REPUBLIC OF KENYA
MINISTRY OF HEALTH

Kenya HIV Quality Improvement Framework

Operational Manual

DECEMBER 2014

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Introduction to the KHQIF Operational Manual

The provision of quality health services is essential for prevention, care and treatment of diseases. Health services should be accessible, effective and efficient across the country. The Ministry of Health (MoH) has identified variations in health outcomes that are largely due to variations in the quality of health care. In response, the MoH in 2011 released implementation guidelines for the Kenya Quality Model for Health (KQMH), which seek to ensure that facilities are constantly working towards the provision of high-quality, measurable services.

HIV is one of the leading causes of morbidity and mortality in Kenya. The Kenya HIV Quality Improvement Framework (KHQIF), modeled after the KQMH, provides a blueprint for ensuring quality HIV services to patients. It provides a framework within which HIV Quality Improvement will be implemented across the country. The KHQIF operational manual provides a detailed description of methodologies, competencies, skills, standard operating procedures and tools that will be used in implementing the KHQIF.

This manual should be used as a guide and resource for implementing Quality Improvement (QI). It provides QI teams with material for defining, planning, improving, monitoring, and evaluating quality interventions on a continuous basis. Practical tools, worksheets, and examples are provided to demonstrate the QI methods employed for HIV services.

TARGET AUDIENCE: Health care workers providing HIV services, QI managers and QI working group (or QI/ Work Improvement teams) members at facility, sub-county, county, and national levels

Section 1
Standard Operating Procedures:
Organizational Assessment

Organizational assessment assesses the needs and major gaps in workflow, health worker skills and attitudes, and potential impact of proposed changes on staff and clinical performance. The steps used are:

Step 1: **Set up the assessment team** comprising facility and county team members with a good understanding of locally relevant determinants of success in addition to key principles of assessment; personnel experienced in QI initiatives will lead or support the establishment of QI teams.

A.1. To what extent does senior leadership create an environment that supports a focus on improving the quality of care in the organization?		
Getting Started	0	☐ Senior leaders are not visibly engaged in the quality of care program
Planning and initiation	1	Leaders are: ☐ Primarily focused only on reporting requirements ☐ Inconsistent in use of data to identify opportunities for improvement ☐ Not involved in improvement efforts ☐ Not involved in quality meetings ☐ Not supporting provision of resources for QI activities, including dedicated time for improvement

Table 1: An example of a quality assessment tool

Step 2: **Conduct the assessment** through direct observation of services and activities, focus group discussions, self-assessment evaluations and other methods covering the following areas— quality management program, quality performance measurement, quality improvement activities, consumer/patient involvement, evaluation of quality programs, and clinical information systems.

Step 3: **Prepare a detailed assessment report** – this will form the basis for developing your facility specific quality management program.

Step 4: **Develop and implement the work plan** (QI processes) – this will be determined by the gaps you will have documented from conducting the assessment. A template for next steps is provided at the end of the OA tool and may be expanded into a broader work plan if needed. The work plan should detail areas identified for intervention, specific activities, responsible personnel, and work plan assessment modalities. In the work plan, it is important to identify key areas for improvement. To maximize the impact of interventions, an approach that focuses on effecting change in a few service areas at a time is better than one that attempts to address all service areas at once. Follow the steps below in this stage:

Step 4.1: **Select target areas for the time period** – this will be based on the scores and results of the assessment that are graded to indicate areas of priority

Step 4.2: **Design/Develop the quality management program** – this will be based on the service areas to be targeted (e.g. leadership, QI teams, etc.)

Step 5: **Evaluate the process** – review plans versus activities.

With a well-conducted assessment exercise, you will identify available resources, staff characteristics, and areas of the facility that need improvement. You should repeat the assessment every year to determine incremental improvements.

Section 2

Team formation and leadership guidelines

Roles and Responsibilities of Team Members

As a QIT/WIT member, you are responsible for an aspect of the team's objectives and should contribute information, experiences, perspectives and ideas, and participate in planning and decision making. Some of your responsibilities include:

- Attending and participating in all team meetings
- Offering perspectives, experiences and ideas
- Helping ensure that the team stays on track and focused on its goals
- Sharing responsibility for work outside of team meetings such as data collection, talking with other staff members, conducting literature search, and interviewing clients
- Defining the roles of team leader, facilitator and team members
- Defining the goals of the team
- Establishing team ground rules and meeting schedules

NOTE: You may have additional responsibilities based on your unique role in the team.

Key principles for effective teams

As you establish QITs/WITs, some of the key principles to consider are:

1. Establish ground rules

Some of the issues you should include:

- *Attendance:* Accepted reasons for absences and the procedure to follow for expected absence
- *Meetings:* Location and time, frequency, breaks, acceptable interruptions
- *Participation:* Expectations about participation, speaking freely, listening to each other, basic conversation courtesy (e.g., not interrupting, one speaker at a time)
- *Assignments:* Expectation for timely completion of any tasks to be completed

2. Conduct productive meetings

Some things your team can do to be productive include:

- Meet for 30 minutes to 1 hour every week or every two weeks depending on task

- Every meeting should have an agenda that should:
  - Define the direction and the area of the discussion
  - Define the end purpose of the discussion

- Appropriately document meetings using
  - Appendix 3 Meeting Template
  - Progress may also be tracked using:
    - Appendix 2 QI Project Checklist (Summary of key steps in PDSA)
    - Appendix 4 QI Project Plan
- The team leader should close each meeting by:
  - Summarizing key decisions and actions

- Ensuring team members are clear on assignments
- Asking team members to recognize/celebrate successes, and to discuss obstacles and mistakes
- Reviewing the date, time and purpose of the next meeting

3. Effective leadership qualities

- Make major decisions by consensus – using open and honest discussions with involvement of all team members, active listening, respect for each other's ideas and a mind open to new or different ideas
- Ensure completion of assignments between meetings
- Resolve conflicts

As a **team leader**, follow these guidelines to resolve conflict:

- Set a positive tone. Remind the team that conflict is not bad and can lead to a stronger team with better, more creative solutions
- Remind the team of its ground rules and agree to abide by them throughout discussions
- Review the overall goals of the team
- List the points/items the team agrees to and list the points/items the team disagrees on
- Focus on the points of disagreement – clarify the disagreement
- Present data or facts to support the points being raised
- Discuss the root cause of the disagreement
- Brainstorm for other solutions
- Ensure that all members have an opportunity to speak
- Ensure all members are actively listening
- Ensure members respect and do not criticize each other
- Ensure that feedback shared among team members is non-evaluative and judgmental but constructive and factual

As a **team member**, you can aid in conflict resolution by:

- Making factual statements; it is important to be descriptive
- Listening carefully
- Not being judgmental
- Understanding where the other person is coming from
- Knowing that what you perceive may be different from what the other person perceives
- Concentrating on understanding rather than on agreement
- Keeping on discussing – the areas of agreement will widen!

Bring to closure when the team achieves the goal – when you as the team leader recognizes that the team's goal(s) may have been met, you should ask the following questions at the next meeting:

- Did we achieve our goal(s)?
- What did we learn from the experience?
- What advice would you give to others who seek to make similar improvements?
- What did we accomplish?
- What problems did we encounter?
- What follow-up is needed and who will do it?
- What presentations need to be made about the team's work to other members, management, other facility/county or outside groups to raise awareness about our work?

Section 3

SOP: 5-S

The 5S Process, or simply “5S”, is a structured program that systematically achieves organization, cleanliness, and standardization within the workplace and stands for five words starting with the letter ‘S’ as shown in figure 1:

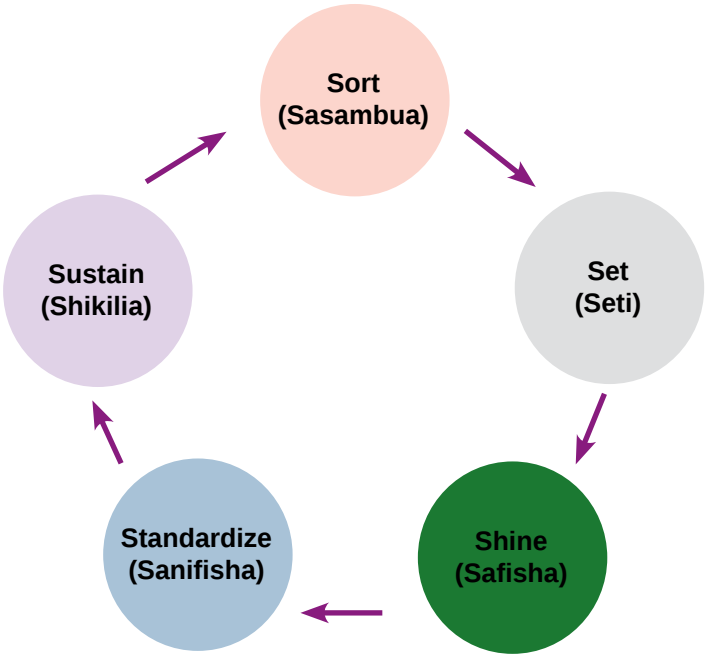


Figure 1: The 5S approach (brackets represent the Swahili equivalent)

Each of these stages involves:

Sorting

- Get rid of clutter or things that have no use.
- Maintain only essential tools and equipment.

Setting in order

- Organize and store everything in its rightful place and label clearly.
- Organize items or equipment to ensure that those used most are the most easily accessed, and all things are in the right order for better flow of activities.
- Organize items/equipment in a way that does not require physically bending repeatedly.

Shining or Cleanliness

- The work environment and equipment must be kept clean and tidy at all times and it is better to clean as work is done (clean on the go).
- When work hours end, the work space should be tidied and everything left as it should be — ready for the next day or person.

Standardizing

- Sorting, setting and shining should be the norm in all parts of the work environment.
- The aim should be to make all work practices consistent and kept to a certain standard.
- For similar jobs, work stations should be similar and similarly equipped to facilitate work in any station by staff members (of the same cadre).
- Responsibilities should be clearly defined so that all staff know how they can sort, set and shine.
- The process for each service should be documented and standard operating procedures created.

Sustaining the discipline

- Staff should be trained in how to maintain the discipline required for 5S.
- Once discipline and adherence to the method has been established for any service area, the discipline should be applied to other areas.
- Consistent application of 5S will eventually lead to a culture change within the organization. Once a culture change happens the sustainability of the discipline becomes better guaranteed.

The application of the S5 model will lead to improvements in your work environment and infrastructure. At this point, CQI using the Plan–Do–Study–Act cycle can be introduced to improve the quality of your health services.

Section 4

SOP: Plan–Do–Study–Act (PDSA)

SOP: The Plan–Do–Study–Act Model

The PDSA cycle is an action-oriented method that you can use in your work setting to improve the quality of services by planning it, trying it, observing the results, and acting on what is learned. Figure 2 illustrates this process.

Source: Adapted from the Institute for Health Care Improvement

PDSA cycles will enable your team to test changes before wholesale implementation, and

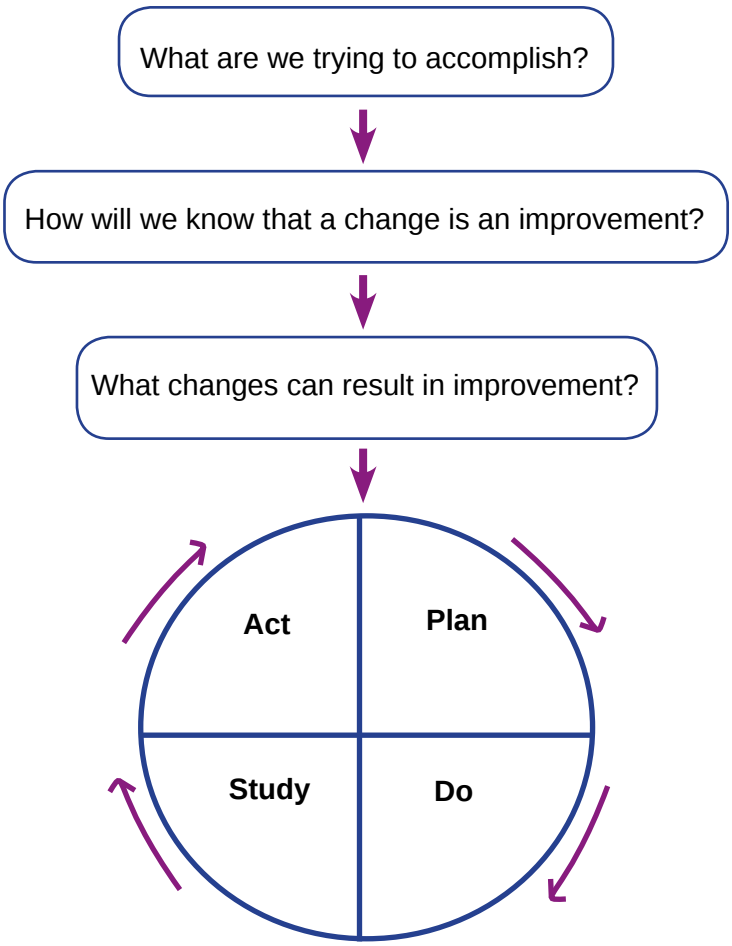


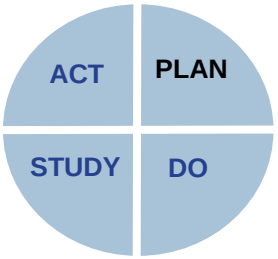
Figure 2: Model for improvement and PDSA Cycle

provide stakeholders with the opportunity to assess the proposed change for impact. We will discuss each of the steps in the PDSA cycle as well as dissemination of PDSA/CQI experiences in this section.

As your team goes through a PDSA cycle, it may be helpful to track progress on the QI Project Checklist (Appendix 3) and the QI Project Plan (Appendix 4). Also remember to track meeting minutes using the QI Meeting template (Appendix 2).

I) Plan
The PDSA cycle starts at the plan stage, which involves the following:

(a) Problem identification
(b) Goal setting
(c) Root cause analysis
(d) Activity planning
(e) Performance measurement plan



(a) Problem Identification
Problem identification can be done through numerous ways such as reviewing facility performance through routine data review, QI indicator file reviews, client satisfaction surveys, or other sources as described in KHQIF Chapter 3: Performance Measurement. WITs may first brainstorm different gaps or problems that they think are an issue for their department or facility. To help narrow down to a manageable set of problems, multi-voting and a decision matrix may also be used (Section 5: QI Tools). At the end of the problem identification process, the team should develop a problem statement as shown in the following example.

Problem Statement: Tracking women through prevention of mother-to-child transmission (PMTCT) care until delivery at Huduma Health Centre has been a challenge. Most pregnant women after being enrolled at the health centre fail to continue attending to clinic appointments for PMTCT care and some exit care when referred to the district hospital therefore signifying loss to follow up. Defaulting from care can result in higher risk of mother-to-child transmission.

(b) Goal Setting
A goal statement briefly describes the desired outcomes and provides focus and direction to the team's efforts. Your goal statement should contain:

- A direction term (i.e., increase, decrease, reduce, lower and develop)
- The specific process being improved
- An indicator or measure of improvement – a measure of success
- Parameters that specify the part of the process under focus (beginning and endpoints)
- Goals should be SMART – Specific, Measurable, Appropriate, Result-oriented and Timely

Examples of goal statements that may 'stretch' a team while still being achievable are:

- To increase Isoniazid Preventive Therapy (IPT) provision from 5% to 15% in the next 6 months.
- To decrease the rate of mortality due to TB from 10% to less than 5% within 12 months.

Goal Statement: *To Increase continuity of prevention of mother-to-child transmission (PMTCT) care from 65% to 95% for all enrolled pregnant women attending Huduma Health Centre within 12 months*

(c) Root cause analysis
Root cause analysis is a diagnostic phase that involves collecting and analyzing quantitative and qualitative data on the service being investigated to establish the causes of and potential solutions to the problem. You should always collect data to verify the problem exists before deciding the process that needs to be improved. This ensures that there is a baseline

to subsequently measure improvement. Some of the tools that may be used to better understand the root cause of the problem are found in Section 5 QI Tools and include 5-Whys, Process flow chart, Fish bone diagram, and Client focus groups.

(d) Change package/intervention and activity planning
After you have identified the problem and set the appropriate goal(s), you should describe a specific set of activities. Efforts should be made to ensure activities are as 'small' as possible to inform incremental change which is easily measured. Subsequent activities should build on previous ones.

You may also carry out a literature search to identify Kenyan context or other solutions for a particular problem, which will help your QIT/WIT to avoid 're-inventing the wheel' while seeking solutions.

In section 6, the Change Package provides examples of change ideas for common problems faced in the health system.

After identifying the activities, you should then be able to determine the resources necessary to carry out these activities. Resource allocation should be made within the context of what is feasible and available. Management support for the specific QI initiative is necessary to ensure their adequacy.

Table 2 outlines two examples of the output of a planning exercise:

Table 2: Two examples of a planning exercise

CHANGE AREA	Problems/Issues	Potential solutions	Specific activities	Resources needed
Increase IPT provision	• Inadequate screening • Drugs not available as needed • Inadequate patient follow up • Increase screening activity	• Procure more drugs • Assign individual client support • Provide screening checklist to providers • Increase IPT allocation from drug fund	• Engage volunteers Checklists • Management support	Volunteer recruiters

CHANGE AREA	Problems/Issues	Potential solutions	Specific activities	Resources needed
Mortality from TB	• Inadequate screening • Poor provider capacity • Lack of Directly Observed Therapy (DOTS) services	• Increase screening activity • Train providers • Establish DOTS centers	• Provide screening checklist to providers • Carry out 1-day training • Engage TB program to set up DOTS centers	Checklist Trainers Funds for DOTS centers

Performance Measurement Plan
The key questions you should address are:

- How will we carry out the change or new practice?
- How will we know that the change led to improvement?
- How should we measure the effect of the change?
- How will we collect the required data and document?

Follow these three major steps to measure performance:

1. Determining the information needed
2. Collecting the data
3. Using the information and results for informed decision-making (done in Study phase)

Step 1: Determining the information needed

- Select health services to be monitored.
- Describe the process involved in the service provision.
- Define the measurement population.
- Draw a systems view of the services.
- Make standards explicit.
- Use the HIV QI indicators and other performance indicators.
- Defining the measures: The measures should be objective and address specific aspects of care. They also should have straightforward, dichotomous answers (Yes or No).

Table 3: Examples of measures

Measure	Definition of Measure	Yes/No response
DNA PCR test	Did the HIV Exposed Infant (HEI) who was 6 weeks during the review period receive a DNA PCR test?	Yes: The HEI received a DNA PCR Test No: The patient did not receive a DNA PCR test
CD4 Test	Was a CD4 test performed and were results documented in the past 6 months?	Yes: CD4 testing was performed No: CD4 testing was not performed (or the test was done but results were not documented)

Step 2: Collecting the data (Develop a data collection plan)

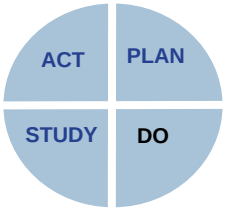
- Select the monitoring strategy – frequency of data collection, data collection personnel, and the flow of information through the QI framework.
- Determine the source of information (e.g. routine HIS data, QI file reviews, client satisfaction interviews)
- Decide how and who will collect the data
- Determine how and who will record the data
- Select or develop the data collection and monitoring tools
- Test the monitoring tools
- Determine how a random sample will be selected (see SOP on QI File Review for example of how to select a random sample)

Step 3: Use information and results for informed decision-making (Study)

This step is largely completed during the study phase, however it is described briefly here:

- Tabulate results
- Analyze the information
- Interpret and use results to improve care and delivery of services
- Design a data storage and retrieval system
- Disseminate information

NOTE: It is recommended that you focus on using the information and results from existing monitoring systems as much as possible, rather than developing new systems.

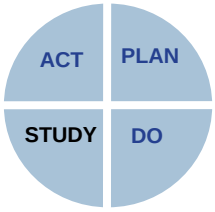


II) Do

In this phase the change package/intervention should be implemented according to the QI project work plan, and data should be collected per the performance measurement plan.

III) Study

In the 'Study' stage, you as a QIT/WIT learn all you can from the data collected during the 'Do' stage. You should then ask the following questions:



- Did the results match the theory/predictions?
- Is there an improvement? If yes, by how much?
- Are there trends?
- Are there any unintended side effects?

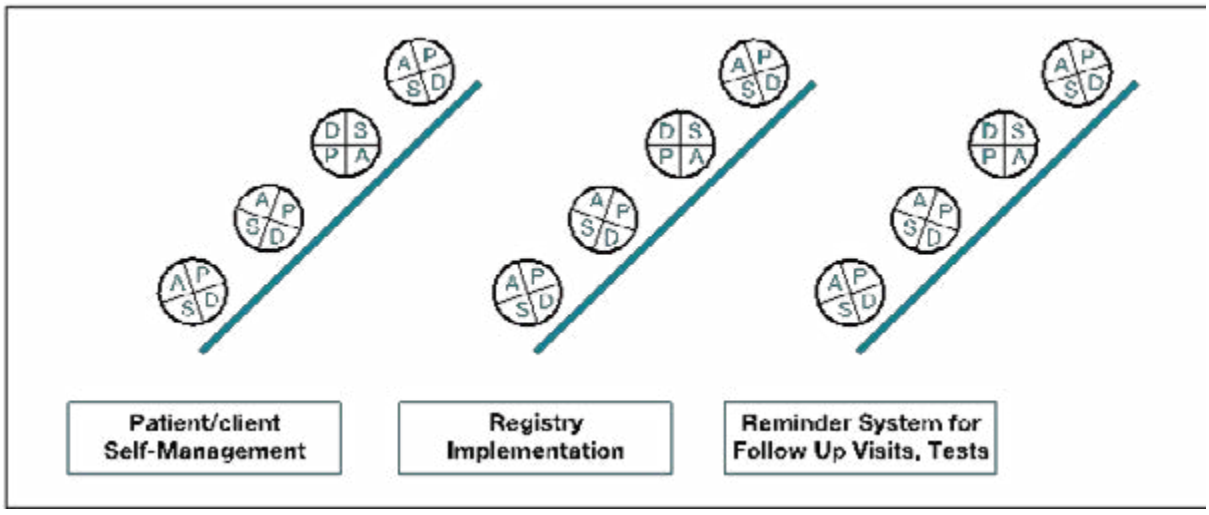
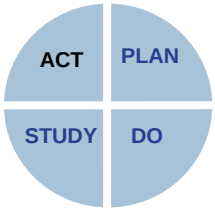


Figure 3 Example of simultaneous multiple tests of change to improve a system

- Is the process more difficult using new methods?
- Is the change scalable?

Studying should go on continuously throughout the improvement cycle.

IV) Act



Your responses derived from the Study stage define the tasks for the Act stage. There are two possible responses you may have:

- The change was successful and should be adopted – follow the steps outlined under the maintenance phase institutionalize and sustain the change
- The process has not improved – you should review the change to determine reasons for poor performance, refine the process, and plan another test cycle

Be aware that the completion of each small PDSA cycle leads to the next small test or PDSA. From each test, you learn what worked, what did not work and what should be kept, changed, or discarded. You continue linking PDSA cycles in this way until an intervention is identified as suitable for broader implementation.

As a team, you may also run multiple tests simultaneously; this is schematically presented in Figure 3.
After finishing a PDSA cycle, complete a WIT QI Project Summary (Appendix 6). The WIT QI Project Summary can be used to develop a presentation that can be used during dissemination or to document lessons learned if an intervention was not successful. Additional details on how to make an effective presentation for disseminating continuous quality improvement (CQI) learning are found at the end of this SOP.

It is important to note that successful interventions need to be formally integrated into normal service provision. Achieving success in a PDSA cycle does not guarantee sustained improvement. This is known as institutionalization or “maintenance” of positive changes.

Table 4 provides an example of a WIT QI Project Template worksheet.

Table 4: An example of WIT QI Project Template

Problem Statement:	Tracking women through PMTCT care until delivery at Huduma Health Centre – women failed to continue attending to clinic appointments for PMTCT care. Women often exited PMTCT care when referred to the district hospital.
Goal Statement:	Increase 12-month retention in PMTCT care from 65% to 95% for all enrolled pregnant women by June 2014.
Indicator Description:	Number of HIV-positive pregnant women retained in PMTCT care 12 months after enrollment.
Baseline Data: *(Indicator Performance Result)*	Period under review: July 2013 to December 2013 12-month retention in PMTCT care: 65%

<table>
<tr><td>Plan: Describe your analysis of the process/ problem.
Attach the fishbone, flowchart and/or any tool used for planning.</td><td colspan="2">Process flow chart done? Yes
Fish bone diagram done? Yes
The analysis highlighted that most women were lost when they were referred to the County facility for drawing of CD4 samples. The step between referral for CD4 and actual CD4 blood draw was difficult due to the long distance to the hospital and lack of direction on where to go when they reached.</td></tr>
<tr><td>Plan – Describe the change ideas / interventions you have selected to address the problem (Attach a work plan for intervention)</td><td>Root Cause
Lab referral – long distance to the hospital and lack of clarity of referral mechanisms.

Inadequate follow-up of defaulters</td><td>Change Interventions Selected
Draw blood at Huduma Health Center and send the specimen for CD4 analysis, rather than refer the patient to the district hospital.
Use patient diary to track missed appointments

Ensure timely home visits for women who miss appointments through mentor mothers and use of an appointment diary</td></tr>
<tr><td>Plan – Performance measurement plan, Indicators (and definition), Method for collection, frequency of collection.</td><td colspan="2">Indicators: Retention of PMTCT clients
Methods: File/register review
Frequency: Monthly and aggregate after 6 months.</td></tr>
<tr><td>Do – Describe implementation of the change package</td><td colspan="2">After consulting with the district hospital to inform them of change in plan, MCH and lab staff were trained on the new process flow. Mentor mothers were given additional training on defaulter follow-up.</td></tr>
<tr><td>Study – Describe the outcomes of the interventions (should include follow-up data using the same indicator as baseline).</td><td colspan="2">Follow-up data (Indicator Performance Result)
Two review periods:
First period: July 2014–September 2014
Second period: September 2014–December 2014
We conducted an in-depth analysis of the trends of process and outcome measures showing that 85% of pregnant women who were enrolled at Huduma Health Centre were retained for continuity of care until delivery between July 2014 and September 2014 and 95% between September 2014 and December 2014.</td></tr>
<tr><td>Was goal achieved?</td><td colspan="2">Yes, the goal was achieved.
If YES, continue to Act.
If NO, explain below why your team thinks the intervention did not succeed (challenges faced) and next steps/way forward, e.g. beginning a new QI project/PDSA cycle to address the problem.</td></tr>
</table>

Act	Describe how you have institutionalized the intervention/change and how you will continue measuring the success of the institutionalized interventions over time. If successful, sustain and upscale: • A patient diary was established at the facility to track missed appointments • A buddy system through mentor mothers was established to ensure that all women who were enrolled were supported and educated about their health care services and had follow-up home visits when they missed appointments. • Formalized the lab network referral system with the district hospital Describe any challenges faced during the process and how they were overcome: • There was need to have better coordination with the county hospital to ensure that referred women reached the county hospital

Presentation Format- Storyboard

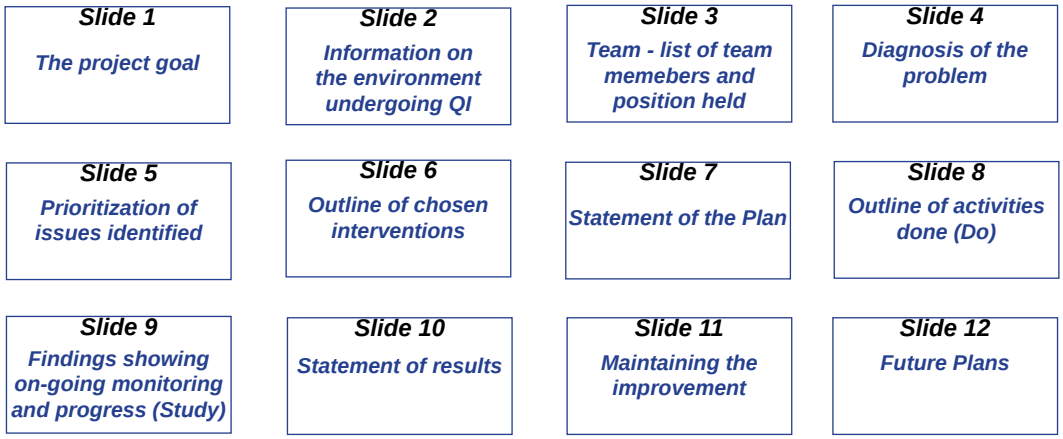


Figure 4: QI presentation format- Storyboard

PDSA/CQI and Data dissemination

Dissemination is a critical facet of implementing CQI and showcasing outcomes in the different levels of health service delivery. Disseminate your PDSA and CQI experiences at the facility, county and national levels using some of the following approaches:

a. At the facility level
- Display on boards outcomes of QI activities by respective QITs and WITs
- Disseminate PDSA/CQI data and findings through facility meetings, Continuous and medical education sessions

b. At the sub-county and county levels
- Submit reports of facility-level QI activities to sub-county offices and post them on sub-county information boards
- Disseminate PDSA/CQI data and findings through sub-county and county health management meetings, and other stakeholder and partners forims, zonal meetings, etc.

- Through sub-county and county QI learning sessions

c. At the national level
- Disseminate PDSA/CQI data and findings through QI Technical Working Group meetings, key QI forums, and learning sessions.

Effective Presentations
Within the KHQIF, you are expected to use presentations, explain new projects or ideas, promote change in response to results of a quality improvement project, or simply provide information. To do this, use any of the following approaches:
- Verbal presentations
- Visual images (also makes verbal presentations more effective) – overhead transparencies or computer projections using graphs, charts, tables and pictures

Good presentations are usually accompanied by notes, which may be unseen by the audience but provide you with guidance. The format in Figure 4 is simple and straightforward and may help in preparing a presentation.

This storyboard is intended to serve as a guide only; you can adjust your individual presentations to match the content, audience, time frame and presentation format.

Section 5

Quality Improvement Tools

This section covers effective presentation skills and the tools that you can use for your QI programs.

This section guides you on some of the tools and techniques most commonly used in conjunction with the PDSA model for improvement. Table 5 summarizes the various tools and methods.

Table 5: QI tools and methods

Tools	Diagnosing and analyzing the problem (Plan)	Measuring impact and reviewing progress (Study)	Maintaining improvement (Act)
1. Brainstorming	X		
2. Multi-voting	X		
3. Decision matrix	X		
4. 5-Whys	X		
5. Flow chart	X		
6. Client focus groups	X	X	
7. Cause-and-Effect diagram (fish bone)	X		
8. Pareto chart	X	X	
9. Bar graph, pie chart, histogram	X	X	
10. Time plot, run chart	X	X	X
11. Statistical Process Control (SPC) chart		X	X

1. Brainstorming

Brainstorming is a technique that you can use to generate ideas in a short period. An example of how you can conduct a brainstorming session is:

a) The team leader (or facilitator) states the topic
b) Each team member shares one idea at a time – anything goes
c) The process moves quickly
d) There is no discussion or evaluation of ideas as team members share their ideas
e) The team leader records ideas on flip chart as they are stated so that the ideas are always in full view of all team members
f) Members take turns to share ideas until they have no more ideas, at which point they simply say “pass”
g) Brainstorming continues until all members have “passed”
h) The team leader then repeats each idea and asks for comments, clarification or discussion

2. Multi-voting

If the list of brainstormed items is too long, (more than 15 items), the team may wish to use a voting technique called multi-voting. This helps you to narrow down the list and come to a consensus on one particular root cause of a problem or one proposed solution. This is how you do it—

a) Number all items
b) Combine similar ideas and eliminate duplicate ideas
c) The team leader reads each item and asks team members to vote on whether the item should remain on the list
d) After the first round of voting, the items with the fewest votes are eliminated
e) Voting is repeated, each time eliminating items with the fewest votes until the team reaches a manageable number of items

3. Decision matrix

A decision matrix can help you to prioritize potential problems and performance gaps with the aim of helping your team to select an appropriate problem to undertake in a QI project cycle.

Use the template provided in Table 6 to develop a decision matrix using the following steps:

a) Under the column titled “Potential performance gaps to be addressed,” make a list of areas or processes that should be considered for QI projects
b) Use existing data from performance reviews, staff feedback, client feedback, and other data sources to rank each potential gap on a scale of 1–5 (5 = totally meets criteria); you may revise the criteria to include other items such as cost
c) Review the rankings and select the project with the highest score

Table 6: An example of a decision matrix template

Potential performance gaps to be addressed	**CRITERIA: Rank 1–5 (where 5=totally meets criteria)**				
	Issue seen as important [a]	**Realistic scope (Control)[b]**	**Likelihood of success via QI[c]**	**Potential impact of QI project[d]**	**Total**
1.					
2.					
3.					
4.					

[a] Issue seen as important refers to a gap that is crucial or gap that does not meet standards set in National guidelines
[b] Realistic scope (control) refers to gaps that the facility is able to address at a facility level that do not involve the macro-system
[c] Likelihood of success refers to performance gaps that can be addressed easily, the so-called quick wins
[d] Potential impact of QI project refers to performance gaps that if addressed will have the greatest effect

Review the rankings and select the project with the highest score

4. 5-Whys

The 5-Whys is a question-asking method used to explore the cause–effect relationships

underlying a particular problem. Ultimately, the goal of applying the 5-Whys method is to determine a root cause of a gap or a problem.

- Remember:
  - This is a brainstorming discussion and there are no wrong answers.
  - Answers come from the group.
  - This is not about pointing fingers at individuals.
  - It is about looking for leaks or defects in the system or processes and working together for an improvement plan.
  - Narrow your responses to actionable activities. Avoid having responses that involve the macro-system, e.g. policy as a final why.

Steps for using 5-Whys

1. Write down the specific problem.
2. Ask Why the problem happens, and write answer below problem.
3. Ask Why again, and write that answer below.
4. Keep asking Why until root cause is identified.
5. Keep asking until no new answer is given.
6. This may take 5 Whys or more.

Problem: Patient fails to show up for appointment	
5 Why's	**Response**
Why does the patient fail to come?	Patient was not aware of appointment date
Why was the patient not aware of appointment?	Appointment not indicated on the patient's appointment card.
Why was appointment date not issued?	Nurse forgot
Why did the nurse forget to give appointment?	Nurse was too busy to record after rendering service.
Why was the nurse too busy?	Busy with needs of other patients.

Intervention: Task shift documentation of appointment in patients' appointment card to Community Health Worker or peer educator.

Problem:	
5 Whys	**Response**

5. Flow chart (also called Process map)

Flow-charting is a technique for mapping steps in a process. You can use it as a diagnostic tool that helps the team better understand the location of problems in the process. To create a flow chart you need to:

- Understand the process as it currently exists: "How does our work actually get done?"
- Be open to criticism on the process, compare with other more effective processes and to identify improvement points, as and when applicable
- Identify the complexity of the process and its management

- Identify ‘outcome’ and ‘process’ steps
- Develop better, less complex, more effective process
- Most flow charts use specific symbols to illustrate different types of steps in a process.

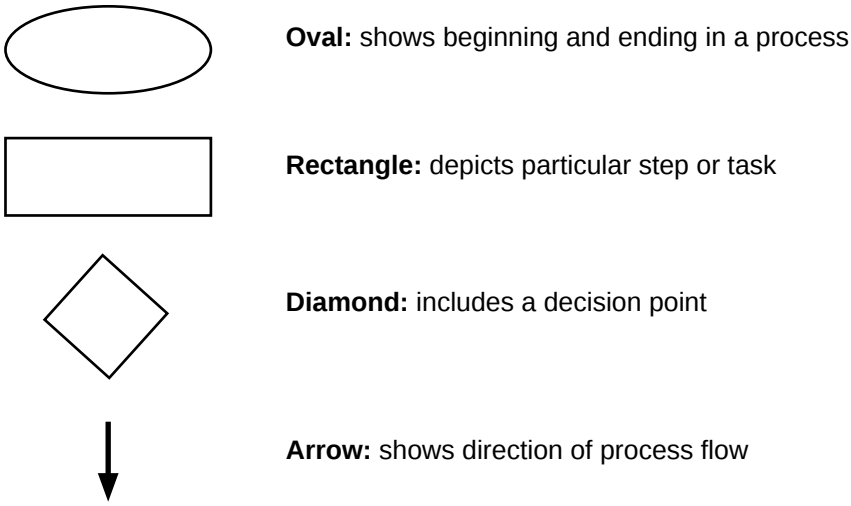


Figure 5: Symbols used in a flow chart

Key steps to follow in developing and using a flow chart:

1. Use appropriate labels, symbols and arrows keeping the flow chart simple, and finalize the chart after a period of reflection and review.

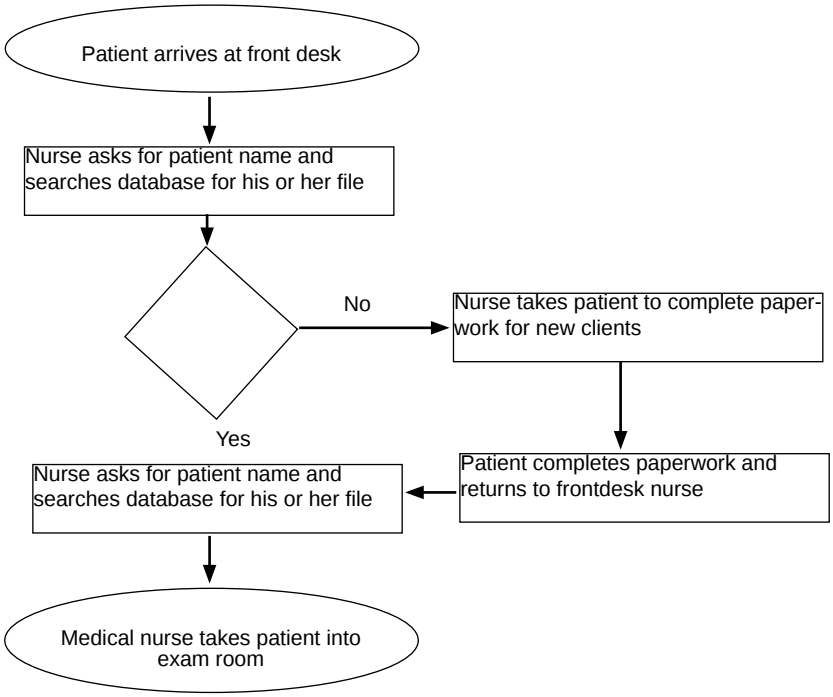


Figure 6 Example of a flow chart.

6. Client Focus Groups

Focus groups are a particularly efficient and effective way of obtaining consumer or client feedback where specific or more in-depth information is required.

Use these guidelines to manage focus groups:
1. Establish some simple ‘rules’ before starting such as:
- All participants get a say
- No person should speak at the same time as another person
- People should say what they think or believe, not what they think someone else wants to hear; there are no right or wrong answers
- Individuals should speak for themselves only and not on behalf of others

2. Commence with an easy, positive, general question. For example: What did you like best about the treatment you have received from our Comprehensive Care Clinic (CCC)?
3. Continue with approximately 4–5 set questions, which will stimulate discussion, for example:
- What do you dislike about the service?
- What would you like to change?
- What information would you like to be receiving?
- How would you like to receive this information?

Figure 7: A focus group discussion in session.

7. Cause-and-effect diagram (fish bone diagram)

Use this type of diagram to explore and display the root causes of a specific problem or condition. The following tips will help you when using a fish bone diagram:
- State the problem under investigation in very specific terms and document it at the “head” of the fish.
- Label each “bone” of the fish with possible categories of causes of the problem. Identifying multiple categories can help the team think of more than one type of cause.
- Brainstorm root causes using the brainstorming technique described below:
  - People (patients and staff)
  - Provisions (materials and equipment)
  - Place (environment)
  - Procedures
  - Policies

Figure 8 illustrates a generic fish bone diagram.

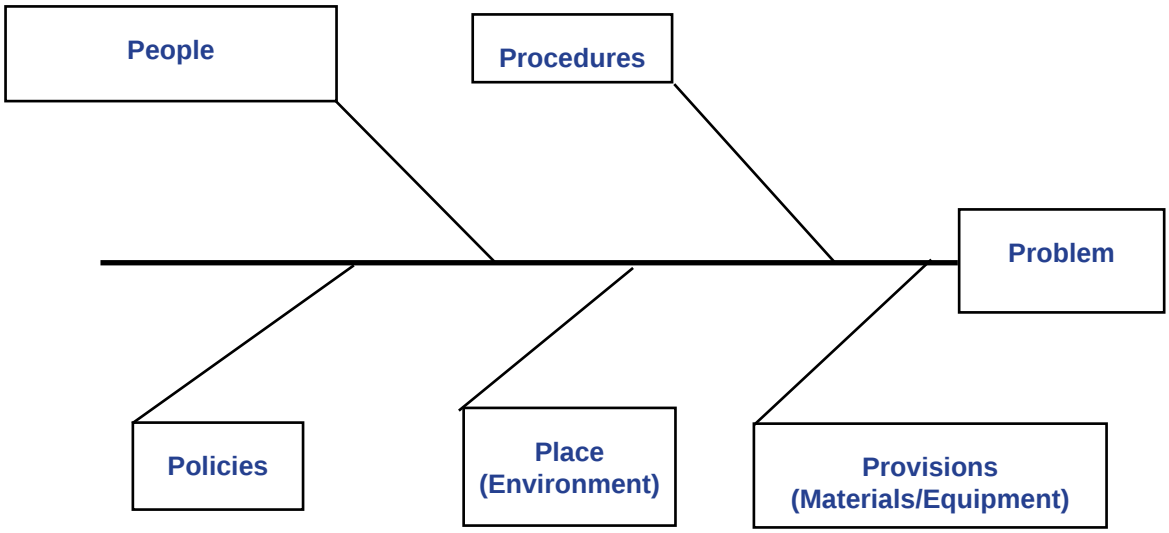


Figure 8: Generic fish bone diagram

Figure 9 gives a completed fish bone diagram outlining the causes of low appointment show rates at a particular facility.

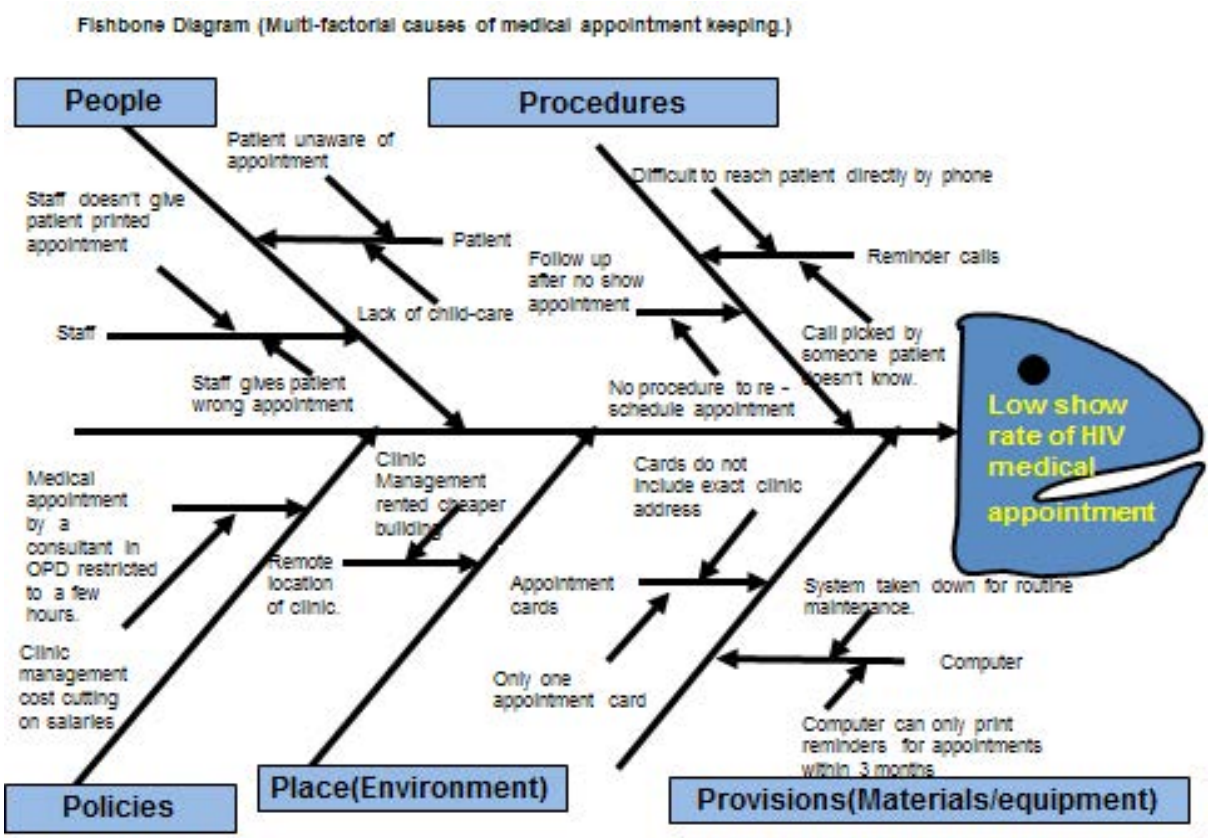


Figure 9: An example of a completed fish bone diagram

8. Pareto chart

The Pareto chart is a bar chart arranged in descending order of height from left to right with each bar reflecting the frequency or impact of a problem. The name is derived from the Pareto Principle that states that “80% of an issue comes from 20% of the associated problems”. Though percentages will never be that exact, you will often find that most trouble is caused by a few problems, with the top 20% usually identifiable. Therefore, 80% of your effort should be focused on the top 20% of improvement opportunities; the tall bars on the left are relatively more important than those on the right. This makes it easy for you to visualize the most frequent causes of a problem and therefore where to put your initial effort for the greatest gain. It separates between the “vital few” and the “useful many”. Figure 10 shows an example of a Pareto Chart.

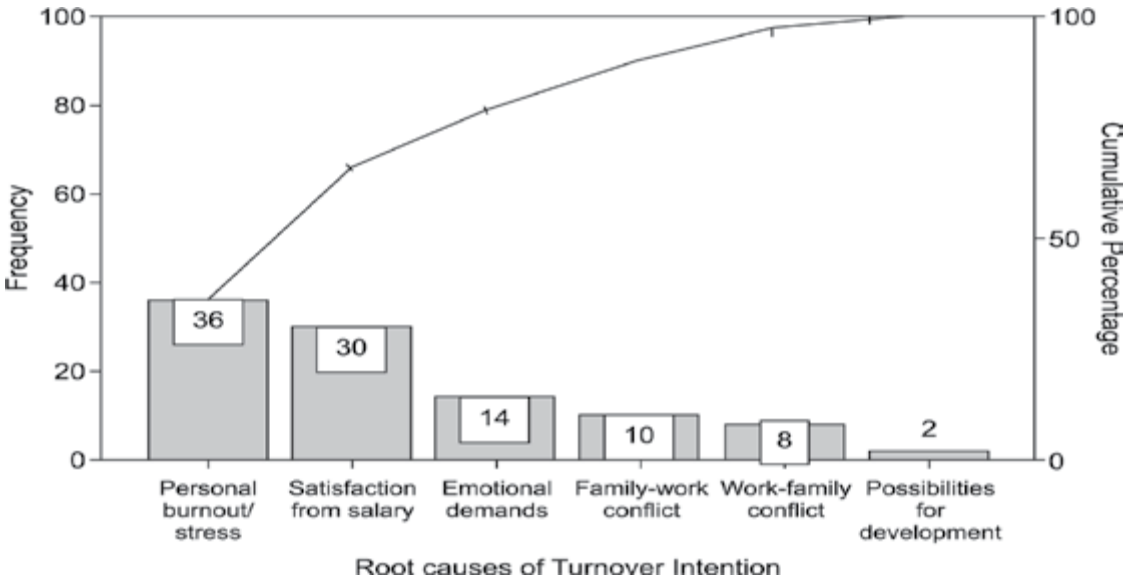


Figure 10: Example of a Pareto chart

9. Graphs and Charts

Some of the common graphs you will use in QI are:

- **Bar graph:** A bar graph presents the data collected in a way that will help you visualize relationships between different categories of factors.

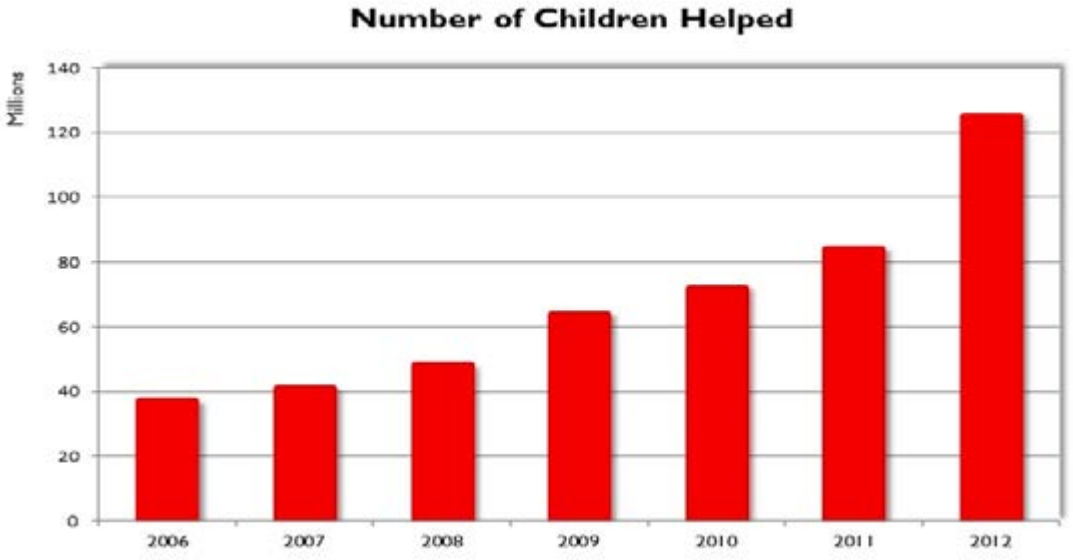


Figure 11: Example of a bar chart

- Pie chart: A pie chart is useful for visualizing the relative importance of several categories of data (Figure 12). Results of pie charts are usually presented as percentages. As the title suggests, this graphical tool illustrates how 'the cake is divided' today, but you will find it less useful for illustrating comparisons over time.

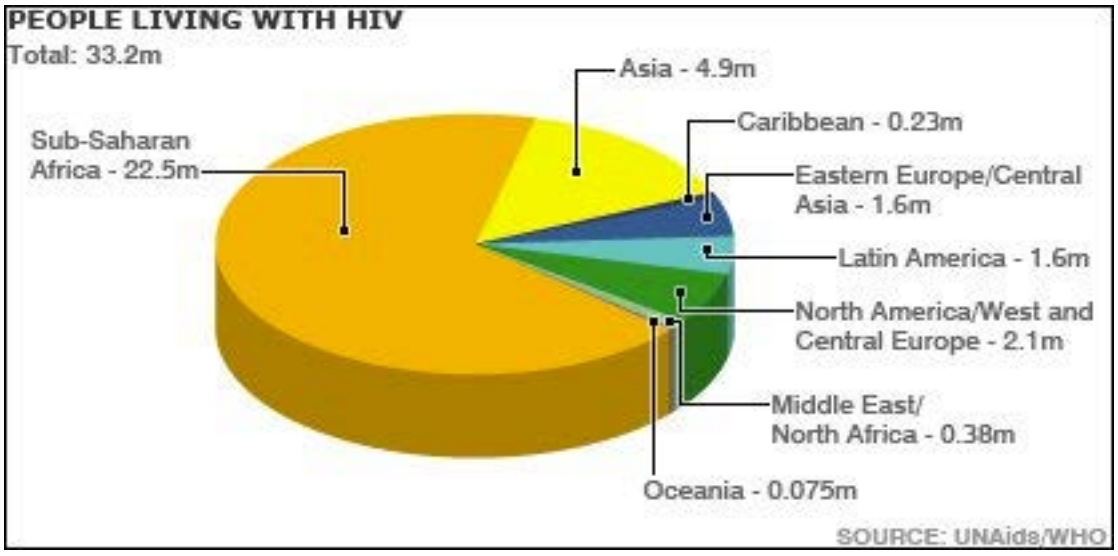


Figure 12: Example of a pie chart

- Histogram: A histogram illustrates patterns of variation in a process. It is particularly useful in depicting variation in a particular process over time.

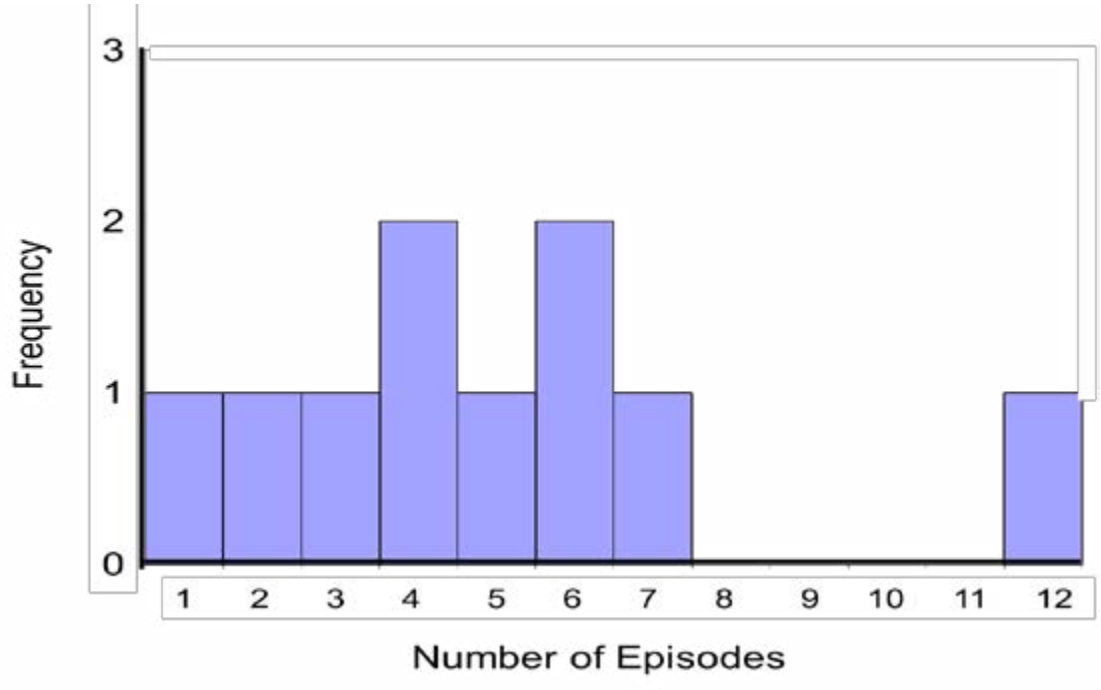


Figure 13: Histogram

10. Run charts

A run chart, sometimes called a time plot, helps in understanding variation and is used to examine data for trends or other patterns that occur over time. It graphically shows the history and pattern of variation in an indicator or measure. You should begin collecting data before interventions (baseline data) and then graph the results of the intervention to measure change in the process.

Over time, the run chart is useful for identifying the impact of interventions, demonstrating long-lasting improvement, and identifying shifts and trends in performance that may indicate the need for further intervention. As you interpret a run chart, do not to see every variation in the data as significant.

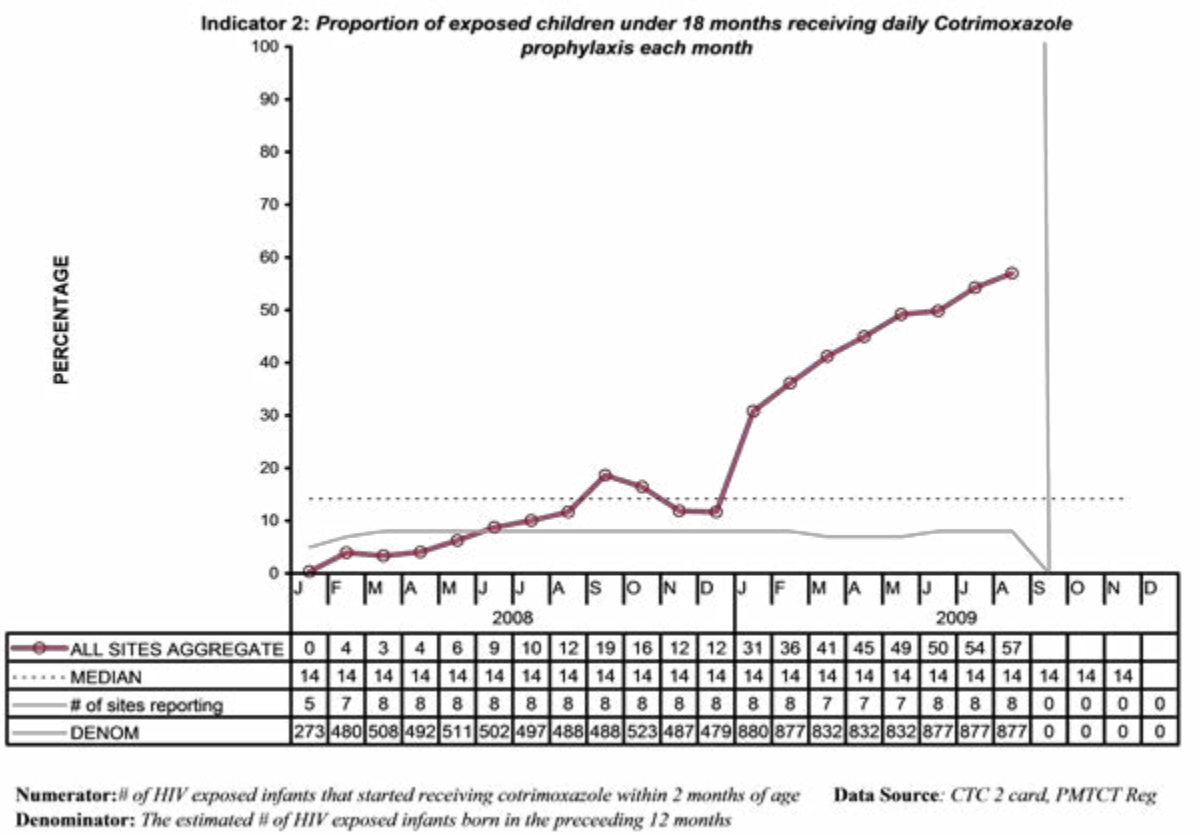


Figure 14: Example of a run chart

11. Statistical process control (SPC) chart

The SPC chart is a run chart with the additional feature of displaying upper and lower statistical control limits for a particular process, representing three standard deviations above and below the mean. When points fall outside the limits or form particular patterns, this may suggest a special cause of variation deserving more investigation.

Features of an SPC chart

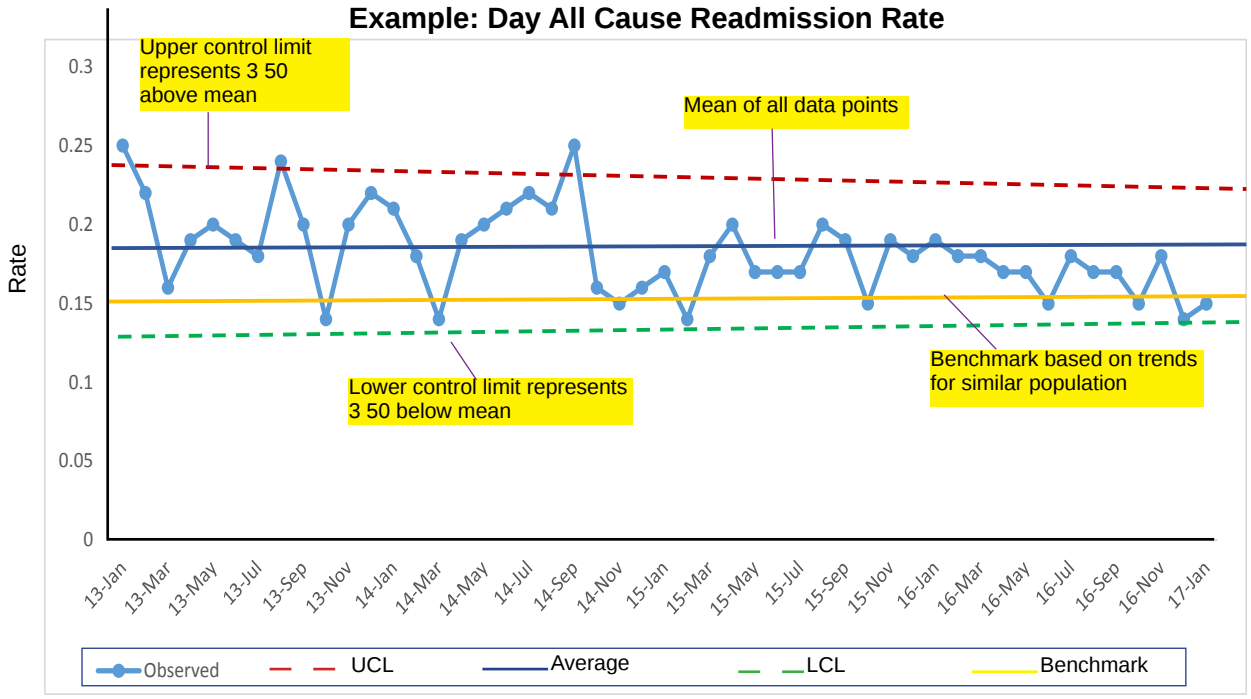


Figure 15: Statistical process control chart

Section 6

The Change Package: Example of interventions

Every problem or performance gap is unique to the facility context, which means that every QI project intervention will likewise be tailored to the particular context. Table 7 provides some common interventions that have been used across numerous settings. You and your QIT/WIT can use this table to help generate ideas. However, it is important that each WIT and QI project team develops an intervention to address the root causes for the particular gap identified. These examples of intervention areas are based on some of the observed service delivery gaps and selected HIV QI indicators, but they are not exhaustive.

Table 7: Examples of intervention areas in health service delivery

CHANGE AREA	SPECIFIC ACTIVITIES
Embracing QI at county/facility level	• Check whether there is a coherent, planned and systematic schedule of meetings and reliable processes to capture findings and implement necessary improvements. • Have regular learning sessions and a system for reward and recognition for teams that perform well in the facility or county.
Process flow changes	• Reorganize the steps in a process of care delivery such as eliminating unnecessary steps and bottlenecks, to rework and streamline the flow of processes. • Use process flow analysis and address the challenges. For example, convene regular team meetings to discuss patient management. Part of the discussion may include assigning responsible persons to send patients to the lab before their next visit. • Integrate laboratory services in outreaches
Clinician Reminder Systems	• Have prompts or reminders on paper charts or Electro Medical Records (EMR) systems at the point of care to remind providers to implement a specific process, e.g. a cyrptococcal antigen test for all patients with a CD4 of < 100
Timely availability of clinical or lab data to health care providers	• Provide up-to-date laboratory data at the point of care so that a provider can make informed decisions on clinical management of patients • Provide on job training on how to collect CD4 and DBS samples and ensure networked transportation • Improved documentation of clinical notes, registers or other health-related data and real time (or near real time) updating in the EMR records. • Ensure accurate, timely and quality data at all times.

CHANGE AREA	SPECIFIC ACTIVITIES
Performance data and feedback	Provide useful data (at point-of-service) that can highlight performance rates on routine indicators compared to county or national targets, county and national summary performance reports, and/or past performance at the same facility.
Provider education	• Provide a step down training to facility staff on quality improvement. • Train or re-train staff on service delivery standards, protocols and algorithms. • Provide reference materials (KHQIF and the Operational Manual) and job aids to assist in improving service delivery. • Change of staff attitudes and practices.
Patient reminders	• Use telephone calls, SMS messages, home visits and client tracking to remind patients to return to clinic. • Assist patients with at-home reminders for clinic visits and adherence to medication, such as alarms, pill boxes, buddy system, and daily routine reminders.
Client Education	• Provide individual counseling sessions or group education to patients so that they better understand their role in optimal care. Expert patients or peer educators can be effective in improving patient visits and treatment adherence in particular. Patient education can include parent and family education, pamphlets and other media.
Partnering with communities and organizations	• Community health workers (CHWs), peer educators, and other designated stakeholders can reinforce the importance of engagement in care, find patients, provide education and enhance resource mobilization. • Use village elders, religious leaders and other community groups including support groups. • Provision of non-monetary incentives to people who bring women for delivery to the clinic or people who track lost patients (praising them/ formal recognition). • Involvement of community leaders in planning outreaches.
Nutritional assessment of clients	• Integrate nutrition services in the HIV or PMTCT clinic, make nutrition assessment as part of triaging. • Ensure task shifting where nutrition assessment can be done by CHWs
ART initiation	• Consider conducting chart reviews and regular treatment monitoring for HIV eligibility • Family testing: Have family open days for HIV clinics. • Use partner invitation cards for ANC and HIV clinics. • Use peer health educators to encourage spouses to come for testing. Use visual materials (available through NASCOP) on notice boards that can encourage one to seek testing

CHANGE AREA	SPECIFIC ACTIVITIES
Service integration	• Ensure mother-baby pair follow-up and documentation. • Integrate HIV and TB. • Integrate PMTCT into ANC. • Integrate RCH with other service delivery points. • Redistribute drugs, test kits, reagents, equipment and non-pharmaceuticals from facilities with excess to facilities experiencing stock outs. • Spread QI knowledge across different hospital departments. • Keep joint appointment to ensure that mother and baby are given same appointment visits to reduce other service access costs.
Private–public partnership	• Joint writing of proposals to donors for funding. • Enhance communication between private and public stakeholders for better patient outcomes. • Use media and other private fraternities to drive better health care, for example, an advert that encourages pregnant women to complete ANC visits and deliver in health facility, or one advocating for male circumcision as a public health solution.

To facilitate quality improvement initiatives and interventions for your Q/WIT, we have put together different additional resources to most effectively integrate quality improvement practices in your practice and expand our knowledge base. To learn more review the following links for additional resources.

Table 8: Additional QI resources

Organization	Website
Agency for Health Care Research and Quality	http://www.ahrq.gov/
Center for Quality and Productivity Improvement	http://cqpi.engr.wisc.edu/
Health Resources and Services Agency	http://www.hrsa.gov/quality/toolsresources.html
Health Care Improvement Institute-Africa	http://www.hci-a.org
Institute of Health Care Improvement	http://www.ihi.org
Institute of Human Virology	http://www.ihv.org/programs/overview.html
Institute of Medicine	http://www.iom.edu/
International Society for Performance Improvement	http://www.ispi.org/
Joint Commission	http://www.jointcommission.org/
National Association for Health Quality	http://www.nahq.org/
National Quality Center	http://nationalqualitycenter.org/
National Quality Forum	http://www.qualityforum.org/Home.aspx

Section 7

SOP: HIV QI Indicator File Review

Step 1. Define the time period for performance measurement

Time Period for Performance Measurement:

- January to June: assessed in July
- July to December: assessed in January of following year

6-month time period selected due to work entailed in undergoing manual file review with large sample size.

Remember: Additional reviews may be done on a monthly or more frequent basis than 6 months depending on the problems being addressed through PDSA by the WIT

Step 2. Define the eligible population

The eligible population is determined by the service delivery area and data source under review.

- When the data source is a register, assess all patient encounters. This applies for most elimination of mother-to-child transmission (EMTCT) indicators.
- When the data source is patient file, then it depends on the type of site: EMR (in full) or non-EMR. For non-EMR sites, sampling will be done. This applies for Adult and Pediatric Care and Treatment plus 2 EMTCT indicators.

Data sources for the different groups:

	Adult Care and Treatment	**Pediatrics Care and Treatment**	**EMTCT**	**HIV Exposed Infant (HEI)**
Data source	Patient file	Patient file	PMTCT patient files ANC Register Postnatal Register Maternity client files	HIV-exposed infants Register HEI Card

For non-EMR sites, the sampling from an active case list is designed to have a **representative** number of files while **minimizing the workload**.

Type of facility	How to sample	How to calculate
Non-EMR, with no computer	• Develop "Active Case Listing" • Use sampling chart to determine sample size • Randomly select files	Manual abstraction tool
Non-EMR, with computer	• Develop "Active Case Listing" • Use sampling chart to determine sample size • Randomly select files	Manual abstraction tool, with option of QI database on computer
EMR	• All records that have been updated in the EMR for the period	EMR auto generated for most care and treatment. Some manual may be required for EMTCT.

Inclusion/Exclusion Criteria for "Active case list" for Care and Treatment patient file reviews:

Inclusion criteria (eligible clients)

- HIV infected patients who have had at least one medical visit in the last 6 months.
  - Children age 0–14 years
  - Adults age 15 years old and above
  - HIV-infected pregnant women (PMTCT clients)

Note: *Clinical visit is an encounter between a nurse or doctor and a patient. Refills of drugs in the pharmacy is not considered a clinical visit.*

Exclusion criteria (non-eligible clients)

- HIV-infected patients transferred out of the facility in the first month of the review period
- HIV-infected patients newly enrolled into care or transferred into the facility during the last 3 months of the review period
- HIV-infected patients that died in the first month of the review period

Step 3. Generate Active Case Listing for File Review

- Review Daily Activity Register for the 6-month review period and make a list of all patient IDs who had at least one HIV clinic visit.

Note: A Clinic visit is an encounter between a patient and a nurse or doctor. Refills of drugs in the pharmacy is not considered as a clinical visit.

- Using Excel workbook. Make three columns – one for adult, one for pediatric and one for PMTCT clients IDs
  - If the last four digits are unique in your patient ID system, you may enter ONLY the last four digits of the patient's ID number in one column for the entire review period

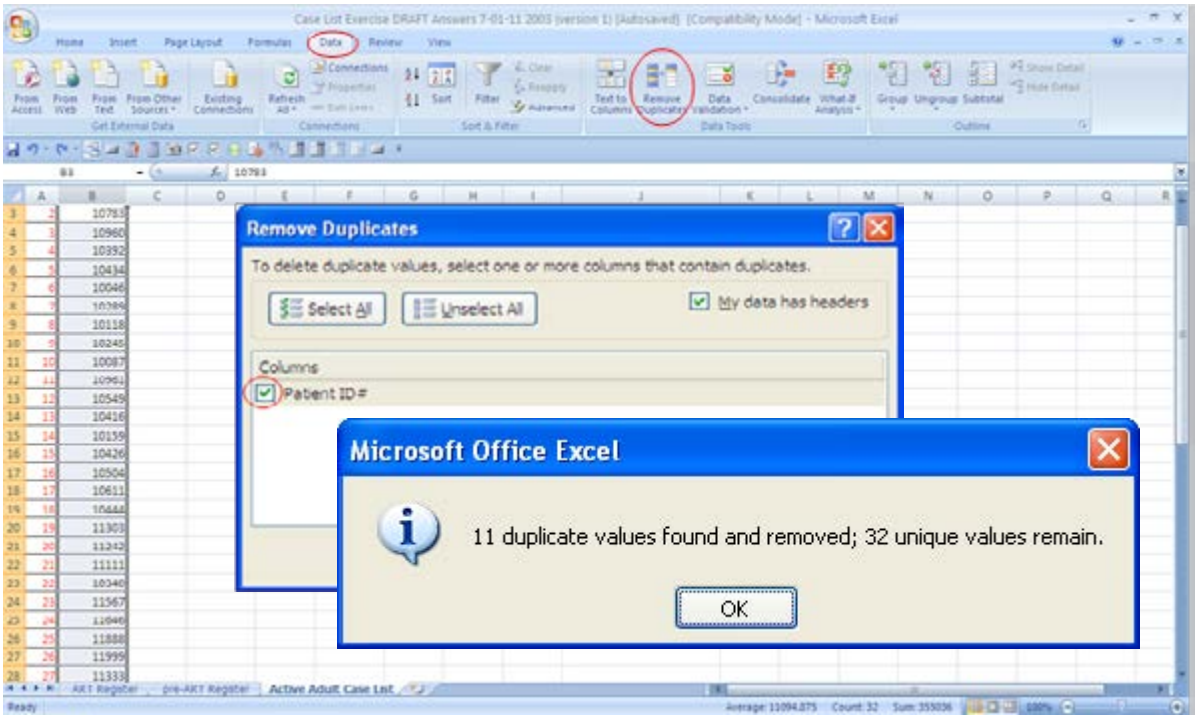
- Remove duplicate entries

How to remove duplicates in the Excel workbook:

- Highlight the column with the list of patient ID
- Click on “Data” button from the task bar on top
- Click on “Remove duplicate” button, and click “Okay” to continue
- ID numbers that remain in the column will be your “active case list”

Note: *It is very likely to have duplicates at this level. We need to remove duplicates to get the “caseload” or “active case list”*

Caseload = number of individuals seen one or more times in the review period



Step 4. Sample size determination

- The number of active patients or “case list” is the ‘population size.’
- We use a sample size table to idenfity the number of files that need to be sampled depending on the population size to achieve a representative sample (95% CI).
- If the population size is less than 26, all files are reviewed, if larger then at least 26–150 records are reviewed depending on the size of the clinic.

Note: *A representative sample helps us know our measurements are closer to the “true performance” without having to review all patient files. For example, if a facility has a total of 205 adult clients in their active case list, then they would need to sample 94 patient files.*

Population Size	Sample size for a 95% CI to have width of 0.16
up to 19	all
20–29	26
30–39	32
40–49	38
50–59	43
60–69	48
70–79	53
80–89	57
90–99	61
100–119	67
120–139	73
140–159	78
160–179	82
180–199	86
200–249	94
250–299	101
300–349	106
350–399	110
400–449	113
450–499	116
500–749	127
750–999	131
1000–4999	146
5000 or more	150

Step 5. Randomly select patient files

- Patient files should be randomly selected from among all those eligible for review.
- You will select every nth file. To determine the nth number, divide the total population (active case list) with your desired sample size. Then you select randomly until the desired sample size is obtained.
- Remember when you are pulling every nth file… only include files that had at least one HIV clinic visit in the review period and exclude any as necessary according to the Exclusion Criteria**:**
  - ► Transferred out of the facility in the first month of the review period
  - ► Newly enrolled into care or transferred into the facility during the last three months of the review period
  - ► That died in the first month of the review period

For example: If 205 is the eligible population (active case list), then 94 is the desired sample size. Then, divide 205/94=2.2. Pick every 2nd chart to make your sample for data abstraction. When you reach the end of 205, if you haven't found 94 eligible files, then start at the beginning of the files and continue selecting every 2nd file until you reach 94.

Step 6. Data collection/abstraction

Data collection and abstraction will vary depending on the type of site, as summarized below.

Type of facility	EMR Sites	Non-EMR, with computer and QI database	Non-EMR, with no computer
Develop Active case listing	All active in EMR	Enter active IDs into QI database	Enter active IDs into excel if available or manually list
Determine sample size and nth file	All active in EMR	QI database will automatically calculate	Use sample size table (Exercise 6 method)
Select files	All active in EMR	Use the filing cabinet to retrieve your sample randomly.	Use the filing cabinet to retrieve your sample randomly.
Data collection	Automatically done by EMR Only register based may need manual	Data collection/abstraction will be entered into the QI database	Manual abstraction tool (Appendix 7a-Adult, 7b-Pediatric, 7c-EMTCT)
Reports	Generated automatically through EMR and pushed to data warehouse	Generated automatically through the QI data base and submit extract file to mail or dropbox	Manually enter on HIV QI Indicator summary report (Appendix 8) and submit to Facility QIT
Data use	Use the reports/results for your QI project selection and monitoring of PDSA cycle		

Additional notes for non-EMR sites:

- When using the filing cabinet to retrieve your sample randomly, in the event that you find inactive file you may replace with another active file by retrieving another chart from the same filling cabinet.
- You may use the same active cast list number in subsequent reviews unless you think your active case list requires updating, then repeat active case listing steps.

ADULT KHQIF/OM: Appendix 7a - Adult Care Treatment File Review Abstraction Tool Review Period: From __To ___

FILE REVIEW INSTRUCTIONS: 1) Based on your case load, pull a sample of patients files who were seen in the last 6 months of the review period. 2) Answer the questions by circling Y or N as applicable for every patient file. If the question does not apply to the patient, then circle "N/A". 3) Use multiple sheets according to your required sample size. 4) After completing all file reviews, fill in sum of Y and N's to calculate the % performance for each indicator. 5) Sum the totals for all sheets and transfer to a QI Indicator Summary report. [Key: Yes (Y), No (N), Not Applicable (N/A).]

		1.0 Did the patient visit the clinic in the 6 months review period? (should be yes for	1.1 Did the patient have 2 clinical visits 3 months apart in the 6 months review	2.0. Did the patient receive a CD4 test (and results available) during the 6 months	3.0 Was the patient on ART before start of the review period?	3.1 If no to 3.0, was the patient eligible for ART initiation during the review period?	3.2 If yes Q 3.1 Was the patient initiated on ART?	4.0 Has the patient been on ART for 12 or more months? (If not on ART, select NA)	4.1 If yes Q 4.0, has viral load been done in the last 12 months and result received?	4.2 If yes Q4.1, was viral load result <1000 copies/ml?	5.0 Was the patient screened for TB using ICF card at last visit in review period?	5.1 Did the patient have a negative TB screen result at last visit?	5.2 If yes Q 5.1 (negative TB screen) Is the patient on IPT or been on IPT in last 2 years?	6.0 Was BMI or MUAC done at the last visit in review period?	6.1 If yes Q6.0, did the patient have a BMI <18.5 or MUAC <23 cm at the last visit?	6.2 If yes Q 6.1, Did the patient receive nutritional support (Suppl or Therap. food)?	7.0 Has the spouse(s)/partner(s) of the patient been tested for HIV within the last 12 months or have a known positive status?
1		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N NA
2		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N NA

Figure 16: Example of the manual data abstraction tool – Appendix 7a – Adult Care and Treatment:

Summary of steps for using manual tool:

- Check you have correct tool for the patient group (Adult, Pediatric, or EMTCT).
- Enter review period in top right corner (January–June 20xx or July–December 20xx)

CHART REVIEW INSTRUCTIONS:

1. Based on your caseload, pull a sample of patients files who were seen in the last 6 months of the review period.
   - Remember inclusion/exclusion criteria
   - Enter client ID in left column.

ADULT KHQIF/OM: Appendix 7a - Adult Care Tre

FILE REVIEW INSTRUCTIONS: 1) Based on your months of the review period. 2) Answer the questio does not apply to the patient, then circle "N/A". 3) U completing all file reviews, fill in sum of Y and N's to sheets and transfer to a QI Indicator Summary repo

		1.0 Did the patient visit the clinic in the 6 months review period? (should be yes for	1.1 Did the patient have 2 clinical visits 3 months apart in the 6 months review	2.0. Did the patient receive a CD4 test (and results available) during the 6 months	3.0 Was the patient on ART before start of the review period?	3.1 If no to 3.0, was the patient eligible for ART initiation during the review period?	3.2 If yes Q 3.1 Was the patient initiated on ART?
1	1630	Y N	Y N	Y N	Y N	Y N NA	Y N NA
2		Y N	Y N	Y N	Y N	Y N NA	Y N NA

1. Answer the questions by circling Y or N as applicable for every patient file. If the question does not apply to the patient, then circle not applicable (N/A).

		1.0 Did the patient visit the clinic in the 6 months review period? (should be yes for	1.1 Did the patient have 2 clinical visits 3 months apart in the 6 months review	2.0. Did the patient receive a CD4 test (and results available) during the 6 months	3.0 Was the patient on ART before start of the review period?	3.1 If no to 3.0, was the patient eligible for ART initiation during the review period?	3.2 If yes Q 3.1 Was the patient initiated on ART?	4.0 Has the patient been on ART for 12 or more months? (If not on ART, select NA)	4.1 If yes Q 4.0, has viral load been done in the last 12 months and result received?	4.2 If yes Q4.1, was viral load result <1000 copies/ml?
1	1630	(Y) N	Y (N)	(Y) N	(Y) N	Y N (NA)	Y N (NA)	(Y) N NA	Y (N) NA	Y N (NA)

2. Use multiple sheets according to your required sample size.

3. After completing all file reviews, fill in sum of Y and N's to calculate the % performance for each indicator. Sum the totals for all sheets and transfer to a QI Indicator Summary report. [Key: Yes (Y), No (N), Not Applicable (N/A).]

		1.0 Did the patient visit the clinic in the 6 months review period? (should be yes for	1.1 Did the patient have 2 clinical visits 3 months apart in the 6 months review	2.0. Did the patient receive a CD4 test (and results available) during the 6 months
1	1630	(Y) N	Y (N)	(Y) N
2	1593	(Y) N	Y (N)	Y (N)
3	3305	(Y) N	Y (N)	Y (N)
4		Y N	Y N	Y N
5		Y N	Y N	Y N
6		Y N	Y N	Y N
7		Y N	Y N	Y N
8		Y N	Y N	Y N
9		Y N	Y N	Y N
10		Y N	Y N	Y N
Sum Y (Num)		3	0	1
Sum Y+N (Den)		3	3	3
Y/(Y+N)*100%		100%	0%	33%

QI Indicator Ref:	N/A	1.1	1.2

KHQIF Operational Manual **Appendix 8 HIV QI Indicators Summary Report**

Facility Name: Amani H/C **MFL Code:** 1 |2 |3 |4 | 5 | **County:** Jimbo

Review Period: July 2013 **to** Dec 2013 **Date Report Submitted**: 30 / 01 / 2014

Instructions: Enter the numerator/denominator/% for every indicator you assessed using the abstraction tool. If multiple pages of the abstraction tool were used, then sum the total across each abstraction sheet in the summary report.

Where to store: Keep a copy in your WIT folder/file to compare performance to other 6monthly QI indicator reviews.

Where to submit: Submit to your Facility QIT or designee per facility instructions.

SN	Performance measure	Numerator	Denominator	%
Adult Care and Treatment				
1.1	% patients in care with 2 or more visits, 3 months apart during the 6 months review period	**0**	**3**	**0%**
1.2	% of HIV infected patients in care with at least one CD4 count during the 6 month review period	**1**	**3**	**33%**
1.3	% eligible patients initiated on ART			

Figure 17: Example of QI Indicator Summary Report (OM Appendix 8).

This report will also contain EMTCT and other QI indicators.

Section 8

SOP: HIV QI Indicator Register Review

Step 1. Define the time period for performance measurement

The data collection exercise should involve different time periods— monthly and quarterly —to complement the big round of data collection of January to June and July to December of each year namely;. Unlike adult and pediatric care and treatment indicators, registers are the main source for EMTCT indicators. Therefore, at the facility level, the registers should be reviewed on regularly (monthly) and aggregated every 6 months using the EMTCT Register Review Abstraction Tool. (Appendix 7d)

The data sources for the different patient groups are below.

	EMTCT	HEI
Data source	• ANC Register • Maternity Register • Maternity Files (Partographs) • Postnatal Register • PMTCT patient files	• HIV Exposed infants Register • HEI Card

Note: Indicator 3.7 and 3.8 are based on PMTCT patient files.

- These should be assessed using the EMTCT File Review abstraction tool (Appendix 7c)
- Use a sampling method as per the Care and Treatment SOP, whereby a representative sample is reviewed every 6 months and reported on the Summary Report (Appendix 8).

Step 2. Define the eligible population

The eligible population is determined by the service delivery area under review. In this case, where, the main data source is the register, all patient encounters may be assessed. Again, for indicator 3.7 and 3.8, use the file abstraction tool for EMTCT and follow the Section 7 – SOP File Review.

Some estimates may need to be set in collaboration with the facility QIT and sub-county/county QIT. However, these may already have been done through the annual work plan process. In particular, the denominators of indicators 3.1, 3.2, 3.4, 3.12 (See Appendix 6 HIV QI Indicator list.) They will also be required to know the county/sub-county HIV prevalence so as to enable calculation of the expected number of pregnant women in the facility catchment population.

- Depending on the review period, annual estimates need to be adjusted.
- If the data review period is 1 month, the expected number of pregnant women in the facility catchment population per year will need to be divided by 12
- If the data review period is quarterly, divide the annual estimate by 4
- If 6 monthly, divide annual estimate by 2

Example of calculating denominators:

- Expected number of pregnant women in the facility catchment population is 6072 p.a
- County HIV prevalence is 5.8%
- Calculate the denominators for indicators 3.1 and 3.12 for the following time periods

SN	Indicator	Denominator definition	Annual	6 months	Quaterly	Monthly
3.1	% of pregnanant women attending at 4th ANC visit	Number of expected pregnant women in the facility catchment population during the review period. (Source AWP planning data)	6072	3036	1518	506
3.12	% HIV exposed mother-baby pair (0-18 months) in active care among population estimate	Expected number of HIV exposed infants between 0 and 18 months in the facility catchment area. (Source AWP planning data - expected number of deliveries in facility catchment area in 1 year x County ANC HIV prevalence x 2	704	352	176	59

Step 3. Data collection/abstraction

In most cases data collection will be manual, unless the facility has an EMR with all required registers included.

a) Use the EMTCT Register Review Abstraction Tool (Appendix 7d).
b) Fill in the review period in top right corner.
c) Every month use the relevant register for each service area and calculate the numerator and denominator based on the definition. Sources vary depending on the indicator.
d) Each month ensure data is used to inform QI projects and PDSA cycle.

EMTCT REGISTER KHQIF/OM: **Appendix 7d EMTCT Register Review Abstraction Tool**

INSTRUCTIONS: For every indicator, calculate the numerator, denominator, and % based on the definition. Sources vary depending on the indicator. Transfer the total num/den/% values to your QI Indicator Summary Report (Appendix 8) at the end of 6 months.

Review Period: From _____ to _____

SN	Key	Numerator/Denominator Definition	Month/Year __/__	Month/Year __/__	Month/Year __/__	Month/Year __/__	Month/Year __/__	Month/Year __/__	Total
3.1	Num	Number of pregnant women attending fourth ANC Visit during the review period (Source: ANC Register column (d) Number of ANC visits = 4)							
	Den	Number of expected pregnant women in the facility catchment population during the review period (Source: AWP planning data)							
	%	**% of pregnant women attending fourth ANC visit**	%	%	%	%	%	%	

3.2	Num	Number of women delivered in the facility during the review period (Source: Maternity register: sum of all women delivering in the facility within the review period)																			
	Den	Number of expected deliveries in the facility catchment population during the review period (Source: AWP planning data)																			
	%	**% of skilled deliveries within the facility catchment population**	**%**	**%**	**%**	**%**	**%**	**%**	**%**												
3.3	Num	Number of deliveries with partographs accurately filled during the review period (Source: Maternity file reviews)																			
	Den	Number of deliveries in the facility during the review period (Source: Maternity register)																			
	%	**% of deliveries with accurately filled partographs**	**%**	**%**	**%**	**%**	**%**	**%**	**%**												

Figure 18: Illustrative Examples of Indicator Calculations by Register/Indicator:

For ANC Register:

Ministry of Health — Antenatal Care Register — MOH 405 — *Page 1*

Date of visit	Antenatal clinic number	First visit (Y)	Number of visits	Full names	Village/Estate	Age	Marital status	Parity	GRavidae	Date of Last Menstrual Period (LMP) *dd/mm/yy*	Expected Date of Delivery (EDD) *dd/mm/yy*	Gestation in weeks	Weight in kg	Blood Pressure	Counselled on.... (codes)	Labortory: Heamolgobin	Labortory: RPR/VDRL	Labortory: HIV results: Initial	Labortory: HIV results: Retest Y/N	ART eligibility: Assessed through? P/n/KPU	ART eligibility: Assessed through? P/N/NA	ART eligibility: WHO stage *(stage)*	ART eligibility: CD4	Start on ART in ANC *Date*
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)	(w)		

Ministry of Health — Antenatal Care Register — MOH 405 — *Page 2*

Prophylaxis: CTX (Y/N)	Prophylaxis: Dispensed ARVs: Mother M/P (Y/N)	Prophylaxis: Dispensed ARVs: Mother AZT (Y/N)	Prophylaxis: Dispensed ARVs: Mother HAART (codes)	Prophylaxis: Dispensed ARVs (Y/N)	TB Status	Cervical cancer PAP (VIA)	1=Hypertension 2=Diabetes 3=Epilepsy 4= Malaria in pregnancy 5=STIs/RTI 6= Others (Specify)	Treatment: Deworming (Y/N)	Treatment: IPT 1-3 1,2,3, NA	Treatment: TT Dose 1 to 5	Treatment: Iron (Y/N)	Treatment: Folic Acid (Y/N)	Received ITN (Y/N)	Additional treatment 1=Hypertension 2=Diabetes 3=Epilepsy 4= Malaria in pregnancy 5=STIs/RTI 6= Others (Specify)	Partner HIV C&T: Councelled as a couple	Partner HIV C&T: Test results of partner (P/N/U/KP)	Referred for ..... Write in	Remarks
(x)	(y)	(z)	(aa)	(ab)	(ac)	(ad)	(ae)	(af)	(ag)	(ah)	(ai)	(aj)	(ak)	(al)	(am)	(an)	(ao)	(ap)

Indicator 3.1: % of pregnant women attending fourth ANC visit

a) Count all the number of pregnant women attending the 4th ANC visit within the review period to arrive at the numerator (i.e., the total number of women who attended 4th ANC visit within the review period. Check visit dates in column (a) and complement with number of visits in column (d).

b) If the data review period is 1 month, the expected number of pregnant women in the facility catchment population per year will need to be divided by 12.This will give you the denominator.

Note: It is unlikely to have duplicates at this level since the ANC register is longitudinal. However, the Focused Antenatal Care (FANC) visits are only counted from 1 to 4 per patient.

c) Transfer the numerator and denominator values to your EMTCT Register Review Abstraction Tool. Divide the numerator by the denominator and multiply the answer by 100 to get the percentage of expected number of women attending 4th ANC visit within the review period.

For Maternity Register:

Ministry of Health				Maternity Register				MOH 333												*Page 1*
												Delivery								
Admission number	Date of admission	No. of ANC visits	Full Names	Village/ Estate	Age	Marital status	Parity	Gravidae	Date of last men-trual period (LMP)	Ex-pected date of delivery	Diagnosis	Duration of labour	Date of delivery	Tired delivery	Gestation at birth (*wks*)	Mode of delivery	Pacenta complete (*Y/N*)	Blood loss (*in mls*)	Condition after delivery (*A/D*)	Other delivery com-plications (*Codes*)
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)

Ministry of Health				Maternity Register			MOH 333										*Page 2*
Baby					HIV status		ARV Prophylaxis					Partner HIV C&T			Discharge		
Sex (M/F)	Birth Weight (*in grams*)	Live birth *FSB, MSB*	APGAR score	VDRL RPR Results (P/N)	ANC (*Drug Code*)	Maternity (*Drug Code*)	ANC (Drug Code)	To baby codes	To baby	CTX to mother (*Y/N*)	Vitamin A (*Y/N*)	Tested	HIV test results	Deivery conducted by (Enter Name)	Birth notification	Date (*dd/mm/yy*)	Status of baby (*Dead/Alive*)	Comments
(v)	(w)	(x)	(y)	(z)	(aa)	(ab)	(ac)	(ad)	(ae)	(af)	(ag)	(ah)	(ai)	(aj)	(ak)	(al)	(am)	(an)

Indicator 3.2: % of skilled deliveries within the facility catchment population

a) Count all the number of expectant women with a diagnosis at delivery within the review period to arrive at the numerator (i.e. the total number of pregnant women with diagnosis e.g. ceaserian section or spontenious vaginal delivery within the review period. Check visit dates and compliment with delivery in columns (b) and (n) respectively).

b) If the data review period is 1 month, the expected number of skilled deliveries in the facility catchment population per year will need to be divided by 12. This will give you the denominator.

c) Transfer the numerator and denominator values to your EMTCT Register Review Abstraction Tool and divide the numerator by the denominator then multiply by 100% to get the number of women delivered by skilled health workers, in the facility catchment population within the review period.

At the end of the 6-month review period, total the num/den/% for the 6 months and transfer to the HIV QI Indicator Summary Report (Appendix 8).

KHQIF Operational Manual		**Appendix 8 HIV QI Indicators Summary Report**		
SN	**Performance measure**	**Numerator**	**Denominator**	**%**
EMCTC				
3.1	% of pregnant women attending 4th ANC visit			
3.2	% ofskilled deliveries within the facility catchment population			
3.3	% of deliveries with accurately filled partographs			

Appendix 1: Organizational Assessment Tool

Purpose

Sustained improvement requires attention to the organizational Quality Management Program (QMP), in which structures, processes and functions support measurement and improvement activities. Development, implementation and spread of sustainable QI requires an organizational commitment to quality management. Organizational structure is fundamental to QI success, and involves a receptive health care organization, sustained leadership, staff training and support, time for teams to meet, and data systems for tracking outcomes. This structure supports quality initiatives that apply process improvement including: reliable measurement, root cause analysis and finding solutions for the most important causes identified.

Implementation

The OA is implemented in two ways: 1) by an expert QI coach or 2) as a self-evaluation. Before beginning the assessment process the reviewer should identify the entity that is being assessed; the entire organization (hospital, health center) or a subset of the organization (the HIV/AIDS Program). The team that is brought together for the assessment should reflect the entity being assessed.

The leader should be identified as the leader for the entire organization or for the smaller program being assessed.

For small centers with few staff, a formal committee or project team may not be necessary to complete the functions described in this assessment. In these organizations, the entire staff should be considered the “committee” or the “team” that is involved in improvement activities.

Scoring

Whether performed by a QI coach or applied as a self-evaluation, key leadership and staff should be involved in the assessment process to ensure that all key stakeholders have an opportunity to provide important information related to the scoring. This assessment identifies the important elements associated with a sustainable QMP. Scores from 0 to 5 are defined to identify gaps in the QMP and to set organizational improvement priorities. The scoring structure evaluates program performance in specific domains along the spectrum of improvement implementation. When assigning a score of 0 to 5 for individual components, select the number that most accurately reflects achievement in that area. **You must meet all of the elements associated with a particular number in order to receive that score.** If all of the boxes are not checked within one particular score section, then the score should be the number preceding that one. To score “2” for example, each box for the elements corresponding to that score section must be checked. If there is any uncertainty in assessing whether performance is closer to the statement in the next higher or next lower range, choose the lower score. Applied annually, this assessment will help a program evaluate its progress and guide the development of goals and objectives. Note that you may decide to check boxes for criteria in some of the higher scores and use that information to address gaps in the program that will help you meet the higher score.

Results

The results are ideally used to develop a workplan for each element with specific action steps and timelines guiding the planning process: to focus on priorities, set direction and ensure

that resources are allocated for the QMP. Results of the OA should be communicated to internal key stakeholders, leadership and staff. Engagement of organizational leadership and staff is critical to ensure buy-in across departments, and essential for translating results into improvement practice.
Improvement activities should be aligned with National Quality Management strategies and frameworks, where applicable.

Please note: before applying the OA, it is important to determine the scope of the program for which this tool will be used. For example, is it the HIV program only or the entire institution? Does the "leader" represent the entire organization or is it limited to a specific program? These decisions will inform the context for each domain.

A. Quality Management

GOAL: To assess how the organizational Quality Management Plan supports a systematic process with identified leadership, accountability and dedicated resources.
Three components form the backbone of a strong sustainable QMP: Leadership, Quality Planning and a Quality Committee.

Leadership

Senior leadership staff are defined by each organization since titles and roles vary among organizations. Clinical programs should include a clinical leader and an administrative leader. Larger programs may include additional leadership positions. There may be other informal leaders in the organization that support quality activities, but these are not included in this section. When reviewing the criteria for each score, consider the clinical or administrative leader who is responsible for the quality management program or is most closely associated with it if there is no one officially designated for this function. Ideally, this person should be a hospital or health center senior leader who has the authority to convene committees and approve actions that are important to implement the quality management program.

Leaders establish a unity of purpose and direction for the organization and work to engage all staff, patients and external stakeholders in meeting organizational goals and objectives, this includes motivation that promotes shared responsibility and accountability with a focus on teamwork and individual performance. Organizational leaders should prioritize quality goals and improvement initiatives for the year, and establish accountability for performance at all organizational levels. The benefits of strong leadership include clear communication of goals and objectives, where evaluation, alignment and implementation of activities are fully integrated.

Evidence of leadership support and engagement includes establishment of clear goals and objectives, communication of program/organizational vision, creating and sustaining shared values, and providing resources for implementation.

Quality Committee

A quality committee drives implementation of the quality plan and provides high-level comprehensive oversight of the quality program. This involves reviewing performance measures, developing workplans, chartering project teams and overseeing progress. Teams should be multidisciplinary and include a patient when feasible. The committee

should meet monthly, document their activities and share meeting notes with committee members and other organizational staff and key stakeholders. For smaller organizations, the entire staff may be the QI committee and should be considered in that way since they perform all of the functions of the Quality Management Program.

Quality Plan

A quality management plan documents programmatic structure and annual quality program goals. The quality plan should serve as a roadmap to guide improvement efforts, and include a corresponding workplan to track activities, monitor progress and signify achievement of milestones.

A.1. To what extent does senior leadership create an environment that supports a focus on improving the quality of care in the organization?		
Getting Started	0	☐ Senior leaders are not visibly engaged in the quality of care program
Planning and initiation	1	Leaders are: ☐ Primarily focused only on reporting requirements ☐ Inconsistent in use of data to identify opportunities for improvement ☐ Not involved in improvement efforts ☐ Not involved in quality meetings ☐ Not supporting provision of resources for QI activities, including dedicated time for improvement
Beginning implementation	2	Leaders are: ☐ Engaged in quality of care with focus on use of data to identify opportunities for improvement ☐ Somewhat involved in improvement efforts ☐ Somewhat involved in quality meetings ☐ Supporting resources for QI activities but not yet at optimal levels to support improvement

Implementation	3	Leaders are: ☐ Providing routine leadership to support the quality management program ☐ Providing routine and consistent allocation of staff or staff time for QI (depending on organization size) ☐ Engaged in QI planning and evaluation ☐ Managing/leading quality committee meetings ☐ Clearly communicating quality goals and objectives to all staff ☐ Recognizing and supporting staff involved in QI ☐ Routinely reviewing performance measures and patient outcomes to inform program priorities and data use for improvement. ☐ Attentive to national health care trends/priorities that pertain to the program
Progress toward systematic approach to quality	4	Leaders are: ☐ Supporting development of a culture of QI across the program through provision of resources for staff participation in QI learning opportunities, seminars, professional conferences, and development of QI story boards. ☐ Supporting prioritization of quality goals based on data, and critical areas of care ☐ Promoting patient-centered care and patient involvement through the QMP ☐ Routinely engaged in QI planning and evaluation ☐ Routinely providing input and feedback to QI teams
Full systematic approach to quality management in place	5	Leaders are: ☐ Actively engaged in the implementation and shaping of a culture of QI across the program through the provision of resources for staff participation in QI learning opportunities, seminars, professional conferences, QI story boards ☐ Encouraging open communication about improvement measurement through routine team meetings and dedicated time for staff feedback ☐ Actively and consistently engaged in QI planning and evaluation ☐ Actively and consistently providing input and feedback to QI teams ☐ Visibly communicating to the entire organization about improvement work, performance measurement and priorities for quality goals ☐ Encouraging staff innovation through QI awards and incentives ☐ Directly linking QI activities back to institutional strategic plans and initiatives
Opportunities/Gaps:		

A.2. To what extent does the organizational program have an effective quality committee to oversee, guide, assess, and improve the quality of services?		
Getting Started	0	☐ A quality plan, including elements necessary to guide the administration of a quality program has not been developed
Planning and initiation	1	<u>The quality plan:</u> ☐ Is written but does not include the essential components necessary to direct an effective quality program (see level 3)
Beginning Implementation	2	<u>The quality plan:</u> ☐ Is written for the HIV program only, and contains some of the essential components (see level 3) ☐ Is under review for approval by senior leadership, and includes steps for implementation ☐ Includes a designated point of contact to manage QM program communication within the organization and with the national program
Implementation	3	<u>The quality plan:</u> ☐ Is complete, defining all essential QI components. This includes goals and objectives, quality committee roles, responsibilities and logistics, performance measurement and review processes, annual goal identification and prioritization processes, QI methodology, communication strategy, patient involvement, and a program evaluation procedure. ☐ Includes a workplan/timeline outlining key activities of the quality program and improvement initiatives, including individuals accountable for each. The timeline is reviewed regularly by the quality committee and modified as necessary to achieve the identified goals. ☐ Includes an organogram visually depicting the organizational quality management structure

Progress toward systematic approach to quality	4	<u>The quality plan:</u> ☐ Has been implemented and regularly used by the quality committee to direct the quality program ☐ Includes annual goals identified based on data generated through internal and external reviews, and engagement of the quality committee and staff to elicit priorities ☐ Includes a workplan/timeline outlining key activities in place and routinely used to track progress of performance measures and improvement initiatives, and is modified as needed to achieve annual goals ☐ Is routinely communicated to most stakeholders, including staff, patients, board members and the parent organizations, if appropriate ☐ Is evaluated annually by the quality committee to ensure that the needs of all stakeholders are met
Full systematic approach to quality management in place	5	<u>The quality plan:</u> ☐ Is written, implemented and regularly utilized by the quality committee to direct the quality program and includes all necessary components (see level 3) ☐ Includes regularly updated annual goals that were identified by the quality committee using data based on internal performance measures and externally required indicators through engagement of the quality committee and staff to identify priorities for improvement ☐ Includes the workplan/timeline outlining key activities in place ☐ Is routinely used to track progress on performance measures and improvement initiatives, and modified as needed to achieve annual goals ☐ Is communicated broadly to all stakeholders, including separate staff, patients, board members and the parent organizations, as appropriate ☐ Is evaluated annually by the quality committee and revised as needed to ensure that the needs of all stakeholders are met. ☐ Is adapted to changes in national policies and to ensure that the program continues to meet the changing needs of the patient as the evidence base and guidelines evolve
Opportunity/Gaps		

B. Workforce Engagement in the quality program

GOAL: To assess awareness, interest and engagement of staff in quality improvement activities.

Staff engagement in the quality management program at all organizational levels is central to the success of improvement activities. Engagement includes development and promotion of staff knowledge around organizational systems and processes to build sustainable quality management programs, such as internal management processes, operational challenges, patient interaction, and successful strategies and barriers to QI implementation.

Ongoing training and retraining in QI methodology and practical skills reinforces knowledge and the building of workforce expertise around improvement. As staff progress along the continuum of QI sophistication, improvement is slowly integrated into routine work and practice, enhancing staff engagement in the process. Immediate access to improvement data for example, empowers staff to focus on key areas of care and build consensus around QI activities to improve patient outcomes.

As QI becomes part of the institutional culture and team work progresses, staff embrace their respective roles and responsibilities, acquiring a sense of ownership and deeper involvement in improvement work.

B.1. To what extent are clinicians and staff routinely engaged in quality improvement activities and provided training to enhance knowledge, skills and methodology needed to fully implement QI work on an ongoing basis?

Getting Started	0	☐ All of the staff (clinical and non-clinical) are not routinely engaged in QI activities and are not provided training to enhance skills, knowledge, theory or methodology or encouragement to identify opportunities for improvement and develop effective solutions
Planning and initiation	1	<u>Engagement of core staff in QI (clinical and non-clinical):</u> ☐ Is under development and includes training in QI methods and opportunities to attend meetings where QI projects are discussed
Beginning Implementation	2	<u>Engagement of core staff in QI (clinical and non-clinical):</u> ☐ Is underway and some staff have been trained in QI methodology ☐ Includes QI meetings attended by some designated staff

Implementation	3	Engagement of core staff in QI (clinical and non-clinical): ☐ Includes attendance in at least one training in QI methodology. Staff members are generally aware of Program QI activities (quality plan/priorities) ☐ Includes involvement in QI projects, project selection and participation in a QI committee ☐ Includes QI project development, where projects are discussed and reviewed during staff meetings ☐ Includes defined roles and responsibilities related to QI. Clinicians and staff are aware of the organizational quality management plan and priorities for improvement. ☐ Includes a formal process for regularly recognizing staff performance in QI via performance appraisals, public recognition during staff meetings, etc.
Progress toward systematic approach to quality	4	Engagement of core staff in QI (clinical and non-clinical): ☐ Is demonstrated by evidence that staff members are engaged and encouraged to use those skills to identify QI opportunities and develop solutions ☐ Involves a shared language regarding quality, which is evidenced in routine discussion ☐ Is described in the annual quality plan, and includes staff training and roles and responsibilities regarding staff involvement in QI activities ☐ Includes a formal process for recognizing staff performance internally. QI teams are provided opportunities to present successful projects to all staff and leadership.

Full systematic approach to quality management in place	5	<u>Engagement of core staff in QI (clinical and non-clinical):</u> ☐ Is defined by staff awareness of the importance of quality and continuous improvement, and their participation in identifying QI issues, developing strategies for improvement and implementing strategies ☐ Is evidenced by regular and continuous QI education and training in QI methodology ☐ Is reinforced by leadership who encourages all staff to make needed changes and improve systems for sustainable improvement including the necessary data to support decisions ☐ Involves formal and informal discussions where teamwork is openly encouraged and leadership shapes teamwork behavior ☐ Incorporates routine communication about new developments in QI, including promotion of QI projects both internally (e.g., quality conferences) and externally (e.g., national meetings) ☐ Includes a formal process for recognizing staff performance internally. QI teams are provided opportunities to present successful projects to all staff and leadership ☐ Includes opportunities for abstract development and submission to relevant professional conferences and authorship of related publications about development and implementation of institutional QM programs ☐ Involves clearly defined roles and responsibilities which are utilized to assess staff performance
Opportunity/Gaps		

C. Measurement, Analysis and Use of Data to Improve Program Performance

GOAL: To assess how the organization uses data and information to identify opportunities for improvement, develops measures to evaluate the success of change initiatives, aligns initiatives with national priorities, and monitors results; and to ensure that accurate, timely data and information are available to stakeholders throughout the organization to drive effective decision making.

The Measurement, Analysis and Use of Data section assesses how the organizational program selects, gathers, analyzes and uses data to improve performance. This includes how leaders conduct performance reviews to ensure that actions are taken, when appropriate, to achieve the organization's program goals.

C.1. To what extent does the organization routinely measure performance and use data for improvement?

Getting Started	0	<u>Performance measures:</u> ☐ Have not been identified
Planning and initiation	1	<u>Performance measures:</u> ☐ Have been identified to evaluate some components of the organization's program, but do not cover all significant aspects of service delivery
		<u>Performance data:</u> ☐ Collection is planned but has not been initiated
Beginning Implementation	2	<u>Performance measures:</u> ☐ Are defined and used by staff in all applicable service delivery areas
		<u>Performance data:</u> ☐ Analysis and interpretation of results on measures is in early stages of development and use ☐ Results are occasionally shared with staff and patients, but a structured process is not in place

Implementation	3	Performance measures: ☐ Are defined by the Ministry of Health or donor partner ☐ Are consistently used by staff in all applicable service delivery areas
		Performance data: ☐ Are longitudinally tracked, analyzed and reviewed with the frequency required to identify areas in need of improvement. A structured review process is used regularly by the leadership to identify and prioritize improvement needs and initiate action plans to ensure that goals are achieved. ☐ Are collected by staff with working knowledge of indicator definitions and their application ☐ Results and associated measures are routinely shared with staff and their input is elicited to make improvements ☐ Clinic has a process for checking the accuracy of its data occasionally but not systematically
Progress toward systematic approach to quality	4	Performance measures: ☐ Are tied to organizational goals and priorities ☐ Are defined and consistently used by staff in all applicable departments
		Performance data: ☐ Are reviewed for accuracy on all measures in all departments ☐ Are actively used to drive improvement activities ☐ Results and associated measures are frequently shared with staff to elicit their input and engage them in improvement processes aligned with organizational goals
Full systematic approach to quality management in place	5	Performance measures: ☐ Are selected using national/donor partner measures and organizational annual goals, with the intent to meet Ministry of Health requirements and the needs of stakeholders and patients ☐ Reflect organizational and patient priorities, in consideration of organizational & local issues ☐ Are defined for key component ☐ Are evaluated regularly to ensure that the program is able to respond effectively to internal and external changes quickly. ☐ Are linked to performance of key clinical outcomes

		Performance data: ☐ Are reviewed for accuracy on all measures in all applicable departments ☐ Visible or easily accessible to ensure data reporting transparency throughout the organization ☐ Are arrayed in formats that enable accurate interpretation, such as run charts or simple bar graphs ☐ Results and associated measures are systematically shared with all key stakeholders, including staff and patients ☐ Are systematically reviewed through a Formal Data Quality Assurance program
Opportunity/Gaps		

D. Quality Improvement Initiatives

GOAL: To evaluate how the organization uses QI methodology and teamwork to achieve program goals and maintain high levels of performance over long periods of time.

The Quality Improvement Initiatives section examines how leadership and workforce use these methods and tools to conduct improvement initiatives with emphasis on identification of the exact causes of problems and designing effective solutions; determining program specific best practices and sustaining improvement over long periods of time. In high reliability organizations, robust process improvement methodology is routinely utilized for all identified problems and improvement opportunities to ensure consistency in approach by all staff members.

D.1. To what extent does the organization identify and conduct quality improvement initiatives using QI methodology to ensure high levels of performance over long periods of time?

Getting Started	0	☐ Formal quality improvement projects have not yet been initiated in the organizational program
Planning and initiation	1	QI initiatives: ☐ Focus on individual cases without assessment of organizational performance or system level analysis of data. Reviews primarily used for inspection. ☐ Are not team-based ☐ Do not use specific tools or methodology to understand causes and make effective changes

Beginning Implementation	2	QI initiatives: ☐ Are prioritized by the quality committee based on program goals, objectives and analysis of performance measurement data ☐ Involve team leaders and team members who are assigned by the quality committee or other leadership ☐ Begin to use specific tools or methodology to understand causes and make effective changes
Implementation	3	QI initiatives: ☐ Are ongoing based on analysis of performance data and other program information, including external reviews and assessments ☐ Focus on processes of care in which QI methodology is routinely utilized ☐ Are regularly documented and provided to the Quality Improvement Committee ☐ Involve staff on QI teams. Cross departmental/cross functional teams are developed depending on specific project needs. This would include laboratory, administrative and pharmacy staff where relevant.
Progress toward systematic approach to quality	4	QI initiatives: ☐ Are ongoing based on analysis of performance data and other program information, including external agency reviews and assessments ☐ Can be identified by any member of the program team through direct communication with program leadership ☐ Routinely and consistently reinforce and promote a culture of quality improvement throughout the program through shared accountability and responsibility of identified improvement priorities ☐ Are supported with appropriate resources, including people and time, to achieve effective and sustainable results ☐ Involve support of data collection with results routinely reported to QI project teams

Full systematic approach to quality management in place	5	QI initiatives: ☐ Are ongoing in core service categories ☐ Correspond with a structured process for prioritization based on analysis of performance data and other factors, such as patient surveys ☐ Are implemented by project teams. Further, physicians and staff can identify an improvement opportunity at any point in time and suggest a QI team be initiated ☐ Consistently and routinely utilize robust process improvement and multidisciplinary teams to identify actual causes of variation and apply effective, sustainable solutions ☐ Are guided by a team leader, and include all relevant staff depending on specific project needs ☐ Are regularly communicated to the Quality Committee, staff and patients ☐ Routinely involve patients on QI project teams ☐ Are presented in storyboard context or other formats and reported to the larger organization and/or placed in public areas for staff and patients (if relevant) ☐ Involve recognition of successful teamwork by senior leadership ☐ Are supported by development of sustainability or "spread" plans
Opportunity/Gaps		

E. Patient Involvement

GOAL: This section assesses the extent to which patient involvement is formally integrated into the quality management program.

Patient involvement encompasses the diversity of individuals using the organization's services and can be achieved in multiple ways, including solicitation of patient perspectives through focus groups, key informant interviews and satisfaction surveys; a formal patient advisory board that is actively engaged in improvement work; including patients as members of organizational committees; conducting patient needs assessments and including patients in specific QI initiatives. Ideally patients have a venue to identify improvement concerns and are integrated into the process to find solutions and develop improvement strategies. Overall, patients are considered valued members of the program, where patient perspectives are solicited, information is used for performance improvement and feedback is provided to patients. Patient experience is considered an important dimension of quality that is considered in determining improvement priorities and included as an important component of the quality management plan.

E.1. To what extent are patients effectively engaged and involved in the HIV quality management program?		
Getting Started	0	☐ There is currently no process to involve patients in HIV quality management program activities
Planning and initiation	1	Patient involvement is demonstrated by: ☐ Occasionally soliciting patient feedback, but no formal process is in place for ongoing and systematic participation in quality management program activities
Beginning Implementation	2	Patient involvement is demonstrated by: ☐ Soliciting patient feedback, with development of a formal process for ongoing and systematic participation in quality management program activities, such as through patient satisfaction surveys
Implementation	3	Patient involvement is demonstrated by: ☐ Engagement with patients to solicit perspectives and experiences related to quality of care ☐ Formal involvement in quality management program activities through a formal patient advisory committee, satisfaction surveys, interviews, focus groups, storytelling and/or patient training/skills building. However, the extent to which patients participate in quality management program activities is not documented or assessed.
Progress toward systematic approach to quality	4	Patient involvement is demonstrated by: ☐ A formal process for patients to participate in quality management program activities, including a formal patient advisory committee, surveys, interviews, focus groups and/or patient training/skills building ☐ Three or more of the following activities: ► Sharing of performance data and discussing quality during formal patient meetings ► Membership on the internal quality management team or committee ► Training in quality management principles and methodologies ► Engagement to make recommendations based on performance data results ► Increasing documentation of how recommendations by patients are used to implement quality improvement projects ☐ Use of documented information gathered through the above activities to improve the quality of care. However, staff does not review with patients how their involvement contributes to refinements in quality improvement activities.

Full systematic approach to quality management in place	5	Patient involvement is demonstrated by: ☐ A formal, well-documented process for patients to participate in HIV quality management program activities, including a patient advisory committee with regular meetings, patient surveys, interviews, focus groups and patient training/skills building ☐ Quality improvement activities that include at least four of the items bulleted in E1#4 (second bullet) ☐ Information gathered through the above noted activities being documented, assessed and used to drive QI projects and establish priorities for improvement ☐ Review of changes by patients with program staff based on recommendations received with opportunities to offer refinements for improvements. Information is gathered in this process and used to improve the quality of care. ☐ Involvement on at least an annual basis in the review by the quality management team/committee of successes and challenges of patient involvement in quality management program activities, with the goal of enhanced collaboration between patients and providers engaged in improvement
Opportunity/Gaps		

F. Quality Program Evaluation

GOAL: To assess how the organization evaluates the extent to which it is meeting the identified program goals related to quality improvement planning, priorities and implementation.

Quality program evaluation can occur at any point during the cycle of quality activities, but should occur annually at a minimum. The process of evaluation should be linked closely to the quality plan goals: to assess what worked and what did not, to determine ongoing improvement needs and to facilitate planning for the upcoming year. The evaluation examines the methodology, infrastructure and processes, and assesses whether or not these led to expected improvements and desired outcomes. At a minimum, the evaluation should assess access to data to drive improvements, success of QI project teams, and effectiveness of quality structure. The evaluation is most effectively performed by program leadership and the program's quality committee, optimally with some degree of patient involvement. Although external evaluations may be useful by peers or formal evaluators, the purpose of this assessment is focused on internal routine evaluation of the quality management program.

F.1. Is a process in place to evaluate the organization's quality management plan and related activities, and processes and systems to ensure attainment of quality goals, objective and outcomes?		
Getting Started	0	No formal process is established to evaluate the quality program
Planning and initiation	1	Quality program evaluation: ☐ To assess program processes and systems is exclusively external (national/donors/partners)
Beginning Implementation	2	Quality program evaluation: ☐ Is part of a formal process and is integrated into annual quality management plan development, but has not been consistently employed
Implementation	3	Quality program evaluation: ☐ Occurs annually, conducted by the quality committee, and includes QM plan and workplan updates and revisions ☐ Involves annual (at minimum) revision of quality goals and objectives to reflect current improvement needs ☐ Results are used to plan for future quality efforts ☐ Includes a summary of improvements and performance measurement trends to document and assess the success of QI projects ☐ Results, noted above, are shared with patients and other key stakeholders
Progress toward systematic approach to quality	4	Quality program evaluation: ☐ In addition to the elements listed in F1.3, findings are integrated into the annual quality plan and used to develop and revise program priorities ☐ Is reviewed during quality committee meetings to assess progress toward planning goals and objectives ☐ Includes review of performance data, which is used to inform decisions about potential changes to measures ☐ Is used to determine new performance measures based on new priorities if they are identified ☐ Includes analysis of QI interventions to inform changes in program policies and procedures to support sustainability

Full systematic approach to quality management in place	5	Quality program evaluation: ☐ In addition to the elements listed in F.1. 3 and 4, findings are integrated into routine program activities as part of a systematic process for assessing quality activities, outcomes and progress toward goals. Data and information from the evaluation are provided regularly to the quality committee. ☐ Is used by the quality committee to regularly assess the success of QI project work, successful interventions and other markers of improved care ☐ Includes data reflecting improvement initiatives, and is presented to ensure comprehensive analysis of all quality activities ☐ Uses a detailed assessment process. The results of this assessment are utilized to revise and update the annual quality plan; adjust organizational program priorities; and identify gaps in the program. ☐ Includes an analysis of progress towards goals and objectives and QI program successes and accomplishments ☐ Describes performance measurement trends which are used to inform future quality efforts
Opportunity/Gaps		

G. Achievement of outcomes

GOAL: To assess HIV program capability for achieving excellent results and outcomes in areas that are central to providing high quality HIV care.

To determine whether a program is achieving excellence in HIV care, a system for monitoring and assessing clinical outcomes should be in place. This system should include routine analysis of an appropriate set of measures; trending results over time; stratifying data by high-prevalence populations; and comparison of results to a larger aggregate data set* used for programmatic target setting. A set of appropriate measures may be externally developed (national government, PEPFAR, WHO/UNAIDS) and/or internally developed based on program goals. Examples of outcome measures include viral load suppression, retention in care, mother-to-child transmission rates, and late diagnosis of HIV as measured by either CD4<200 or AIDS diagnosis at time of testing. At least one of these measures should be incorporated into the program's set of clinical measures.

*Possible data sets for comparison include national, provincial or partner network data sets.

G.1. To what extent does the HIV program monitor patient outcomes and utilize data to improve patient care?		
Getting Started	0	☐ No clinical performance results are routinely reviewed or used to monitor patient outcomes and guide improvement activities
Planning and initiation	1	Data: ☐ A clinical database is used to routinely measure performance of care (EMR, database, register) ☐ Some measures are routinely reviewed and used to guide improvement activities ☐ Trends for some measures are reported to determine improvement over time
Beginning Implementation	2	Data: ☐ Results for most measures are routinely reviewed and used to guide improvement activities ☐ Trends for most measures are reported and many show improving trends over time
Implementation	3	Data: ☐ A listing of active patients is maintained and refreshed at least annually to remove those who have died, transferred or are lost to follow-up according to national definitions ☐ Results for all measures are routinely reviewed and used to guide improvement activities, including one of the following: viral load suppression (CD4 may be used as a proxy if viral load is not available), retention in care, late diagnosis, MTCT transmission rate ☐ Trends for all measures are reported and many show improving trends over time ☐ Results are compared to a larger aggregate data set for at least one outcome measure (see above) ☐ Comparison to a larger aggregate data set is used to set programmatic targets
Progress toward systematic approach to quality	4	Data: ☐ Results for all measures are routinely reviewed and used to guide improvement activities, including outcome measures ☐ Trends are reported for all measures and most show improving trends over time ☐ Results are compared to a larger aggregate data set for two outcome measures ☐ Comparison to a larger aggregate data set is used to set improvement goals which are met for at least 50% of measures

Full systematic approach to quality management in place	5	Data: ☐ Results for all measures are routinely reviewed and used to guide improvement activities, including outcome measures ☐ Trends are reported for all measures and most show sustained improvement over time in areas of importance aligned with organizational goals ☐ Results are compared to a larger aggregate data set for all core national prioritized outcomes measures (such as retention, viral load suppression, etc) ☐ Comparison to a larger aggregate data set is used to set programmatic goals which are met for at least 75% of measures ☐ Results for outcomes measures are above the 75th percentile of the comparative data set
Opportunity/Gaps		

What are the major findings from the Organizational Assessment?

What are the key recommendations and suggestions? What specific areas should be improved? What are specific improvement goals for the upcoming year?

Organizational Quality Assessment Tool

Hospital/Clinic name……
Rater team:
( ) Administrative/Hospital committee/hospital quality team
( ) HIV coordinator team/clinic team
( ) external survey/assessment

Organization Assessment	Score					
	0	1	2	3	4	5
A. Quality management						
A.1. To what extent does senior leadership create an environment that supports a focus on improving the quality of care in the hospital?						
A.2. To what extent does the hospital program have an effective quality committee to oversee, guide, assess, and improve the quality of hospital services?						
A.3. To what degree does the hospital have a comprehensive quality plan that is actively utilized to oversee quality improvement activities?						
B. Workforce engagement in the quality program						
B.1. To what extent are clinicians and staff routinely engaged in quality improvement activities and provided training to enhance knowledge, skills and methodology needed to fully implement QI work on an ongoing basis?						
C. Measurement, analysis and use of data to improve program performance						
C.1. To what extent does the Hospital routinely measure performance and use data for improvement?						
D. Quality improvement initiatives						
D.1. To what extent does the hospital identify and conduct quality improvement initiatives using QI methodology to assure high levels of performance over long periods of time?						
E. Patient involvement						
E.1. To what extent are patients effectively engaged and involved in the HIV quality management program?						
F. Quality program evaluation						

Organization Assessment	Score					
F.1. Is a process in place to evaluate the hospital's QMP and related activities, and processes and systems to ensure attainment of quality goals, objective and outcomes?						
G. Achievement of outcomes						
G.1. To what extent does the HIV program monitor patient outcomes and utilize data to improve patient care?						

Appendix 2: QI Meeting Template

Facility Name:
WIT Section:
Meeting Date:

Members present:
Apologies:

Agenda: (Sample)

1. Review previous meeting minutes
2. Report on action items
3. Discuss current performance data and QI projects progress.
4. Way forward
5. AOB

Main points of discussion:

Next steps/Action items:

SN	Action Item	Person Responsible	Due by:

Share Updated Team meeting notes with all members of team after each meeting and keep a copy in your WIT folder/file.

Appendix 3: QI Project Checklist

Instructions: WIT/QI teams may use the checklist below for tracking progress in the course of implementing a QI project. Not every QI cycle will necessarily include every step.

Phases	Steps/Actions in QI	Date completed	Tools or resources to support
All	Hold meetings at least once a month		OM Appendix 2: QI Meeting Template
All	Regular performance measurement and review of data (ongoing)		KHQIF Chapter 3 Performance Measurement; OM Section 7/8: QI File/ Register Review SOP
Plan	Identification of the problem that needs improvement made (problem statement)		OM Section 3: PDSA SOP OM Section 5: QI Tools Decision Matrix
Plan	Problem statement and Goal written		OM Section 3: PDSA SOP
Plan	Causes of problem identified (Flow chart, 5-Whys, Fishbone)		OM Section 5: QI Tools 5-Whys, Fishbone, Flow Chart, Data graphs
Plan	Change package/Interventions developed		OM Section 6: Change package
Plan/ Study	Appropriate indicators chosen to measure intervention and performance measurement plan developed?		KHQIF Chapter 3: Performance Measurement
Plan	Workplan developed for implementation of the change package?		OM Section 3: PDSA SOP
Do	Intervention/Change implemented and data collection		OM Section 3: PDSA SOP
Study	Review, analyze and discuss data		OM Section 3: PDSA SOP OM Section 5: QI Tools
Act	Identify if changes need to be implemented/institutionalized		OM Section 3: PDSA SOP
Maintenance	Improvements monitored / sustained		OM Section 3: PDSA SOP - Maintenance KHQIF Chapter 5: Implementation
Maintenance	Project presentation delivered to QIT or in learning sessions		OM Section 3: PDSA SOP - Maintenance
Reporting	Facility QI Report submitted to QIT every 6 months		OM Appendix 5: Facility Project Report
Reporting	HIV QI Indicators report submitted to QIT/County every 6 months		OM Appendix 8: HIV QI Indicator Summary Report

Appendix 4 : WIT QI Project Template

Instructions:

Who/What: Team lead or designee should fill in one template for every QI project cycle undertaken by the WIT at your facility. This may also serve as an outline for a power point presentation or dissemination of results

Where to store: In your departmental Work Improvement Team (WIT) folders/file.

Reporting/ Feedback: The facility QIT lead should review and provide feedback on the completed summary.

Facility Name: _____ Facility MFL Code: _____

County: _____ Sub County: _____

Submitted by: _____ Date of submission: _____

Project Title:		
Project Team Leader:		
Project Team Members:		
Problem Statement:		
Goal Statement:		
Indicator Description:		
Baseline Data: (Indicator Performance Result)	Period under review - e.g. Jan 2014 to June 2014: _____ to _____ Results:	
Plan – Describe your analysis of the process/ problem. Attach the fishbone, flowchart and/or any tool used for planning.	Fish bone diagram done? Yes No Initial Process flow chart done? Yes No Revised Process flow chart done? Yes No	

Plan – Describe the change ideas/interventions you have selected to address the problem (Attach a workplan for intervention)	Root Cause	Change Interventions Selected
Plan – Performance measurement plan. Indicators (and definition), Method for collection, frequency of collection.		
Do – Describe implementation of the change package		
Study – Describe the outcomes of the interventions (should include follow-up data using the same indicator as baseline).	Follow-up Data (Indicator Performance Result) Period under review - e.g. July 2014 to Dec 2014 : ___ to _____ Results:	
Was goal achieved?	Circle one: Yes No *If YES, continue to Act.* *If NO, explain below why your team thinks the intervention did not succeed (challenges faced) and next steps/way forward e.g. beginning a new QI Project/PDSA cycle to address the problem.*	
Act – Describe how you have institutionalized the intervention/change and how you will continue measuring the success of the institutionalized interventions over time.	• If successful, sustain and upscale • Describe any challenges faced during the process and how you managed to overcome them. • Describe the lessons learnt. • Recommendations for further actions.	

Appendix 5: Facility QI Report

Instructions:
Who/What: QIT lead or designee should fill in one worksheet for all QI project cycles undertaken at your facility in the 6 month reporting period.

Where to store: In your facility Quality Improvement Team (QIT) folders/file.

Reporting: Submit a copy of the completed report to your County QIT for the necessary further action.

Facility Name: | Facility MFL Code:

County: | Sub County:

Submitted by: | Date of submission:

Reporting period: From: | To:

Submitted by: | Date of submission:

WIT Department/Area	Issue/indicator being addressed	Change package	Current status of QI project

Appendix 6: Kenya HIV Quality Improvement Indicators
1.0 - Adult Care and Treatment Indicators

SN	Quality Area (Indicator type)	Standard	Target	Performance Measure*	Numerator	Denominator	Comments
1.1	Clinical visit (Service coverage)	HIV infected patients in care should have at least 2 Clinical visits, 3 months apart during the 6 months review period.	100%	% patients in care with 2 or more visits, 3 months apart during the 6 months review period	Number of HIV-infected patients in care and had at least two Clinical visits, 3 months apart during the 6 months review period	Number of HIV-infected patients in care with at least one HIV Clinical visit during the 6 months review period [Exclusions: new IN CARE in months 4-6, transferred out OR died in month 1)]	Patients in care includes both Pre-ART and ART patients
1.2	HIV Monitoring - CD4 (Service Coverage)	HIV infected patients in care should have a CD4 assessment every 6 months.	100%	% of HIV infected patients in care with at least one CD4 count during the 6 month review period	Number of HIV infected patients in care with at least one CD4 count (results available) during the 6 months review period	Number of HIV-infected patients in care with at least one HIV Clinical visit during the 6 months review period	If facility has access to routine VL, then they can modify this indicator to only track 6-monthly CD4s among Pre-ART patients.
1.3	ART Initiation (Quality of care)	HIV infected patients with either CD4<500, WHO Stage 3 or 4, TBcoinfection, HBVcoinfection, or in a discordant relationship should be initated on ART	100%	% eligible patients initiated on ART	Number of ART eligible patients initiated on ART during the 6 months review period	Number of HIV-infected patients who were not on ART at the beginning of the review period with at least one HIV Clinical visit during the 6 months review period who met at least one of the eligibility criteria for ART in the 6 month review period.	Criteria subject to approval of revised guidelines.
1.4	HIV Monitoring - Viral Load (coverage)	HIV infected patients on ART should have at least one viral load (VL) assessment every year	100%	% of patients on ART with at least one VL result during the last 12 months	Number of patients on ART for at least 12 months by the end of the review period with at least one VL result during the last 12 months	Number of HIV-infected patients on ART with at least one Clinical visit during the 6 months review period who have been on ART for at least 12 months by the end of the review period.	Subject to approval of VL Policy.

*Data source for all indicators is patient file (MOH 257, clinical notes)

SN	Quality Area (Indicator type)	Standard	Target	Performance Measure*	Numerator	Denominator	Comments
1.5	HIV Monitoring - Viral Load supression (outcome)	HIV infected patients should have suppressed VL after at least 12 months of being on ART.	100%	% of patients on ART for at least 6 months with VL suppression	Number of patients on ART for at least 12 months by the end of the review period who have VL < 1,000 copies on their most recent VL result	Number of patients on ART for at least 12 months by the end of the review period with at least one VL result	Subject to approval of VL Policy.
1.6	TB Screening (Service coverage)	All HIV infected patients should be screened for clinical symptoms of TB at every clinic visit.	100%	% patients screened for TB using ICF card at last clinic visit	Number of patients screened for TB at the last clinical visit using ICF card during the 6 months review period.	Number of HIV-infected patients currently NOT on anti TB treatment with at least one HIV Clinical visit during the 6 months review period.	
1.7	TB IPT (Service coverage)	HIV infected patients who screen negative using ICF card for clinical symptoms of TB should be initiated on IPT for 6 months with a 2 year interval after completing a 6 month IPT course	100%	% of patients eligible for IPT who were initiated on IPT	Number of patients with negative TB screen who have not had IPT in the past 2 years who were put on IPT	Number of patients who have not had IPT within the last 2 year, with a negative TB screen at the last clinic visit during the 6 months review period.	
1.8	Nutritional Assessment (Service coverage)	HIV positive clients should receive nutritional status assessment (BMI MUAC) at every clinic visit	100%	% of patients with Nutritional assessment at the last clinic visit	Number of patients who had a nutritional assessment (MUAC,BMI) at the last clinic visit during the 6 months review period)	Number of HIV-infected patients with at least one HIV Clinical visit during the 6 months review period	
1.9	Nutritional Support (Service coverage)	HIV positive clients who are classified as malnourished should receive nutritional support	100%	% of patients eligible for nutritional support and who received nutritional support	Number of patients who meet criteria for nutritional support who received nutritional support	Number of patients who meet the criteria for nutritional support (BMI < 18.5 in adult or MUAC< 23cm) at the last clinic visit during the 6 months review period	
1.10	Partner Testing (Service coverage)	HIV infected patients should have their partner(s) tested for HIV	100%	% of patients whose partner(s) have been tested for HIV or have known positive status	Number of HIV infected patients whose partner(s) have at least one HIV testresult during the last 12 months or have a known positive status.	Number of HIV-infected patients with at least one HIV clinic visit during the 6 months review period who have at least one partner	All partners of the client must be tested to fit the criteria (be part of the numerator).

SN	Quality Area (Indicator type)	Standard	Target	Performance Measure*	Numerator	Denominator	Comments
1.11	Children Testing (Service coverage)	HIV infected patients should have their children tested for HIV	100%	% of patients whose children have been tested for HIV or have known positive status	Number of HIV infected patients whose children have at least one HIV test result during the last 12 months or have a known positive status.	Number of HIV-infected patients with at least one HIV clinic visit during the 6 months review period who have at least one child or other minor under the care of the patient.	All children/ minors under the care of the patient must be tested to fit the criteria (be part of the numerator).
1.12	Reproductive Health (Family planning Service coverage)	HIV infected non-pregnant women age 15-49 years should be on modern contraceptive methods	100%	% non-pregnant women patients who are on modern contraceptive methods during the review period	Number of HIV-infected non pregnant women age 15-49 years who are on modern contraceptive methods during the review period	Number of HIV infected, non-pregnant women age 15 – 49 years with at least one HIV Clinical visit during the 6 months review period	This indicator needs to be carefully interpreted as some of the women in the denominator may include women who are trying to conceive or who are using natural FP methods who are not sexually active. Modern contraceptive methods include: Condoms, Oral contraceptive pills, injectable, implant, IUD, diaphragm, tubal ligation, vasectomy.
1.13	Reproductive Health (Ca Cx screening Service coverage)	HIV infected nonpregnant women age 18-65 years should be screened for cervical cancer every 12 months	100%	% HIV infected nonpregnant women 18-65 years who have been screened for cervical cancer in within the last 12 months	Number of HIV-infected non pregnant women age 18 to 65 years who have been screened for cervical cancer in the last 12 months	Number of HIV infected, non pregnant women age 18 to 65 years with at least one HIV Clinical visit during the 6 months review period (Excluding women currently being treated for cervical cancer).	

Appendix 6 - Kenya HIV Quality Improvement Indicators
2.0 - Pediatric Care and Treatment Indicators

SN	Quality Area (Indicator type)	Standard	Target	Performance Measure*	Numerator	Denominator	Comments
2.1	Retention in care	HIV infected patients in care should have at least 2 HIV Clinical visits, 3 months apart during the 6 months review period.	100%	% patients in care with 2 or more visits, 3 months apart during the 6 month review period	Number of HIV-infected patients in care and had at least two Clinical visits, 3 months apart during the 6 months review period	Number of HIV-infected patients in care with at least one HIV Clinical visit during the 6 months review period	[Exclusions: new IN CARE in months 4-6, transferred out OR died in month 1)]
2.2	HIV Monitoring - CD4 (Service Coverage)	HIV infected patients in care should have a CD4 assessment every 6 months.	100%	% of HIV infected patients in care with at least one CD4 count during the 6 month review period	Number of HIV infected patients in care with at least one CD4 count (results available) during the 6 months review period	Number of HIV-infected patients in care with at least one HIV Clinical visit during the 6 months review period	If facility has access to routine VL, then they can modify this indicator to only track 6-monthly CD4s among Pre-ART patients.
2.3	ART Initiation (Quality of care)	HIV infected children meeting the following criteria should be initiated on ART: Below 10 years regardless of CD4 and clinical stage; Above 10 years with either CD4<500 OR WHO Stage 3 or 4 OR TB-coinfection OR HBVcoinfection.	100%	% eligible patients initiated on ART	Number of ART eligible patients initiated on ART during the 6 months review period	Number of HIV-infected patients who were not on ART at the beginning of the review period with at least one HIV Clinical visit during the 6 months review period who meet at least one of the eligibility criteria for ART.	Criteria subject to approval of revised guidelines.
2.4	HIV Monitoring - Viral Load (Service Coverage)	HIV infected patients on ART should have at least one VL assessment every year	100%	% of patients on ART with at least one VL result during the last 12 months;	Number of patients on ART for at least 6 months by the end of the review period with at least one VL result during the last 12 months;	Number of HIV-infected patients on ART with at least one HIV Clinical visit during the 6 months review period who have been on ART for at least 6 months by the end of the review period.	Subject to approval of VL Policy.

SN	Quality Area (Indicator type)	Standard	Target	Performance Measure*	Numerator	Denominator	Comments
2.5	HIV Monitoring -Viral Load (Outcome)	HIV infected patients should have suppressed VL after at least 6 months of being on ART.	100%	% of patients on ART for at least 6 months with VL suppression	Number of patients on ART for at least 6 months by the end of the review period who have VL < 1,000 copies on their most recent VL result in the last 12 months	Number of patients on ART for at least 6 months by the end of the review period with at least one VL result during the last 12 months	Subject to approval of VL Policy.
2.6	TB Screening (Service coverage)	All HIV infected patients should be screened for clinical symptoms of TB at every clinic visit.	100%	% patients screened for TB at last clinic visit;	Number of patients screened for TB at the last clinical visit using ICF card during the 6 months review period.	Number of HIV-infected patients currently NOT on anti-TB treatment with at least one HIV Clinical visit during the 6 months review period.	
2.7	TB IPT (Service coverage)	HIV infected patients who screen negative for clinical symptoms of TB should be initiated on IPT for 6 months with a 2 year interval after completing a 6 month IPT course.	100%	% of patients eligible for IPT who were initiated on IPT	Number of patients with negative TB screen who have not had IPT in the past 2 years who were put on IPT	Number of patients who have not had IPT within the last 2 year, with a negative TB screen at the last clinic visit during the 6 months review period.	
2.8	Nutritional Assessment (Service coverage)	HIV positive clients should receive nutritional status assessment (Z-score or MUAC) at every clinic visit	100%	% of patients with Nutritional assessment (Zscore or MUAC)at the last clinic visit	Number of patients who had a nutritional assessment (Z-score or MUAC) at the last clinic visit during the 6 months review period	Number of HIV-infected patients with at least one HIV Clinical visit during the 6 months review period	
2.9	Nutritional Support (Service coverage)	HIV positive clients who are classified as malnourished should receive nutritional support	100%	% of patients eligible for nutritional support and who received nutritional support	Number of patients who meet criteria for nutritional support who received nutritional support	Number of patients who meet the criteria for nutritional support (Z score < =2) at the last clinic visit during the 6 months review period	MUAC criteria can also be used - refer to nutrition tools for MUAC assessment in children.
2.10	Disclosure (Service coverage)	HIV-infected children age 8-14 should have their HIV status disclosed to them	100%	% of children aged 8-14 who have been disclosed HIV status	Number of HIV infected children 8-14 years whose status has been disclosed to them	Number of HIV infected children 8-14 years who are enrolled into care with at least one HIV Clinical visit during the 6 months review period	

SN	Quality Area (Indicator type)	Standard	Target	Performance Measure*	Numerator	Denominator	Comments
3.1	4th ANC visit (FANC) Service coverage	All pregnant women should be reviewed at least four times in ANC	100%	100% % of pregnant women attending fourth ANC visit	Number of pregnant women attending fourth ANC Visit during the review period (Source: ANC Register column (d) Number of ANC visits = 4)	Number of expected pregnant women in the facility catchment population during the review period (Source: AWP planning data)	
3.2	Skilled delivery (Service coverage)	All women should deliver under skilled attendant	100%	% of skilled deliveries within the facility catchment population	Number of women delivered in the facility during the review period (Source: Maternity register: sum of all women delivering in the facility within the review period)	Number of expected deliveries in the facility catchment population during the review period (Source: AWP planning data)	
3.3	Quality of Delivery (Service delivery)	All deliveries should be monitored using an accurately filled partograph 100%	100%	% of deliveries with accurately filled partographs	Number of deliveries with partographs accurately filled during the review period (Source: Maternity file reviews)	Number of deliveries in the facility during the review period Source: Maternity register)	
3.4	Mother-baby pair postnatal follow-up	All neonates should be reviewed 7-14 days after birth	100%	% of Mother-newborn pairs reviewed by health care provider 7-14 days of birth	Number of mother-newborn pair reviewed 7-14 days of birth [Source: PNC register column (g) date of delivery and column (a) date of visit =7-14 days after delivery]	Expected number of deliveries in the facility catchment (Source: AWP planning data)	
3.5	Partner testing (Service coverage)	Partners of pregnant women should be tested for HIV or have a known positive status.	100%	% of pregnant women whose partners have been tested for HIV or who are known positive.	Number of pregnant women whose partners were tested for HIV during the 6 months review period or who have known documented positive status. (Source: ANC register: column (an) status indicated as P/N/KP)	Number of new ANC clients during the 6 months review period. (Source: ANC register: Column (c) 1st visit indicated with Y)	

SN	Quality Area (Indicator type)	Standard	Target	Performance Measure*	Numerator	Denominator	Comments
3.6	ART Provision (Service coverage)	All HIV-infected pregnant women should receive HAART	100%	% of HIV-infected pregnant women receiving HAART	Number of HIV infected pregnant women who were receiving HAART (Source: ANC register column (aa) dispensed ARVs = HAART)	Number of HIV-infected pregnant women who had at least one ANC visit during the 6 months review period. (ANC Register column (an) Status indicated as P/KP)	Facilities should consider further exploration on the timing of starting HAART
3.7	HIV Monitoring Viral Load (Service coverage)	All HIV infected pregnant or lactating women who have been on ART for at least 6 months (and have not had a VL in the past 6 months) should have a VL assessment done	100%	% of HIV-infected pregnant or lactating women on ART for at least 6 months who had a VL assessment done	Number of HIV-infected pregnant or lactating women on ART for at least 6 months with a VL result not older than 6 months at their last visit. (Source: PMTCT client file: lab form/ patient notes)	Number of HIV-infected pregnant or lactating women who have been on ART for at least 6 months with at least one ANC visit during the 6 months review period. (Source: PMTCT client file)	
3.8	HIV Monitoring Viral Load supression (Outcome)	HIV infected pregnant or lactating women should have suppressed VL after at least 6 months of being on ART.	100%	% of HIV-infected pregnant or lactating women on ART for at least 6 months with VL suppression	Number of HIV-infected pregnant or lactating women on ART for at least 6 months who have VL < 1,000 copies on their most recent VL result (Source: PMTCT file reviews: lab form/ patient notes)	Number of HIV-infected pregnant or lactating women on ART for at least 6 months with a VL result not older than 6 months from the end of the review period. (Source: PMTCT file)	Note: Pregnant and lactating women should have a VL every 6 months for the duration of pregnancy and lactation. Current MOH tools need revision to allow easy identification of BF women.

SN	Quality Area (Indicator type)	Standard	Target	Performance Measure*	Numerator	Denominator	Comments
3.9	Early Infant Diagnosis (Service coverage)	HIV-Exposed infants (HEI) should receive HIV DNA PCR by 6-8 weeks of age	100%	% HEI who received HIV DNA PCR testing by age 6-8 weeks and results are available	Number of HEI who were DNA PCR tested by age 6-8 weeks and results available (Source: HEI register column (l) age at test in weeks and (q) test results available)	Number of HEI in cohorts who turned 12 months of age during the 6 months review period (Source: HEI register: Column (a) Number of HEI registered in birth cohort)	Facilities implementing the HEI Cohort Analysis (HCA) have the option to sum HCA indicator 3.0 for the 6 month review period.
3.10	Infant Feeding Practices (Service corverage)	HIV exposed infants aged 0 – 6 months should be exclusively breast fed	100%	% HIV exposed infants on exclusive breast feeding at age 6 months Number of HIV exposed	Infants that are on exclusive breast feeding at age 6 months (Source: HEI register: Month 6 column (x) feeding code EBF)	Number of HEI in cohorts who turned 12 months during the 6 months review period. (Source: HEI register: Column (a) Number of HEI registered in birth cohort)	Facilities implementing the HEI Cohort Analysis (HCA) have the option to sum HCA indicator 8.0 for the 6 month review period.
3.11	Retention of Mother baby pair - Facility estimate (Retention)	All HIV exposed infants should be followed up 18 months old	100%	.% HIV infected mother and HIVexposed baby pair (0-18 months) in active care among facility registered	Number of infants seen in facility during review period whose mother/guardian also have documented visit on same day during review period (Source: HEI Register, Mother's File)	Number of HIV exposed infants between 0 and 18 months in follow-up at the facility during the review period (Source: HEI register: Column (a) Number of HEI registered in -birth cohort)	
3.12	Retention of Mother-baby pair population estimate (Retention)	All HIV exposed infants should be followed up 18 months old.		% HIV infected mother and HIVexposed baby pair (0-18 months) in active care among population estimate	Number of infants seen in facility during review period whose mother/guardian also have documented visit on same day during review period (Source: HEI Register, Mother's File)	Expected number of HIV exposed infants between 0 and 18 months in the facility catchment area (Source: AWP planning data: expected number of deliveries in facility catchment area in 1 year x County ANC HIV prevalence x 2)	

SN	Quality Area (Indicator type)	Standard	Target	Performance Measure*	Numerator	Denominator	Comments
3.13	Elimination of Mother-o-Child Transmission (Outcome)	Mother-to-child transmission of HIV should be reduced to <5%	<5%	% HIV exposed infants diagnosed with HIV between 0 and 18 months	Number of HIV-exposed infants identified HIV positive by 18 months of age (Source: HEI register: column (ar) HIV status at 18 months indicated as Pos)	Number of HEI in cohorts that turned 24 months of age during the 6 months review period (Source: HEI register: Column (a) Number of HEI registered in birth)	Facilities implementing HCA have the option to sum HCA indicator 13.3 for the 6 month review period

SN	Quality Area (Indicator type)	Standard	Target	Performance Measure*	Numerator	Denominator	Comments
4.1	VMMC adverse events rate	None of the circumcised male clients should experience adverse events	<2%	% of male clients who were circumcised with documented adverse event	Number of male client who were circumcised with documented adverse event (Source: VMMC Minor Theatre Register or files)	Number of male clients who were circumcised during the 6 months review period (Source: VMMC Minor Theatre Register or files)	Source: VMMC registers or files

ADULT KHQIF/OM: Appendix 7a: Adult Care Treatment File Review Abstraction Tool

Review Period: From _____ To _____

FILE REVIEW INSTRUCTIONS: 1) Based on your case load, pull a sample of patients files who were seen in the last 6 months of the review period. 2) Answer the questions by circling Y or N as applicable for every patient file. If the question does not apply to the patient, then circle "N/A". 3) Use multiple sheets according to your required sample size. 4) After completing all file reviews, fill in sum of Y and N's to calculate the % performance for each indicator. 5) Sum the totals for all sheets and transfer to a QI Indicator Summary report. [Key: Yes (Y), No (N), Not Applicable (N/A).]

		1.0 Did the patient visit the clinic in the 6 months review period? (should be yes for	1.1 Did the patient have 2 clinical visits 3 months apart in the 6 months review	2.0. Did the patient receive a CD4 test (and results available) during the 6 months	3.0 Was the patient on ART before start of the review period?	3.1 If no to 3.0, was the patient eligible for ART initiation during the review period?	3.2 If yes Q 3.1 Was the patient initiated on ART?	4.0 Has the patient been on ART for 12 or more months? (If not on ART, select NA)	4.1 If yes Q 4.0, has viral load been done in the last 12 months and result received?	4.2 If yes Q4.1, was viral load result <1000 copies/ml?	5.0 Was the patient screened for TB using ICF card at last visit in review period?	5.1 Did the patient have a negative TB screen result at last visit?	5.2 If yes Q 5.1 (negative TB screen) Is the patient on IPT or been on IPT in last 2 years?	6.0 Was BMI or MUAC done at the last visit in review period?	6.1 If yes Q6.0, did the patient have a BMI <18.5 or MUAC <23 cm at the last visit?	6.2 If yes Q 6.1, Did the patient receive nutritional support (Suppl or Therap. food)?	7.0 Has the spouse(s)/partner(s) of the patient been tested for HIV within the last 12 months or have a known positive status?	8.0 Have children of the patient been tested for HIV or have a known HIV positive status?	9.0 Is the patient a female aged 15-49 years?	9.1 If Yes Q 9.0 Is the patient on any modern contraceptive methods?	10.0 Is the patient a female aged 18-65 years and not pregnant?	10.1 If Yes Q 10.0 Was the patient screened for cervical cancer in the last 12 months?
1		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N	Y N NA
2		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N	Y N NA
3		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N	Y N NA
4		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N	Y N NA
5		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N	Y N NA
6		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N	Y N NA
7		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N	Y N NA
8		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N	Y N NA
9		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N	Y N NA
10		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N	Y N NA
Sum Y (Num)																						
Sum Y+N (Den)																						
Y/(Y+N) * 100%																						
QI Indicator Ref:		N/A	**1.1**	**1.2**	N/A	N/A	**1.3**	N/A	**1.4**	**1.5**	**1.6**	N/A	**1.7**	**1.8**	N/A	**1.9**	**1.10**	**1.11**	N/A	**1.12**	N/A	**1.13**

PEDIATRIC KHQIF/OM: Appendix 7b: Pediatric Care Treatment File Review Abstraction Tool

Reiew Period: From _____ To _____

FILE REVIEW INSTRUCTIONS: 1) Based on your case load, pull a sample of patients files who were seen in the last 6 months of the review period. 2) Answer the questions by circling Y or N as applicable for every patient file. If the question does not apply to the patient, then circle "N/A". 3) Use multiple sheets according to your required sample size. 4) After completing all file reviews, fill in sum of Y and N's to calculate the % performance for each indicator. 5) Sum the totals for all sheets and transfer to a QI Indicator Summary report. [Key: Yes (Y), No (N), Not Applicable (N/A).]

SN		1.0 Did the patient visit the clinic in the 6 months review period? (should be yes for all)	1.1 Did the patient have 2 clinical visits 3 months apart in the 6 months review period?	2.0. Did the patient receive a CD4 test (and results available) during the 6 months review period?	3.0 Was the patient on ART before start of the review period?	3.1 If no to 3.0, was the patient eligible for ART initiation during the review period?	3.2 If yes Q 3.1 Was the patient initiated on ART?	4.0 Has the patient been on ART for 12 or more months? (If not on ART, select NA)	4.1 If yes Q 4.0, has viral load been done in the last 12 months and result received?	4.2 If yes Q4.1, was viral load result <1000 copies/ml?	5.0 Was the patient screened for TB using ICF card at last visit in review period?	5.1 Did the patient have a negative TB screen result at last visit?	5.2 If yes Q 5.1 (negative TB screen) Is the patient on IPT or been on IPT in last 2 years?	6.0 Was Z score assessed at the last visit in review period?	6.1 If yes Q6.0, did the patient have a Z-score < 2 at the last visit?	6.2 If yes Q 6.1, Did the patient receive nutritional support (Suppl or Therap. food)?	7.0 Is the child currently aged 8-14 years?	7.1 If Yes Q 7.0 - Has the HIV status of the child been disclosed to him/her?
1		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA
2		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA
3		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA
4		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA
5		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA
6		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA
7		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA
8		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA
9		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA
10		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA
Sum Y (Num)																		
Sum Y+N (Den)																		
Y/(Y+N) * 100%																		
QI Indicator Ref:		N/A	**2.1**	**2.2**	N/A	N/A	**2.3**	N/A	**2.4**	**2.5**	**2.6**	N/A	**2.7**	**2.8**	N/A	**2.9**	**N/A**	**2.10**

EMTCT FILE KHQIF/OM: Appendix 7c: EMTCT File Review Abstraction Tool

Review Period: From _____ To _____

FILE REVIEW INSTRUCTIONS: 1) Based on your case load, pull a sample of patients files who were seen in the last 6 months of the review period. 2) Answer the questions by circling Y or N as applicable for every patient file. If the question does not apply to the patient, then circle "N/A". 3) Use multiple sheets according to your required sample size. 4) After completing all file reviews, fill in sum of Y and N's to calculate the % performance for each indicator. 5) Sum the totals for all sheets and transfer to a QI Indicator Summary report. [Key: Yes (Y), No (N), Not Applicable (N/A).]

SN		1.0 Did the patient visit the clinic in the 6 months review period? (should be yes for	1.1 Did the patient have 2 clinical visits 3 months apart in the 6 months review	2.0. Did the patient receive a CD4 test (and results available) during the 6 months	3.0 Was the patient on ART before start of the review period?	3.1 If no to 3.0, was the patient eligible for ART initiation during the review period?	3.2 If yes Q 3.1 - Was the patient initiated on ART?	4.0 Has the patient been on ART for 6 or more months?	4.1 If yes Q 4.0 - Has a viral load test been done in the last 6 months and result	4.2 If yes Q4.1, was viral load result <1000 copies/ml?	5.0 Was the patient screened for TB using ICF card at last visit in review period?	5.1 Did the patient have a negative TB screen result at last visit?	5.2 If yes Q 5.1 (negative TB screen) is the patient on IPT or been on IPT in last 2	6.0 Was BMI or MUAC done at the last visit in review period?	6.1 If yes Q6.0, did the patient have a BMI <18.5 or MUAC <23 cm at the last visit?	6.2 If yes Q 6.1, Did the patient receive nutritional support (Suppl or Therap.	7.0 Has the spouse(s)/partner(s) of the patient been tested for HIV within the last 12 months or have a known positive	8.0 Have children of the patient been tested for HIV or have a known HIV positive status?	9.0 Is the patient a female aged 15-49 year.	9.1 If Yes Q 9.0- Is the patient on any modern contraceptive methods?	10.0 Is the patient a female aged 18-65 years and not pregnant?	10.1 If Yes Q 10.0 Was the patient screened for cervical cancer in the last 12 months?
1		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N	Y N NA
2		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N	Y N NA
3		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N	Y N NA
4		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N	Y N NA
5		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N	Y N NA
6		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N	Y N NA
7		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N	Y N NA
8		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N	Y N NA
9		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N	Y N NA
10		Y N	Y N	Y N	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N	Y N NA	Y N NA	Y N NA	Y N NA	Y N	Y N NA	Y N	Y N NA
Sum Y (Num)																						
Sum Y+N (Den)																						
Y/(Y+N) * 100%																						
QI Indicator Ref:		N/A	N/A	N/A	N/A	N/A	N/A	N/A	**3.7**	**3.8**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

EMTCT REGISTER KHQIF/OM: Appendix 7d: EMTCT Register Review Abstraction Tool

INSTRUCTIONS: For every indicator, calculate the numerator, denominator, and % based on the definition. Sources vary depending on the indicator. Transfer the total num/den/% values to your QI Indicator Summary Report (Appendix 8) at the end of 6 months.
Review Period: From _____ to _____

SN	Key	Numerator/Denominator Definition	Month/Year __/__	Month/Year __/__	Month/Year __/__	Month/Year __/__	Month/Year __/__	Month/Year __/__	Total
3.1	Num	Number of pregnant women attending fourth ANC Visit during the review period (Source: ANC Register column (d) Number of ANC visits = 4)							
	Den	Number of expected pregnant women in the facility catchment population during the review period (Source: AWP planning data)							
	%	**% of pregnant women attending fourth ANC visit**	%	%	%	%	%	%	
3.2	Num	Number of women delivered in the facility during the review period (Source: Maternity register: sum of all women delivering in the facility within the review period)							
	Den	Number of expected deliveries in the facility catchment population during the review period (Source: AWP planning data)							
	%	**% of skilled deliveries within the facility catchment population**	%	%	%	%	%	%	%
3.3	Num	Number of deliveries with partographs accurately filled during the review period (Source: Maternity file reviews)							
	Den	Number of deliveries in the facility during the review period (Source: Maternity register)							
	%	**% of deliveries with accurately filled partographs**	%	%	%	%	%	%	%
3.4	Num	# of mother-newborn pair reviewed 7-14 days of birth [Source: PNC register column (g) - date of delivery and column (a) - date of visit =7-14 days after delivery]							
	Den	Expected number of deliveries in the facility catchment (Source: AWP planning data)							
	%	**% of Mother-newborn pairs reviewed by health care provider 7-14 days of birth**							

SN	Key	Numerator/Denominator Definition	Month/Year __/__	Month/Year __/__	Month/Year __/__	Month/Year __/__	Month/Year __/__	Month/Year __/__	Total
3.5	Num	Number of pregnant women whose partners were tested for HIV during the 6 months review period or who have known documented positive status. (Source: ANC register: column (an) status indicated as P/N/KP)							
	Den	Number of new ANC clients during the 6 months review period. (Source: ANC register: Column (c) 1st visit indicated with Y)							
	%	**% of pregnant women whose partners have been tested for HIV or who are known positive.**							
3.6	Num	Number of HIV infected pregnant women who were receiving HAART (Source: ANC register column (aa) dispensed ARVs = HAART)							
	Den	Number of HIV-infected pregnant women who had at least one ANC visit during the 6 months review period. (ANC Register column (an) Status indicated as P/KP)							
	%	% of HIV-infected pregnant women receiving HAART							
3.7	Num	Number of HEI who were DNA PCR tested by age 6-8 weeks and results available (Source: HEI register column (l) age at test in weeks and (q) test results available)							
	Den	Number of HEI in cohorts who turned 12 months of age during the 6 months review period (Source: HEI register: Column (a) Number of HEI registered in birth cohort)							
	%	% HEI who received HIV DNA PCR testing by age 6-8 weeks and results are available							
3.8	Num	Number of HIV exposed infants that are on exclusive breast feeding at age 6 months (Source: HEI register: Month 6 column (x) feeding code EBF)							
	Den	Number of HEI in cohorts who turned 12 months during the 6 months review period (Source: HEI register: Column (a) Number of HEI registered in birth cohort)							
	%	% HIV exposed infants on exclusive breast feeding at age 6 months							
3.9	Num	Number of infants seen in facility during review period whose mother/guardian also have documented visit on same day during review period (Source: HEI Register, Mother's File)							
	Den	Number of HIV exposed infants between 0 and 18 months in follow-up at the facility during the review period (Source: HEI register: Column (a) Number of HEI registered in birth cohort)							
	%	% HIV infected mother and HIV-exposed baby pair (0-18 months) in active care among facility registered							

Note: 3.7 and 3.8 indicators are assessed using the PMTCT File review tool as per the File review SOP.

			Month/Year __/__	Month/Year __/__	Month/Year __/__	Month/Year __/__	Month/Year __/__	Month/Year __/__	Total
3.10	**Num**	Number of infants seen in facility during review period whose mother/guardian also have documented visit on same day during review period (Source: HEI Register, Mother's File)							
	Den	Expected number of HIV exposed infants between 0 and 18 months in the facility catchment area. (Source: AWP planning data: expected number of deliveries in facility catchment area in 1 year x County ANC HIV prevalence x 2)							
	%	% HIV infected mother and HIV-exposed baby pair (0-18 months) in active care among population estimate months indicated as Pos)							
3.11	**Num**	Number of infants seen in facility during review period whose mother/guardian also have documented visit on same day during review period (Source: HEI Register, Mother's File)							
	Den	Number of HEI in cohorts that turned 24 months of age during the 6 months review period (Source: HEI register: Column (a) Number of HEI registered in birth)							
	%	HIV exposed infants diagnosed with HIV between 0 and 18 months							
3.12	**Num**	Number of infants seen in facility during review period whose mother/guardian also have documented visit on same day during review period (Source: HEI Register, Mother's File)							
	Den	Expected number of HIV exposed infants between 0 and 18 months in the facility catchment area (Source: AWP planning data: expected number of deliveries in facility catchment area in 1 year x County ANC HIV prevalence x 2)							
	%	% HIV infected mother and HIV exposed baby pair (0-18 months) in active care among population estimate							
3.13	**Num**	Number of HIV-exposed infants identified HIV positive by 18 months of age (Source: HEI register: column (ar) HIV status at 18 months indicated as Pos)							
	Den	Number of HEI in cohorts that turned 24 months of age during the 6 months review period (Source: HEI register: Column (a) Number of HEI registered in birth)							
	%	% HIV exposed infants diagnosed with HIV between 0 and 18 months							

KHQIF Operational Manual
Appendix 8: HIV QI Indicators Summary Report

SN	Performance measure	Numer-ator	Denomi-nator	%
Adult Care and Treatment				
1.1	% patients in care with 2 or more visits, 3 months apart during the 6 months review period			
1.2	% of HIV infected patients in care with at least one CD4 count during the 6 month review period			
1.3	% eligible patients initiated on ART			
1.4	% of patients on ART with at least one VL result during the last 12 months			
1.5	% of patients on ART for at least 6 months with VL suppression			
1.6	% patients screened for TB using ICF card at last clinic visit			
1.7	% of patients eligible for IPT who were initiated on IPT			
1.8	% of patients with Nutritional assessment at the last clinic visit			
1.9	% of patients eligible for nutritional support and who received nutritional support			
1.10	% of patients whose partner(s) have been tested for HIV or have known positive status			
1.11	% of patients whose children have been tested for HIV or have known positive status			
1.12	% non-pregnant women patients who are on modern contraceptive methods during the review period			
1.13	% HIV infected non-pregnant women 18 to 65 years who have been screened for cervical cancer in within the last 12 months			
Pediatric Care and Treatment				
2.1	% patients in care with 2 or more visits, 3 months apart during the 6 month review period			
2.2	% of HIV infected patients in care with at least one CD4 count during the 6 month review period			
2.3	% eligible patients initiated on ART			
2.4	% of patients on ART with at least one VL result during the last 12 months;			
2.5	% of patients on ART for at least 6 months with VL sup-pression			

2.6	% patients screened for TB at last clinic visit;			
2.7	% of patients eligible for IPT who were initiated on IPT			
2.8	% of patients with Nutritional assessment (Z-score or MUAC)at the last clinic visit			
2.9	% of patients eligible for nutritional support and who received nutritional support			
2.10	% children aged 8-14 who have been disclosed HIV status			
EMTCT				
3.1	% of pregnant women attending fourth ANC visit			
3.2	% of skilled deliveries within the facility catchment population			
3.3	% of deliveries with accurately filled partographs			
3.4	% of Mother-newborn pairs reviewed by health care provider 7-14 days of birth			
3.5	% of pregnant women whose partners have been tested for HIV or who are known positive.			
3.6	% of HIV-infected pregnant women receiving HAART			
3.7	% of HIV-infected pregnant or lactating women on ART for at least 6 months who had a VL assessment done			
3.8	% of HIV-infected pregnant or lactating women on ART for at least 6 months with VL suppression			
3.9	% HEI who received HIV DNA PCR testing by age 6-8 weeks and results are available			
3.10	% HIV exposed infants on exclusive breast feeding at age 6 months			
3.11	% HIV infected mother and HIV-exposed baby pair (0-18 months) in active care among facility registered			
3.12	% HIV infected mother and HIV-exposed baby pair (0-18 months) in active care among population estimate			
3.13	% HIV exposed infants diagnosed with HIV between 0 and 18 months			
Other Program Areas				
4.1	% of male clients who were circumcised with documented adverse event			

Appendix 9: Outline of Contents in a QIT/WIT Box File

INSTRUCTIONS: QIT/WITs are encouraged to keep a box file with the QI templates and tools that are used for ongoing QI work. The file should be divided into sections as outlined below. It is recommended to use dividers to separate the sections.

Section	Section Title	Items to include	When to use
1	Organizational Assessment	Organizational Assessment Tool (Appendix 1) Report and Facility workplan	OA to be done annually. Workplan to be updated as needed over the year.
2	Meeting Minutes	QI Meeting minutes (using Meeting template – Appendix 2)	Every time QIT/WIT meets
3	QI Project Checklist	QI Project Checklist (Appendix 3) for every Project being undertaken	Every time you complete an activity in the PDSA cycle
4	WIT QI Project Template	WIT QI Project Summary (Appendix 4)	Every time a new PDSA cycle is being undertaken
5	Facility QI Report	Facility QI Report (Appendix 5)	Every 6 months
6	Performance Measurement: QI Indicator Summary Reports	QI Indicator Summary reports collected during 6-monthly file reviews	Every 6 months
7	Performance Measurement: Other data sources	Any other routinely reviewed data that WITs may use to assess performance during PDSA cycles	Monthly
8	References	Operational Manual, which includes SOP HIV QI Indicator File Review	