposes; not for plain management decision-making.

The success of the implementation of REQ-QI largely depends on the coordination process between the partners (e.g., MCSP/Bill & Melinda Gates Foundation-funded SS4RI), MOH, other health development partners, and the district. Any gap in coordination may lead to the misunderstanding and low acceptance/performance of the REQ-QI approach, as well as lost opportunities for using this approach to reach every child with immunization services.

Health facilities are expected to contribute to solving prioritized HSD problems. Regular coordination meetings and feedback at this level ensure that all HFs implement activities that are in line with the selected problem and will contribute to the achievement of the desired goal.

Coordination meetings at all levels and sharing of reports provide guidance on how best to implement the planned activities.

- Share information across departments and units on planned activities to increase efficiencies, e.g.:
- Combine delivery of vaccines with cold-chain maintenance.
- Collect monthly reports and/or empty gas cylinders during supportive supervision.
- Regular coordination between MOH/UNEPI and districts in the areas of data analysis and monthly feedback to the districts motivates districts and encourages them to identify and overcome performance gaps.

Stage 3: Sustain

At this stage, the district should have the tools and knowledge to continue REC-QI activities on its own, with occasional technical assistance from the center (MOH or any other national partner) as requested or needed. In other words, the center gradually reduces technical and financial support to the district for REC-QI. Generally, the district takes a leading role in all activities; however, the MOH/UNEPI oversees to ensure that the key activities of REC-QI introduced in Stages 1 and 2 continue. "Sustain" here means that key REC-QI activities are institutionalized (are part of routine practice) at all levels and funding for them is incorporated into district and sub-county budgets.

Sustainability is built in from Stage 1 by introducing QI and other methodologies that the district (DHTs, HSDs, HFs, communities, and all other stakeholders) can afford to sustain. At the sustainability forum meeting, the district presents strategies for sustaining the activities of REC-QI.

In reality, during the sustain stage, the center funds a few activities, to supplement the district, e.g., if the center funds the HSD QRMs, the district should fund the DHMT that follows immediately. This stage puts more emphasis on helping the district to identify resources or sources of resources to sustain the critical ongoing REC-QI activities.

Continuous Supportive Supervision, QRMs, and PDSA Cycle Implementation

Districts must sustain the following critical ongoing REC-QI activities:

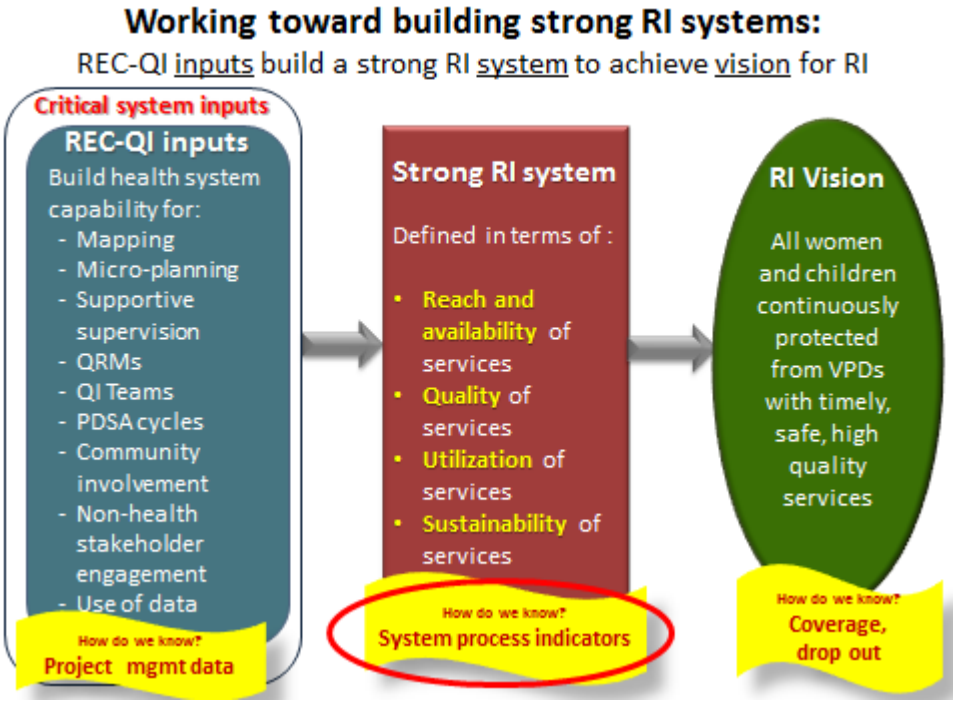
- Regular SS and coaching to support priority RI challenges and the checklist.
- Regular QWIT meetings to review RI and PDSA implementation (action points) at all levels.
- DHMT and HSD QRMs at which successful health facilities and PDSAs are identified, shared, and documented.
- Regular use of EPI data for action at district, HSD, and at least 90% of the HFs (e.g., displaying and updating the EPI monitoring chart).
- Ongoing involvement of community/VHT in QWITs and meetings and before RI sessions.
- Regular updates to CAO and SAS through monthly briefs or technical planning committees at the district and sub-county levels.

Indications that an RI System has Been Strengthened

DHTs and HSDs should consider the indications below when determining if an RI system is stronger than it was before embarking on REC-QI:

- Better planning and management of resources evidenced by completed and regularly reviewed and updated REC microplans.
- Better identification of target population (HF and RI service delivery points)—reach.
- Better scheduling of regular RI outreach sessions—availability and reach.
- Fewer stock-outs of vaccines—availability.
- More frequent static RI services—availability.
- Better community understanding of the need to complete the vaccination schedule—utilization and sustainability.
- District capacity to generate local solutions within their mandate, to RI challenges—sustainability.
- Figure 9 outlines how REC-QI inputs contribute to a strong RI system.

Figure 9. Building Strong RI Systems



Experiences from other five-year programs in Ethiopia, Malawi, and Rwanda that have moved from small-scale projects to scale-up have provided the below lessons on scale and sustainability, which may be useful for REC-QI.[9]

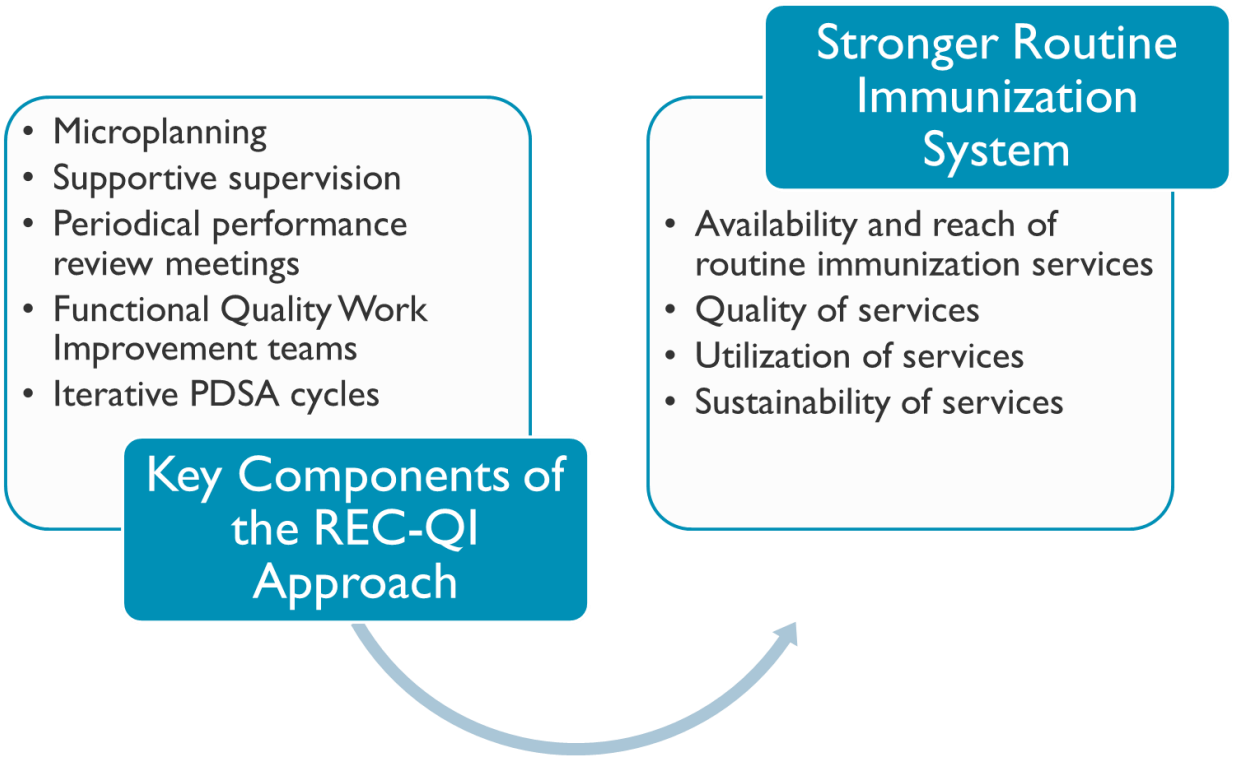
- Consistent stakeholder consultation and intervention redesign and refinement, based on data and evidence from monitoring and evaluation activities, build the foundation for scale and sustainability.
- Gaining political commitment from senior MOH officials is critical to advancing scale and sustainability. Ongoing data sharing and collaborative problem-solving contribute to achieving the commitment.
- Attention to improving management components helps to establish an organizational culture of learning and QI, which can boost the likelihood of sustainability.
- A continuous improvement process, continued political commitment, and reliable financing are all necessary investments to produce sustained benefits.

[9]*From Pilot to Practice. Lessons on Scale, Institutionalization and Sustainability from the (In-Progress) Journey of the SC4CCM Project.* JSI, September 2014

Monitoring and Evaluation of the REC-QI Approach

As a health systems strengthening model, the REC-QI approach should be monitored and assessed on its ability to improve functionality, efficiency, and sustainability of the RI system. The performance monitoring system should be designed to assess how key components of the REC-QI model contribute to a strong RI system, as illustrated in Figure 10.

Figure 9. Illustration of the Relationship between Key Components of the REC-QI Approach and a Stronger RI System



Traditionally, immunization performance has been informed by outcome indicators of coverage and DORs, but these measures are influenced by the intermediate outcomes that measure the strength of a routine immunization system.

Monitoring and evaluation under the REC-QI approach should go beyond measuring system outcomes and dig deeper to understand how the components of the approach are functioning and how they affect the strength of the RI system. The following suggested indicators are based on current thinking and should be adopted, adapted, or revised as the situation dictates.

Performance Indicators for Monitoring Key Components of REC-QI

1. Number of sensitization meetings on REC-QI held in each of the districts.
2. Percentage of HFs in the district that have determined their catchment areas and populations for RI services.
3. Percentage of HFs in the district that have annually updated their catchment areas and populations for RI services.
4. Percentage of HFs in the district that have REC micro-plans for RI.

5. Percentage of HFs in the district that are displaying up-to-date and accurate RI monitoring charts at their premise.
6. Percentage of HFs in the district that have established QWITs.
7. Percentage of scheduled HF QWIT meetings held in the last quarter in each of the districts.
8. Percentage of district performance review meetings attended by non-traditional stakeholders
9. Percentage of HFs in the district that have documented PDSA cycles showing improvements in a selected RI problem.
10. Percentage of HFs in the district that have received at least one RI-focused supportive supervision session in the last quarter.
11. Number of VHT members and community leaders who have attended REC-QI orientation sessions.
12. Percentage of HFs in the districts that had VHTs participating in RI micromapping activities.

Performance Indicators for Monitoring a Strengthened RI System

1. Percentage of villages in the district that were reached by RI services at least once in the last quarter.
2. Percentage of HFs in the district that provide static RI services at least once a week.
3. Percentage of districts that have analyzed RI data for the previous quarter using the RED Categorization Tool.
4. Number of EPI stakeholders who include key components of the REC-QI approach in their capacity building materials and/or activities.
5. Percentage of HFs in the district that have had no stock-outs of Penta 1 vaccines in the last quarter.
6. Percentage of HFs in the district where wait times for RI services are less than 30 minutes.
7. Percentage of HFs in the district where RI outreach services are at least partially funded by the DHO's office.

Cost of Implementing REC-QI

As the REC-QI approach aims to strengthen the full implementation of REC in Uganda, most REC-QI activities are already being implemented under REC. In addition to providing the "how-to" prioritize, REC-QI enables effective use of the available resources by addressing the most pressing or rewarding problems and their root causes first. REC-QI adds quality tools, methodologies, and solutions to make their implementation feasible and structured to fit within the existing local government health service delivery system. To advance sustainability of stronger RI systems, planning and budgeting for REC-QI activities should fall within the district's mandate and capacity. A few areas of added cost are highlighted below.

Expenditure items

The expenditure items to be budgeted during the implementation of REC-QI activities include but are not limited to: Safari Day Allowance, fuel, lunch for participants attending a meeting for the whole day, venue reservation in case participants cannot fit in the available district hall, and stationary/ health management information system (HMIS) tools.

- The REC-QI approach may incur extra costs while implementing some routine activities, e.g., the attendance of non-traditional stakeholders at QRMs and printing of tools.
- One-off activities involved in REC-QI, such as trainings and field activities/practicums, also require incurring additional expenses for venue hire, participants' per-diem, meals, transport refund, training materials, and facilitators' package, among others.
- Added activities like macro- and Micromapping of HF and service delivery point catchment areas can largely fit in the existing REC activities, e.g., DHT planning meeting (macro- mapping), extended DHMT QRM (harmonization), VHT/HF meeting (Micromapping).
- REC-QI encourages peers to learn through exchange visits. These are new to REC, but support development and sharing of local solutions to similar challenges in an area.

The approved government rates apply to the different expenditure items for implementing REC-QI activities.

Conclusion

Uganda now has more than five years of experience with REC-QI (and its precursor project in Masaka District) in nine districts. REC-QI focuses on strengthening the capacities of managers, health workers, and communities to apply QI concepts and practices, including the development of local solutions to problems, within the context of national REC strategy implementation. This approach promises to resolve many of the shortcomings noted in the comprehensive EPI evaluation of 2015. Some of the challenges noted in the evaluation that REC-QI specifically addresses include the lack of reliable target population data for micro-planning and performance tracking at lower levels; inadequate monitoring at all levels; inadequate supportive supervision of lower levels; and limited use of data for informing programmatic action.[10][12] REC-QI also highlights the important role of VHTs as well as of non-traditional stakeholders in improving RI services.

In sum, adding QI to REC offers an iterative improvement approach for building an immunization system strong enough to sustain high-coverage routine immunization. REC-QI also has the potential to be applied to improvements in other areas of health service delivery, such as maternal, newborn, and child health. Over the next three years, MCSP and the Bill & Melinda Gates Foundation-funded SS4RI will continue to study the adaptability and sustainability of the REC-QI approach on a much larger scale and plan to update this guide with new lessons and information.

[10] *Uganda Comprehensive EPI, Surveillance, Immunization Financing Review and Post Introduction Evaluation of Pneumococcal Vaccine 23 Feb–6 Mar 2015. Executive Summary, Recommendations and Road Map*. 2015.

Summary of Roles and Responsibilities in REC-QI

Table 8 summarizes the roles and responsibilities for implementing the REC-QI approach, including the key activities and who (category of health staff) is responsible for them.

Table 8. Summary of the REC-QI Roles and Responsibilities

Activity	Who is responsible
1. Orientation for DHT and	DHT/partner
2. Planning for REC-QI implementation	DHT/partner
• Macromapping and Populating the RED Categorization Tool (Determining RED Category)	DHT and macro- mapping working group
• First Integrated QRM (REC-QI Sensitization for District Health Staff and Other Stakeholders and Harmonization of the Macro Map)	All HSD and HF in-charges and their EPI FPs DHT, district contact persons Non-traditional stakeholders
• Training on PDSA and REC Microplanning (for HWs)	DHT, HSD, and HF staff
• District council sensitization	DHT District councilors SAS SC chairperson Heads of departments and other key stakeholders
1. Implementation of Immediate Steps after the 5-day Activities (Stage 1)	All levels
2. First Supportive Supervision	DHT
• Training on organizing focused integrated SS and checklist development	
• Preparation for supportive supervision: finalization of checklist and other logistics	
• Field visits using updated checklists	
• Reflection/review of field findings, report writing, and feedback to the DHO	
3. Routine Integrated Supportive Supervision	DHT/HSD
4. VHT Training of Trainers	HF
5. VHT Orientation and HF Micromapping	HF
6. Community and Leader Engagement	All levels
7. QWIT and PDSA Management and Implementation at All Levels	All levels
8. Integrated QRMs and sharing outstanding PDSAs	DHT/HSD

Activity	Who is responsible
9. Cold-chain Maintenance	DHT/HSD
10. OPL Training	DHT
11. Exchange Visit(s)	DHT
12. Sharing REC-QI Practices	DHT
13. Coordinating National, Regional, and Other District Leadership	DHT
14. Continuous SS, QRMs, and PDSA Cycles	All levels
15. Indications That an RI System Has Been Strengthened	All levels
16. Experience on Scale and Sustainability	All levels
17. Monitoring and Evaluation	District biostatistician
Costs	DHT local leaders (e.g., LC1 district council)

Glossary

Data quality self-assessment and improvement (DQSI Routine). A process to continuously measure and facilitate improvement of data accuracy and consistency at all levels. DQSI is used during internal (at the HF) and external supportive supervision.

Fishbone diagram (cause and effect diagram). A graphic tool used in QI that helps generate possible root causes of a problem, and classify and analyze them.

Macromapping. An ongoing process of identifying and assigning communities (parishes) to HFs for high-quality health service delivery. Also used to define catchment areas and populations for REC micro-planning.

Micromapping. An ongoing process of identifying and assigning communities (villages) within an HF catchment area to RI service delivery points (static and outreaches).

Minutes book. An ordinary counter book used to record notes during meetings, including the HF Quality Work Improvement Team (QWIT) meetings.

Model for improvement. A framework to guide QI. The model includes three fundamental questions (the aim, the outcome measures, and the possible solution to a problem—a change idea) and cyclical PDSAs.

Plan-Do-Study-Act (PDSA). A QI problem-solving model used for carrying out changes or making improvements. P= plan the change; D = do the change; S = study the change; A = act to maintain the change or to continue to improve.

Process map. A QI tool to critically examine how a task is accomplished. It involves comparing the *ideal* with the *actual* process, enabling the users to identify and fill gaps. By identifying inefficiencies, it serves to align the actual to the ideal.

Quality improvement (QI). A cyclical process of measuring a performance gap; understanding the causes; testing, planning, and implementing interventions to close the gap; studying the effects of the interventions; and planning additional corrective actions in response.

Quality work improvement team (QWIT). The group of individuals who meet regularly to identify and analyze areas in need of improvement, propose solutions, and test change ideas. The QWIT oversees and performs carefully selected tasks to solve identified problems affecting the specific program.

RED Categorization Tool. An Excel-based tool to collect and analyze core EPI performance indicators (Penta 1, Penta 3, and measles) data. It allows assessment of performance by health facilities and the district as a whole.

Reaching Every Child through Quality Improvement (REC-QI). An approach to strengthening the routine immunization system through the application of practical quality improvement models and tools, with the aim of making the five components of REC fully operational in a district.

Village health team (VHT). A non-statutory community (village) structure that manages all matters related to health and related issues. VHT members are chosen by their own communities to promote health and well-being of all residents.

Annex 1. REC-QI Success Stories

Involvement of Local Leadership Helps Improve Immunization Services

"Last year I did not carry out routine immunization for six months," says Alex Kwikiriza, in-charge of Nyamiryango HC II in Butanda Sub-county, Ndorwa West Health Sub-district in Kabale District. "My health facility's under-performance went unnoticed because the district health office could not assess performance of individual health facilities, due to lack of clearly demarcated service areas."

Alex is an enrolled comprehensive nurse who has been working at Nyamiryango HC II for two years. In the last 11 months, he has seen great improvement in RI at the health center—an activity that had previously been abandoned completely.

MCHIP/Uganda helped Kabale local government conduct macromapping of communities and health facilities throughout the district. This helped the DHT identify the service areas of each HF and target population. Using the target population and local EPI data, each HF's performance over six months was assessed. The best- and worst-performing health centers for RI were identified using a national categorization tool from the Uganda National Expanded Program on Immunization (UNEPI) and partners.

"The Kabale DHT, with MCHIP/Uganda support, organized a district quarterly review meeting attended by political and religious leaders and health workers from all static health centers in the district. It was found that my health center had not vaccinated any child for the past six months," says Alex.

"The district chairperson asked me to stand amidst the meeting to explain why my health facility had not vaccinated a single child in the past six months despite having all that it takes to vaccinate children. It was a hard moment for me! They also showed me the effects of this poor performance. I was very touched and ashamed to be the in-charge of a health facility performing poorly and letting down the whole district."

Alex continues, "Later, the district chairperson asked me to discuss the challenges I face in the health facility and come up with solutions. As a result of this meeting, Nyamiryango HC II RI challenges were put in the spotlight of both political and health leaders of the district. I met with the district chairperson and the district health officer and explained the various challenges faced by the health facility. They helped me overcome these challenges systematically."

Alex's face beams with confidence as he says, "I am happy to note that after this meeting, the following achievements and successes have been registered at the health center. In September 2013, Nyamiryango HC II successfully immunized 79 babies from birth to one year. In October, we have immunized 121 babies from birth to one year from both static and outreach sites. In July and August, Nyamiryango carried out one outreach session each month, and in September and October, two outreach sessions were carried out each month." All of this was done using existing resources at the health center.

"I thank MCHIP/Uganda for coming in, for without their intervention, Nyamiryango to date would still not carry out vaccinations. We now know which villages to focus on and our target populations, we track and access utilization issues and follow-up in strengthening immunization. MCHIP/Uganda also helped us identify our immunization needs and challenges. We [now] also understand that each health facility is accountable for providing health services to their identified community." Alex further asserts that, "through the continuous mentorship and training I have received over the past year from the DHT and MCHIP, the immunization rates of Nyamiryango HC II have steadily gone up, and there is a great improvement in the service delivery at the health center."

Alex's summary of what has changed in the past 11 months:

- To address the storage problem of vaccines, the district has provided solar energy for the HC II. The fridge is fully functional and vaccines are brought on time and stored safely.
- The DHT has been routinely following our performance and frequently checking performance during supportive supervision.
- A support staff member from HC III has been brought to assist with both static and outreach immunization sessions; we usually pay her from our PHC funds. We also have a retired nurse who is a volunteer vaccinator who comes and assists with RI sessions on the days when we have static and outreach services. She is paid a small stipend for her services from our PHC fund. This has reduced my work load at the health center.
- There has been sensitization of the community on RI services from both political and religious leaders and health workers, and the parents and caretakers of children are happy that we are immunizing again.
- Village Health Team (VHT) coordinators have been oriented to RI and they assist with mobilization of communities to attend the outreach sessions. The VHTs are given an allowance for their services from our PHC funds.
- In addition, a QWIT comprised of sub-county leaders, Community Development Officers, Health Assistants, In-charges of health facilities and focal points for immunization, and parish coordinators (a total of 20 people) held a sub-county review meeting supported by the DHT and MCHIP. We identified our problems, prioritized three major problems where we developed an aim, some ideas to make changes to, and indicators to measure how well our ideas are solving our local problems.

The Power of PDSA and "Thinking outside the Box" in Solving Long-Standing RI Problems: The Iganga District Experience Statement of the problem

- Low access (Penta 1 coverage) to routine immunization (RI) services.

Root cause to be addressed/improved

- Irregular functioning of fridges due to lack of standby gas cylinder (inventory revealed 20 HFs lack standby gas cylinder). MOH took over 10 years to supply standby gas cylinders.

Prioritized root causes

- District lacked authority to use available resources to procure gas cylinders
- Lack of RI involvement of non-traditional stakeholders

Plan-Do-Study-Act Aim/Objective

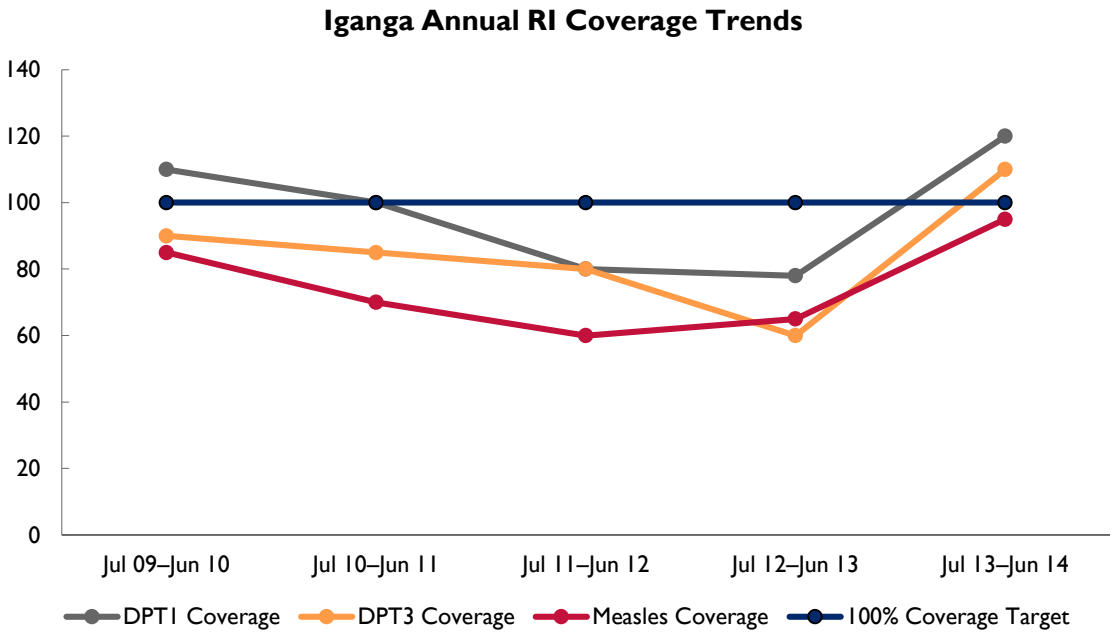
To procure 20 standby gas cylinders by Dec 31, 2013

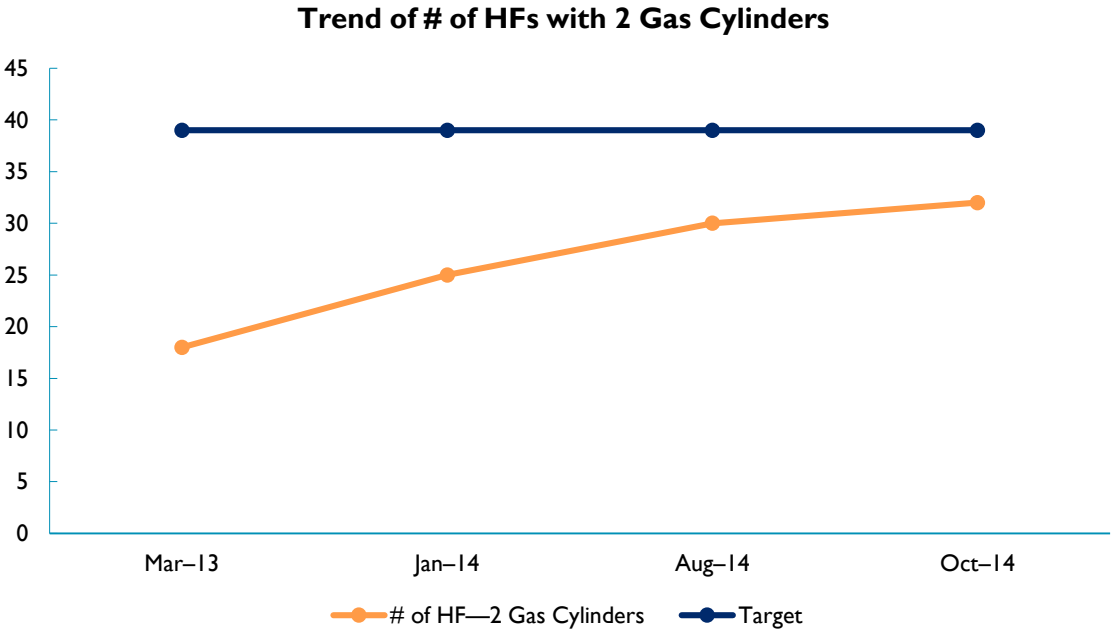
Outcome Measure

- Number of HFs with two gas cylinders (one on fridge, one standby)

Process Measures

- MOH/UNEPI guidelines to allow district to use available resources to procure gas cylinders secured
- Number of stakeholders contacted by the selected committee
- Number of gas cylinders procured and distributed to health facilities
- Results: The Quality Work Improvement Team, through the District Health Officer and Chief Administrative/Accounting Officer, secured authority from MOH to use district resources and procured:
    - 8 standby gas cylinders using district funds
    - Gas cylinders from contributions by the HF in-charges impress funds
    - Pending gap: 5 standby gas cylinders
- Bridging gap of gas cylinders contributed to RI coverage improvement


Iganga Annual RI Coverage Trends
140
120
100
80
60
40
20
0
Jul 09–Jun 10
Jul 10–Jun 11
Jul 11–Jun 12
Jul 12–Jun 13
Jul 13–Jun 14
DPT1 Coverage
DPT3 Coverage
Measles Coverage
100% Coverage Target


Trend of # of HFs with 2 Gas Cylinders
45
40
35
30
25
20
15
10
5
0
Mar–13
Jan–14
Aug–14
Oct–14
# of HF—2 Gas Cylinders
Target

Annex 2. Data to Collect and Assemble for the 5-Day Planning Activity

- Current (or previous) year populations per parish/SC/HSD/district from Uganda Bureau of Statistics.
- HFs per HSD/SC/parish. For each HF, indicate:
  - Location (at least the parish, but if possible, the village location)
  - By color or any other mark:
    - If there is an EPI refrigerator in the HF
    - If no refrigerator and HF conducts RI by picking up vaccines from a nearby HF
  - Black (normal) color for HFs that do not conduct RI
  - Number of doses of Penta 1, Penta 3, and measles administered by each HF in the previous 2–3 years (financial or calendar year).
- Additional baseline data:
  - Health sector work plan
  - Information on VHTs
  - Implementing partners in the district (location and what they are doing)
  - SS
  - QRMs
  - Budget and process

Annex 3. Macromapping Tools

Table 7. Example of Merged UBOS Population Data and HFs in a Macromapping Excel Template

MAPPING KAMPALA CENTRAL DIVISION WARDS TO HEALTH FACILITIES

Parish/Ward where HF is located	HSD/DIVISION/HF	LEVEL	Parishes it's Resp for	Total Population		UBOS Admin. Unita and Projected total population 2014/15	
	KAMPALA DISTRICT					Wards	Populations
	CENTRAL DIVISION						
	KISENYI HEALTH CENTRE	H/CIV				Bukesa	12283
						Civic Centre	2047
						Industrial Area	754
						Kagugube	11744
	BIVA MATERNITY CENTRE	H/CIV				Kamwokya I	4525
						Kamwokya II	23812
						Kisenyi I	5387
	AAR ACACIA	H/C II				Kisenyi II	16916
	AAR CITY CENTRE	H/C II				Kisenyi III	7758
	FRIENDS POLYCLINIC	H/C II				Kololo I	2694
	WATOTO CLINIC	H/C II				Kololo II	2263
	BHAI MEDICAL CENTRE	H/C II				Kololo III	3987
	NAKASERO HOSPITAL	HOSP				Kololo Iv	4633
						Mengo	19825
						Nakasero I	1724
						Nakasero II	5387
	SAS CLINIC	H/C II				Nakasero III	2047
						Nakasero IV	1724
						Nakivubo Shauliyak	1939
	KOLOLO HOSPITAL	HOSP				Old Kampala	6034
	KAMPALA HOSPITAL	HOSP					
	ST.CATHERINE HOSPITAL	H/C II					
	CHILDREN'S CLINIC KAMPALA LTD	H/C II					
	MENGO DOCTOR'S CLINIC	H/C II					
	NORVIK HOSPITAL	HOSP					
	KITANTE MEDICAL CENTRE	H/C III					
	KAMPALA MEDICAL CHEMBERS	H/C II					
	KASERENA CHILDREN'S CLINIC	H/C II					
	CASE HOSPITAL	HOSP					
	MALCOM HEALTH CENTRE	H/C II					
	KAMWOKYA CHRISTIAN CARING CENTRE	H/CIII					
	CITY HALL CLINIC	H/C II					
	KATEGO HEALTH CENTRE	H/C II					
	ADVENTIST MEDICAL CENTRE	H/C III					
	PRINCETON CHILDREN'S CENTRE	H/C II					
	MASS MEDICAL CENTRE	H/C II					
	OLD KAMPALA HOSPITAL	HOSP					

Table 10. Example of UBOS Data by Administrative Unit with Estimate of Target Population

UBOS		
1	2	3
District	2012	
County/HSD		
Subcounty	Total	Annual Target
Parish		<1yr (4.3% of total pop.)
KAPCHORWA DISTRICT	114,100	4,906
Tingey County/HSD	114,100	4,906
Chema Sub County	17,000	731
Chema	4,100	176
Kapkwai	3,300	142
Munarya	4,000	
Ngasire	2,700	116
Chemosong	2,900	125
0		
Kapchorwa Town Council	13,300	572
Kawowo	6,800	292
Kokwomurya	1,900	
Barawa	4,600	198

Figure 10. Example of Macromap of HF Service/Catchment Areas with Color Coding

MAPPING KABALE DISTRICT PARISHES TO STATIC HEALTH FACILITIES 26/3/2013

				2012		2013	
Parish/Ward where HF is located	**HSD/SUBCOUNTY/HF**	**LEVEL**	**Parishes it's Resp for**	**Total Pop**	**Target Pop < 1yr**	**Total Pop**	**Target Pop < 1yr**
	KABALE DISTRICT			**491,780**	**21147**	**507,337**	**21815**
	Kabale Municipality			**46,152**	**1985**	**45,337**	**1949**
	Kabale Central Division			**12,300**	**529**	**16,500**	**710**
Central	Kabale RRH	Hosp	Central ward	4,900	**211**	6573	283
Kigongi	KMC Clinic	HC II	Kigongi ward	4,000	**172**	5366	231
			Butobere ward	3,400	**146**	4561	196
	Sub-Total			**7,400**	**318**	**9,927**	**427**
Kigongi	Police Barracks						**0**
			Nyabikoni ward				**0**
							0
	Kabale North Division			**16,277**	**700**	**12,037**	**518**
Kijuguta	Rugarama	Hosp	Kijuguta	3,900	**168**	2,884	**124**
			Lower Bugongi	3,200	**138**	2,366	**102**
Upper Bugongi	St. Johns Bugongi	HC II	Upper Bugongi	2,400	**103**	1,775	**76**
			Muyanje	2,352	**101**	1,739	**75**
	Sub-Total			**11,852**	**510**	**8,765**	**377**
Rutooma	Rutooma	HC II	Rutooma	1,500	**65**	1,109	**48**
			Nyabikoni	2,925	**126**	2,163	**93**
	Sub-Total			**4,425**	**190**	**3,272**	**141**

Color codes for HF: Red = HF has EPI refrigerator; Blue = HF picks up vaccines from another HF; Black = HF does not conduct immunization; Yellow = parish served by another HF.

Annex 4. RED Categorization Tool Example and Guidance

Figure 13. Example of a Completed RED Categorization Tool

Analysis of Health Facility Data using RED categorization

Criteria	
DPT1 coverage	90%
Drop-out Rate	10%

Name : KAPCHORWA DISTRICT

Goal : Increase immunization coverage to at least 90% with all vaccines in every district

Category 1 = high coverage (>90%), low drop out (<10%)

Category 2 = high coverage (>90%), high drop-out (>10%)

Category 3 = low coverage (<90%), low drop-out (<10%)

Category 4 = low coverage (<90%), high drop-out (>10%)

HSD	Compile population, immunization							Analyse Problem						
Sub-County	Target Population	Doses of vaccine administered			Immunization coverage (%)			Unimmunized (No.)		Drop-out (rates (%)		Identify problem		Categorize problem
Health Facility		DPT1	DPT3	Measles	DPT1	DPT3	Measles	DPT3	Measles	DPT1-DPT3	DPT1-Measles	Access	Utilization	Category 1,2,3, or 4
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
KAPCHORWA DISTRICT	**1,226**	**992**	**765**	**967**	**81%**	**62%**	**79%**	**461**	**259**	**23%**	**3%**	**Poor**	**Poor**	**Cat. 4**
Tingey HSD	**1,226**	**992**	**765**	**967**	**81%**	**62%**	**79%**	**461**	**259**	**23%**	**3%**	**Poor**	**Poor**	**Cat. 4**
Chema Sub County	111	**28**	**19**	**36**	25%	17%	33%	92	75	32%	-29%	Poor	Poor	Cat. 4
Chemosong	111	**28**	**19**	**36**	25%	17%	33%	91.5	74.5	32%	-29%	Poor	Poor	Cat. 4
Munarya Sub-county	72	**70**	**53**	**79**	97%	74%	110%	19	-7	24%	-13%	Good	Poor	Cat. 2
Chebonet	72	**70**	**53**	**79**	97%	74%	110%	19	-7	24%	-13%	Good	Poor	Cat. 2
Kapchorwa Town Council	227	**286**	**230**	**226**	126%	101%	100%	-3	1	20%	21%	Good	Poor	Cat. 2
Kokwomurya	21	**15**	**12**	**23**	73%	59%	112%	9	-3	20%	-53%	Poor	Poor	Cat. 4
Kapchorwa Hospital	200	**236**	**189**	**174**	118%	95%	87%	11	26	20%	26%	Good	Poor	Cat. 2
Reproductive health Uganda	7	**35**	**29**	**29**	538%	446%	446%	-23	-22.5	17%	17%	Good	Poor	Cat. 2

Guidance

- Using the data from the macromap and the district biostatistician, complete the first five columns.
- Column 1: Enter the name of the HF, under each sub-county and HSD.
- Column 2: Enter the target populations.
- Columns 3–5: Enter the number of doses of the different vaccines.
- Do not enter data into the remaining columns. These columns contain formulas that auto-calculate coverage, unimmunized children, DORs, and RED categorization based on access (Penta 1) and utilization (Penta 1–3 DOR).

Annex 5. REC Micro-Planning Tools and Process for HFs

The REC-QI micro-planning process adheres to the micro-planning process for REC, as outlined in the national guidance for REC. (*REC [RED] Uganda Health Facility Guide).*

REC-QI micro-planning is not a separate activity; however, it deliberately incorporates PDSA plans to facilitate implementation of the REC micro-plans. For example, a PDSA plan picks one activity from the REC micro-plan at any level and breaks it into smaller, step-by-step processes and action points to effect the implementation of the activity. The managerial and service delivery improvements to be tested during PDSAs as well as the other associated REC-QI activities are built into the REC micro-plans.

Stage	Tool	By whom	Activity	Comment
Orient	Health demographic data	District	5-day activity	
	1a: Situation analysis: sociodemographic characteristics	District	5-day activity	
	1c: Situation analysis problem identification and priority setting (RED categorization)	District	5-day activity	
Immediately after Orient but before Establish and Strengthen	4a: Vaccine and other commodities supplies forecast	HSD	Immediately after 5-day activity before the first SS	
	4b: Injection and other supplies/materials forecast	HSD	Immediately after 5-day activity before the first SS	
	6b: HF-level monitoring tool	HF in-charge	Immediately after 5-day activity/ followed up during the subsequent SS	To be filled in at the end of every month
	Monitoring chart	HF	Immediately after 5-day activity	To be filled in at the end of every month
	Chart for plotting the DOR	HF	Immediately after 5-day activity	To be filled in at the end of every month
Establish and Strengthen	1b: Sample map of HF service area		HF VHT orientation and Micromapping	
	2a: Situation analysis by using the RED components: strengths, causes of problems, and solutions analysis for immunization interventions	HF	Starts in the 5-day activity and completed in the HF VHT orientation	
	3a: Immunization coverage targets	HF	Starts in the 5-day activity and completed in the HF VHT orientation	

Stage	Tool	By whom	Activity	Comment
	5a: Social mapping stakeholders/partner analysis (identify influential people in the parishes/villages)	HF	HF VHT orientation	
	5b: Immunization session static and outreach plan for the HF	HF	HF VHT orientation	
	6a: Summary activity plan and budget for reaching every community	HF	Immediately after HF VHT orientation	To be completed during ongoing SS

Annex 6. Sample Template for District RI Improvement Plan

Level of management	Prioritized problem	Aim statement	Outcome measure(s)	Time frame	Responsible person
District					
HSD1					
HSD2					
HSD3					
HSD4					

Annex 7. Guidance on QWITs and PDSA Work

Roles and Responsibilities of QWITs at Different Health System Levels

District roles

- Form district QWIT
- District and HSD RED categorization
- Categorize HF according to RED Categorization Tool to facilitate broader problem identification and aim-setting by HSD
- Determine how often district QWIT will meet

HSD QWIT roles

- Form HSD QWIT
- Problem identification: access, utilization, or data quality
- Problem analysis using the fishbone tool
- Aim-setting
- HF RED categorization
- Monitor HF progress toward achievement of the HSD aim through supportive supervision
- Develop managerial PDSA
- Meet quarterly
- Provide hands-on training and mentorship to HF QWITs

HF roles

- Form HF QWIT
- Conduct root cause analysis
- Develop change ideas
- Develop HF PDSA
- Developing indicators
- Meet monthly at HF
- Document PDSA progress on implementation in the minutes book
- Composition—in-charge, EPI FP, VHT representative
- Provide monthly feedback to SC
- Participate in HSD QRMs—in-charge HF and EPI FP
- Data collection—qualitative (document in minutes book—see below) and quantitative

Sample Forms for Documentation of PDSA Implementation in the QWIT Minute Book at HF Level

List of participants

S/N	Names	Title	Gender	Tel contact

PDSA plan format

NOTE: use when implementing a new intervention/change idea.

HSD aim:				
Date when HSD aim was set:				
Outcome measure: Data source:				
Root cause being addressed:				
Intervention/change idea:				
Process measure: Data source:				
Action points	**Start date**	**End date**	**Responsible person**	**Data collected and data source**
1.				
2.				
3.				

PDSA action review guide

Use to review progress with implementation of action points for a given intervention/change idea during the monthly HF and HSD quarterly review meetings.

Date of review:		
Intervention/change idea under review:		
Action points agreed upon from previous meeting	**Progress with implementation of action points *(ongoing, completed, not done)***	**Next steps**
1.		
2.		
3.		
4.		

PDSA performance review format

Use when reviewing performance for a given change idea

Intervention/change idea under review:												
Actual start date of implementation (date when first action point was implemented):												
Process measure/ indicator	Progress over the 3-month period of testing the change idea											
	Month 1				Month 2				Month 3			
	wk 1	wk 2	wk 3	wk 4	wk 5	wk 6	wk 7	wk 8	wk 9	wk 10	wk 11	wk 12
Target												
Actual												

If PDSA is completed, indicate date when it was completed___

Results of PDSA based on the process measure/indicator set _

Progress with Penta 1–3 dropout rate/Penta 1 coverage (refer to immunization charts)__

Final decision taken on PDSA :

a) Adopted (taken as tested to be part of the routine)

b) Adapted (taken as tested but with some modifications to be part of the routine)

c) Abandoned (dropped, left out)

Annex 8. Routine Data Quality Self-Assessment and Improvement (DQSI)

Routine DQSI aims to measure and facilitate improvement of data **accuracy and consistency** at all levels. DQSI is used during internal (at the HF) and external supportive supervision, as follows.

- At HFs, it gives HWs a system for checking consistency and accuracy of data before using them and reporting the monthly HMIS 105 to the next level.
- At the district or HSD level, routine DQSI focuses on the use of a tool (see Table 11 below) that is incorporated into SS checklists. The tool compares data reported in the DHIS 2 with the data sets of each HF. The district also compares submitted HF reports with what is entered in the DHIS 2.
- MOH/UNEPI and Resource Center compare data at the national level with those at the district level and selected HFs during data verification/supportive supervision.

Routine DQSI has few indicators, which allows it to be managed easily. The three recommended indicators for regular monitoring are the number of children given the following antigens in a month:

- Penta 1
- Penta 3
- Measles

NOTE: Indicators can be changed to address data challenges experienced by the district, region, or country.

Table 11. Example of DQSI Tool to Incorporate into the Routine Integrated Supportive Supervision Checklist

No.	Antigen	Doses recorded/reported given					Comments
		VIMCB doses used	CR	Tally sheets	HMIS 105	District	
1	Penta 1						
2	Penta 3						
3	Measles						

Guidance for Using Routine DQSI Tool

District/HSD level

- To prepare for the supportive supervision, request EPI data in the DHIS 2 for each HF from the district biostatistician and enter the figure into the column District DHIS 2.
- At the HF, review the numbers of doses given/used for that period in the CR, the tally sheets, and the HF monthly HMIS 105 form. Enter these numbers in the corresponding rows and columns. The period here refers to the most recent completed month.
- Compare the figures from the different forms to assess accuracy and consistency of reporting.
- Discuss the findings with the supervisee. If there are inconsistencies, identify causes and possible solutions, and decide on action points to improve data quality.
- NOTE: For measles, enter the number of doses **"used"** as indicated in the VIMCB, and compare it with the number of children given a measles vaccine in the same period. This allows monitoring of vaccine use, recording, and accountability.
- The district biostatistician, as s/he enters data from the HF monthly reports into DHIS 2, should look out for outliers and call the HF staff to clarify before entering such figures. This combined with

verification data during supportive supervision should facilitate regular updating by the biostatistician of data in the DHIS 2 and thus improve data quality.

HF level

During supportive supervision, confirm that all HMIS forms are available and completed, as recommended for DQSI:

- CR (completed by vaccinating staff).
- Tally sheet (completed by vaccinating staff with EPI data from the CR for each immunization session. One tally sheet per session allows tracking of planned against conducted sessions and segregation of static and outreach EPI data).

NOTE: In Uganda the law requires HFs to keep the tally sheets for at least 3 years.

- EPI activity monthly summary form (completed by EPI focal person for the HF with information from the tally sheets. The EPI focal person cross-checks the entries in the CR and tally sheet for accuracy and consistency, with reference to the VIMCB.)
- Monthly HMIS 105 report (completed by the medical records person, where this post exists, using data from the EPI activity monthly summary form). The medical records person cross-checks for consistency and accuracy of the figures with the previously filled forms—CR, tally sheets, and summary form—for at least one antigen.
- Before submitting the HMIS 105 to the district, the HF in-charge cross-checks for any errors as data are processed from the CR, tally sheets, and EPI activity monthly summary form and signs it. This serves as a third check point for EPI data quality before they are reported to the district and national levels through DHIS2.

Annex 9. Micromapping

Micromapping is a continuous process of identifying and assigning communities (villages) within an HF catchment area to RI service delivery points (static and outreaches). (In contrast, macromapping identifies the catchment area of each HF.) HF staff work with catchment area community leaders (e.g., HUMC and VHT members, and other groups, including non-traditional leaders) to identify all villages and allocate them to RI service delivery points.

Micromapping has three basic steps:

- Collecting inputs to Micromapping
- Forming a working committee to produce a draft Micromap
- Harmonization

Collecting inputs to micromapping

The basic inputs to micromapping are:

- HF catchment area (macromap)
- List of villages per parish in catchment area
- List of RI service delivery points (outreach and static) with their location by parish and village

Forming a working committee and drafting a micro map

Members of the working committee include HF staff and community leaders knowledgeable about the geography of the HF catchment area.

The working committee updates the list of villages per parish obtained from the district. The committee uses its geographical knowledge of the catchment area to allocate villages to each of their existing RI service delivery points and come up with the first micro map draft.

Harmonization/finalization

- Hold a meeting with HF staff and key community leaders (e.g., HUMC and VHT members, and other opinion leaders) from each village within the HF catchment area to review and revise the micro map draft (see Micromapping tool below and Figure 14 for an example of a completed micromap).
- Present the draft micro map and update the column for villages with newly created and/or initially forgotten villages.
- Review village allocation for each RI service delivery point.
- Actively seek and respect the opinions of the VHT members, as they represent parents/guardians.
- Finalize the micromap after it is updated with inputs from VHT's and key community leaders.

Micromapping Tool

_____ District

Health facility ___

Sub-county _____ Date __

S/N	Health facility	Parish	Village name	Location of service point (HF & outreach)	Villages to be served at or near service point/near	Villages that cannot be served at either service point	Comments
1							
2							
3							
4							
5							
6							
7							

Figure 11. Example of Micromap

RUKUNGIRI DISTRICT - BUYANJA SUB-COUNTY Rubanga HC II Micro Map							
S/N	**Health Facility**	**Parish**	**Names of villages in the parish**	**Location of service point (HF & outreach)**	**Villages agreed upon to be served at service point**	**Villages that cannot be ser ved at either service point**	**Comments**
3	Rubanga HC II	Rubanga A & B	Nyarutare			Nyarutare	Proposed OR site is "Rubanga Catholic Church OR" however due to irregular gas supply cannot start
			Karushanje			Karushanje	
			Kaamishyayo			Kaamishyayo	
			Kabagahe			Kabagahe	
			Kishonga Upper			Kishonga Upper	
4			Kihengamo			Kihengamo	"Omukihoona TC OR" however, due to irregular gas supply
			Ibumba			Ibumba	
			Omukatojo			Omukatojo	
			Omukabingo	**Rubanga Static**	Omukabingo		Currently all villages in Rubanga A parish are served at static, however, for better access two new outreach (OR) sites above are proposed
			Rwenyangi		Rwenyangi		
			Kisharara		Kisharara		
			Rwenshekye		Rwenshekye		
			Karushanje		Karushanje		
			Kyamabare		Kyamabare		
			Kishonga Lower		Kishonga Lower		
			Nyakasharara		Nyakasharara		
			Rusharara		Rusharara		

Establishing a New Routine Immunization Schedule (during Harmonization)

The harmonization meeting, based on the villages allocated to RI service delivery points, may change the location of the outreach to a different village to improve access for all allocated villages. To establish a new RI schedule (see Figure 12 below for an example):

- Ask the VHT members to decide on the most appropriate day of the week and time for their RI session. This should be a day and time that does not have other village activities that may compete with outreach, i.e., avoid days of the week with activities that pull away people.
- Ensure that the time of the RI session fulfills three key essentials: child, HW, and vaccine are in the same place, on the same day, and at the same time for vaccinations to take place.
- Identify days for the sessions as days of the week of a month (e.g., the first Monday of the month, or the third Wednesday of the month) instead of dates (e.g., the fifth of every month), which require scheduling every month because the day of the week for a particular date changes every month.
- Make note of hard-to-reach villages (that cannot be reached via static or outreach services) so HF staff can later work toward reaching these locations. Follow-up may include:
    - Negotiating with neighboring HFs if residents of the hard-to-reach villages can more easily reach neighboring static or outreach sites, or if the hard-to-reach villages could be included in existing outreach as a mobile point, which is visited before or after the scheduled outreach.
    - Contacting leaders of hard-to-reach villages to approve the day and the time before or after the scheduled outreach.
    - Ask leaders to provide an appropriate place where HWs can meet to vaccinate their children.
    - Whatever the case, the HF staff and community leaders need to ensure that these hard-to-reach

Figure 12. Example of a New RI Schedule

RUKUNGIRI DISTRICT - BUYANJA SUB-COUNTY Rubanga HC II Micro Map					
Plan/schedule for immunization agreed upon with VHTs					
	OLD PLAN	NEW PLAN/SCHEDULE			
S/N	Previous place, Day & time	New place	Day & week of month	Time of the day	Comments/VHT contact
1	Rubanga Static	Rubanga static	Every day	Whole day	
2	Nil	Omukihoona TC OR	Tuesday 2nd week	2 - 5.00 pm	
3	Nil	Rubanga Catholic Church OR	Wednesday 3rd week	2 - 5.00 pm	
4					
5					

Planning the way forward

- Agree when the new RI schedule will start.
- Decide how the VHT members and community leaders will communicate the revised outreach sites, schedule, and start dates to residents.
- Select the focal point VHT member (from the village where the outreach is located).
- Outline how the focal point will assist the HF staff during the session and provide post-session follow up, including:

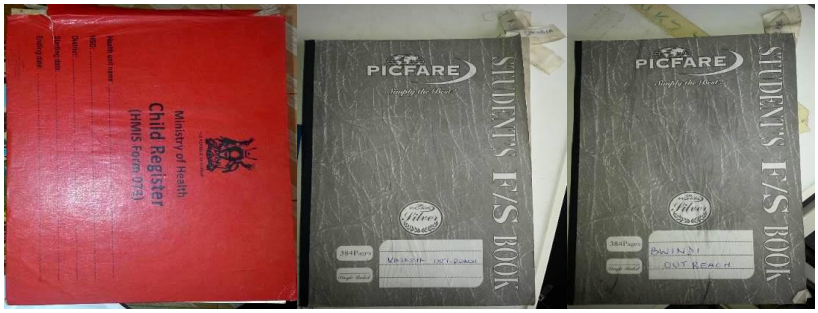
Help with left-out and defaulter tracing—newborns who have not yet come for their first vaccination and children who started but have not finished their full vaccination schedule, respectively.

Reviewing and reorganizing the CR for each RI service delivery point

- Ensure that each RI service delivery point has a separate CR.
- Allocate pages in the register for each village served by the RI service delivery point.

- Allocate pages at the end of the CR to visitors—children from outside the service delivery point villages or outside the HF catchment area.
- If the visitor is from the HF catchment area and comes for a static session, register/update the appropriate CR.
- If the visitor is at outreach, register the child in the visitors section of the CR of that outreach point.
- Use counter books for service delivery points to supplement the preprinted CR to minimize costs (see Figure 13 below for an example).

Figure 13. Example of a Counter Book as a CR for an RI Service Delivery Point



Contents of the Child Register... 2

HMIS FORM 073: CHILD REGISTER

COLUMN HEADINGS:

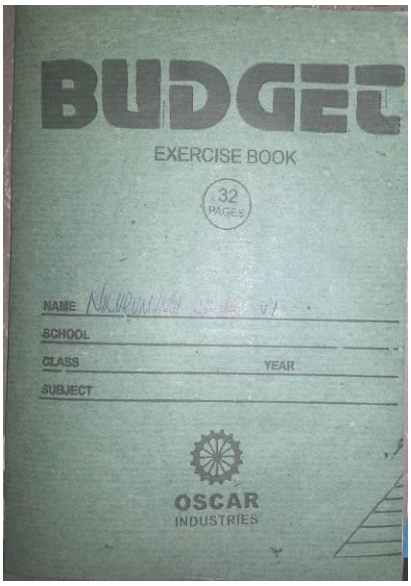
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)				(11)			(12)			(13)		
Child No.	Name	Village and Parish	Sex	WT	Age	Date of Birth	Date BCG	PAB	Dates Polio				Dates DPT-HepB + Hib			Dates PCV			Dates Rota Virus		
									0	1	2	3	1	2	3	1	2	3	1	2	3
	Child: Mother's Name: Father's Name:																				

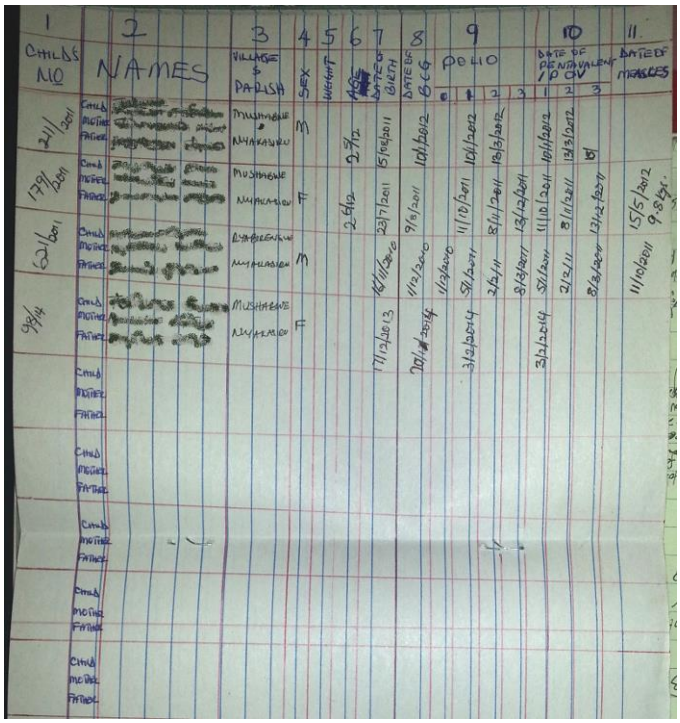
(14)	(15)	(16)	(17)	(18)	(19)				(20)		(21)
MEASLES VACCINATION					Vitamin A Administration				Deworming		
Date Of Measles Vaccination	WT at Measles Vaccination	Under Weight (Below -- 2SD Line)	Over Weight (Above +3SD Line)	Fully Immunised by 1 Year	1st Dose administered within this year		2nd dose administered within this year		1st dose administered within this year	2nd dose administered within this year	Remarks
					Children 6 to 11 months	Children 12 to 59 months	Children 6 to 11 months	Children 12 to 59 months			

Using a VHT CR

- Give all VHTs an exercise book during harmonization meetings to use as a VHT CR (see Figure 14 below for an example).
- Explain how to use the VHT CR:
    - Register all children and all newborns in the village in the CR, regardless of their immunization status.
    - Use the CRs to facilitate tracking left-outs and defaulters.
    - Update regularly the CR for the RI service delivery point (HF-based CR) using information in the VHT CR.
    - Update the VHT CR, using information from the HF-based CR.

Figure 14. Example of VHT CR





Annex 10. Sample Focused Supportive Supervision Checklist

Busia District: Checklist for Health Facility Integrated Supportive Supervision, July 2015

HF: _____ HSD: _____ Date: _____

Time of arrival: _____ Departure: _____

Supervisors

Name, Title

1. _____
2. _____
3. _____
4. _____

Supervisees

Name, Title

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Themes:

A. Infection control and health care waste management
B. General information
C. Routine immunization
D. Antenatal, maternity, and postnatal services
E. HIV services
F. Debriefing meeting with the entire health facility team

A. Infection Control and Health Care Waste Management

1. Is the facility clean? Tick Yes ___ No ___
2. Are there color-coded bins to segregate wastes? Tick Yes ___ No ___
3. Are disinfectants adequately available? Tick Yes ___ No ___

B. General Information

1. Do you have your catchment target population for 2015/2016? Tick Yes ___ No __

If yes, are they displayed? Tick Yes ___ No ___

2. Does the facility have a work plan for 2015/2016 in place? (Observe) Tick Yes___ No ___

If no, why? _____

3. Does the health facility hold staff meetings? Tick Yes ___ No ___
   If yes:

Are minutes available? (observe) Tick Yes ___ No ___

When was the last meeting held? (date) _____

C. Routine Immunization (RI)

1. Does the health facility have a refrigerator? Tick Yes ___ No ___
   If yes:

Has the temperature in the refrigerator been recorded twice daily for the last 3 months to date? (Observe)
Tick Yes___ No___

Has the health facility had a stock-out of any antigen to date? Tick Yes___ No___

If yes, state which vaccine(s) and for how long it has been out of stock:

_____

2. Does this health facility have an RI schedule displayed? (Observe) Tick Yes ___ No ___
3. Does the facility have the EPI performance monitoring chart pinned up for the current financial year 2015/2016? (Observe) Tick Yes___ No___

- If no, help the health facility draw and display the routine immunization monitoring charts (DPT-HepB-Hib 1 and 3 cumulative chart, DPT-HepB-Hib 1 and 3 noncumulative chart, DPT-HepB-Hib 1–3 drop-out rate chart.
- Comments:

4. Routine data quality self-assessment and improvement

Table 1. Perform recounts of numbers of doses of DTP3 administered to reobtain data for the following data element for April–June 2015

Antigen	Months	Recount from CR	Re-summation from tally sheets	Figure recorded in the hard copy for HMIS 105 at the HF
DPT- HepB-Hib 3	April 2015			
	May 2015			
	June 2015			

If any discrepancies, what are the reasons?_____

_____

In case of any discrepancy, talk to staff about how it can be avoided through the use of a CR as the primary data collection tool; every child vaccinated at any service delivery point (static and outreach) is entered/updated in the CR and routine DQSAI is done by the HF EPI focal person followed by the in-charge of the HF before submission of monthly reports to the DHO/HSD.

D. Antenatal, Maternity, and Postnatal Services

1. Does the health facility offer the following maternal and child health services below? (tick what is offered)

   ☐ Antenatal Yes___ No___
   ☐ Deliveries Yes___ No___
   ☐ Postnatal Yes___ No___

- If yes to any of the services above:

How many midwives does this health facility have? _____

Table 2. Review records for April–June 2015 and fill in the table below.

Enter numbers for each service for the last 3 months	April 2015	May 2015	June 2015
ANC attendance			
Postnatal attendance			
Deliveries			

Does the health facility have monitoring charts with targets for the current financial year (2015/2016) displayed to monitor performance? (Observe) Tick Yes ___ No ___

What challenges do you face in carrying out any of the services above at this health facility? _____

_____

E. HIV Services

Table 3. What HIV preventive/care services do you offer? (fill in table below)

HIV Service	Funder

2. Do you have updated documentation journals for HIV indicators? (Observe) Tick Yes ___ No ___
   If yes:

When was the last meeting held? Observe minutes and fill in date _____

What action points did you document in the last meeting? (observe/review minutes) _____

_____

3. How many HCT outreaches did you conduct in the last 3 months and who supported? _____

_____

4. How many community dialogue meetings occurred in the community and who supported? __

_____

5. What are the critical challenges you are facing with offering HIV preventive/care services? __

_____

F. Debriefing Meeting with the Entire Health Facility Team

1. Discuss the RI problem the health facility is working on for the next 3 months (July–September 2015). Summarize the information in the table below.

Table 4. Summary of Health Facility RI PDSA for July–September 2015

RI problem being addressed: _____		
Changes agreed upon for implementation to solve the RI problem above: 1. _____ 2. _____ 3. _____		
Key Action Points to Address the Root Causes	Time Frame	Responsible Person

Note for emphasis by supervisors: The HF QWIT should always review progress of implementing the action points during their meetings.

2. Discuss with health facility team **actions for follow-up in previous supportive supervision** (review the Health Facility Supportive Supervision Book) and fill in table below:

Table 5. Status on Actions for Follow-Up in Previous Supportive Supervision

Action Point	Resolution Status

3. Outline gaps/areas of improvement identified during this supervision:

i. _____
ii. _____
iii. _____
iv. _____
v. _____

4. Discuss with health facility team the overall **actions for follow up for this supportive supervision** and fill in the table below

Table 6. Summary of Action Points for Follow-Up

Action Points	Time Frame	Responsible Person

Action Points	Time Frame	Responsible Person

5. Discuss and outline recommendation for this health facility as per this supportive supervision.

i. _____
ii. _____
iii. _____

END

G. Busia District Terms of Reference July 2015 Integrated Supportive Supervision

Purpose

The purpose of this supportive supervision is to give onsite support, coaching, and mentoring to health facility staff to improve performance in the themes outlined in the checklist (A. Infection Control and Health Care Waste Management; B. General Information; C. Routine Immunization (RI); D. Antenatal, Maternity, and Postnatal Services; E. HIV Services; F. Debriefing Meeting with the Entire Health Facility Team).

- Two health facilities will be support supervised per day beginning July 13–15, 2015.
- District supervisors will work in pairs backstopped by the Mbale supervisor and MCSP.
- On July 16, all supervisors will convene to analyze the supervision findings, write the supportive supervision report, and debrief the DHO.

Onsite tasks of supervisors

1. Discuss with the health facility team their catchment target population for 2015/2016 and guide them on how to fill in the:

- Immunization monitoring chart (both cumulative and noncumulative)
- Immunization dropout chart
- ANC monitoring chart
- Deliveries monitoring chart
- Postnatal monitoring chart
- Tool 1b: Health facility demographic data
- Form to summarize health facility routine immunization PDSA for July–September 2015

2. Leave the health facility when the above forms (2015/2016) have been strategically displayed on the wall for continuous updating and use.
3. Hold a debriefing meeting with the entire health facility team/staff and discuss theme F of the checklist (status of previous supportive supervision actions, today's findings, action points, and recommendations—see details in the checklist).
4. Document today's supportive supervision findings, action points, and recommendations in the Health Facility Supportive Supervision Book.

Tools to take per health facility

- Immunization monitoring chart (both cumulative and noncumulative)
- Immunization dropout chart
- ANC monitoring chart
- Deliveries monitoring chart

- Postnatal monitoring chart
- Tool 1b: Health facility demographic data
- Form to summarize health facility routine immunization PDSA for July–September 2015

Annex 11. Sample Supportive Supervision Report

Report on integrated supportive supervision to health facilities in Busia district

Name and title of staff on the team:	Name Designation Phone Milly Namaalwa, District Technical Officer (DTO)/USAID-MCSP, 0772457550
Reporting Period	JULY 2015
Region	Eastern BUSIA  MCSP DTO mentoring supervisee in Buwembe HC III Busia on using monitoring charts (July 2015).
	PLACE(S) VISITED:DATE(S): 20 health facilities July 13–15, 2015 District Health Office July 16, 2015
Commencement date:	July 12, 2015
End date:	July 17, 2015

1. Introduction

Busia District is one of the five former USAID MCHIP districts and is now being supported by USAID's Maternal and Child Survival Program (MCSP) to implement activities in the Sustain stage. In this stage, MCSP planned and supported the district to carry out Integrated Supportive Supervision in 20 out of 29 health facilities of Busia District (Habuleke HC II, Sikuda HC II, Namungodi HC II, Buwembe HC II, Namasyolo HC II, Buwumba HC II, Bumunji HC II, Buhehe HC III, Sibona HC II, LuminoFocrev HC, Lord of Lordoues Lumino, Majanji HC II, Busiime HC II, Mundindi HC II, Musichimi HC II, Lunyo HC III, Mawero HC II, Amonikakinei HC II, Tiira HC II, and Nabulola HC). The other nine health facilities

had already been supervised by July 2015 with support from the USAID-funded Strengthening Decentralisation Sustainability Program.

The activity was scheduled and took place July 12–17, 2015, coordinated by Milly Namaalwa, MCSP/DTO, with technical support from Dr. Amongin Mary from the Mbale EPI Regional Office.

1.1. Objectives

1.1.1. Main objective

To conduct integrated supportive supervision for 20 health facilities in Busia District, July 12–17 2015

1.1.2. Specific objectives

1. To provide onsite support to health facility teams in the identified performance areas
2. To follow up on the previous supportive supervision recommendations
3. To support the district team in writing the supportive supervision report
4. To brief the DHO about the supportive supervision (SS) activity and areas that needed urgent attention

2. Methodology

2.1. Preparatory phase

In an effort to continue building the capacity of DHTs in carrying out SS, prior communication was made to the district guiding them to review their current performance gaps to inform development of an appropriate checklist. Unlike the previous SS activities supported by MCHIP/MCSP, this time, for purposes of sustainability and ownership, the district took the lead to develop the checklist and sought the program's technical input (see Annex 10).

The checklist was developed under six themes: A. Infection Control and Health Care Waste Management; B. General Information; C. Routine Immunization (RI); D. Antenatal, Maternity, and Postnatal Care Services; E. HIV Services; and F. Debriefing Meeting with the Entire Health Facility Team. In addition, the program guided the DHT to come up with Terms of Reference (see Annex 10) to enable all supervisors to have the same deliverables while at the targeted health facilities.

2.2 Field visits

Four teams of district supervisors being backstopped by MCSP DTO and the Regional EPI Supervisor reached out to 20 health facilities (July 13–15, 2015). The team administered the checklist using different data collection methods deemed appropriate for each theme and the questions for each theme. Among these methods were observations and interviews with hands on practice (coaching and mentoring) to meet the expected deliverables.

Immediate feedback was given to the supervisee(s) one-on-one and through convening a debriefing meeting with all staff available at each health facility to share the overall findings. Documentation of findings was thereafter done in the health facility supportive supervision books/files.

Following the 3 days of field supportive supervision, supervisors convened on July 16, 2015, to analyze the field findings, write the report and debrief the District Health Officer.

3. Supportive supervision findings

3.1. Positive observations

- The majority of HFs were clean, utilizing color-coded bins and with disinfectant (Jik) available most of the time. However, Buhehe, Sibona, Tiira, and Buwembe HFs did not meet cleanliness standard and did not focus sufficiently on the "5s."[11]
- More than half of the health facilities supervised had fridges (12/20) and 8/12 had updated RI schedules displayed.
- Almost half of the health facilities supervised offered ANC and delivery services.
- A majority of health facilities with refrigerators were charting vaccine temperatures twice daily, apart from Nabulola (temperature was last charted on July 7, 2015) and Buwembe (no thermometer in the fridge).
- 4/20 health facilities offered HIV services (Lumino HC III, Nabulola, Buhehe, and LuminoFocrev). Of these only 3 had updated documentation journals (Lumino HC III, LuminoFocrev and Buhehe).

3.2. Observed performance gaps

- The majority of HFs had no target catchment populations for 2015/2016; only seven HFs (Mudindi, Musichimi, Buwumba, Namungodi, Namasyolo, Lord of Lordoues Lumino, and Buhehe) had these populations.
- 17 HFs did not have work plans for 2015/2016. The in-charges attributed this to lack of guidelines from their respective HSDs. Only three HFs had the current financial year work plans (Namungodi, Lunyo HC III and Sibona).
- Few HFs had held staff meetings since the calendar year began (Mundindi—7/7/15, Majanji - 09/06/2015, Buwumba - 20/6/2015, Namasyolo - June 2015, Sikuda - 19/6/15, Lord of Lordoues Lumino -26/06/2015 and LuminoFocrev - 28 May 2015). Tiira HC II attributed their failure to hold the meetings to low staffing numbers at the sites, i.e., only 1–2 staff. Instead, they opted to participate in Health Unit Management Committee Meetings, which were also not regularly held, and there was no documentation to confirm their occurrence.
- Routine Immunization data discrepancies were largely observed in 17/20 HFs. Only three HFs had no data discrepancies (Busiime, Musichimi and Habuleke for the period April–June 2015.
- CRs were largely not filled. Staff attributed this to not always carrying them to outreaches. In addition, there was noticeable poor filing of Tally Sheets.
- There was low postnatal care (PNC) service delivery and data capture in health facilities where the service is offered. Facilities claimed not to have PNC registers.
- The majority of HC IIs were not offering HIV services apart from referring clients to the next level.
- Low staffing levels of midwives and inadequate equipment supply in HFs was given by the HF teams as one of the challenges affecting delivery of Maternal and Child Health Services.

[11] See https://asq.org/quality-resources/lean/five-s-tutorial.

4. Support provided by the supervision team

- Distributed the current UBOS district population figures to each Health Facility as per their catchment areas
- Coached supervisees on calculating the target populations for 2015/2016 and left charts displayed per health facility
- Supported health workers on how to use performance monitoring charts for Routine Immunization, ANC, Deliveries, and PNC for 2015/2016.
- Discussed with health workers the effect of data discrepancy and guided them on how to conduct routine data quality self-assessments and improvement (review relevant data collection tools that feed into the HMIS 105 before submission of report to the HSD/district.)

Busia district health education officer mentors supervisees.

- Held post-supportive supervision meeting chaired by the ADHO with all the supervisors to analyze field findings and debriefed the DHO.

5. Lessons learned

- For successful implementation of any given activity, there should be deliberate efforts to continuously build capacity of lead teams on the ground. Despite the supportive supervision TOT where the DHT and other peripheral supervisors were engaged, the team still needed technical guidance and input to comprehend the process.
- In addition, transition of lead staff in any given activity leaves a gap; hence, ongoing updates are very fundamental in skills building.
- In the event of few technical staff at the District Health Office, the DHT needs to identify and co-opt active health workers from the hospital, HC IV and III to form a solid SS team.
- The DHT should always deliberately convene and further discuss the findings of any conducted supervision and/or activity to be able to elicit performance gaps to focus on in the subsequent supportive supervision activities.

6. Way forward

6.1. By the DHT

	Action Point	Time Frame	Responsible Person
1	Supervisors to hold prior meetings to develop and understand the checklist and terms of reference before moving out to the field	Effective July ongoing	ADHO
2	District to conduct an EPI technical supervision towards addressing performance gaps (use of CR, filling out Tally Sheets, monitoring RI monthly performance, action points on RI PDSA, etc.) established in the July 2015 supportive supervision (start with the low-performing health facilities)	August 2015	ADHO

	Action Point	Time Frame	Responsible Person
3	Make early communication to supervisees on every scheduled supportive visit	Effective July ongoing	ADHO
4	HSD heads to share guidelines with Lower level health facility to facilitate development of 2015/2016 work plans	By September 2015	Dr. Ouma
5	Update the list of HF EPI focal persons (FPs) in the district	By July 30, 2015	Sr. Sarah
6	HF EPI FPs to take lead in compiling monthly RI data and filling in the EPI section in HMIS 105 (District EPI FP to communicate this to all In-charges)	July 30, 2015	District EPI FP
7	Share July supportive supervision findings with In-charges in the upcoming HSD QRMs	Early August 2015	ADHO

6.2. Debrief to the DHO

6.2.1. DHO actions points

- All health facility in-charges were to meet to discuss their performance plan for the current financial year. The key areas of focus would be work-plan development and staff appraisals, among others.
- Suggest that DHO input into the upcoming QRM agenda tasking the HSD teams/HF in-charges to report on their overall health service delivery indicators and set targets for the subsequent quarters and/or financial year.

Annex 12. HC III Summary Report for Leaders

Keeping Sub-County Leaders Involved in Routine Immunization

HC III monthly reporting form

District: _____ HSD: _____

Sub county: _____

Name of in-charge: _____ Signature: _____

Date: _____ Month of reporting: _____

1	Routine Immunization broad problem of HSD:		
2	Number of routine immunization outreaches	Planned	Conducted
3	DPT 1 coverage or DPT 1–3 DOR or Data quality (negative DPT 1–3 DOR)	Planned improvement in 3 months (_____)	Cumulative achievement to date
4	**Priority** challenges of HFs that the HF QWITs have planned to handle		
5	**Priority** challenges requiring S/C leaders attention clearly spelled out		

Annex 13. Child Tally Sheet

HMIS Form 073a: Child Tally Sheet

Description and instructions

Objective: To record all child immunizations, weight for age at measles, vaccination, vitamin A supplementation and de-worming for children

Copies: One copy which stays at health unit

Responsibility: In-charge child health and immunization

Procedure

1. For immunizations, weight for age, vitamin A administration and de-worming, tally the information at the moment you give the service to the child. Do not wait until the end of the month, as it will be difficult to tally the information from the register. The register can be used to double-check the Tally Sheet totals.
2. When you weigh the child, tally either "above the bottom line" or "below the bottom line" on the tally sheet. Adding these two figures together should tell you the number of children weighed in the month.
3. For vitamin A administration, only tally doses given for routine supplementation. Do not tally vitamin A doses given for treatment of severe malnutrition, measles, or other conditions.

HMIS Form 073a: Child Tally Sheet

Health Facility Name _____ Date started _____

Date finished _____ Static/outreach site/school_____

Use a separate Tally Sheet each day of vaccination

Antigen	Under 1 Year of Age				1–4 Years Of Age			
	Male	Male total	Female	Female total	Male	Male total	Female	Female total
BCG	00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000	
Protection at birth for TT	00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000					
POLIO 0	00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000					
POLIO 1	00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000	
POLIO 2	00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000	
POLIO 3	00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000	

Antigen	Under 1 Year of Age				1–4 Years Of Age			
	Male	Male total	Female	Female total	Male	Male total	Female	Female total
IPV	00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000	
DPT-HepB-Hib 1	00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000	
DPT-HepB-Hib 2	00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000	
DPT-HepB-Hib 3	00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000	
PCV 1	00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000	
PCV 2	00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000	
PCV 3	00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000	

Antigen	Under 1 Year of Age				1–4 Years Of Age			
	Male	Male total	Female	Female total	Male	Male total	Female	Female total
Rotavirus 1	00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000	
Rotavirus 2	00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000	
Rotavirus 3	00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000	
MEASLES	00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000	
FULLY IMMUNIZED	00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000					
RECEIVED long-lasting insecticidal nets	00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000	

Children Weighed At Measles Vaccination

Target	Under 1 Year of Age			1–4 Years of Age				
	Male	Male total	Female	Female total	Male	Male total	Female	Female total
NORMAL WEIGHT	00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000	
UNDER-WEIGHT (BELOW -2SD LINE)	00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000	

Target	Under 1 Year of Age				1–4 Years of Age			
	Male	Male total	Female	Female total	Male	Male total	Female	Female total
OVER WEIGHT (ABOVE +3SD LINE)	00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000	
TOTAL								
STUNTING (BELOW -2SD)	00000 00000 00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000 00000	

Vitamin A Supplementation

Target	Under 1 Year of Age				1–4 Years of Age			
	Male	Male total	Female	Female total	Male	Male total	Female	Female total
CHILDREN 6 TO 11 MONTHS THAT HAVE RECEIVED 1ST DOSE IN THE YEAR	00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000					
CHILDREN 6 TO 11 MONTHS THAT HAVE RECEIVED 2ND DOSE IN THE YEAR	00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000					
CHILDREN 12 TO 59 MONTHS THAT HAVE RECEIVED 1ST DOSE IN THE YEAR					00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000	
CHILDREN 12 TO 59 MONTHS THAT HAVE RECEIVED 2ND DOSE IN THE YEAR					00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000	

De-Worming

Target	1–4 Years of Age				5–14 Years of Age				School Children (5–14 Years)			
	Male	Male total	Female	Female total	Male	Male total	Female	Female total	Male	Male total	Female	Female total
CHILDREN THAT HAVE RECEIVED 1ST DOSE IN THE YEAR	00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000	
CHILDREN THAT HAVE RECEIVED 2ND DOSE IN THE YEAR	00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000		00000 00000 00000 00000 00000 00000 00000 00000	

Name of the vaccinator_____ Signature_____

Annex 14. Health Unit EPI Attendance Monthly Summary Form

Health Unit EPI Attendance Monthly Summary

District _____ Health Facility_____ Month_____

Where RI Session Held	Static		Outreach 1		Outreach 2		Outreach 3		Outreach 4		Outreach 5		Outreach 6		Outreach 7		Outreach 8		Subtotal Outreaches		Total	
Name of Outreach																						
Category	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
BCG - Under 1 year																						
1-4 years																						
Protection at Birth for TT																						
Polio 0 – Under 1 year																						
1 – Under 1 year																						
1 – 1-4 years																						
2 – Under 1 year																						
2 – 1-4 years																						

Where RI Session Held	Static		Outreach 1		Outreach 2		Outreach 3		Outreach 4		Outreach 5		Outreach 6		Outreach 7		Outreach 8		Subtotal Outreaches		Total	
Name of Outreach																						
Category	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
3 – Under 1 year																						
3 – 1-4 years																						
DPT-HepB-Hib																						
1 – Under 1 year																						
1 – 1-4 years																						
2 – Under 1 year																						
2 – 1-4 years																						
3 – Under 1 year																						
3 – 1-4 years																						
PCV																						
1 – Under 1 year																						
1 – 1-4 years																						

Where RI Session Held	Static		Outreach 1		Outreach 2		Outreach 3		Outreach 4		Outreach 5		Outreach 6		Outreach 7		Outreach 8		Subtotal Outreaches		Total	
Name of Outreach																						
Category	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
2 – Under 1 year																						
2 – 1-4 years																						
3 – Under 1 year																						
3 – 1-4 years																						
ROTA VACCINE																						
1 – Under 1 year																						
1 – 1-4 years																						
2 – Under 1 year																						
2 – 1-4 years																						
3 – Under 1 year																						
3 – 1-4 years																						

Where RI Session Held	Static		Outreach 1		Outreach 2		Outreach 3		Outreach 4		Outreach 5		Outreach 6		Outreach 7		Outreach 8		Subtotal Outreaches		Total	
Name of Outreach																						
Category	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Measles – Under 1 year																						
1 - 1-4 years																						
Fully Immunized – Under 1 year																						
Children weighed																						
Children under weight (below line -2SD)																						
Children over weight (above line +3SD)																						
Total number of children weighed																						

Where RI Session Held	Static		Outreach 1		Outreach 2		Outreach 3		Outreach 4		Outreach 5		Outreach 6		Outreach 7		Outreach 8		Subtotal Outreaches		Total	
Name of Outreach																						
Category	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Vitamin A given to children																						
1st Dose in year- Under 1 year																						
1st Dose in year- 1-4 years																						
2nd Dose in year- Under 1 year																						
2nd Dose in year- 1-4 years																						
De-worming																						
1st Dose in year- 1-4 years																						

Where RI Session Held	Static		Outreach 1		Outreach 2		Outreach 3		Outreach 4		Outreach 5		Outreach 6		Outreach 7		Outreach 8		Subtotal Outreaches		Total	
Name of Outreach																						
Category	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1st Dose in year- 5-14 years																						
2nd Dose in year- 1-4 years																						

Annex 15. Gas Cylinder Tracking Form

TRACKING GAS USAGE

District: HF				**Date:**	
A - Previous Delivery	**Delivered by:**				**Sign:**
	Received by:				**Sign:**
Source of cylinder	**Full Cylinders**			**Empty Cylinders Collected**	**Comment**
	Balance at hand	**Number Delivered**	**Total for the month**		
Shell (U) LTD					
Total (U) Limited					
TOTAL					

B - Distribution list of cylinders in the previous delivery

	Cylinders			Receivers details	
Name of Health Facility	Full (Received)	Empty (Issued)	Date	Signature	Name
Total cylinder transactions					

A - Current Delivery	**Delivered by:**				**Sign:**
	Received by:				**Sign:**
	Full Cylinders				

Annex 16. EPI Monitoring Charts

Ministry of Health

Immunization monitoring chart

Cumulative Chart

District_____**HSD**_____**HU**_____**FY**_____

Antigens DPT-HepB+Hib 1&3 **Under 1 year Population**_____

Key:

DPT 1

DPT 3

Month	J	A	S	O	N	D	J	F	M	A	M	J
Monthly DPT-HepB+Hib 1 coverage												
Cumulative DPT-HepB+Hib 1 total (Plot this)												
Monthly DPT-HepB+Hib 3 coverage												
Cumulative DPT-HepB+Hib 3 total (Plot this)												

Note: 1. Remember to display and update this chart monthly. 2. Always share this information among your selves for appropriate action

Ministry of Health

Immunization monitoring chart

Non-cumulative Chart

District_____**HSD**_____**HU**_____**FY**_____

Antigens: DPT-HepB+Hib 1&3 **Under 1 year Population**_____

Key:

DPT 1

DPT 3

Month	J	A	S	O	N	D	J	F	M	A	M	J
Monthly DPT-HepB+Hib 1 coverage **(Plot this)**												
Monthly DPT-HepB+Hib 3 coverage **(Plot this)**												

Note: 1. Remember to display and update this chart monthly.

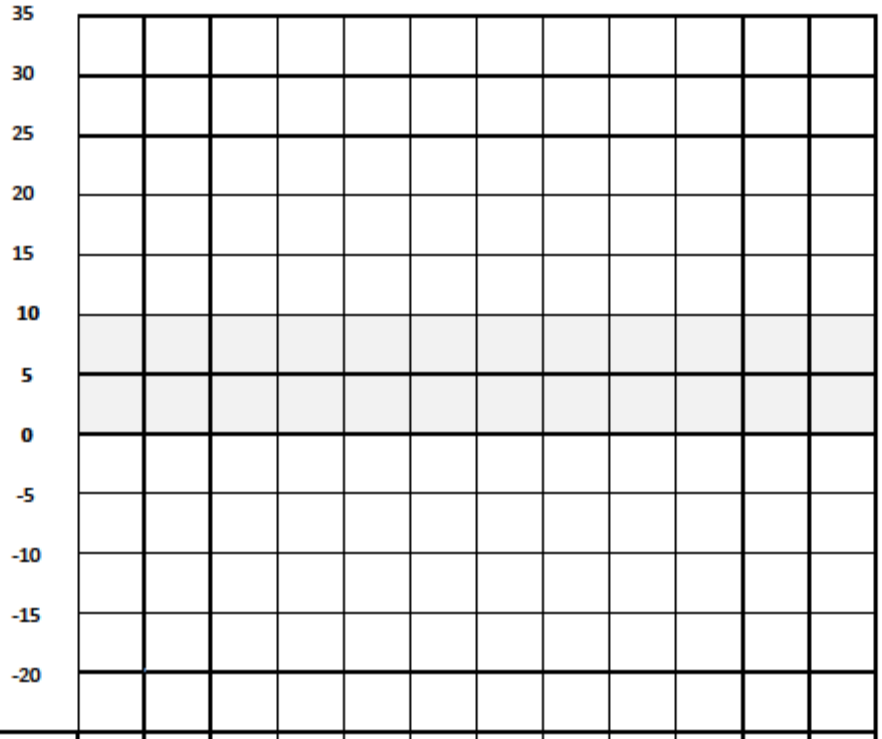
2. Always share this information among your selves for appropriate action

Ministry of Health

Drop Out monitoring chart

District_____HSD_____HU_____FY_____

Antigen_____ Under 1 year Population _____



Month	J	A	S	O	N	D	J	F	M	A	M	J
Cumulative DPT-HepB+Hib1												
Cumulative DPT-HepB+Hib3												
Cumulative Drop Out												
Cumulative Drop Out Rate (%) **(Plot this)**												

Dropout Rate = Cumulative DPT-HepB+Hib1 - Cumulative DPT-HepB+Hib3 X 100

Cumulative DPT-HepB+Hib1

Annex 17. Sample Agenda for VHT Orientation & HF Microplanning Exercise

TIME	ACTIVITY/TOPIC	RESPONSIBLE PERSON
Day One: Preparatory meeting—Orientation of health workers		
8:00–8:30 a.m.	Registration, Introduction and Administrative Issues	District FP
8:30–9:00 a.m.	Pre-test	DHO
9:00–9:10 a.m.	Opening remarks	
9:10–9:15 a.m.	Workshop objectives	Supporting partner
9:15–10:30 a.m.	Immunization concepts: • Definition • Benefits • RI schedule • RI contraindications, side effects, AEFI, and community case detection District RI performance for July–Sept 2015	
10:30 –11:00 a.m.	Morning Break Tea	
11:00–12:00 p.m.	Microplanning (micromapping of catchment area, selection of service delivery points, predictable RI schedule)	Supporting partner
12:00–12:45 p.m.	Data collection tools CR Child Health Card Mother Passport	Supporting partner
12:45–1: 15 p.m.	Briefing VHT about the HF PDSA and progress on action plan implementation.	Supporting partner
1:15–2:00 p.m.	Lunch Break	
2:00–2:30 p.m.	Roles of VHT at different levels Community HF level	Supporting partner
2:30 –3:00 p.m.	QWIT (structure, roles, and responsibilities of VHTs)	Supporting partner
3:00–3:15 p.m.	Discussion	District health education officer
3:15–3:45 p.m.	Post-test	Supporting partner
3:45–4:10 p.m.	Way forward & closure	DHO
4:10–4:40 p.m.	Distribution of logistics/training materials	District FP
4:40 p.m.	Departure	
Day Two: Mobilization and planning for the HF meetings		

Day Three: Health worker and VHT meeting at health facility
Day Four: Submission of reports and accountabilities to the district

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