Federal Democratic Republic of Ethiopia
Ministry of Health

Hospital Performance Monitoring and Improvement Manual

Medical Services Directorate
Ethiopian Hospital Management Initiative

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Abbreviations

ANC	Antenatal Care
ART	Antiretroviral Therapy
ALOS	Average Length of Stay
BOR	Bed Occupancy Rate
BPR	Business Process Reengineering
CEO	Chief Executive Officer
CHAI	Clinton Health Access Initiative
CRCPTs	Curative and Rehabilitative Core Process Teams
DOTS	Directly Observed Therapy (Short Course)
EHRIG	Ethiopian Hospital Reform Implementation Guidelines
EHMI	Ethiopian Hospital Management Initiative
EPI	Expanded Program on Immunization
FMOH	Federal Ministry of Health
FTE	Full time equivalent
HMIS	Health Management Information System
HCFR	Healthcare Finance Reform
H-CAHPS	Hospital Consumer Assessment of Health Providers and Systems
HR	Human Resources
HSDP	Health Sector Development Plan
I-PAHC	Inpatient Assessment of Health Care
KPI	Key Performance Indicator
MHA	Masters in Hospital and Healthcare Administration
MCH	Maternal and Child Health
MSD	Medical Services Directorate (FMOH)
NHS	National Health Service (UK)
NGO	Non Governmental Organization

OPD	Outpatient Department
O-PAHC	Outpatient Assessment of Health Care
PNC	Post Natal Care
RHB	Regional Health Bureau
SMT	Senior Management Team (Hospitals)
SEHC	Satisfaction of Employees in Health Care
TB	Tuberculosis
VCT	Voluntary Counseling and Testing

Glossary

Abdominal route	Through a surgical incision in the belly
Abdominal surgical delivery	Removal of the foetus, placenta etc through a surgical incision in the belly
Admission	Going into hospital
Anesthesia	Method of putting patient to sleep or stopping feeling in a part of the body for surgery
Ante partum	Pregnancy before delivery of a baby
Assisted delivery	Birth of a baby in which the midwife or surgeon manipulates the baby as it moves through the birth canal
Caesarian section	Operation to deliver a baby through an incision in the uterus
Cartilage	Tissue between bones
Case team	A team within the hospital i.e. for in patients
Craniotomy	Procedure to remove part of skull
Day surgery unit	Department in the hospital where patients are operated on then go home the same day
Delivering mother	Woman in the process of delivering a baby
Dental	Concerning teeth
Discharge	Leaving hospital
Eclampsia	Seizures/fitting - potentially fatal disorder of pregnancy
Elective	Planned ahead, not emergency
Emergency attendance	Occasion when a patient goes to the emergency room for treatment
Emergency room	Department in the hospital where emergency patients are treated
Family planning	Service to advise on controlling fertility so pregnancy is planned
Foetus	Baby in the uterus

Forceps delivery	Delivery of a baby using forceps to pull the baby out
Gestational age	Age of the baby in the womb during pregnancy, i.e. how far on in pregnancy
Gynecology	Medical specialty concerned with areas of women's health such as fertility, pregnancy, continence
Haemorrhage	Bleeding
Hospital performance monitoring framework	Ethiopian system for monitoring the performance of health facilities
In patient	Patient staying in the hospital
Incision	Cut in the skin by a surgeon
Infection prevention processes	Procedures like regular hand washing and sterilization of instruments which stop the spread of infections
Instrumental delivery	See assisted delivery
Intensive care unit	Department in the hospital for acutely ill patients with higher levels of medical and nursing care
Intra partum	During delivery of a baby
Key performance indicator	An agreed measure that all facilities collect in the same way
Labouring mother	Woman in labor
Live birth	Baby who is born alive
Maternity	Concerning pregnancy and childbirth
Medical record	Papers that document the care and treatment a patient received
Morbidity	Illness or disability
Mortality	Death
Neonatal	Concerning newborn babies
Ophthalmology	Medical specialty for eye diseases
Out patient	Patient visiting the hospital for treatment
Performance improvement	Process to improve the organization’s performance

Postpartum	A description of the mother after delivery of a baby
Pressure ulcer	Skin breakdown because of continued pressure
Private wing	Part of the hospital where patients pay for all services they receive
Psychiatry	Medical specialty for mental health
Purulent	With pus, infected
Referral	Recommendation that a patient attend another hospital or clinic
Sacrum	Bottom of the back above the buttocks
Stillbirth	Baby who is born dead
Subcutaneous tissue	Tissue under the skin
Supportive supervision site visit	A visit by the RHB and partners to the hospital to review performance
Surgical delivery	Baby delivered by an operation
Surgical site infection	Infection at the place on the body where a surgical incision was made
Triage	A process of sorting patients into priority groups for treatment according to need
Uterus	Womb
Vacuum delivery	Delivery of a baby using a suction instrument to pull the baby out
Vaginal delivery	Baby delivered normally
Well baby clinic	Clinic to checks on babies' development
Wound	Area of damaged skin for example from an injury or surgery
Wound dehiscence	An area of a wound which is not healing and has come apart or broken down

Section 1 Introduction

1.1 Purpose of this Manual

This manual has been developed to help hospital senior management teams (SMTs), Governing Boards (GBs) and higher health offices to monitor hospital performance, focusing on a core set of Key Performance Indicators (KPIs) to ensure the effectiveness, efficiency and quality of services provided. The manual sets out a framework for hospital performance monitoring using the KPIs, and outlines how the framework has been developed and why performance monitoring using a core set of KPIs is important at all levels. The manual provides detailed guidance to ensure that hospitals collect and analyze accurate KPI data and provides guidance on performance improvement methods that will assist hospital management and staff to act upon the findings of the KPIs. The manual also provides guidance for the Federal Ministry of Health (FMOH) and Regional Health Bureaus (RHBs) to receive, review and analyze KPI information, and to conduct site visits and facilitate review meetings that aim to strengthen hospital performance.

Please note: The indicators and guidance outlined in this document do not remove the responsibility of hospitals for implementing the routine reporting, review and monitoring processes of the Health Management Information System (HMIS). The guidance in this document is complementary to HMIS, and HMIS processes should still be established in all hospitals.

1.2 Background

The FMOH and RHBs are leading a sector wide reform to strengthen and improve health services in Ethiopia. Hospitals are central to these reform efforts and a number of recent initiatives have specifically sought to improve hospital performance. Such initiatives include Health Care Finance Reform (HCFR), Business Process Re-engineering (BPR), Health Management Information System (HMIS), and the Ethiopian Hospital Reform Implementation Guidelines (EHRIG), among others.

Hospital Governing Boards have been established and Chief Executive Officers (CEOs) have been appointed to the majority of hospitals, thereby increasing the autonomy of hospitals. Through BPR 'Curative and Rehabilitative Core Process Teams' have been established within RHBs. The main role of the CRCPTs is to oversee health service delivery within hospitals and health centers. Similarly the Medical Services Directorate (MSD) has been established within the FMOH to oversee the performance of Federal Hospitals and to support RHBs in their efforts to improve hospital and health centre performance in each Region.

To achieve their functions, these stakeholders (Governing Boards, CRCPTs and MSD) require accurate and timely information about hospital performance to ensure that expectations are being met and to take timely action to address any problems identified.

Additionally, hospitals would benefit from experience sharing and the identification and dissemination of best practice.

Nationwide, hospital performance monitoring has been conducted by RHBs using different methodologies. Some regions have established hospital performance indicators, in some regions supportive supervision has been conducted and some regions have established regular hospital review meetings. However, there has been no systematic effort to share performance monitoring experience between regions and the efforts of stakeholders (e.g. MSD staff, CRCPTs, hospital staff and partners) are poorly coordinated.

This Manual sets out a Framework for Hospital Performance Monitoring and Improvement focused on a core set of KPIs that seeks to address the above needs and challenges. The Manual outlines processes by which hospitals, FMOH and RHBs can collaborate to strengthen hospital performance monitoring, thus maximizing resources and preventing duplication of efforts.

1.3 Development of the Manual

The Framework and KPIs presented in this Manual were first drafted by MSD and presented to representatives from all Regional CRCPTs (with the exception of Afar Region) for discussion and review at a two-day workshop held in Addis Ababa in September 2010. During the workshop participants split into small groups for critical review and discussion on the proposed Framework and KPIs. Following feedback, the Framework and KPIs were revised and presented once again to meeting participants. All participants accepted the revised Framework and KPIs, and agreed that each Region would subsequently work towards implementation of this Performance Monitoring Framework and KPIs, with the support of MSD and relevant partners as required.

Additionally, field visits were conducted by CRCPT, MSD and Clinton Health Access Initiative (CHAI) staff to 9 hospitals in 4 Regions. During the field visits the definitions, inclusion and exclusion criteria and data sources for each KPI were critically reviewed and training needs ascertained.

Following agreement on the Performance Monitoring Framework and KPIs, MSD and the CRCPT of RHBs developed this Manual with the technical assistance of CHAI.

Section 2 Practical tools for Performance Improvement

Common tools for performance improvement include both problem solving and change management. Although there are many approaches to both problem solving and change management, some common elements are apparent. These can be summarized in the '8 Step Scientific Method of Problem Solving' which is described below.

Step 1 Define the problem,

Step 2 Set the overall objective,

Step 3 Conduct a root cause analysis,

Step 4 Generate alternative interventions,

Step 5 Perform comparative analyses of alternatives,

Step 6 Select the best intervention and address its limitations,

Step 7 Develop an implementation plan and implement, and

Step 8 Develop an evaluation plan and evaluate.

To successfully move from one step to the next, leaders can rely on a number of useful management tools including:

- Root cause analysis, including fishbone diagramming, flow charting, and histograms,
- Options appraisal using evaluative criteria, and
- Gantt chart.

Each step, together with the associated management tools, is described in detail below.

Step 1: Define the problem

The first step to solving a problem is to define the problem (the 'problem statement') in a way that allows us to find solutions. Defining the problem requires analysis of the current situation and how it differs from the desired situation. To devise a good problem statement the following should be considered:

1. *Focus on a single problem:* The challenges that leaders face are complex, but it is important to identify one single problem to work on, rather than getting lost in a tangle of multiple problems.

2. *Address problems that are feasibly solved:* Selecting a problem that is impossible to solve will result in frustration and no clear progress.

3. *Keep it short:* Simply state, "The problem is…" Long, complex problem statements can be confusing and may result in a lack of a shared understanding of the problem.

4. *Find statements that are shared widely by key constituents:* In order to gain support for your solutions, key players must all believe that this problem exists and is important.

5. *Do NOT include solutions themselves*: This first step simply states the problem. Subsequent steps focus on identifying solutions. Good leaders often may have a solution in mind, but a clear strategy starts with the problem, and next focuses on generating multiple solutions.

Figure 1 below shows some common mistakes in defining the problem and gives suggestions for improvement.

Figure 1 **Common Mistakes and Suggestions for Problem Statements**

Weak Problem Statement	Suggestions for Improvement	Strong Problem Statement
"We need more regular delivery of supplies."	Focus on a problem, rather than the solution. In this case, why is a more regular delivery important?	Stock-outs of essential drugs are common in our pharmacy.
"Due to understaffing, nurses are overworked."	Focus on the problem, rather than the causes of the problem when defining the problem statement.	Nurses feel overworked.
"Our budgets are too small and we run out of pharmaceuticals in the middle of the year and no one pays their bills, and our medical director is leaving soon, along with 4 doctors."	Focus on a single problem.	There is not sufficient revenue to cover costs.

Step 2: Set the overall objective

The overall objective should be phrased to address or solve the problem. The objective identifies where the organization wants to be regarding the specific problem. In this sense, the defining of the problem (i.e., reflecting the current state) and the setting of the objective (i.e.,

the desired state) is a central part of strategic management. The objective is the goal that your team will focus all of its efforts toward achieving, so it is important that it is clearly defined. Good overall objectives *address the problem you have defined in the problem statement and have measurable targets.*

Figure 2 **Relating the Problem Statement, Objective and Target**

Relating the problem statement, objective and target	
Problem Statement	Stock-outs are common
Overall Objective	Reduce the frequency of stock-outs by 50% in the next quarter
Measurable Target	Number of stock-outs per quarter

Step 3: Conduct a Root Cause Analysis

Your overall objective has been defined, but how can you best reach your goal? A root cause analysis will help identify the factors that cause the problem. Like peeling away the layers of an onion, finding the root cause requires careful analysis of multiple layers. Several management tools can help leaders find the root causes of the problem, including:

1) Fishbone diagram,
2) Flow charting, and
3) Histograms.

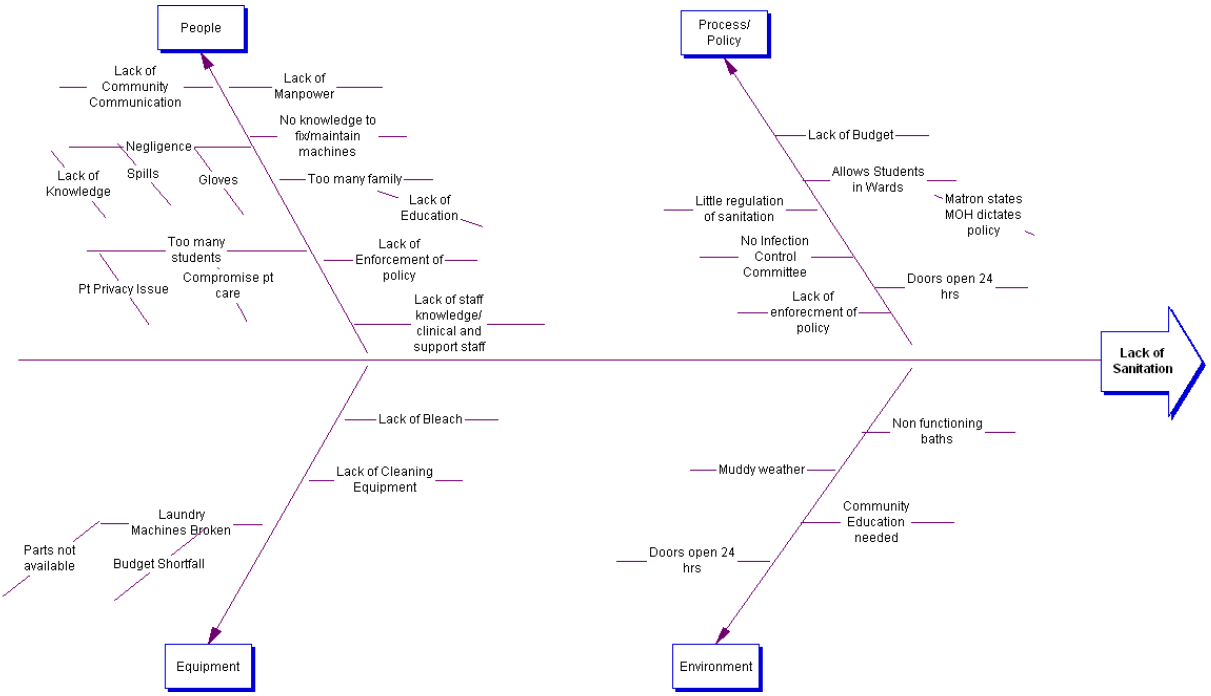
Fishbone Diagram

A fishbone diagram helps leaders identify multiple causes of a single problem. The diagram takes its name from its shape, which resembles the skeleton of a fish as shown in Figure 3.

The problem statement is written at the "head" of the fish. Causes of this problem are grouped into four categories:

1) *People:* Are staff behaviours or characteristics contributing to the problem?
2) *Process/policy:* What procedures or policies contribute to the problem?
3) *Equipment:* Is there any equipment, including supplies, that contribute to the problem?
4) *Environment:* Does the immediate environment (i.e., the building or compound), or the broader environment (i.e., the community, town, or nation) contribute to the problem?

Figure 3 **Sample Fishbone Diagram**



As you identify factors that contribute to the problem, place them on the appropriate "fishbone." For each factor that you identify, ask, "What leads to that factor?" For example, in the diagram above, the laundry machines were identified as an important factor in the lack of sanitation. This is an equipment issue, and "Laundry Machines Broken" was placed on the equipment fishbone. The laundry machines were broken because of two factors: lack of parts and a budget shortfall. Both of these were added to the diagram.

Fishbone diagramming is useful for a number of reasons:

1) *Allows for open session:* Involves everyone in an open session. Using a chalkboard or other display to brainstorm allows everyone to contribute their ideas, no matter how big or small.

2) *Ideas are generated quickly:* Generates an abundance of diverse ideas quickly. Because there are many bones, there is room for many ideas.

3) *Group understanding develops:* Helps group members understand and appreciate others' perspectives. Some participants will be more focused on the environmental factors while others will focus on factors related to people. The diagram makes room for all of these perspectives.

4) *Alternative approaches emerge:* Helps generate alternative approaches. Identifying multiple factors will lead to multiple possible solutions.

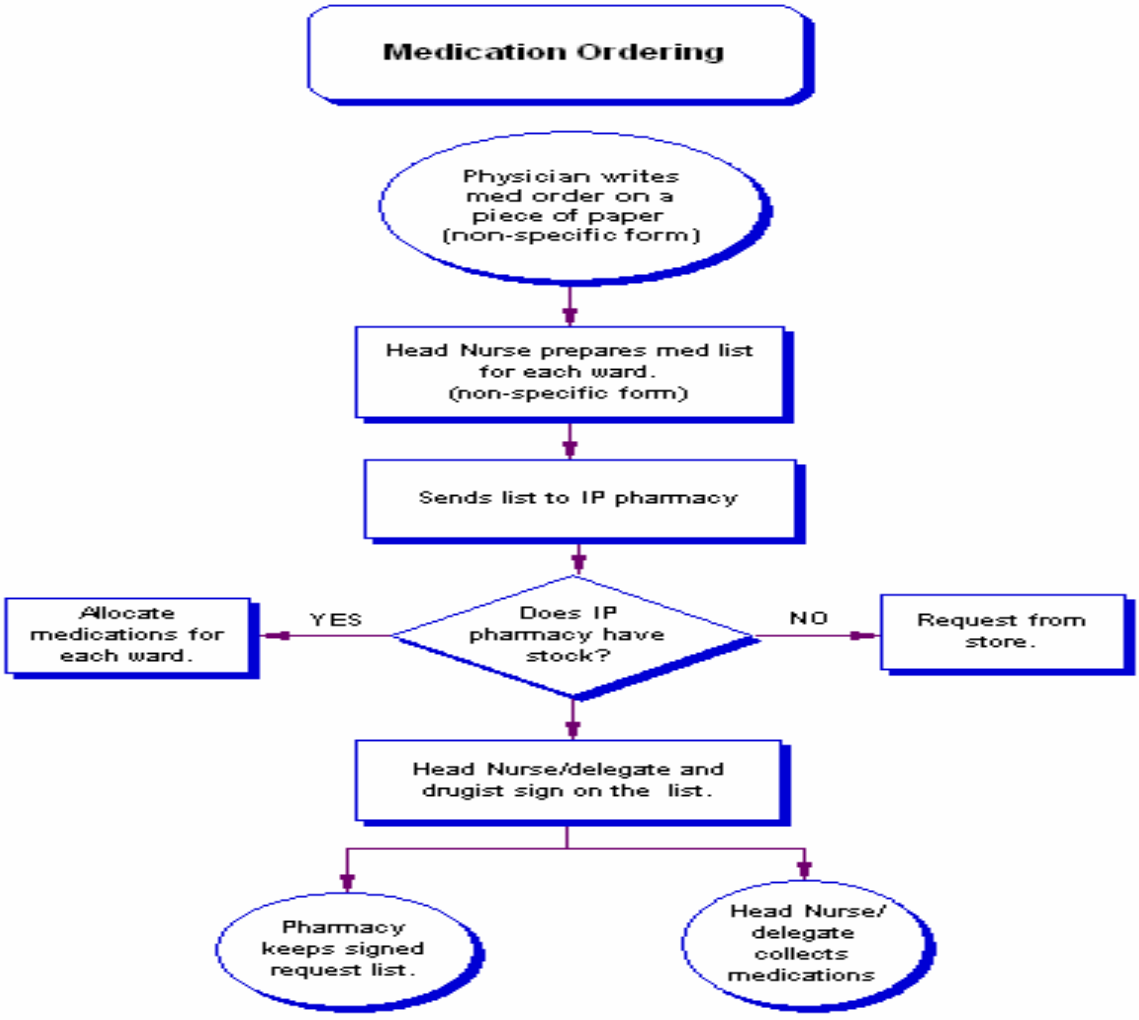
One drawback to the fishbone diagram is that this tool cannot display the importance or commonality of a particular issue.

Flow Charting

Sometimes managers find it necessary to identify problems within larger processes or systems. The flow chart is a diagram that puts the process into pictures so that problems can be "seen."

Figure 4 indicates a sample flow chart for medication ordering. Notice that the start and end points are indicated by circles, and each step in the process is shown in a rectangle. If there is a decision point, or question, that must be asked along the way, this is indicated by a diamond shape.

Figure 4 **Sample Flow Chart**



Flow charts are useful because they:

1) Describe complex processes in manageable steps that can be improved,

2) Illustrate breakdowns in the process, including parallel processes, extra steps, or incomplete feedback loops (an incomplete feedback loop is when the communication

loop is not "closed," i.e., the conversation ends without a clear assignment of action steps for specific people to accomplish in a specific time period),

3) Show how one's own actions influence "downstream" events,

4) Foster a team that "owns" the whole process, not simply individuals focused only on fragments, and

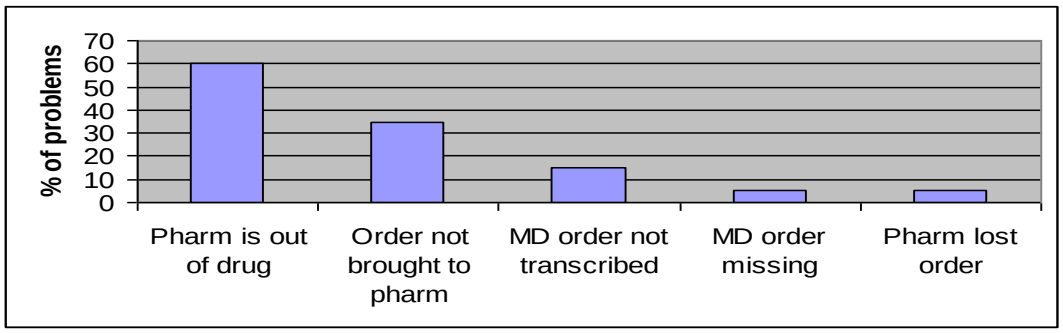
5) Help generate alternative approaches.

While a flow chart is useful for identifying breakdowns in the process, this tool does not tell **how often** breakdowns occur.

Histogram

A histogram is a useful tool for quantifying the frequency of common causes of the problem. By quantifying the frequency, managers can focus on the biggest issues first. The histogram below shows reasons that in-patients do not receive required drugs:

Figure 5 **Sample Histogram**



Histogram analysis provides a useful representation of data that allows managers to prioritize. This analysis also helps generate alternative approaches and provides a tool for showing progress. One drawback is that this analysis shows the frequency of the problem without indicating possible solutions.

Step 4: Generate alternative interventions

To the point above, the problem solving process has focused on identifying all of the factors that contribute to a problem, including the root causes, or underlying factors. After identification of the problem's cause(s), the next step is to start generating solutions. By generating multiple alternatives for solving the problem, the chances of reaching a solution are increased. Effective leaders are creative in developing these alternatives.

Good alternatives are:

- Clearly described,
- Comprehensive, but not too many (try to identify 2 to 4 solutions),
- Feasible to implement, and
- Mutually exclusive, so you can compare and choose one of the options:
    - Do A and do not do B,
    - Do B and do not do A, or
    - Do both A and B

Step 5: Perform comparative analysis of alternatives

When a few alternative interventions have been generated, the most promising intervention must be identified. Comparing these alternatives can be challenging, as some members of the group may prefer one alternative, while other members may champion a different alternative. An Options Appraisal allows for a side-by-side comparison of the strategic alternatives using evaluative criteria to select the best option. Consider the following options for addressing low productivity:

Problem	**Productivity is inadequate**
Option 1	Increase staffing
Option 2	Increase pay among existing staff
Option 3	Increase supervision of existing staff

In order to compare these 3 options, the group must agree on a set of evaluative criteria. Evaluative criteria are factors that are important to the group and the organization. For example, they may include effect of the problem, expense, political feasibility, or time to implement. The Options Appraisal can be qualitative or quantitative as shown in Figure 6.

Figure 6 Sample Options Appraisals

Qualitative Options Appraisal

	Impact on Productivity	**Annual Expense**	**Political Feasibility**	**Time Required**
1: Increase Staff	Good	High	Low	3 Months
2: Increase Pay	Unclear	High	Very Low	1 Year
3: Improve Supervision	Good	Low	High	1 Month

Quantitative Options Appraisal

	Impact on Productivity	Annual Expense	Political Feasibility	Time Required	Total Score
1: Increase Staff	5	1	2	4	12
2: Increase Pay	3	1	1	1	6
3: Improve Supervision	4	4	4	4	16

Note: Each option ranked on a score of 1-5 with 5 being the best, or strongest, option. In this case, if each evaluative criteria is weighted equally, improve supervision is the best option with a total score of 16.

Estimating the values within the matrix is not a perfect science. A sensitivity analysis allows managers to determine whether the final decision, or best option, would change if some of the estimates inside the matrix were changed, or if the estimates were slightly wrong. In other words, how much can each estimate change without changing the selection of the best strategy?

Often, managers only estimate the impact of interventions and not the other factors. An options appraisal and the sensitivity analysis allows managers to think through whether being slightly "wrong" would change the choice of the best option.

Step 6: Select the best intervention

Based on the results of the competitive analysis, select the best intervention.

Step 7: Develop implementation plan and implement

Once you have selected the best intervention, the Implementation Plan is the strategy that you will use to turn your ideas into reality.

1) *Identify specific tasks:* Identify tasks to be completed to meet specific objectives, including who is responsible for each step, what resources are needed, and conditions necessary for success.
2) *Develop timeline using a Gantt chart:* The Gantt Chart is a tool for defining the tasks, timeline and persons responsible for accomplishing the project objectives. When developing the Gantt chart, key persons responsible should be involved in the process of defining the target dates and their role(s) for each task. This step will ensure their support and commitment. The Gantt chart should be reviewed on a regular basis (e.g., weekly, monthly, and quarterly) and adjusted and revised to reflect changes in the environment to ensure progress towards objectives (see Figure 7).

Figure 7 **Sample Gantt chart**

Task Description		Person Responsible	Week														
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	**Development of Methodology**																
1.1	Workshop on user needs																
1.2	Draft of methodology																
1.3	Evaluation of methodology																
2	**Specifications of Integrated System**																
2.1	Inventory of resources in selected regions																
2.2	Review of existing facilities																
2.3	Specify technical developments																
2.4	Impact analysis of different scenarios																
2.5	Prepare detailed business plans																
3	**Feasibility studies for each region**																
3.1	Review existing practices																
3.2	Review technologies																
3.3	Sensitivity analysis of scenarios																
3.4	Report on most suitable options																
4	**Project Management and Coordination**																
4.1	Dissemination of information: Workshops																

Step 8: Monitor process and outcomes

Part of problem solving is monitoring your impact or success.

Box A Monitoring and Evaluation

Monitoring is the systematic and continuous collection of information over time to measure progress or change of an activity or objective, using pre-defined indicators of progress and/or impact of an intervention.

Evaluation is the process by which one determines if the program achieved its overall and specific objectives; it usually is an assessment at one point in time to determine the impact of the project.

A monitoring plan provides a set of indicators that will be monitored regularly to show the impact of the management interventions. Indicators should be selected that reflect both processes and outcomes. Process indicators measure interim impacts, such as the number of

staff trained or the percent of drugs properly unpacked and put away properly. Outcome indicators measure the ultimate objectives such as patient waiting time or stock outs or patient satisfaction. A good evaluation system has both types of indicators. In addition, the system should identify how each indicator will be measured, and ideally, what the target is for performance (i.e., waiting time will be less than one hour for 90 percent of patients; satisfaction scores will increase by 25%, etc.

The management team can use information generated from monitoring and evaluation to assess if interventions are working as expected and identify where further work is needed to improve performance in desired areas.

Section 3 A Framework for Hospital Performance Monitoring and Improvement

What is Hospital Performance Monitoring and Improvement?

Hospital performance monitoring and improvement is a process by which hospitals are *supported* and *held accountable* for providing effective, efficient and quality health services. Specific aims of hospital performance monitoring and improvement include:

- To ensure the provision of effective, efficient and quality health care by all Ethiopian public hospitals
- To strengthen the performance of hospitals in relation to HSDP IV goals and objectives, including specific hospital reform programs
- To provide stakeholders, including the public and Government Offices, with information about the availability and the quality of hospital care;
- To identify and disseminate best practice; and
- To identify areas for further improvements within hospitals where targeted support, by the RHB, MSD or other partners is necessary.

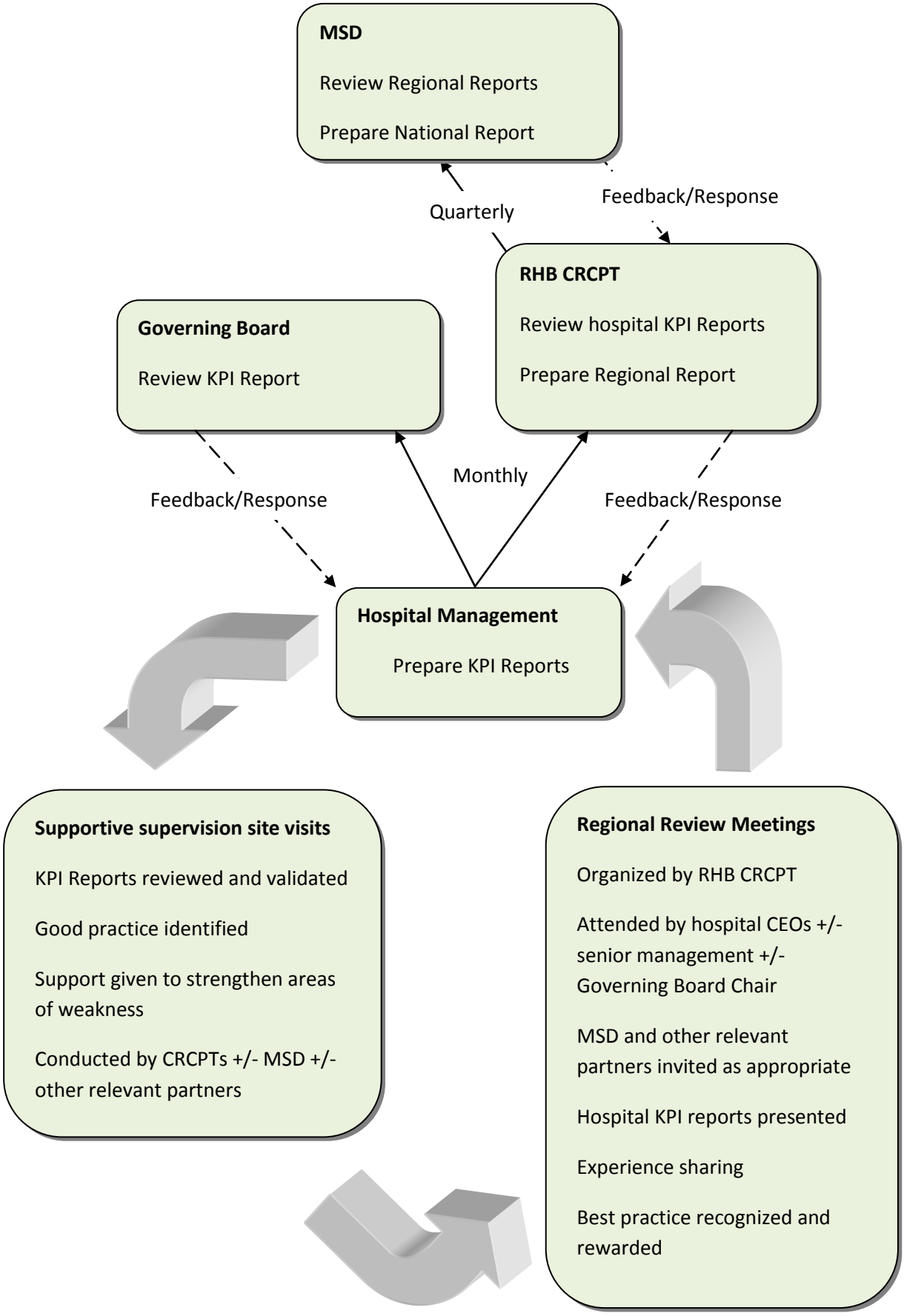
As illustrated in Table 1 and Figure 8 below, the Framework for Hospital Performance Monitoring and Improvement has three main elements:

1) The establishment, reporting and review of a core set of hospital KPIs;
2) Supportive supervision site visits to hospitals, led by the respective RHB CRCPT and including other bodies such as MSD or partners as relevant; and
3) Review meetings:
    - Regional (or cluster) review meetings between each RHB and all hospitals in the respective Region; and
    - MSD and all Regional CRCPTs review meetings.

Table 1 **Key elements of the Hospital Performance Monitoring and Improvement Framework**

Element	Description
KPIs	• A set of core hospital KPIs that meets the needs of Governing Boards, CRCPTs, MSD and the public will streamline reporting processes and prevent duplication of efforts by the different stakeholders. The burden on hospitals will be minimized. • A common set of KPIs will allow hospital performance to be tracked over time, and comparisons between hospitals and regions can be made • The KPIs can be used by Governing Boards to monitor hospital performance. Problems will be identified at an early stage, allowing the Governing Board to take remedial action where necessary. • KPIs should be reported by each hospital to the RHB CRCPT every month. Comparisons between hospitals can be made, identifying best practice as well as areas where improvement is needed. • The MSD can review regional and hospital performance and identify areas where additional support is needed
Supportive supervision site visits	• Supportive supervision site visits to hospitals should be conducted in order to check (validate) hospital performance in relation to the KPIs, to identify good practice, and to provide supervision and guidance to help hospitals to improve areas that require strengthening • Supervision should be conducted by a team of supervisors. The supervisors could include RHB CRCPT staff, MSD staff, staff from other hospitals (e.g. CEOs) and other partners such as CHAI. It would not be necessary for all stakeholders to attend every supervision visit, rather the team for each visit can be drawn from the different stakeholders. • All supervision should be under the direction of the respective CRCPT. No stakeholder should conduct supervision without the approval of the CRCPT.
Review meetings	**Regional** • Review meetings between the CRCPT and hospitals (either region wide or in clusters) will allow for benchmarking and the dissemination of good practice. • At each review meeting hospitals should present a performance report based on their KPIs. Hospitals will have the opportunity to share successes and challenges in order to learn from each other. • Regional 'all hospital' review meetings can also be used to discuss other relevant topics **National** • Review meetings between MSD and all regional CRCPTs will allow for benchmarking and the dissemination of good practice between regions. • At each review meeting CRCPTs should present a regional performance report based on their KPIs. Regional CRCPTs will have the opportunity to share successes and challenges in order to learn from each other. • MSD/CRCPT meetings can also be used to discuss other relevant topics.

Figure 8 **Framework for Hospital Performance Monitoring and Improvement**



Section 4 Hospital Key Performance Indicators (KPIs)

4.1 What are Key Performance Indicators?

An indicator is a way to measure a specific issue, or a way of saying "how much" or "how many" or "to what extent". Performance Indicators help to understand a system, compare it and improve it.[1]

Different types of indicators are used for different purposes. For example indicators could be used to monitor implementation of a specific program, to monitor the financial performance of a hospital, to monitor the quality of care provided by each clinical team or to monitor implementation of the hospital annual plan.

However, it is easy to get overwhelmed by indicators and measurements, and to gather too much information that is not really useful for overall performance monitoring. It is like trying to drive a car while inspecting the engine, instead of using the dashboard!

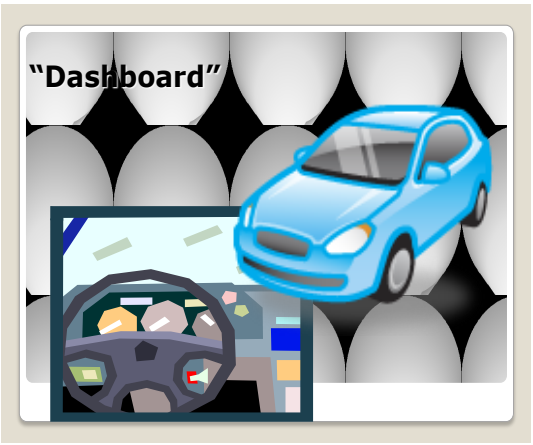
Figure 9 **Driving with the bonnet up!**

Wrong→ trying to drive while inspecting the engine

- Too many indicators
- Too busy counting and inspecting

You're going nowhere!

Right → using the dashboard!



- A small set of KPIs shown on the dashboard
- Information presented is the minimum, most important information required to drive the car

You're going somewhere!

[1] NHS Institute for Innovation and Improvement, 2008

Instead of trying to monitor everything, hospital SMTs, Governing Boards and RHBs need a core set of indicators that provide all the information they need to ensure that hospitals provide effective, efficient and quality services. These KPIs should describe the minimum information needed to effectively govern and manage hospital performance. The KPIs listed below fulfill these requirements. They have been agreed by the RHBs and FMOH as the core set of indictors that form the foundation of the Hospital Performance Monitoring and Improvement Framework for Ethiopia.

4.2 KPIs for Ethiopian hospitals

There are 36 National Key Performance Indicators which are organized into 10 categories: hospital management, outpatient services, inpatient services, maternity services, referral services, pharmacy services, productivity, human resources, finance and patient satisfaction.

Hospital Management

KPI 1: % of EHRIG operational standards for hospital reform met

Outpatient Services

KPI 2: Outpatient attendances

KPI 3: Outpatient attendances seen by private wing service

KPI 4: Outpatient waiting time to treatment

KPI 5: Outpatients not seen on same day

Emergency Services

KPI 6: Emergency room attendances

KPI 7: Emergency room patients triaged within 5 minutes of arrival at ER

KPI 8: Emergency room attendances with length of stay > 24 hours

KPI 9: Emergency room mortality

Inpatient Services

KPI 10: Inpatient admissions

KPI 11: Inpatients that are admitted to private wing services

KPI 12: Inpatient mortality

KPI 13: Delay for elective surgical admission

KPI 14: Bed occupancy

KPI 15: Average length of stay

KPI 16: Pressure ulcer incidence

KPI 17: Surgical site infection

KPI 18: Completeness of inpatient medical records

Maternity Services

KPI 19: Deliveries (live births and stillbirths) attended

KPI 20: Births by surgical, instrumental or assisted vaginal delivery

KPI 21: Institutional maternal mortality

KPI 22: Institutional neonatal death within 24 hours of birth

Referral Services

KPI 23: Referrals made

KPI 24: Rate of referrals

KPI 25: Emergency referrals as a proportion of all referrals made

Pharmacy Services

KPI 26: Average stock out duration of hospital specific tracer drugs

Productivity

KPI 27: Patient day equivalents per doctor

KPI 28: Patient day equivalents per nurse/midwife

KPI 29: Major surgeries per surgeon

KPI 30: Major surgeries conducted in the private wing

Human resources

KPI 31: Attrition rate - physicians

KPI 32: Staff satisfaction

Finance

KPI 33: Cost per patient day equivalent

KPI 34: Raised revenue as a proportion of total operating revenue

KPI 35: Revenue utilization

Patient Satisfaction

KPI 36: Patient satisfaction

4.3 Relationship with HMIS

The Health Management Information System (HMIS) draws its data from routine service and administrative records and is primarily designed to monitor and refine implementation programmes of the Health Sector Development Plans[2]. Additionally, the indicators are based on the priorities of the Plan for Accelerated and Sustained Development to End Poverty, the needs and priorities of local authorities, and the requirements of international agreements, such as the Millennium Development Goals.

On the other hand, the hospital KPIs, are a small set of 36 indicators with the primary function of assisting hospital SMTs, Governing Boards, RHBs and FMOH to oversee hospital operations. The hospital KPIs do not replace the HMIS indicators and existing HMIS reporting, review and monitoring processes should continue.

4.4 Collecting hospital KPI data

Hospitals should develop suitable mechanisms for collecting KPI data. These mechanisms should ensure that the information is accurate and that it has been properly checked prior to submission. To achieve this, each KPI needs an assigned data owner and the organization needs a named KPI focal person.

4.4.1 KPI Data Owners

The data owner should be an individual who is responsible for the primary data source (e.g. register, record or database) from which the KPI is drawn and who has responsibility for the service area that is being measured.

Each KPI data owner is responsible for:

- Maintenance of the primary data source(s) for KPI information
- Calculating the KPI, at the end of each reporting period
- Submitting the KPI to the KPI focal person at the end of each reporting period
- Reviewing the KPI, and identify any action that is needed as a result (i.e. performance improvement plan)

For example the Head of Human Resources (HR) could the KPI data owner for KPI 31**:** Attrition rate - Physicians and KPI 32**:** Staff satisfaction

[2] FMOH (2008) HMIS/M&E Indicator Definitions: HMIS / M&E Technical Standards: Area 1.

4.4.2 KPI focal person

A single focal person should be assigned to collect all KPIs and the data elements from the data owners and to prepare the hospital KPI report. The KPI focal person should be a member of the hospital quality committee (see 4.6.1 below). If the hospital has a separate HMIS performance monitoring team the KPI focal person should be one of the HMIS team members. A deputy KPI focal person should also be assigned to act in the absence of the KPI focal person.

The KPI focal person is responsible for:

- Collecting KPI data from every KPI data owner at the end of the reporting period
- Checking the accuracy of the KPI data, by reviewing data sources and conducting spot checks for accuracy on the data sources and the KPIs submitted by data owners
- Entering the KPI data into the electronic Hospital KPI Database
- Preparing the KPI report (including data elements and KPI results) from the KPI Database
- Submitting the KPI report to the hospital Quality Committee and CEO
- Training the KPI data owners, ensuring that each understands the meaning of the KPI, how to maintain the primary data source and calculate the KPI.
- Ensuring the availability of all required computer hardware and software, stationery and forms for the collation and submission of KPIs.

Table 2 on the following page, can be used to list the people assigned to each KPI. If a staff member changes, the Table should be updated with the name of the new person assigned as the data owner. The list should be established and updated by the KPI focal person with any changes approved by the CEO.

Table 2 **KPIs and KPI data owners**

Code	KPI Description	KPI Data Owner	
		Position	Name
Hospital Management			
KPI 1	% EHRIG operational standards met		
	Chapter 1: Leadership and governance		
	Chapter 2: Patient flow		
	Chapter 3: Medical records management		
	Chapter 4: Pharmacy services		
	Chapter 5: Laboratory services		
	Chapter 6: Nursing care		
	Chapter 7: Infection prevention		
	Chapter 8: Facilities management		
	Chapter 9: Medical equipment mgt		
	Chapter 10: Financial and asset mgt		
	Chapter 11: Human resource management		
	Chapter 12: Quality management		
	Chapter 13: Monitoring and reporting		
Outpatient Services			
KPI 2	Outpatient attendances		
KPI 3	Outpatient attendances seen by private wing service		
KPI 4	Outpatient waiting time to treatment		
KPI 5	Outpatients not seen on same day		
Emergency Services			
KPI 6	Emergency room attendances		
KPI 7	Emergency room patients triaged within 5 minutes of arrival at ER		
KPI 8	Emergency room attendances with length of stay > 24 hours		
KPI 9	Emergency room mortality		
Inpatient Services			
KPI 10	Inpatient admissions		
KPI 11	Inpatients that are admitted to private wing services		
KPI 12	Inpatient mortality		
KPI 13	Delay for elective surgical admission		

Code	KPI Description	KPI Data Owner	
		Position	Name
KPI 14	Bed occupancy		
KPI 15	Average length of stay		
KPI 16	Pressure ulcer incidence		
KPI 17	Surgical site infection		
KPI 18	Completeness of inpatient medical records		
Maternity Services			
KPI 19	Deliveries (live births and stillbirths) attended		
KPI 20	Births by surgical, instrumental or assisted vaginal delivery		
KPI 21	Institutional maternal mortality		
KPI 22	Institutional neonatal death within 24 hours of birth		
Referral Services			
KPI 23	Referrals made		
KPI 24	Rate of referrals		
KPI 25	Emergency referrals as a proportion of all referrals made		
Pharmacy Services			
KPI 26	Average stock out duration of hospital specific tracer drugs		
Productivity			
KPI 27	Patient Day Equivalents per doctor		
KPI 28	Patient day equivalents per nurse/midwife		
KPI 29	Major surgeries per surgeon		
KPI 30	Major surgeries conducted in the private wing		
Human Resources			
KPI 31	Attrition rate – Physicians		
KPI 32	Staff satisfaction		
Finance			
KPI 33	Cost per patient day equivalent		
KPI 34	Raised revenue as a proportion of total operating revenue		
KPI 35	Revenue utilization		
Patient Satisfaction			
KPI 36	Patient satisfaction		

4.5 Analyzing and reporting hospital KPI data

4.5.1 Analysis and reporting at hospital level

An electronic Hospital KPI Database has been created (in Excel) into which the KPI focal person should enter all KPI data elements. The KPI Database will automatically generate KPI results and related tables and charts. KPI reports can be printed from this Database.

A 'User Guide to the Hospital KPI Database' is presented in Appendix 1.

After entering and checking the data, the KPI focal person should print the KPI report and submit this to their quality committee and the CEO. The hospital CEO should check and sign off the KPIs before submitting them to the Governing Board Chair.

Additionally, KPI data should be submitted to the RHB. Ideally, the KPI focal person should email the electronic KPI Database to the RHB ever month. If this is not possible, the KPI focal person should print a copy of the data elements and a copy of the KPI results directly from the KPI Database and should fax these to the RHB.

KPI reports should be submitted to the RHB by the 10^{th} of each month.

Hospitals should also keep track of progress towards attainment of EHRIG standards. To assist with this, a Hospital EHRIG Database has been created into which the KPI focal person should enter all EHRIG self assessment results (see Section 5 below and Appendix 6). The EHRIG Database will automatically generate tables and charts from the entered data.

A 'User Guide to the Hospital EHRIG Database' is presented in Appendix 2.

The KPI focal person should email an electronic copy of the EHRIG Database to the RHB every quarter. If this is not possible then a hard copy of the EHRIG self assessment tool (see Appendix 6) should be faxed to the RHB.

4.5.2 Analysis and reporting at regional level

Each RHB should assign a focal person to receive KPI and EHRIG databases/ reports from all hospitals, and should share the name, contact telephone number and email address of the focal person with each hospital.

An electronic Regional KPI Database has been created (in Excel) into which the RHB should enter all KPI data elements reported by each hospital. The KPI Database will automatically generate KPI results and related tables and charts, including regional averages. KPI reports can be printed from this Database.

A 'User Guide to the Regional KPI Database' is presented in Appendix 3.

Additionally, a Regional EHRIG Database has been created (in Excel) into which the RHB should enter all hospital EHRIG reports. The EHRIG Database will automatically generate tables and charts, including regional averages, from the entered data.

A ‘User Guide to the Regional EHRIG Database’ is presented in Appendix 4.

Every quarter, the RHB should email electronic copies of the Regional KPI Database and Regional EHRIG Database to MSD. If it is not possible to send electronically then hard copies of the KPI Data Elements and KPI Data Results, together with a hard copy of the average attainment within the Region of each EHRIG should be faxed to MSD.

4.6 How should KPI reports be used?

Hospital KPI data should be used as information for action to guide decision making and planning for performance improvement at all levels. The performance improvement tools presented in Section 2 can be used, alongside KPI results, to determine actions to be taken to improve performance. Particular considerations for hospital management and staff, Governing Boards, RHBs and the FMOH are outlined below.

4.6.1 Use of KPIs by hospital management and staff

The data owner of each KPI is responsible not just for reporting the KPI data, but also for reflecting on the information and collaborating with colleagues to improve performance.

Useful questions to consider when reviewing KPI data include:

- How does this KPI result compare to the last reporting period? Is there improvement? No change? Is performance worse than before? How and why has the change in performance happened?
- How does the KPI compare to the target for the reporting period? Has the target been reached? If the target has not been reached, why not?
- Is there a need for further improvement on this KPI?
- Is additional information required?
- Is further support (e.g. trainings, supervision) required from the RHB or other partners to support the hospital to make improvements?

The KPI data owner, together with case team and other relevant colleagues should analyze the performance and develop actions that need to be taken to improve performance, using the tools outlined in Section 2.

Each hospital should have a performance management or quality committee (QC) to oversee performance monitoring and improvement functions across the hospital. The name of such a committee may differ from hospital to hospital but the important issue is not the name of team per se, but rather to ensure that the *functions*/*responsibilities* described below are carried out by designated individuals.

The QC should be comprised of a chairperson and between 4-6 quality officers. The QC should be multidisciplinary, with members appointed from different clinical, administrative and support case teams within the hospital. The chair of the QC should be a member of the hospital senior management team. Where circumstances permit, and depending on the size of the hospital, the chair and quality officers should be full time in their role. Where this is not

possible, the members of the QC should have specified time allocated within their regular working week for quality assurance activities.

Roles of the QC include:

a) To develop hospital performance and/ quality management strategy and present to the Senior Management Team for approval,

b) To develop an implementation plan for the overall improvement of hospital performance and monitor its execution,

c) To ensure that performance management activities relate to the vision and mission of the hospital, and are aligned with the hospital strategic and annual plans,

d) To co-ordinate all hospital performance improvement activities,

e) To promote and support the participation of all staff in hospital performance improvement activities,

f) To receive and analyze feedback information from patients, staff and visitors,

g) To receive clinical audit reports and maintain a record of all clinical audit activities,

h) To review selected hospital deaths

i) To monitor KPI data

j) To monitor HMIS performance

k) To conduct peer review in response to specific quality and safety concerns and to take appropriate action and follow-up when deficiencies are identified, and

l) To update hospital staff on hospital performance improvement activities and findings including:

    a) Comparisons across time

    b) Comparisons between case teams/departments

    c) Comparisons with other health facilities.

The KPI focal person should be a member of the quality committee. The KPI focal person should present all KPI reports to the quality committee for review. Further guidance on the role of the quality committee, and hospital quality management can be found in Chapter 12, Quality Management, of the *Ethiopian hospital Reform Implementation Guidelines*.

4.6.2 Use of KPIs by a hospital Governing Board

Hospital KPI Reports should be presented to the Governing Board by the hospital CEO. The KPI report should be circulated at least one week in advance of the Governing Board meeting, together with the agenda and any other discussion papers for the board meeting.

At the board meeting the CEO should present the KPI report, identifying areas of improvement or weakness. The Governing Board should question the CEO on the data

presented, seeking additional information if necessary. The Governing Board may also instruct the CEO on specific follow up actions.

For example, if the Patient Satisfaction Score is low or is decreasing, the Governing Board could ask the CEO to present the full results of the Patient Satisfaction Survey to see if there are any particular areas of concern, and could ask the CEO to describe actions that the hospital is going to take to improve patient satisfaction. Or, if inpatient mortality is high or increasing, the Governing Board could ask the CEO if there are any factors to explain this (perhaps a communicable disease outbreak) or to provide additional information on the mortality rate for each ward or specialty (e.g. surgical mortality rate, paediatric mortality rate etc) to identify if there is a particular problem area.

When reviewing the hospital KPI data and discussing with the CEO, questions that Governing Board members should consider include:

- How does each KPI compare to the last reporting period? Is there improvement? No change? Is performance worse than before?
    - If there is improvement, how did this take place? Should special recognition be given to any staff members or case teams who are responsible for the improvement?
    - If performance is worse why has this taken place?
    - How does each KPI compare to the target for the reporting period? Has the target been reached? If not, why not?
- Is additional information required from the CEO?
- What action should be taken by the CEO/hospital in response to the KPI results?
- What support (e.g. trainings, supervision) is required from the RHB or other partners to support the hospital to make improvements?

4.6.3 Use of KPIs by Regional Health Bureaus

After receiving hospital KPI and EHRIG reports and entering these into the Regional KPI and EHRIG Databases, the RHBs should compare hospitals, monitor changes over time and calculate regional averages.

When reviewing individual hospital KPI reports, the RHB should consider the same questions as outlined above for Governing Boards. In addition, the RHB should compare performance between hospitals, in particular:

- Which hospitals are showing the best performance overall? Which are showing poor performance?
- Which hospitals are improving? Which hospitals show slow or no improvement?
- What are the particular strengths in the region as a whole, what are the weaknesses?

The RHB should give feedback to each hospital on the KPI reports, asking for clarification or further information where required.

The RHB should also use the hospital KPI reports to identify areas for action by the RHB. In particular, KPI reports should be used as input for hospital site visits and regional review meetings (see Sections 5 and 6).

4.6.4 Use of KPIs by FMOH

The FMOH should assign a focal person to receive KPI reports from all RHBs, and should share the name, contact telephone number and email address of the focal person with each RHB. FMOH should review all regional KPI reports to compare regions, to monitor changes over time and to calculate national averages. The electronic National KPI Database can be used for this purpose.

When reviewing regional KPI reports, FMOH should consider the same questions as RHBs. In addition, FMOH should compare performance between regions, in particular:

- Which regions are showing the best performance overall? Which are showing poor performance?
- Which regions are improving? Which regions show slow or no improvement?
- What are the common strengths in all regions, what are the common weaknesses?

FMOH should give feedback to each RHB on the KPI reports, asking for clarification or further information where required. FMOH should not contact hospitals directly in response to the KPI reports, but instead should discuss first with the RHB so that a joint response can be made to the hospital and any follow up action can be agreed jointly between FMOH and the RHB.

In particular, KPI reports should be used as input for hospital site visits and regional and national review meetings (see Sections 6 and 7).

4.7 KPI Data Elements

The KPIs are calculated from individual data elements numbered Q1 to Q59, which are listed in Table 3. These data elements form the numerators and denominators of each KPI and, using the formulae, are used to calculate the 36 national KPIs.

Table 3 **KPI Data Elements**

Category	Code	Data Element
Hospital Management	Q1	Number of EHRIG operational standards for hospital reform met
	Q2	124 (the total number of EHRIG Operational Standards)
Outpatient Services	Q3	Number of new and repeat outpatient attendances at public facility
	Q4	Number of new and repeat outpatient attendances at private wing
	Q5	Sum total outpatient waiting time (minutes)

	Q6	Number of outpatient waiting time cards completed
	Q7	Number of outpatients not seen on the same day as registration in OPD during the reporting period
Emergency Services	Q8	Number of emergency room attendances
	Q9	Number of surveyed patients who undergo triage within 5 minutes of arrival in emergency room
	Q10	Number of patients included in emergency room triage time survey
	Q11	Number of emergency room attendances who remain in emergency room for more than 24 hrs
	Q12	Number of deaths in emergency room from patients who were alive (i.e. any vital signs present) on arrival
Inpatient Services	Q13	Number of patients admitted to public facility
	Q14	Number of patients admitted to private wing
	Q15	Number of deaths among admitted inpatients
	Q16	Number of patients discharged alive (including transfers out)
	Q17	Sum total number of days between date added to surgical waiting list to date of admission for surgery
	Q18	Number of patients who were admitted for elective (non-emergency) surgery during the reporting period
	Q19	Sum total of length of stay in days during the reporting period
	Q20	Average number of operational beds during the reporting period
	Q21	Number of days in reporting period
	Q22	Sum of total length of stay for patients who were discharged (including deaths and transfer outs) during the reporting period
	Q23	Number of inpatients who developed a new pressure ulcer during the reporting period
	Q24	Number of inpatients with new surgical site infection arising during the reporting period
	Q25	Number of major surgeries (both elective & non-elective) performed during the reporting period on public patients
	Q26	Number of major surgeries (both elective & non-elective) performed during the reporting period on private wing patients
	Q27	Sum total of medical record checklist scores
	Q28	Number of discharged inpatient medical records surveyed
Maternity Services	Q29	Number of women who gave birth in the hospital
	Q30	Number of live births attended in the hospital
	Q31	Number of stillbirths attended in the hospital
	Q32	Number of Caesarean sections (with intact uterus)
	Q33	Number of abdominal surgical deliveries
	Q34	Number of instrumental or assisted vaginal deliveries
	Q35	Number of maternal deaths (any gestational age)

	Q36	Number of deaths within 24 hours of birth among babies born alive in the hospital
	Q37	Number of non-delivering emergency maternal attendances (any gestational age)
Referral System	Q38	Number of emergency referrals made
	Q39	Number of non- emergency referrals made
Pharmacy	Q40	Sum total of stock out days of hospital specific tracer drugs
	Q41	16 (the total number of hospital specific tracer drugs)
Productivity	Q42	Average number of full time equivalent doctors
	Q43	Average number of full time equivalent nurses/midwives
	Q44	Average number of full time equivalent specialist surgeons (excluding ophthalmologists)
Human Resources	Q45	Number of physicians (GPs and specialists) who left the hospital during the reporting period
	Q46	Number of physicians (GP & Specialists) employed by hospital at the beginning of the reporting period
	Q47	Number of physicians (GP & Specialists) hired during the reporting period
	Q48	Sum total of rating scores from SEHC surveys
	Q49	Number of SEHC surveys completed
Finance	Q50	Hospital operating expenses during reporting period
	Q51	Raised revenue during the reporting period
	Q52	Government operating budget allocation for reporting period
	Q53	Capital expenses during reporting period
	Q54	Government capital budget allocation for the reporting period
	Q55	Raised revenue budget allocation for reporting period
Patient Satisfaction	Q56	Sum total of O-PAHC rating scores
	Q57	Number of O-PAHC surveys completed
	Q58	Sum total of I-PAHC rating scores
	Q59	Number of I-PAHC surveys completed

4.8 Detailed guide to each KPI

The following tables present a detailed guide to each KPI, outlining the importance of the indicator, the data sources and formula for calculating the indicator.

(Please note: The tables below, together with data entry forms for each KPI, are presented again in Appendix 5. The KPI tables can be photocopied from Appendix 5 and given to the data owner of each KPI to assist with collection of the data elements and calculation of the KPI by the data owner).

HOSPITAL MANAGEMENT

KPI 1: % of EHRIG operational standards met

Why is this important?	In order to provide quality, effective and efficient health care, hospitals must have well functioning management systems. The EHRIG operational standards for hospital reform are a set of minimum standards that a well functioning hospital should have in place. There are a total of 124 standards across 13 management areas: • Hospital Leadership and Governance (6 standards) • Patient Flow (13 standards) • Medical Records Management (6 standards) • Pharmacy Services (12 standards) • Laboratory Services (11 standards) • Nursing Care (6 standards) • Infection Prevention (8 standards) • Facilities Management (14 standards) • Medical Equipment Management (9 standards) • Financial and Asset Management (11 standards) • Human Resource Management (13 standards) • Quality Management (8 standards) • Monitoring and Reporting (7 standards) By measuring attainment of each standard (i.e. whether a standards is met or unmet) hospitals can identify areas of weakness in their management systems, identify priorities for improvement and monitor progress over time.
Unit of measurement	%
Numerator	Number of EHRIG operational standards for hospital reform met
Denominator	124 (i.e. total number of EHRIG operational standards for hospital reform)
Formula	Number of EHRIG operational standards for hospital reform met (Q1) ÷ 124 (i.e. the total number of EHRIG operational standards for hospital reform) (Q2) x 100
Data sources	Assessment tool for operational standards of the EHRIG (see Appendix 6)
Frequency of reporting	Quarterly

OUTPATIENT SERVICES

KPI 2: Outpatient attendances

Why is this important?	Hospitals need to know the number of patients treated (inpatient, outpatient and emergency) in order to plan staff numbers, equipment and supply needs. This information informs the annual plan and budget preparations. By monitoring the number of patients treated a hospital can also assess if patient demand is increasing or decreasing over time and investigate further if unexpected changes are seen. For the RHB, knowledge of the number of patients treated at each hospital is necessary to calculate population health service coverage rate, assess access to healthcare services and to plan health care services for the region.
Definition	Total number of new and repeat outpatient attendances (including specialized clinics). Patients who attend the following services should be INCLUDED in the outpatient count: • General outpatient clinics • Specialty outpatient clinics (including Dental, Ophthalmic and Psychiatry) • TB clinics • ART clinics • VCT clinics • MCH clinics (EPI, IMCI, well baby clinics, ANC, PNC, family planning etc) • Private wing clinics EXCLUDE: • All patients attending the emergency department • All emergency maternity attendances (any gestational age)
Unit of measurement	Absolute number
Formula	Number of new and repeat outpatient attendances at public facility (Q3) + Number of new and repeat outpatient attendances at private wing (Q4)
Data sources	Outpatient registration books/database; private wing registration book/database; central registration book/database; HMIS tally forms
Frequency of reporting	Monthly

KPI 3: Outpatient attendances seen by private wing service

Why is this important?	Through Health Care Finance Reform (HCFR), hospitals are permitted to establish a private wing service. The number of outpatient visits to the private wing service, and the proportion of all outpatient visits that are seen at the private wing, are measures of service availability, patient demand for private wing services and of the success of HCFR implementation by the hospital.
Definition	The proportion of all outpatient visits that are seen at the private wing service. Private wing outpatients includes both new and repeat outpatient visits that are seen by the private wing service All outpatient visits includes all new and repeat visits to *any* outpatient clinic, including: • General Outpatient clinics • Specialty outpatient clinics (including Dental, Ophthalmic, Psychiatry etc) • TB clinics • ART clinics • VCT clinics • MCH clinics (EPI, IMCI, well baby clinics, ANC, PNC, family planning etc) • Private wing clinics EXCLUDE: • All patients attending the emergency department • All emergency maternity attendances (any gestational age)
Unit of measurement	%
Numerator	Number of new and repeat outpatient attendances at private wing (Q4)
Denominator	Number of new and repeat outpatient attendances at public facility (Q3) + Number of new and repeat outpatient attendances at private wing (Q4)
Formula	Number of new and repeat outpatient attendances at private wing (Q4) ÷ [Number of new and repeat outpatient attendances at public facility (Q3) + Number of new and repeat outpatient attendances at private wing (Q4)] x 100
Data sources	Outpatient registration books; private wing registration book or central registration book/database; HMIS tally forms
Frequency of reporting	Monthly

KPI 4: Outpatient waiting time to treatment

Why is this important?	The time that a patient waits from arrival to treatment is a measure of access to health care services. Long waiting times indicate that there are insufficient staff and/or resources to handle the patient load or that those available resources are being used inefficiently. By measuring waiting times a hospital can assess if there is a need for extra personnel and/or other resources in the outpatient department and/or to review patient flow processes to increase the efficiency of service provision.
Definition	Average time from arrival at the outpatient department to treatment consultation with clinical staff member (minutes) For patients who have an appointment and who go immediately to the OPD waiting area (without attending registration or triage), the time of arrival begins at the time when they reach the OPD waiting area. For patients who do not have an appointment, the time of arrival means the time of arrival at the patient registration *or* the time of arrival at triage (whichever is first) EXCLUDE: Patients not seen on the same day
Unit of measurement	Minutes
Numerator	Sum total of outpatient waiting time (in minutes) (Q5)
Denominator	Number of outpatient waiting time cards completed (Q6)
Formula	Sum total of outpatient waiting time (in minutes) (Q5) ÷ Number of outpatient waiting time cards completed (Q6)
Data sources	Survey – see protocol for survey to measure OPD wait time in Appendix 7 The survey should be conducted on Monday and Thursday of the first week of the last month of each quarter
Frequency of reporting	Quarterly

KPI 5: Outpatients not seen on same day

Why is this important?	All patients should be seen in the OPD on the same day that they register for treatment. By measuring the number and proportion of patients that do not receive a same day service the hospital can assess if there is a need for extra personnel and/or other resources in the outpatient department and/or to review patient flow processes to increase the efficiency of service provision.
Definition	The proportion of all outpatients that do not receive treatment on the same day as registration in the outpatient department
Unit of measurement	%
Numerator	Number of outpatients not seen on same day as registration in OPD during the reporting period (Q7)
Denominator	Number of new and repeat outpatient attendances at public facility (Q3) + Number of new and repeat outpatient attendances at private wing (Q4)
Formula	Number of outpatients not seen on same day as registration during the reporting period (Q7) ÷ [Number of new and repeat outpatient attendances at public facility (Q3) + Number of new and repeat outpatient attendances at private wing (Q4)] x 100
Data sources	OPD registration book
Frequency of reporting	Quarterly

EMERGENCY SERVICES

KPI 6: Emergency room attendances

Why is this important?	Hospitals need to know the number of patients treated (inpatient, outpatient and emergency) in order to plan staff numbers, equipment and supply needs. This information informs the annual plan and budget preparations. By monitoring the number of patients treated a hospital can also assess if patient demand is increasing or decreasing over time and investigate further if unexpected changes are seen. For the RHB, knowledge of the number of patients treated at each hospital is necessary to calculate population health service coverage rate, assess access to healthcare services and to plan health care services for the region.
Definition	The number of emergency room attendances during reporting period INCLUDE: • All patients registered in the emergency room (all ages) EXCLUDE: • All patients triaged and sent to OPD • Patients who were already dead (i.e. no vital signs present) on arrival
Unit of measurement	Absolute number
Formula	Number of emergency room attendances (Q8)
Data sources	Emergency room registration book
Frequency of reporting	Monthly

KPI 7: Emergency room patients triaged within 5 minutes of arrival

Why is this important?	Triage is a process of sorting patients into priority groups according to their need and available resources. The aim of triage is to give priority treatment to those with the most critical conditions, thus minimizing delay, saving lives, and making the most efficient use of available resources. The first five minutes of arrival in the emergency room (ER) is the most critical time to save lives. If assessment and treatment is not initiated during this time then lives will be lost unnecessarily. By monitoring the % of patients triaged within 5 minutes the hospital can assess whether ER services are sufficient and identify the need for additional staff and/or resources and/or service redesign to reduce waiting times in ER.
Definition	Proportion of all patients presenting to the emergency room who were triaged within 5 minutes of arrival at the emergency room
Unit of measurement	%
Numerator	Number of surveyed patients who undergo triage within 5 minutes of arrival in emergency room (Q9)
Denominator	Number of patients included in emergency room triage time survey (Q10)
Formula	Number of surveyed patients who undergo triage within 5 minutes of arrival in emergency room (Q9) ÷ Number of patients included in emergency room triage time survey (Q10) x 100
Data sources	Survey – see Appendix 8 : Protocol for survey to measure % of patients triaged within 5 minutes of arrival in ER The survey should be conducted at 3 different time periods on the first week of the final month of each reporting period as follows: Monday: 8am to 12 noon Wednesday: 12 noon to 5pm Saturday: 5pm to 8am
Frequency of reporting	Quarterly

KPI 8: Emergency room attendances with length of stay > 24 hours

Why is this important?	Through BPR and other hospital reforms, emergency medical services are being strengthened. Hospitals have emergency room beds where patients can stay for a short period of time to receive emergency treatment. However, the length of stay in the emergency room should always be less than 24 hours. If a patient requires treatment for longer than 24 hours then he/she should be transferred to a ward. If emergency room beds are occupied by patients for more than 24 hours then the emergency room will become congested and there is a danger that the emergency room will not have the capacity for any NEW emergency attendances.
Definition	The proportion of all emergency room attendances who remain in the emergency room for > 24 hours INCLUDE: • All patients registered in the emergency room (all ages) EXCLUDE: • Patients who were already dead (i.e. no vital signs present) on arrival
Unit of measurement	%
Numerator	Total number of attendances who remain in emergency room for more than 24 hrs (Q11)
Denominator	Total number of emergency room attendances (Q8)
Formula	Total number of attendances who remain in emergency room for more than 24 hrs (Q11) ÷ Total number of emergency room attendances (Q8) x 100
Data sources	Emergency room registration book
Frequency of reporting	Monthly

KPI 9: Emergency room mortality

Why is this important?	The emergency room mortality is a measure of the quality of care provided by the emergency room of the hospital. A high mortality could indicate that the hospital is providing poor quality emergency care with unnecessary patient deaths.
Definition	The number of deaths in emergency room from patients who were alive (i.e. any vital signs present) on arrival per 100 emergency room attendances. INCLUDE: All deaths in emergency room from patients who were alive (i.e. **any** vital signs present) on arrival EXCLUDE: Patients who were already dead (i.e. **no** vital signs present) on arrival
Unit of measurement	%
Numerator	Number of deaths in emergency room from patients who were alive (i.e. any vital signs present) on arrival (Q12)
Denominator	Number of emergency room attendances (Q8)
Formula	Number of deaths in emergency room from patients who were alive (i.e. any vital signs present) on arrival (Q12) ÷ Number of emergency room attendances (Q8) x 100
Data sources	Emergency room register/database
Frequency of reporting	Monthly

INPATIENT SERVICES

KPI 10: Inpatient admissions

Why is this important?	Hospitals need to know the number of patients treated (inpatient, outpatient and emergency) in order to plan staff numbers, equipment and supply needs. This information informs the annual plan and budget preparations. By monitoring the number of patients treated a hospital can also assess if patient demand is increasing or decreasing over time and investigate further if unexpected changes are seen. For the RHB, knowledge of the number of patients treated at each hospital is necessary to calculate population health service coverage rate, assess access to healthcare services and to plan health care services for the region.
Definition	The number of patients admitted (including those transferred from another health facility) during the reporting period. INCLUDE all patients admitted to: • Wards (all patients under the care of the inpatient case team should be included, even if they are admitted to a trolley or stretcher, i.e. do not have a bed) • Clinical facilities (e.g. intensive care units, ophthalmic units) • Neonatal units • Private wing beds The following should be EXCLUDED: • Patients in day units/day surgery • Labouring and delivering mothers who are discharged directly from the delivery room (i.e. who are NOT admitted to an inpatient bed) • Healthy babies who are born in the hospital or who accompany their mother
Unit of measurement	Absolute number
Formula	Number of patients admitted to public facility (Q13) + Number of patients admitted to private wing (Q14)
Data sources	Inpatient register/admission and discharge book/database; Private wing registration/admission and discharge book/database
Frequency of reporting	Monthly

KPI 11: Inpatients admitted to private wing service

Why is this important?	Through Health Care Finance Reform (HCFR) hospitals are permitted to establish a private wing service. The number of inpatient admissions to the private wing service, and the proportion of all inpatient admissions that are admitted to the private wing, are measures of service availability, patient demand for private wing services and of the success of HCFR implementation by the hospital.
Definition	% of all admitted patients who were admitted to the private wing during the reporting period.
Unit of measurement	%
Numerator	Number of patients admitted to private wing (Q14)
Denominator	Number of patients admitted to public facility (Q13) + Number of patients admitted to private wing (Q14)
Formula	Number of patients admitted to private wing (Q14) ÷ [Number of patients admitted to public facility (Q13) + Number of patients admitted to private wing (Q14)] x 100
Data sources	Inpatient register/admission and discharge book/database Private wing registration/admission and discharge book/database
Frequency of reporting	Monthly

KPI 12: Inpatient mortality

Why is this important?	The inpatient mortality is a measure of the quality of care provided by the hospital. High inpatient mortality could indicate that the hospital is providing poor quality care with unnecessary patient deaths.
Definition	The number of deaths per 100 discharged inpatients. INCLUDE: All deaths among patients admitted to public facility Private wing inpatient deaths EXCLUDE: All deaths in emergency room All deaths among non admitted maternities (any gestation)
Unit of measurement	%
Numerator	Number of deaths among admitted inpatients (Q15)
Denominator	Number of deaths among admitted inpatients (Q15) + Number of patients discharged alive (including transfers out) (Q16)
Formula	Number of deaths among admitted inpatients (Q15) ÷ [Number of deaths among admitted inpatients (Q15) + Number of patients discharged alive (including transfers out) (Q16) x 100
Data sources	Discharge registration book
Frequency of reporting	Monthly

KPI 13: Delay for elective surgical admission

Why is this important?	Delays in surgery for different conditions are associated with a significant increase in morbidity and mortality. Through BPR, the Government has set a stretch objective that any outpatient who requires a bed should receive the service within 2 weeks. By monitoring the waiting time for surgical admission, hospitals can assess the adequacy of surgical capacity and identify the need for improved efficiency in systems and processes, and/or the need for additional surgical staff and/or resources.
Definition	The average number of days that patients who underwent elective surgery during the reporting period waited for admission (i.e. the average number of days between the date each patient was added to the waiting list to their date of admission for surgery)
Unit of measurement	Days
Numerator	Sum total of number of days between date added to surgical waiting list to date of admission for surgery (Q17) EXCLUDE: Elective Caesarean Sections Emergency Surgery NB: If a cold case patient is admitted on the same day that the decision for surgery is made then their number of days on the waiting list should be counted as zero.
Denominator	Number of patients who were admitted for elective (non-emergency) surgery during the reporting period (Q18)
Formula	Sum total of number of days between date added to surgical waiting list to date of admission for surgery (Q17) ÷ Number of patients who were admitted for elective (non-emergency) surgery during the reporting period (Q18)
Data sources	Surgical registration book
Frequency of reporting	Monthly

KPI 14: Bed occupancy

Why is this important?	The bed occupancy rate (BOR) is a measure of the efficiency of inpatient services. Hospitals are most efficient at a BOR of 80 – 90%. If the BOR is lower, resources may be wasted. If the BOR is higher than 90% there is a danger of staff burnout and of over-crowding during sudden increases in demand for services. Knowledge of the BOR helps hospitals to identify inefficiencies in service delivery in order to investigate and take action to address this, and also to plan for future staff or other resource requirements. For a RHB, knowledge of the BOR from each hospital helps to assess health service coverage and population access to services as a foundation for health service planning.
Definition	The average percentage of occupied beds during the reporting period
Unit of measurement	%
Numerator	The sum total length of stay in days during the reporting period (Q19) **NB:** The length of stay should ONLY be counted for the actual reporting period. If a patient was admitted during a previous reporting period their length of stay during that previous reporting period should not be counted. Instead, FOR THIS KPI, the patient's length of stay should be counted from the first day of this reporting period to the time of discharge, death or to the end of the reporting period (whichever is first). INCLUDE: • Patients admitted to public facility • Patients admitted to private wing
Denominator	Average number of operational beds during reporting period (Q20) x number of days in reporting period (Q21) An operational (inpatient) bed INCLUDES: • Beds in wards • Beds in clinical facilities (e.g. intensive care units, ophthalmic units where patients are routinely kept for > 24 hours) • Beds temporarily out of use • Beds/cots in neonatal units • Private wing beds The following should be EXCLUDED: • Beds in emergency room or emergency gynecology departments • Beds in day units/day surgery • Temporary beds, e.g. stretchers or trolleys • Observation or recovery beds in the emergency department, operating room or outpatient department • Labour suite beds, e.g. delivery beds/couches, examination beds • Beds for non-patients (e.g. beds for mothers accompanying children) • Beds/cots for healthy babies who are born in the hospital or accompany their mothers
Formula	The sum total length of stay in days during reporting period (Q19) ÷ [Average number of operational beds during reporting period (Q20) x number of days in reporting period (Q21)] x 100
Data sources	Admission/discharge registration books
Frequency of reporting	Monthly

KPI 15: Average length of stay (ALOS)

Why is this important?	By monitoring length of stay hospitals can assess if patients remain in hospital for longer than is necessary, perhaps due to non clinical reasons, and investigate further if required.
Definition	The average number of days from admission to discharge, death or transfer out. INCLUDE: • Inpatient discharges: discharge is the process by which a patient completes a hospital stay and is discharged from an inpatient ward. • Transfer outs: These are patients who are directly transferred from an inpatient ward to another hospital. • Deaths: All deaths of patients admitted to an inpatient ward should be included • Patients admitted to public facility • Patients admitted to private wing
Unit of measurement	Days
Numerator	Sum of total length of stay for patients who were discharged (including deaths and transfer outs) during reporting period (Q22) **NB:** For this KPI the total length of stay should be counted for all discharged patients, including their length of stay in previous reporting periods. The total length of stay is the time from admission to discharge, transfer or death. A day is measured at midnight, and the day of discharge is not counted as an extra day. This means that a patient admitted today and discharged tomorrow will have one patient day. (Day patients will have zero patient days and should not be included in the total monthly count).
Denominator	Number of patients discharged alive (including transfers out) (Q16) + Number of deaths among admitted inpatients (Q15)
Formula	Sum of total length of stay for patients who were discharged (including deaths and transfer outs) during reporting period (Q22) ÷ [Number of patients discharged alive (including transfers out) (Q16) + Number of deaths among admitted inpatients (Q15)]
Data sources	Inpatient register/admission and discharge register
Frequency of reporting	Monthly

KPI 16: Pressure ulcer incidence

Why is this important?	This is an indicator of the quality of care performed by nursing staff in a hospital. Poor nursing care, with inadequate turning of patients in their bed can lead to the development of a pressure ulcer (also called bed ulcer or decubitus ulcer). Pressure ulcers can be fatal when allowed to progress without treatment. By measuring the pressure ulcer rate hospitals can assess the quality of nursing care provided and take action to address any problems identified.
Definition	Proportion of inpatients who develop a pressure ulcer during their hospital stay. Pressure ulcers arise in areas of unrelieved pressure (commonly sacrum, elbows, knees or ankles). Either of the following criteria should be met: • A superficial break in the skin (abrasion or blister) in an area of pressure OR • An ulcer that involves the full thickness of the skin and may even extend into the subcutaneous tissue, cartilage or bone INCLUDE: • New pressure ulcers that arise during the patients admission, during the reporting period EXCLUDE: • Pressure ulcers that were already present at the time of admission • Pressure ulcers that developed in a previous reporting period
Unit of measurement	%
Numerator	Number of inpatients who develop a new pressure ulcer during the reporting period (Q23)
Denominator	Number of patients discharged alive (including transfers out) (Q16) + Number of deaths among admitted inpatients (Q15)
Formula	Number of inpatients who develop a new pressure ulcer during the reporting period (Q23) ÷ [Number of patients discharged alive (including transfers out) (Q16) + Number of deaths among admitted inpatients (Q15)] x 100
Data sources	Routine surveillance - Pressure ulcer report form (see Appendix 9)
Frequency of reporting	Monthly

KPI 17: Surgical site infection

Why is this important?	Infection at the site of surgery may be caused by poor infection prevention practices in the operating room or on the ward after completion of surgery. The surgical site infection rate is an indicator of the quality of medical care received by surgical patients and an indirect measure of infection prevention practices in the hospital. By monitoring surgical site infection hospitals can assess the adequacy of infection prevention practices in the hospital and take action to address any problems identified.

Definition	Proportion of all major surgeries with an infection occurring at the site of the surgical wound *prior to discharge*. One or more of the following criteria should be met:
	• Purulent drainage from the incision wound
	• Positive culture from a wound swab or aseptically aspirated fluid or tissue
	• Two of the following:
	  o wound pain or tenderness
	  o localized swelling
	  o redness
	  o heat
	• Spontaneous wound dehiscence or deliberate wound revision/opening by the surgeon in the presence of:
	  o pyrexia > 38C or
	  o localized pain or tenderness
	• An abscess or other evidence of infection involving the deep incision that is found by direct examination during re-operation, or by histopathological or radiological examination
	A major surgical procedure is defined as any procedure conducted under general, spinal or major regional anaesthesia.

Unit of measurement	%
Numerator	Number of inpatients with new surgical site infection arising during the reporting period (Q24) INCLUDE: • Patients undergoing surgery in public facility • Private wing surgical cases
Denominator	Number of major surgeries (both elective & non-elective) performed during the reporting period on public patients (Q25) + Number of major surgeries (both elective & non-elective) performed during the reporting period on private wing patients (Q26)
Formula	Number of inpatients with new surgical site infection arising during the reporting period (Q24) ÷ [Number of major surgeries (both elective & non-elective) performed during the reporting period on public patients (Q25) + Number of major surgeries (both elective & non-elective) performed during the reporting period on private wing patients (Q26)] x 100.
Data sources	Routine surveillance – Surgical Site Infection Report Forms (See Appendix 10) At the end of the reporting period the number of Surgical Site Infection Forms completed during that period should be tallied from each surgical inpatient ward.
Frequency of reporting	Monthly

KPI 18: Completeness of inpatient medical records

Why is this important?	Complete and accurate medical records are essential to maintain the continuity of patient care and ensure that the health provider has full information about the patient when providing healthcare. Through HMIS a standardized medical record has been introduced nationwide. The completeness of this medical record is a measure of the quality of care provided at the hospital.
Definition	Proportion of elements completed of the minimum elements of an inpatient medical record. The MINIMUM elements are*: - Patient Card (Physician notes) – present and all entries signed - Physician/health officer Order Sheet – present and all entries signed - Nursing Care Plan – present and signed - Medication Administration Record – present and all medications given are signed - Discharge Summary – present and signed * The checklist describes the MINIMUM set of documents that should be present in the medical record of EVERY discharged patient. Some inpatient records will contain additional documents and forms (e.g. referral forms, laboratory report forms etc). However for standardization of this indicator, only the items that are listed in the checklist should be included in the survey.
Unit of measurement	%
Numerator	Sum total of medical record checklist scores (Q27)
Denominator	Number of discharged inpatient medical records surveyed (Q28) x 5 (i.e. the number of items in checklist)
Formula	Sum total of medical record checklist scores (Q27) ÷ [Number of discharged inpatient medical records surveyed (Q28) x 5] x 100
Data sources	Audit of medical records against checklist A full protocol for the audit is presented in Appendix 11 5% or 50 (whichever is greater) medical records should be audited
Frequency of reporting	Quarterly

MATERNITY SERVICES

KPI 19: Deliveries (live and stillbirths) attended

Why is this important?	Hospitals need to know the number of patients who deliver at the hospital, and the number of complicated deliveries in order to plan staff numbers, equipment and supply needs. This information informs the annual plan and budget preparations. For the RHB, knowledge of the number of deliveries attended at each hospital is necessary to calculate population health service coverage rate, assess access to healthcare services and to plan health care services for the region.
Definition	Number of women who gave birth in the hospital
Unit of measurement	Absolute number
Formula	Number of women who gave birth in the hospital (Q29) INCLUDE: All births in hospital, regardless of the department where delivery occurred
Data sources	Delivery registration book
Frequency of reporting	Monthly

KPI 20: Births by surgical, instrumental or assisted vaginal delivery

Why is this important?	In the health care system of Ethiopia, it is expected that hospitals will manage complicated maternity cases and that uncomplicated pregnancies and normal deliveries should mainly be managed by Primary Health Care Units. By monitoring the % of attended deliveries that are complicated, the hospital and RHB can assess if hospital services are being used appropriately.
Definition	Number of births by surgical, instrumental or assisted vaginal delivery per 100 deliveries attended in the hospital
Numerator	Number of Caesarean sections (Q32) + Number of abdominal surgical deliveries (Q33) + Number of instrumental or assisted vaginal deliveries (Q34) Caesarean Section means delivery of the foetus (including live births and stillbirths) by the abdominal route when the uterus is intact (Q32) Abdominal Surgical Delivery means removal of the foetus, placenta and/or membranes by the abdominal route (including live births and stillbirths) where the uterus is not intact (i.e. ruptured uterus). (Q33) Instrumental or assisted vaginal delivery (Q34) means any vaginal delivery (including live births and stillbirths) using an instrument or manual intervention of the health worker. INCLUDE: • Forceps delivery • Rotational deliveries, e.g. internal podalic version • Vacuum extractions • Craniotomy EXCLUDE: • Episiotomy • Vaginal tears
Denominator	Number of live births attended in the hospital (Q30) + Number of stillbirths attended in the hospital (Q31)
Unit of measurement	%
Formula	[Number of Caesarean sections (Q32) + Number of abdominal surgical deliveries (Q33) + Number of instrumental or assisted vaginal deliveries (Q34)] ÷ [Number of live births attended in the hospital (Q30) + Number of stillbirths attended in the hospital (Q31)] x 100
Data sources	Delivery registration book
Frequency of reporting	Monthly

KPI 21: Institutional maternal mortality

Why is this important?	This indicator reflects both the quality of medical care provided at the hospital and the access to maternity services. For example a high maternal mortality may be due to inadequate treatment of pregnant women after they arrive at the hospital and/or could be due to long delays in seeking medical care that result in women arriving at the hospital in a moribund condition. Through BPR, the government has set a stretch objective that "deaths related to pregnancy and maternity should not occur to 99% of mothers after the patient arrives at the hospital". Hospitals should monitor the proportion of maternal deaths in order to assess the quality of maternal health services. The reasons for every maternal death in the hospital should be investigated and quality improvement measures taken where necessary. For a RHB, knowledge of the number of maternal deaths in the hospital is necessary to calculate the regional, population based maternal mortality rate which will assist to plan future health services and to identify actions that should be taken to increase access to maternal health care services.
Definition	The number of maternal deaths per 100 deliveries
Unit of measurement	%
Numerator	Number of maternal deaths (any gestational age) (Q35) INCLUDE: **All** maternal deaths should be included, wherever they occur in the hospital. • Ante partum deaths (at any gestational age) • Intrapartum deaths • Post partum deaths (from delivery until 6 weeks post partum) • Direct causes (e.g. haemmorhage, ruptured uterus, eclampsia, obstructed labour, infection etc) • Indirect causes (e.g. heart disease or malaria aggravated by pregnancy) EXCLUDE: Deaths in pregnant women due to incidental or accidental causes, e.g. road traffic accident.
Denominator	Number of women who gave birth in the hospital (Q29)
Formula	Number of maternal deaths (any gestational age) (Q35) ÷ Number of women who gave birth in the hospital (Q29) x 100
Data sources	Delivery register Emergency gynecology database/register Emergency room database/register
Frequency of reporting	Monthly

KPI 22: Institutional neonatal death within 24 hours of birth

Why is this important?	This indicator is a measure of the quality of care during delivery and in the immediate post-partum period. A hospital should monitor the early neonatal death rate to assess the quality of maternity care provided and take action to address any problems identified.
Definition	The number of deaths within 24 hours of birth per 100 live births attended in the hospital. INCLUDE: All deaths within the first 24 hours of life among babies who were delivered in the health facility EXCLUDE: Deaths among babies who were admitted AFTER delivery
Unit of measurement	%
Numerator	Number of deaths within 24 hours of birth among babies born alive in the hospital (Q36)
Denominator	Number of live births attended in the hospital (Q30)
Formula	Number of deaths within 24 hours of birth among babies born alive in the hospital (Q36) ÷ Number of live births attended in the hospital (Q30) x 100
Data sources	Delivery register
Frequency of reporting	Monthly

REFERRAL SYSTEM

KPI 23: Referrals made

Why is this important?	A high number and proportion of referrals made from the hospital could indicate that the hospital is not providing all services required by the population served, whereas a low number and proportion of referrals might indicate that the hospital is not following referral guidelines and is treating patients beyond its capacity. Knowledge of the number and rate of referrals helps the hospital to plan future service provision. For the RHB, knowledge of the number and rate of referrals made by each hospital helps to monitor the regional Referral System and assists the RHB to identify the need for and plan future healthcare services in the region.
Definition	The total number of patient attendances (inpatient, outpatient, emergency and maternity) who were referred to another facility with a referral paper during the reporting period Emergency referrals are those patients who were advised to seek immediate or life saving medical treatment at another facility. This could include patients referred from the emergency room, patients referred from the emergency gynecology unit, labouring or non-labouring mothers referred from the maternity unit, patients referred from OPD or inpatient wards for immediate or life saving treatment. Non-emergency referrals are those patients who were advised to seek medical treatment at another facility but where the need for treatment was not immediate or life saving. Referrals made by ANY department or service should be included, e.g. • Inpatient admissions • Outpatient attendances • Emergency room attendances • Emergency maternity attendances (any gestational age) • Delivering mothers or neonates • Private wing attendances
Unit of measurement	Absolute number
Formula	Number of emergency referrals made (Q38) + Number of non-emergency referrals made (Q39)
Data sources	Referral register
Frequency of reporting	Monthly

KPI 24: Rate of referrals

Why is this important?	A high number and proportion of referrals made from the hospital would indicate that the hospital is not providing all services required by the population served, whereas a low number and proportion of referrals might indicate that the hospital is not following referral guidelines and is treating patients beyond its capacity. Knowledge of the number and rate of referrals helps the hospital to plan future service provision. For the RHB, knowledge of the number and rate of referrals made by each hospital helps to monitor the regional referral system and assists the RHB to identify the need for and plan future healthcare services in the region.
Definition	The number of patient attendances (inpatient, outpatient, emergency and maternity) who were referred to another facility with a referral paper during the reporting period per 100 patient attendances
Unit of measurement	%
Numerator	Number of emergency referrals made (Q38) + Number of non-emergency referrals made (Q39)
Denominator	Total patient attendances, i.e. Number of new and repeat outpatient attendances at public facility (Q3) + Number of new and repeat outpatient attendances at private wing (Q4) + Number of emergency room attendances (Q8) + Number of patients admitted to public facility (Q13) + Number of patients admitted to private wing (Q14) + Number of women who gave birth in the hospital (Q29) + Number of non-delivering emergency maternal attendances (any gestational age) (Q37)
Formula	[Number of emergency referrals made (Q38) + Number of non-emergency referrals made (Q39)] ÷ [Number of new and repeat outpatient attendances at public facility (Q3) + Number of new and repeat outpatient attendances at private wing (Q4) + Number of emergency room attendances (Q8) + Number of patients admitted to public facility (Q13) + Number of patients admitted to private wing (Q14) + Number of women who gave birth in the hospital (Q29) + Number of emergency maternal attendances (any gestational age) (Q37)] x 100
Data sources	Referral register, admission register, outpatient register, emergency register, delivery register/log books or databases
Frequency of reporting	Monthly

KPI 25: Emergency referrals as a proportion of all referrals made

Why is this important?	All hospitals should be able to provide emergency medical services. If a hospital has a high proportion of emergency referrals this would suggest that the hospital is not providing adequate emergency services.
Definition	Number of emergency referrals per 100 referrals
Unit of measurement	%
Numerator	Number of emergency referrals made (Q38) Emergency referrals are those patients who were advised to seek immediate or life saving medical treatment at another facility. This could include patients referred from the emergency room, patients referred from the emergency gynecology unit, labouring or non-labouring mothers referred from the maternity unit, patients referred from OPD or inpatient wards for immediate or life saving treatment.
Denominator	Number of emergency referrals made (Q38) + Number of non emergency referrals made (Q39)
Formula	Number of emergency referrals made (Q38) ÷ [Number of emergency referrals made (Q38) + Number of non emergency referrals made (Q39)] x 100
Data sources	Referral register
Frequency of reporting	Monthly

PHARMACY

KPI 26: Average stock out duration of hospital specific tracer drugs

Why is this important?	The availability of hospital specific essential (tracer) drugs is a measure of service availability. Tracer drugs should ALWAYS be available at the hospital. If there is any stock out of tracer drugs the hospital should take action to identify and address the cause. For the RHB, knowledge of the stock out of hospital specific tracer drugs in hospitals helps to assess the adequacy of hospital inventory control processes and the regional Pharmaceutical Supply Chain Management System.
Definition	The number of days in which a hospital specific tracer drug was not available averaged over all hospital specific tracer drugs. The hospital specific tracer drugs are as follows: • Amoxycillin • Oral Rehydration Salts • Arthemisin/Lumphantrine • Mebendazole Tablets • Tetracycline Eye Ointment • Paracetamol • Refampicine/Isoniazide/Pyrazinamide/Ethambutol • Medroxyprogesterone(depo) injection • Ergometrine Maleate Injection/Tablets • Ferrous Sulphate plus Folic Acid • Pentavalent DPT-Hep-Hib Vaccine • Plus an additional 5 drugs, whose availability is mandatory, to be selected by the hospital
Unit of measurement	Days
Numerator	Sum total of stock out days of hospital specific tracer drugs (Q40)
Denominator	Number of hospital specific tracer drugs (Q41)
Formula	Sum total of stock out days of hospital specific tracer drugs (Q40) ÷ 16 (the total number of hospital specific tracer drugs) (Q41)
Data sources	Pharmacy Bin Cards
Frequency of reporting	Monthly

PRODUCTIVITY

KPI 27: Patient day equivalents per doctor

Why is this important?	This indicator relates to the productivity of doctors and helps the hospital to determine whether doctors are working productively, or are overloaded. The indicator is useful for planning future staff numbers.
Definition	The average number of patient day equivalents per full time equivalent (FTE) doctor
Numerator	Number of patient day equivalents (PDEs) during reporting period A patient day equivalent is equal to ONE inpatient bed day (i.e. one overnight stay by one patient) *or* three outpatient visits *or* three emergency visits *or* three emergency maternity attendances *or* two deliveries. It assumes that the cost of one inpatient day is equivalent to three out outpatient visits *or* three emergency visits *or* three emergency maternity attendances *or* two deliveries. INCLUDE: • Inpatient admissions to public and private facilities • Outpatient attendances to public facility and private wing • Emergency attendances • Deliveries attended I.e. Patient day equivalent = Sum total of length of stay during reporting period (Q19) + [Number of new and repeat outpatient attendances at public facility (Q3) ÷ 3] + [Number of new and repeat outpatient attendances at private wing (Q4) ÷3] + [Number of emergency room attendances (Q8) ÷3] + [Number of non-delivering emergency maternal attendances (any gestational age) (Q37) ÷ 3] + [Number of women who gave birth in the hospital (Q29) ÷ 2]
Denominator	Average number of full time equivalent (FTE) doctors (GPs & Specialists) (Q42) A full time equivalent means a doctor working regular duties of 40 hours per week (excluding on call or duty hours). A doctor working a regular 40 hour week is counted as 1.0 FTE. If a doctor works part time then his/her regular work hours should be converted to a FTE number by dividing the number of regular duty hours by 40. For example a doctor who works 20 hours regular duty per week is counted as 0.5 FTE (i.e. 20 ÷ 40).

	So if the hospital has 4 full time doctors working 40 hours per week, plus one doctor working 20 hours per week plus one doctor working 10 hours per week then the total FTE is 4.75 (i.e. (4 x 1.0) + 0.5 + 0.25). If the number of doctors changes during the reporting period then calculate the AVERAGE FTE for the period, (i.e. [FTE doctors at beginning of reporting period + FTE doctors at end of reporting period] ÷ 2) INCLUDE: • All doctors (both general practitioners and specialists) funded by the hospital or RHB • All doctors (both general practitioners and specialists) who are voluntary or funded by another source EXCLUDE: • Health Officers • Students • Residents & Interns
Formula	{Sum total of length of stay during reporting period (Q19) + [Number of new and repeat outpatient attendances at public facility (Q3) ÷ 3] + [Number of new and repeat outpatient attendances at private wing (Q4) ÷3] + [Number of emergency room attendances (Q8) ÷3] + [Number of non-delivering emergency maternal attendances (any gestational age) (Q37) ÷ 3] + [Number of women who gave birth in the hospital (Q29) ÷ 2]} ÷ Average number of full time equivalent (FTE) doctors (GP & Specialists) (Q42)
Data sources	• Inpatient registration book/ admission and discharge register • Outpatient registration book/register • Private wing registration book/database • Emergency registration book/database • Delivery register/database • Human resource/personnel database
Frequency of reporting	Monthly

KPI 28: Patient day equivalents per nurse/midwife

Why is this important?	This indicator relates to the productivity of nurses and midwives and helps the hospital to determine whether nurses and midwives are working productively, or are overloaded. The indicator is useful for planning future staff numbers.
Definition	The average number of patient day equivalents per full time equivalent (FTE) nurse/midwife
Numerator	Number of patient day equivalents (PDEs) during reporting period A patient day equivalent is equal to ONE inpatient bed day (i.e. one overnight stay by one patient) *or* three outpatient visits *or* three emergency visits *or* three emergency maternity attendances *or* two deliveries. It assumes that the cost of one inpatient day is equivalent to three out outpatient visits *or* three emergency visits *or* three emergency maternity attendances *or* two deliveries. INCLUDE: • Inpatient admissions to public and private facilities • Outpatient attendances to public facility and private wing • Emergency attendances • Deliveries attended I.e. Patient day equivalent = Sum total of length of stay during reporting period (Q19) + [Number of new and repeat outpatient attendances at public facility (Q3) ÷ 3] + [Number of new and repeat outpatient attendances at private wing (Q4) ÷3] + [Number of emergency room attendances (Q8) ÷3] + [Number of non-delivering emergency maternal attendances (any gestational age) (Q37) ÷ 3] + [Number of women who gave birth in the hospital (Q29) ÷ 2]
Denominator	Average number of full time equivalent (FTE) nurses/midwives (Q43) A full time equivalent means a nurse or midwife working regular duties of 40 hours per week (excluding on call or duty hours). A nurse or midwife working a regular 40 hour week is counted as 1.0 FTE. If a nurse or midwife works part time then his/her regular work hours should be converted to a FTE number by dividing the number of regular duty hours by 40. For example a nurse who works 20 hours regular duty per week is counted as 0.5 FTE (i.e. 20 ÷ 40). So if the hospital has 30 full time nurses working 40 hours per week, plus three nurses working 20 hours per week plus two midwives

	working 10 hours per week then the total FTE is 32.00 (30 x 1.0 + 3 x 0.5 + 2 x 0.25). If the number of nurses/midwives changes during the reporting period then calculate the AVERAGE FTE for the period,(i.e. [FTE nurses/midwives at beginning of reporting period + FTE nurses/midwives at end of reporting period] ÷ 2) INCLUDE: • All nurses and midwives funded by the hospital or RHB • All nurses and midwives who are voluntary or funded by another source EXCLUDE: • Students
Formula	{Sum total of length of stay during reporting period (Q19) + [Number of new and repeat outpatient attendances at public facility (Q3) ÷ 3] + [Number of new and repeat outpatient attendances at private wing (Q4) ÷3] + [Number of emergency room attendances (Q8) ÷3] + [Number of non-delivering emergency maternal attendances (any gestational age) (Q37) ÷ 3] + [Number of women who gave birth in the hospital (Q29) ÷ 2]} ÷ Average number of full time equivalent (FTE) nurses/midwives (Q43)
Data sources	• Inpatient registration book/ admission and discharge register • Outpatient registration book/register • Private wing registration book/database • Emergency registration book/database • Delivery register/database • Human resource/personnel database
Frequency of reporting	Monthly

KPI 29: Major surgeries per surgeon

Why is this important?	This indicator relates to the productivity of surgeons, and helps the hospital to determine whether surgeons are working productively, or are overloaded. The indicator is useful for planning future surgical staff numbers.
Definition	The number of major surgical procedures per full time equivalent (FTE) specialist surgeon.
Numerator	Number of major surgeries (both elective & non-elective) performed on public patients (Q25) + Number of major surgeries (both elective & non-elective) performed on private wing patients (Q26)) A major surgical procedure is defined as any procedure conducted under general, spinal or major regional anaesthesia. INCLUDE: • all surgeries conducted on patients admitted to public facility • all surgeries conducted on private wing patients EXCLUDE: • all ophthalmic surgery NB: Ophthalmologists and ophthalmic surgery should be excluded because the case mix of ophthalmic surgeons is substantially different from that of other surgeons. In particular, ophthalmic surgery tends to be of shorter duration than other types of surgery and hence inclusion of ophthalmic surgery in the calculation would introduce bias when comparing hospitals that provide an ophthalmic service with those that do not.
Denominator	Average number of FTE specialist surgeons (excluding Ophthalmologists) (Q44) Specialist surgeons INCLUDE: • All surgeons funded by the hospital or RHB • All surgeons who are voluntary or funded by another source EXCLUDE: • Surgical residents and interns • Ophthalmologists
Formula	[Number of major surgeries (both elective & non-elective) performed on public patients (Q25) + Number of major surgeries (both elective & non-elective) performed on private wing patients (Q26)] ÷ Average number of FTE specialist surgeons (excluding Ophthalmologists) (Q44)
Data sources	Surgical/operating room log book Human resources/personnel database
Frequency of reporting	Monthly

KPI 30: Major surgeries conducted in the private wing

Why is this important?	Through Health Care Finance Reform (HCFR) hospitals are permitted to establish a private wing service. The proportion of all major surgeries that are conducted on private wing patients is a measure of the productivity of the private wing surgical service and is a measure of service availability, patient demand for private wing services and of the success of implementation of HCFR by the hospital.
Definition	The proportion of all major surgeries that are performed on private wing patients
Numerator	Number of major surgeries (both elective & non-elective) performed on private wing patients (Q26) A major surgical procedure is defined as any procedure conducted under general, spinal or major regional anaesthesia. INCLUDE: • all surgeries conducted on private wing patients EXCLUDE: • all ophthalmic surgery
Denominator	Number of major surgeries (both elective & non-elective) performed on public patients (Q25) + Total number of major surgeries (both elective & non-elective) performed on private wing patients (Q26) EXCLUDE: • all ophthalmic surgery
Formula	Number of major surgeries (both elective & non-elective) performed on private wing patients (Q26) ÷ [Number of major surgeries (both elective & non-elective) performed on public patients (Q25) + Number of major surgeries (both elective & non-elective) performed on private wing patients (Q26)]
Data sources	Surgical/operating room log book
Frequency of reporting	Monthly

HUMAN RESOURCES

KPI 31: Attrition rate – physicians

Why is this important?	The attrition rate (turnover) of hospital staff is an indicator of the quality of the working environment for staff. A high turnover indicates that employees are not satisfied with their working environment. When employees are not satisfied in the workplace they tend to be poorly motivated and are less efficient in their work, and less motivated to provide quality healthcare. Additionally, a high staff turnover may have a negative impact on patient care since it may lead to staff shortages and poor continuity of care. There is a shortage of physicians in Ethiopian hospitals, with many leaving the public sector for the private sector; hence the retention of this group of workers is extremely important to the hospital.
Definition	Proportion of physicians who left during reporting period.
Unit of measurement	%

Numerator	Number of physicians (GP & Specialists) who left the hospital during the reporting period (Q45)
	
	INCLUDE:
	• all physicians and specialists employed by the hospital who:
	  ○ left voluntarily or compulsorily
	  ○ left for training of > 3 months duration
	  ○ died during the reporting period
	
	EXCLUDE:
	• health officers
	• all voluntary physicians and specialists
	• short term trainings (<3 months) where the physician is expected to return to the hospital after completion

Denominator	Number of physicians (GP & Specialists) employed by hospital at the beginning of the reporting period (Q46) + Number of physicians (GP & Specialists) hired during the reporting period (Q47)
Formula	Number of physicians (GPs and specialists) who left the hospital during the reporting period (Q45) ÷ [Number of physicians (GP & Specialists) employed by hospital at the beginning of the reporting period (Q46) + Number of physicians (GP & Specialists) hired during the reporting period (Q47)] x 100
Data sources	HR personnel records
Frequency of reporting	Six monthly

KPI 32: Staff satisfaction

Why is this important?	Hospitals should strive to provide a good working environment for employees, with opportunities for training and development and equitable remuneration. Employees who are satisfied with their working environment are more productive and provide higher quality care. In contrast when workers are dissatisfied in the workplace their productivity tends to be low and the attrition rate is high. The Satisfaction of Employees in Healthcare (SEHC) survey has been developed for use in Ethiopian health facilities. The survey tool measures staff experience and perceptions in relation to training and development opportunities, communication and relationships between staff members, provision of adequate resources to perform the job, and the overall rating of the hospital as a working environment. By monitoring staff satisfaction the hospital can identify areas for improvement and take action to address problems identified.
Definition	Average rating of hospital on a score of 0-10 from SEHC survey
Unit of measurement	Absolute number on a scale of 0 - 10
Numerator	Sum total of rating scores from SEHC surveys (Q48)
Denominator	Number of SEHC surveys completed (Q49)
Formula	Sum total of rating scores from SEHC surveys (Q48) ÷ Number of SEHC surveys completed (Q49)
Data sources	Survey – The survey tool and protocol are under development
Frequency of reporting	Annual

FINANCE

KPI 33: Cost per patient day equivalent

Why is this important?	The cost per patient day equivalent is a measure of the efficiency of providing services at the hospital. A high cost per patient day equivalent suggests that the hospital is not cost effective when using resources (staff and/or equipment and supplies).
Definition	A patient day equivalent is equal to ONE inpatient bed day (i.e. one overnight stay by one patient) *or* three outpatient visits *or* three emergency visits *or* three emergency maternity attendances *or* two deliveries. It assumes that the cost of one inpatient day is equivalent to three out outpatient visits *or* three emergency visits *or* three emergency maternity attendances *or* two deliveries. The cost per PDE is the average cost of treating one inpatient for one day in the hospital *or* the average cost of 3 outpatients, emergency room or emergency maternity attendances *or* the average cost of 2 deliveries.
Unit of measurement	Ethiopian birr
Numerator	Total hospital operating expenses (Q50). This is all expenses associated with running the hospital including: • Gross salaries and employee benefits • Consumables and supplies • Cost of outsourced services • Professional fees • Rentals • Interest payments • Insurance payment etc EXCLUDE: • Capital expenses
Denominator	<u>Patient Day Equivalents</u> = Sum total of length of stay during reporting period (Q19) + [Number of new and repeat outpatient attendances at public facility (Q3) ÷ 3] + [Number of new and repeat outpatient attendances at private wing (Q4) ÷3] + [Number of emergency room attendances (Q8) ÷3] + [Number of non-delivering emergency maternal attendances (any gestational age) (Q37) ÷ 3] + [Number of women who gave birth in the hospital (Q29) ÷ 2]

Formula	Total operating expenses (Q50) ÷ {Sum total of length of stay during reporting period (Q19) + [Number of new and repeat outpatient attendances at public facility (Q3) ÷ 3] + [Number of new and repeat outpatient attendances at private wing (Q4) ÷3] + [Number of emergency room attendances (Q8) ÷3] + [Number of non-delivering emergency maternal attendances (any gestational age) (Q37) ÷ 3] + [Number of women who gave birth in the hospital (Q29) ÷ 2]}
Data sources	1) Operational expenses: hospital monthly financial statement 2) Patient day equivalents: • Inpatient registration book/ admission and discharge register • Outpatient registration book/register • Private wing registration book/database • Emergency registration book/database • Delivery register/database Human resource/personnel database
Frequency of reporting	Quarterly

KPI 34: Raised revenue as a proportion of total operating revenue

Why is this important?	Hospital income is from two sources: government budget allocation and raised revenue. Through Healthcare Finance Reform (HCFR) hospitals now have the autonomy to generate income from user fees, private wing and other sources. This is known as raised revenue or non government revenue. Hospitals are expected to generate income that should then be re-invested in the hospital to improve the quality of services provided. By monitoring the amount of raised revenue, and the ratio between raised revenue and total operating revenue the hospital can assess the adequacy of HCFR activities and plan future service improvements.
Definition	Raised revenue as a proportion of total operating revenue (i.e. raised revenue + government operating budget allocation) for the reporting period
Unit of measurement	%
Numerator	Raised revenue during reporting period (Q51) Raised revenue includes all activities that generate income for the hospital with the exception of government budget allocation. For example: user fees, gross income from private wing, sales of food or services, hall rent, donor, etc.
Denominator	Total operating revenue for reporting period, i.e. Government operating budget allocation* for reporting period (Q52) + raised revenue (Q51) *Government operating budget allocation means budget allocated for the general running of a hospital (including staff salaries, consumables and supplies etc). Capital budget allocation should be EXCLUDED. NB: The Government operating budget for the reporting period can be calculated from the annual budget. For example if the reporting period is quarterly then the government budget allocation for the reporting period is the annual budget divided by 4.
Formula	Raised revenue during reporting period (Q51) ÷ [Government operating budget allocation for reporting period (Q52) + Raised revenue during reporting period(Q51)] x 100
Data sources	Hospital financial statement
Frequency of reporting	Quarterly

KPI 35: Revenue utilization

Why is this important?	Each year, hospitals are expected to prepare an annual plan and identify the budget required to meet that plan. Hospitals should fully utilize their budget by the end of the year. If a hospital spends more than its budget then it will run into debt and will be unsustainable in the long term. If a hospital spends less than its budget this could indicate either improved efficiency OR a failure to fulfill the annual plan. In any case where a hospital over or under-spends its budget further investigation is required to assess the reasons why and take action to correct this if necessary.
Definition	Proportion of budget for the reporting period (both raised revenue and government allocation) that is utilized.
Unit of measurement	%
Numerator	Total hospital operating expenses during reporting period (Q50) + Total capital expenses during reporting period (Q53)
Denominator	Government operating budget allocation for reporting period (Q52) + Government capital budget allocation for the reporting period (Q54) + Raised revenue budget allocation for reporting period (Q55)
Formula	[Total hospital operating expenses during reporting period (Q50) + Total capital expenses during reporting period (Q53)] ÷ [Government operating budget allocation for reporting period (Q52) + Government capital budget allocation for the reporting period (Q54) + Raised revenue budget allocation for reporting period (Q55)] x 100
Data sources	Hospital financial statement
Frequency of reporting	Quarterly

PATIENT SATISFACTION

KPI 36: Patient satisfaction

Why is this important?	Patient satisfaction with the health care they receive at the hospital is a measure of the quality of care provided. By monitoring patient satisfaction hospitals can identify areas for improvement and ensure that hospital care meets the expectations of the patients served. The Out-Patient Assessment of Healthcare Survey (O-PAHC) and In-Patient Assessment of Healthcare Survey (I-PAHC) have been developed for use in Ethiopian health facilities. These survey tools measure the patient experience related to service availability, cleanliness, communication, respect, medication (prescription, availability and patient information) and cost.
Definition	Average rating of hospital on a score of 0-10 from O-PAHC & I-PAHC surveys
Unit of measurement	Absolute number, on a scale of 0-10
Numerator	Sum total of O-PAHC rating scores (Q56) + Sum total of I-PAHC rating scores (Q58)
Denominator	Number of O-PAHC surveys completed (Q57) + Number of I-PAHC surveys completed (Q59)
Formula	[sum total of O-PAHC rating scores (Q56) + sum total of I-PAHC rating scores (Q58)] ÷ [Number of O-PAHC surveys completed (Q57) + Number of I-PAHC surveys completed (Q59)]
Data sources	Survey – protocol for the patient satisfaction survey is presented in Appendix 12. A minimum of 50 patient outpatients and 50 inpatients should be surveyed. NB: The number of O-PAHC and I-PAHC surveys completed should be equal in order to avoid bias in the calculation Data entry and analysis can be undertaken using the electronic Access database and Excel pre-programmed analytical tool through which summary tables, charts and the average satisfaction rating can be calculated.
Frequency of reporting	Quarterly

Section 5 Hospital Supportive Supervision Site Visits

5.1 Purpose of hospital supportive supervision site visits

The purpose of a hospital supportive supervision site visit is:

- To provide guidance and technical assistance to improve hospital performance
- To assure the RHB that KPI and any other performance data reported by the hospital to the RHB is accurate
- To identify, recognize and learn from good practice, which can then be shared with other hospitals
- To identify areas for improvement
- To identify areas where additional support from the RHB or other partners is required, and to plan with the hospital for the provision of that support

These are common to all site visits conducted by the RHB but there may be additional reasons for site visits. For example, the site visit could be conducted collaboratively with Faculty from the Masters in Hospital and Healthcare Administration Program (MHA) and have an additional aim to assess 'on site' the performance of a hospital CEO who is participating in the MHA, or the site visit could be conducted with a partner NGO to assess a specific area where the partner has provided direct assistance to the hospital.

The purpose of the site visit and specific areas of focus should always be agreed by the site visit team and should be informed to the hospital in advance of the visit taking place (see Section 5.4 below).

5.2 Overview of the supportive supervision site visit process

Step 1 Selection of the site visit team

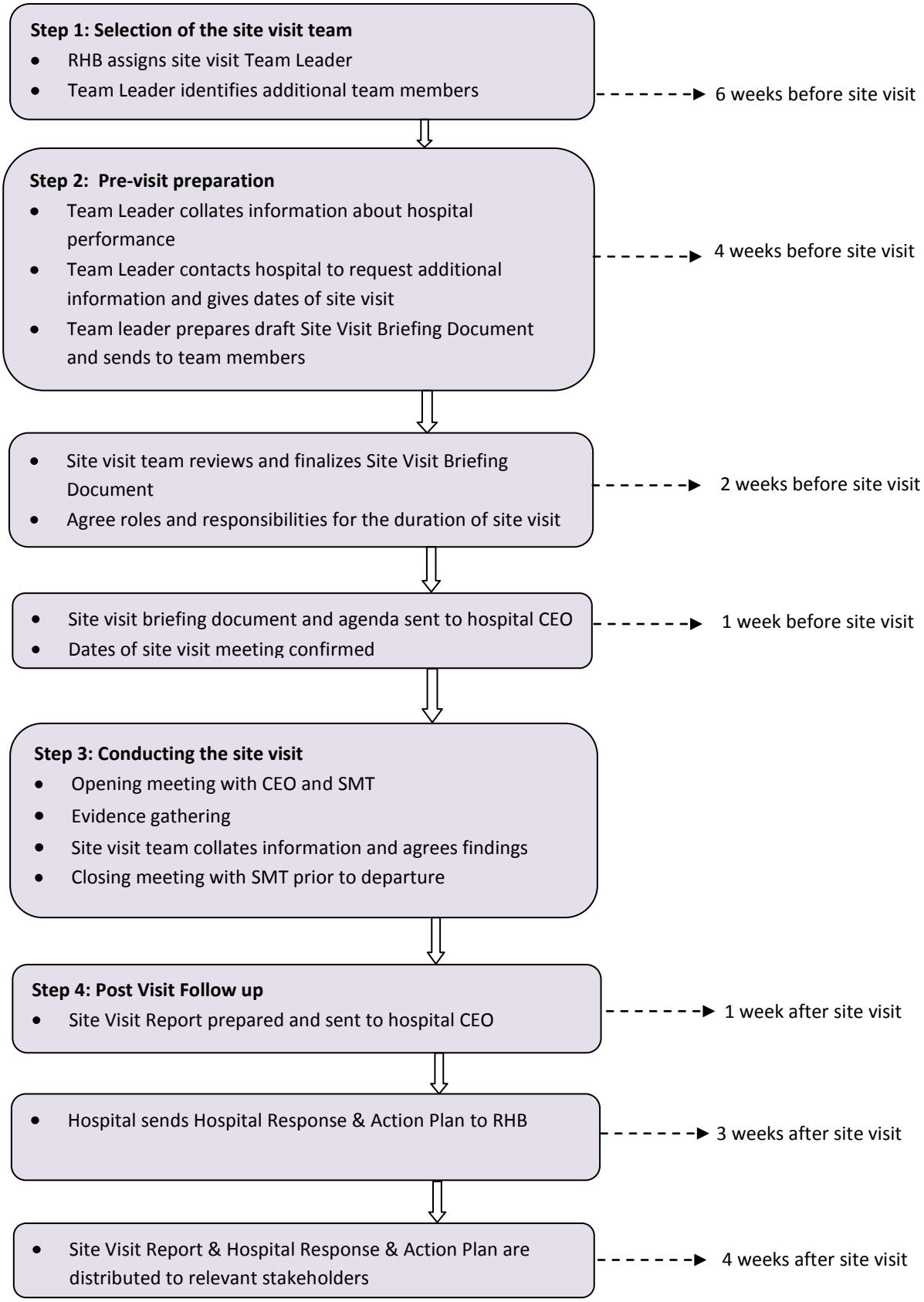
Step 2 Pre-visit preparation

Step 3 The site visit

Step 4 Post-visit report and follow up

A timeline for each of the above steps is presented in Figure 10 followed by detailed descriptions of each step.

Figure 10 **Overview of the supportive supervision site visit process**



5.3 Selection of the site visit team

The first step in the site visit process is to determine membership of the site visit team.

The site visit should be led and coordinated by the RHB in collaboration with other partners as relevant. Potential participants include FMOH staff, staff from other hospitals (e.g. a respected hospital CEO), CHAI EHMI staff, MHA Faculty or others.

A minimum of three individuals should conduct the site visit. This will allow each person to carry out specific functions during the site visit and minimize the time required at the hospital.

A team leader should be assigned by the RHB to oversee the site visit process. The roles of the team leader include:

- To establish membership of the site visit team
- To prepare the site visit briefing document
- To co-ordinate the site visit process, following the steps outlined below
- To ensure communication between site visit team members both before and after the site visit is conducted
- To communicate with the hospital CEO both before and after the site visit
- To prepare the site visit report and distribute to relevant stakeholders (e.g. RHB Head, Hospital CEO and GB Chair, site visit team members).
- To ensure the hospital provides a written response to the site visit report. To follow up on any action described in the site visit report or the hospital response
- To ensure the site visit report and the hospital response are maintained on file by the RHB
- To establish the date or timeline within which the next hospital site visit should be conducted

5.4 Pre-visit preparation for a site visit

The success of a site visit is dependent on adequate planning and preparation by both the site visit team and hospital management.

5.4.1 Preparation by the site visit team

Collate information

Firstly, the site visit team leader should collate all available evidence about the performance of the hospital, in order to identify specific areas that should be addressed during the site visit. Much of this evidence will already be on record with the RHB. As a minimum, the following information should be reviewed:

- The most recent site visit report and the hospital response & action plant
- The most recent, and previous hospital KPI reports
- The most recent, and previous hospital self assessment reports on attainment of EHRIG standards

The hospital KPIs and attainment of EHRIG standard reports should also be compared with other hospitals in the region to assess how well the hospital is performing in relation to others.

If any of the above information is not available in the RHB, the team leader should contact the hospital CEO to request them to submit the missing information.

Prepare draft site visit briefing document

After gathering the above information, the site visit team leader should review all evidence and based on this should prepare a site visit briefing document. This should include:

- Summary of hospital performance
- Strengths/successes of the hospital
- Areas of possible weakness
- Evidence that requires validation (e.g. selected KPIs, selected chapters of EHRIG self assessments etc)
- Priority areas for further investigation during the site visit
- Service areas to be visited during site visit
- Staff members to be interviewed during site visit
- Additional information for the hospital to prepare for the site visit team. For example, if the patient satisfaction rating score is low, the team leader may ask the hospital CEO to prepare the full results of the patient survey for review at the site visit. If the physician attrition rate is high the team leader may ask the CEO to provide a breakdown of the

number and type of physicians who have left during the reporting period. A template for the site visit briefing document is presented in Appendix 14.

Consultation and finalization of site visit briefing document with site visit team members

The team leader should send the draft site visit briefing document together with all the above evidence (KPI reports, previous site visit report etc) to all site visit team members. Each team member should review and give comments.

All team members should then meet in person, or communicate by telephone or email, to agree the areas to be addressed during the site visit.

The team leader should then assign specific tasks and responsibilities to each team member and should prepare a schedule for the site visit which describes in detail the role of individual team members. A sample site visit schedule is presented in Figure 11, below.

Figure 11 Sample Site Visit Schedule

Time	Activity	Site visit team members involved	Department &/or hospital staff involved
8.30am – 9.30am	Opening meeting	All	CEO Senior management team
9.30am – 3.00pm	Information Gathering by visits to departments and service areas	*Insert name of first team member*	*Insert name of departments/service areas to be visited and staff members to be interviewed (eg OPD Case Team Leader) by first site visit team member*
		Insert name of second team member	*Insert name of departments/service areas to be visited and staff members to be interviewed (eg OPD Case Team Leader) by second site visit team member*
		Insert name of third team member	*Insert name of departments/service areas to be visited and staff members to be interviewed (eg OPD Case Team Leader) by third site visit team member*
3.00pm – 4.00pm	Collation of information gathered	All	n/a
4.00pm to 5.00pm	Closing meeting	All	CEO Senior management team

Inform hospital CEO of date and purpose of site visit

After finalization of the site visit briefing document and schedule the team leader should contact the hospital CEO to confirm the dates of the site visit. The site visit briefing document and schedule should be sent to the CEO so that he/she can ensure that the required hospital staff are available on the days of the site visit, and can prepare the additional evidence requested by the site visit team

5.4.2 Preparation by the Hospital

After receiving the site visit briefing document and schedule, the hospital CEO should share these with the senior management team and should prepare any supplementary evidence requested in the briefing document.

The CEO should inform all hospital staff that a site visit is being conducted; giving a general overview of the purpose of the site visit and priority areas that the site visit team will review. In particular, the CEO should ensure that the management and staff of all service areas that will be visited during the site visit are available on the days of the site visit.

5.5 Conducting the site visit

The site visit should last between one to two days, although may be lengthened if necessary.

5.5.1 Opening meeting

On arrival at the hospital, the site visit team should first have an opening meeting with the CEO and SMT to give an overview of the purpose of the site visit, to confirm the schedule and to receive any additional information that had been requested from the hospital. The SMT should also be given opportunity to comment on the schedule and to add any areas that they think are missing and that they would like the site visit team to review. The site visit team may also take this opportunity to update the SMT on any relevant regional or national developments that the hospital should be aware of.

5.5.2 Information gathering

The team should then split up, each team member visiting the departments and services within the hospital as per the planned schedule.

Each team member should prepare detailed notes on their activities during the site visit, ensuring that the specific questions raised in the site visit briefing document are addressed.

5.5.3 Collation of evidence

After visiting the different service areas, the site visit team should meet together and should report back to on their assigned tasks. Together, the team should agree initial findings of the visit, including strengths and weaknesses of the hospital, recommendations to the hospital and specific areas that the hospital should address. The team should also identify areas where additional support from the RHB is required and a provisional date/timeline for the next site visit.

5.5.4 Closing meeting

After the internal meeting among site visit team members alone, the team should then invite the hospital CEO and SMT to join them for a closing meeting. The team should present their overall findings as described above, and give opportunity to the SMT to respond to these. These findings should be seen as provisional, with the possibility of adding further areas or revising the focus after further reflection.

5.6 Post Visit Follow Up

Following the site visit, the team leader should prepare a detailed report that describes how the visit was conducted and the main findings and recommendations arising. A template for a site visit report is presented in Appendix 15.

The report should be reviewed by all site visit team members. When reviewing the draft report team members should consider:

- Does the report present the impression of the hospital that you want it to convey?
- Does the report contain the key messages arising from the site visit?
- Does the report describe any follow up action that is expected from the hospital?
- Are recommendations based on evidence gathered during the site visit?
- Are all recommendations important? Are they feasible?
- Does the report identify any follow up action or support that is required from the RHB?
- Will the report help to improve hospital services? If not, how can the report be improved?

After finalizing the report by the site visit team, the report should be sent to the hospital CEO who should review and prepare a hospital response & action plan that describes specific actions that the hospital will take in the light of the report. When reviewing the report the hospital CEO should consider:

- Is the report factually accurate? If not, the CEO should include a correction of any errors in their written response
- What specific actions should the hospital take to address the recommendations made in the report? In what timeframe?
- Does the report describe all areas of support that the hospital expects from the RHB to assist the hospital to act on the recommendations?

- Are there any additional comments that the CEO would like to raise with the RHB about the site visit process itself? Anything that could be improved in the process?

A sample template for the hospital response to a site visit report is presented in Appendix 16.

The CEO should send a copy of the hospital response and action plan to the site visit team leader.

After finalizing the site visit report and the hospital response, copies of both should be shared with the RHB Head and all relevant stakeholders. Copies should be kept on file within the RHB and used as evidence when preparing subsequent site visits and regional review meetings (see Section 6).

Section 6 Regional Review Meetings

6.1 Purpose

Regular meetings between the RHB and all hospitals in the region provide the opportunity for communication and experience sharing between the RHB and hospitals. Specifically review meetings can be used to:

- Present and discuss hospital performance reports
- Benchmark
- Identify and reward good practice
- Share successes and challenges
- Discuss other relevant topics

6.2 Frequency of meetings

Review meetings should be held as a minimum every six months.

6.3 Length of meeting

In general the meeting should last for two days, but may be longer if the need arises.

6.4 Participants

a) RHB staff

The meeting should be attended by RHB curative and rehabilitative core process team members. The RHB Head and deputies should also attend whenever possible. Additional RHB staff members should be invited if the agenda includes topics that are of relevance to them.

b) Hospital staff

As a minimum the hospital CEO and Medical Director should attend the meeting. Additional participants could include other members of the hospital senior management team and/or the Governing Board Chair.

c) Medical Services Directorate

The FMOH regional focal persons for the region should be invited to attend since this will maintain strong communication between FMOH, the RHB and hospitals and will build capacity in FMOH to support the RHB and hospitals when required.

d) Other

Additional partners (such as CHAI or other NGOs) could be invited to attend according to their area of expertise and relevance for the agenda.

6.5 Pre Meeting Preparation

Before each meeting the RHB should determine the venue, set the meeting agenda, identify participants and send an invitation letter plus agenda to all hospitals, describing which participants should attend to represent the hospital. Additional partners such as FMOH staff or NGO partners should be invited as relevant. The invitation letter and agenda should be sent at least 3 weeks in advance of the meeting, with a follow up email or phone call to confirm attendance approximately one week in advance of the meeting.

To prepare for each meeting, the RHB should review all hospital KPI reports and the most recent site visit report and hospital response and action plan. Using these reports the RHB should identify successes and challenges within individual hospitals or across the region as a whole.

Based on the findings, the RHB should identify specific hospitals to give presentations or share experience at the meeting and should inform these hospitals in advance so that the hospitals can prepare all necessary information.

6.6 Conducting the meeting

The meeting should be chaired by the RHB, with additional facilitators for each session or topic according to need.

Specific individuals from within the RHB, FMOH or partners should be assigned to take minutes of the meeting.

At each meeting the RHB should give a presentation on the KPI and EHRIG standards assessment reports from each hospital, including regional averages and recommendations from the RHB in response to the findings. Other agenda items will vary from meeting to meeting according to need.

6.7 Post meeting follow up

The RHB should prepare minutes and circulate these to all participants within a maximum of two weeks following the meeting. The minutes may also be sent to others as relevant (for example the RHB Head and FMOH).

Section 7 FMOH and RHB Meetings

7.1 Purpose

Regular meetings between FMOH and all RHBs provide the opportunity for communication and experience sharing between regions. Specifically FMOH/RHB meetings can be used to:

- Present and discuss regional performance reports
- Benchmark
- Identify and reward good practice
- Share successes and challenges
- Share recent research reports related to hospital performance
- Discuss other relevant topics

7.2 Frequency of meetings

FMOH/RHB meetings should be held as a minimum every quarter

7.3 Length of meeting

In general the meeting will last for two days, but may be longer if the need arises.

7.4 Participants

a) FMOH Staff

All members of the MSD should attend the meeting. Additional FMOH staff should be invited if the agenda includes topics that are of relevance to them.

b) RHB Staff

Ideally, all members of each CRCPT of all RHBs should attend every meeting, but as a minimum the RHB core process owner and hospital lead should be in attendance.

c) Hospital staff

A selected number of hospital CEOs, governing board chairs and/or other senior managers should be invited to attend meetings depending on the agenda items.

d) Other

Additional partners (such as CHAI or other NGOs) could be invited to attend according to their area of expertise and relevance for the agenda.

7.5 Pre Meeting Preparation

Before each meeting FMOH should determine the venue, set the meeting agenda, identify participants and send an invitation letter plus agenda to all RHBs +/- specific hospitals +/- other partners as relevant. The invitation letter and agenda should be sent at least 3 weeks in advance of the meeting, with a follow up email or phone call to confirm attendance approximately one week in advance of the meeting.

To prepare for each meeting, FMOH should review all regional KPI reports to identify successes and challenges within individual regions or across the country as a whole.

Based on the findings, FMOH should identify specific RHBs to give presentations or share experience at the meeting and should inform these RHBs in advance so that the RHB can prepare all necessary information.

7.6 Conducting the meeting

The meeting should be chaired by FMOH, with additional facilitators for each session or topic according to need.

Specific individuals from within FMOH or partners should be assigned to take minutes of the meeting.

At each meeting FMOH should give a presentation on the KPI and EHRIG standards assessment reports from each region, and recommendations from FMOH in response to the findings. Other agenda items will vary from meeting to meeting.

7.7 Post meeting activities

FMOH should prepare minutes and circulate these to all participants within a maximum of two weeks following the meeting. The minutes may also be sent to others as relevant (for example all RHB heads, and other FMOH directors or Ministers).

Appendix 1 User Guide: Hospital KPI Database

Background

The Federal Ministry of Health (FMOH) and Regional Health Bureaus (RHB) are leading a sector wide reform to strengthen and improve health services in Ethiopia. To support these efforts, the Medical Services Directorate (MSD) of the FMOH, in collaboration with regional health bureaus (RHBs) and hospital Governing Boards has developed a performance monitoring framework for hospitals, based on a national core set of 36 Key Performance Indicators (KPI) which measure hospital performance in the areas of efficiency, effectiveness, and quality.

The set of KPIs are made up of 59 data elements, which are used in the calculation of the KPIs. Data elements are collected from sourcing documents at the hospital level and used to calculate KPIs by "KPI Data Owners". The hospital "KPI Focal Person" collects all Data Elements and KPI Results from each and every KPI Data Owner.

The KPI Focal Person is responsible to present the KPI results to the hospital Quality Committee and CEO. After approval by the CEO the information should be sent to the RHB. The CEO should also present the KPI results to the hospital Governing Board.

In an effort to support and standardize this process of collection, analysis and dissemination, an MSExcel tool for hospitals (the 'Hospital KPI Database') has been developed.

The guidance in this document describes how to use this excel tool in data collection, reporting, and analysis. Based on the data entered into the tool, automatic tables and reports are produced that describe an individual hospital's overall performance within a given time period.

Operational Requirements

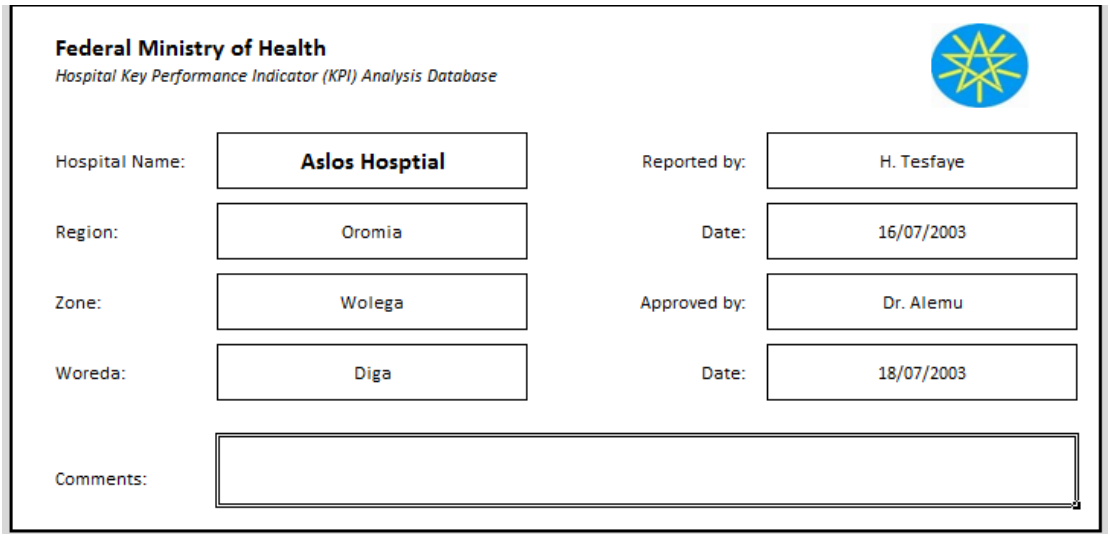
To use the Hospital KPI Database, Excel 2007 is preferred. Using the tool in Excel 2003 will compromise some of the functions of the tool and limit its effectiveness in presenting a given hospital's data.

Entering Hospital Information

1. Open the empty database and save it for your particular hospital

    a. Open document "Hospital_KPI_Database"

    b. Under the office button highlight "Save As", click on Excel workbook, and save under the title of "Hospital_KPI_Database_[your hospital]"



2. Click on the "Hospital_Form" tab and enter the following data into the cells:

    a. Hospital name: include "Hospital" after the name of the hospital

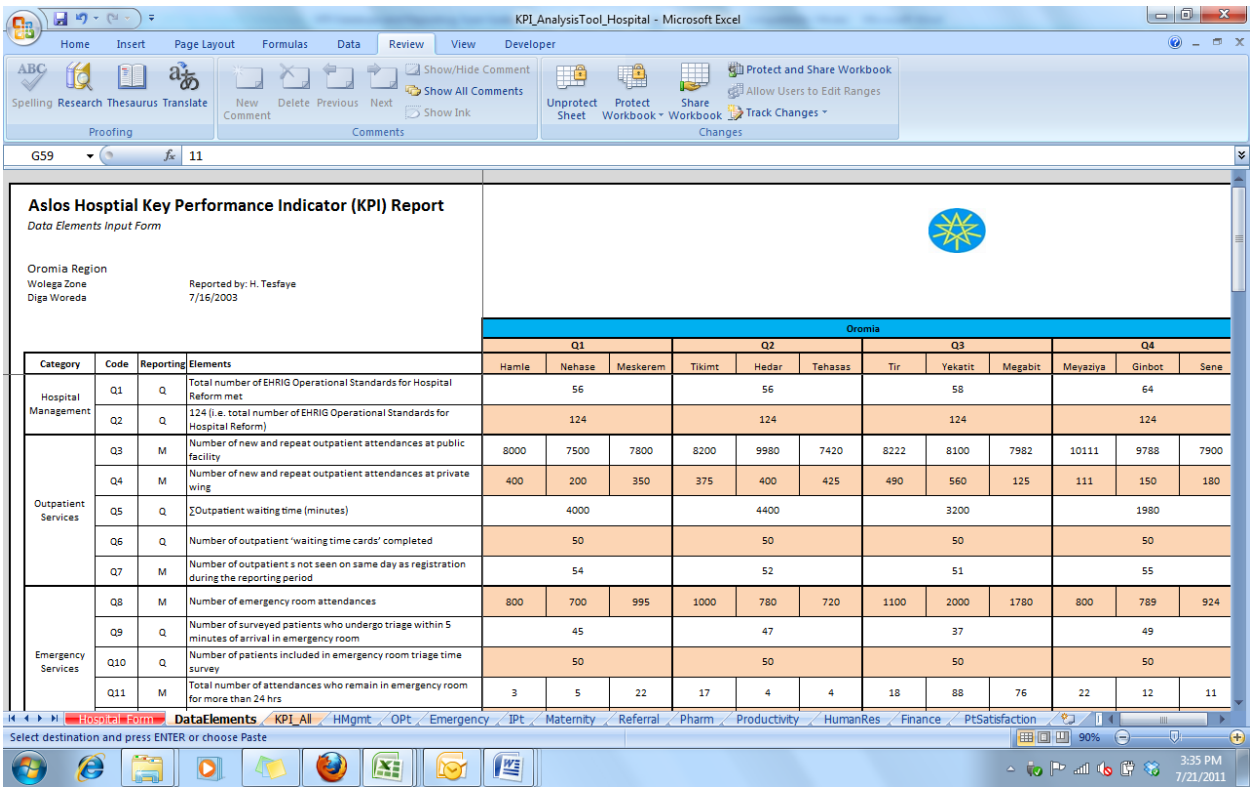
    b. Reported by should be the name of the KPI Focal Person who was responsible to collate all the Data Elements and KPI Results from the KPI Owners

    c. Approved by: should be the name of the person (most likely the hospital CEO) who reviewed the data and certified its accuracy

    d. The 'Approver' can enter comments into the comments box if necessary

Entering Data Elements

1. Open the "Data Elements Input Form" under the "Data Elements" tab



2. Don't use anything but numbers – remember everything is linked to the data elements sheet and if there is a problem somewhere else, it is probably the result of incorrect data entered into the main sheet

3. Enter the data elements collected from the data owners into their respective cells. Make sure to line up with the proper month and quarter.

    a. For Data Elements reported quarterly (Q1, Q2, Q5, Q6, Q7, Q9, Q10, Q27, Q28, Q50, Q51, Q52, Q53, Q54, Q55, Q56, Q57, Q58, Q59) there is one box for three months

    b. For Data Elements reported bi-annually (Q45, Q46, Q47) there is one box for six months

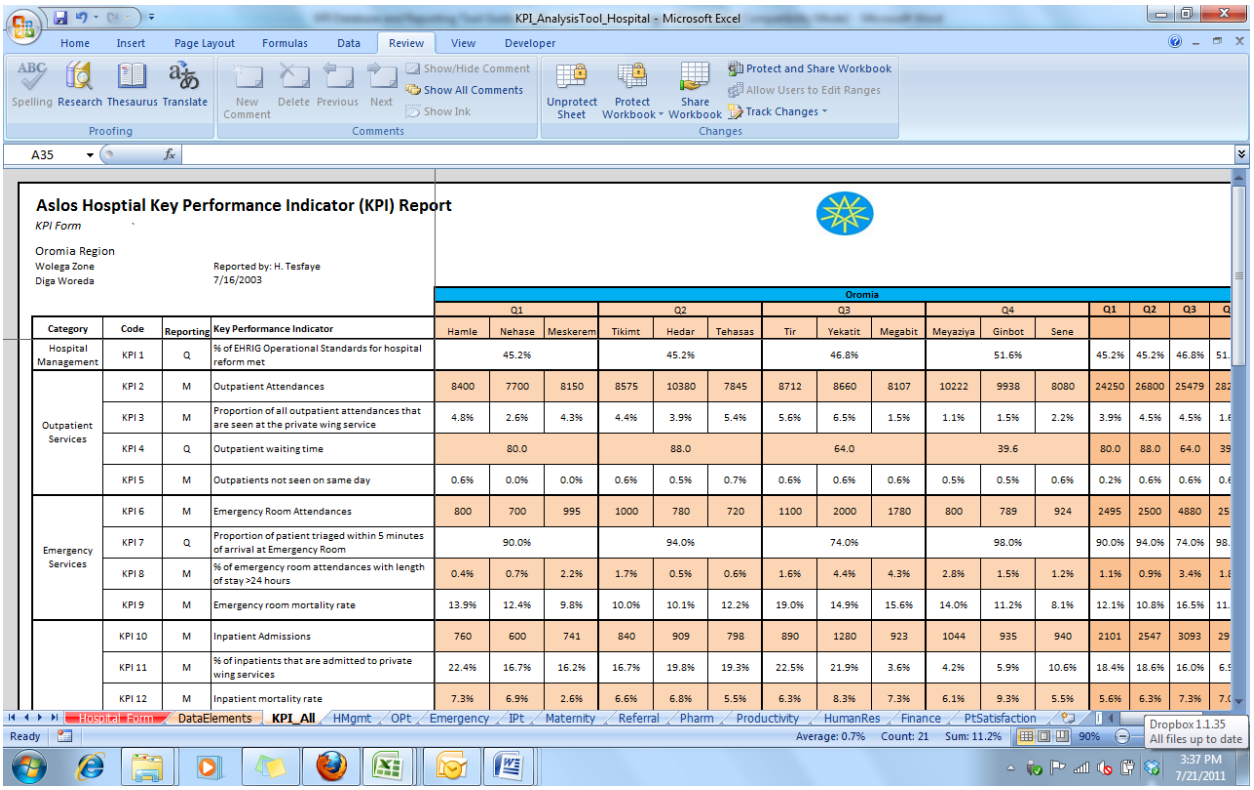
    c. For Data Elements reported annually (Q48, Q49) there is one box for all twelve months

NB: Do not try to enter KPI results directly, instead you should ONLY enter the data elements.

Analyzing Data and Producing Reports

When all of the data elements have been correctly entered into the 'Data Elements' sheet, the database will automatically calculate the KPI results and will generate reports for the different service areas of the hospital.

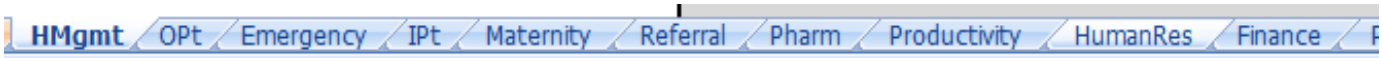
One report is generated for each of the following service areas: Hospital Management, Outpatient Services, Emergency Services, Inpatient services, Maternity services, Referral System, Pharmacy, Productivity, Human Resources, Finance, and Patient Satisfaction.



1. Open the master report under the "KPI_All" tab

2. KPI's will be generated for all of the reporting periods that data is entered for and will be displayed in their relevant columns and rows

3. To view reports for each hospital management category/service area (eg outpatient services, referrals etc), click on the tabs at the bottom



4. To print reports, select the office button, highlight print, and then choose print (the report is already formatted so there is no need to alter specifications)

Setting Hospital-Level Targets

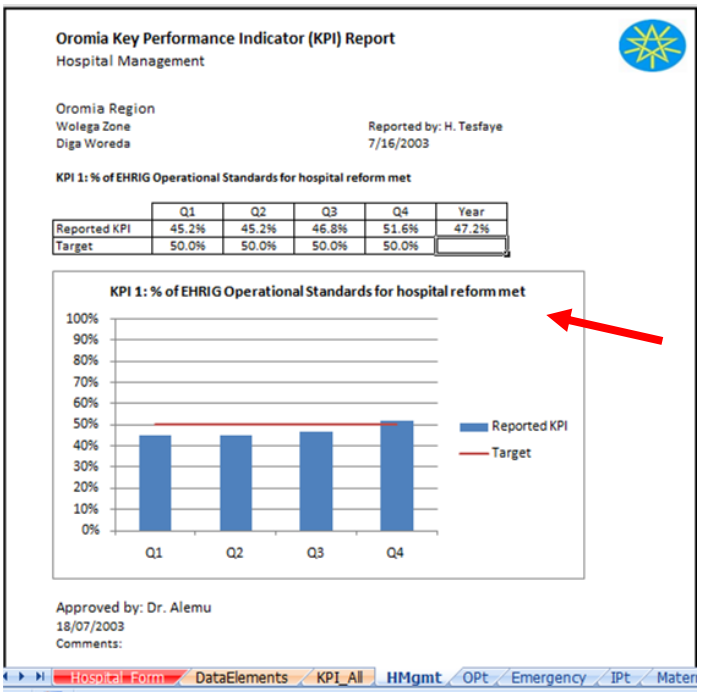
It is possible to set hospital targets for each of the KPI's and view them next to the actual results of the hospital.

Hospital level targets for specific KPIs should be SMART:

- Specific
- Measurable
- Attainable
- Realistic
- Timely

In addition, they should be based on previous, valid information, indicating an upward trajectory of the hospital's performance. Hospitals should measure their progress based on targets set at the beginning of the year in comparison with their actual performance.

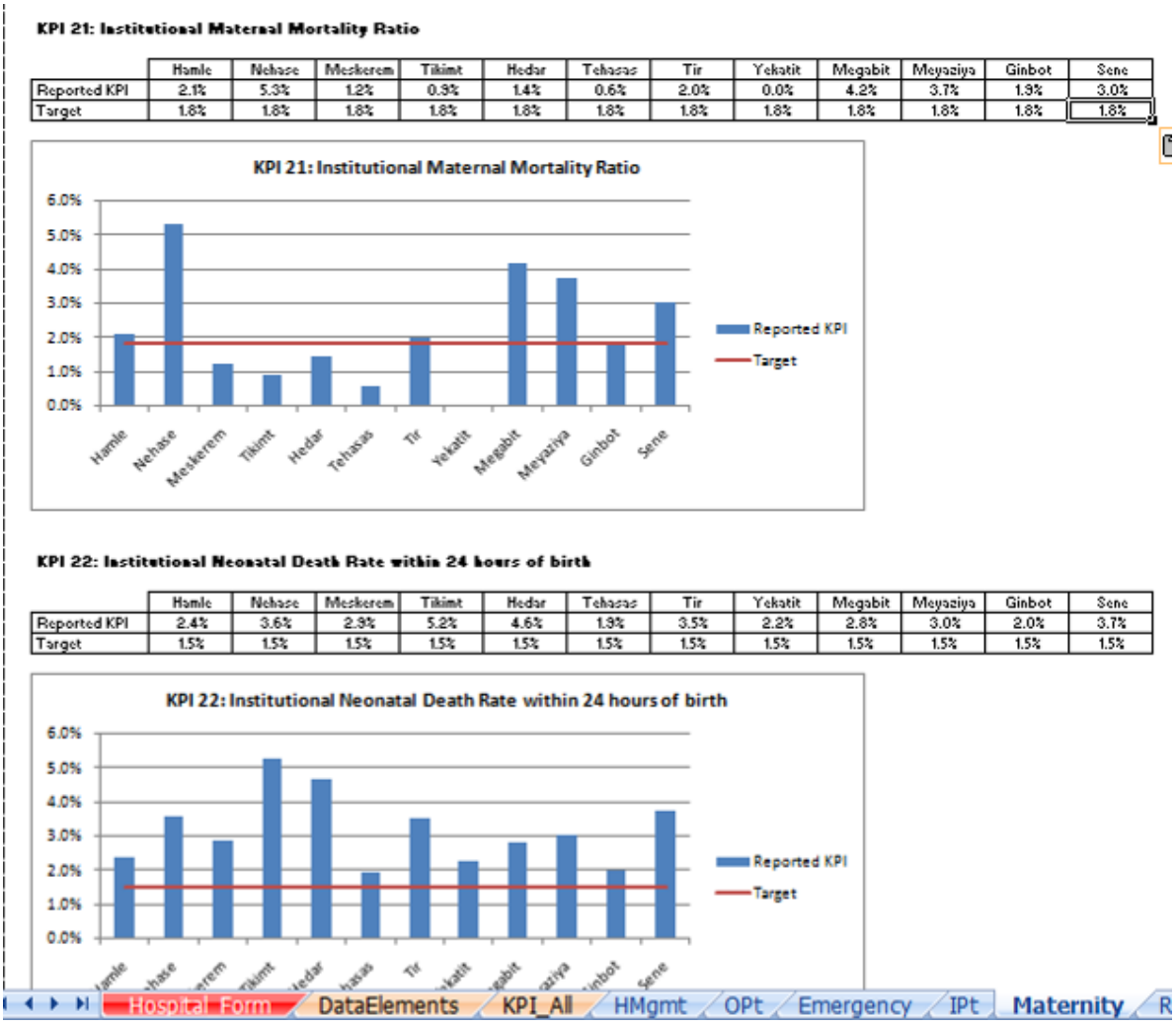
To input hospital-level targets into the reports, locate the "Target" row present in each of the service reports. Input the hospital target for each quarter and it will automatically appear on the graph, next to actual reported data.



Interpreting the Data

KPI results should be reviewed by the relevant Case Team, by hospital management and by the Governing Board to identify areas of good performance as well as areas for improvement.

For example here is a sample report generated for "Maternity Services".



KPI 21: Institutional Maternal Mortality Ratio

	Hamle	Nehase	Meskerem	Tikimt	Hedar	Tehasas	Tir	Yekatit	Megabit	Meyaziya	Ginbot	Sene
Reported KPI	2.1%	5.3%	1.2%	0.3%	1.4%	0.6%	2.0%	0.0%	4.2%	3.7%	1.9%	3.0%
Target	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%

KPI 22: Institutional Neonatal Death Rate within 24 hours of birth

	Hamle	Nehase	Meskerem	Tikimt	Hedar	Tehasas	Tir	Yekatit	Megabit	Meyaziya	Ginbot	Sene
Reported KPI	2.4%	3.6%	2.9%	5.2%	4.6%	1.9%	3.5%	2.2%	2.8%	3.0%	2.0%	3.7%
Target	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%

Talking points for the Maternity Service Case Team could include:

- Which months are we having higher than average numbers?
- Why were some months higher than other months?
- How can we anticipate these spikes in the coming years and account for them?
- How can we achieve targets across every month of the year?
- Why was the maternal mortality ratio high in the months of Tikimt and Ginbot?
- Why was the neonatal death rate high in the months of Tehasas and Tir?

Providing Data to RHBs

Regional Health Bureaus require hospitals to submit KPI reports every month.

Ideally the database should be sent electronically to the RHB by email. If this is not possible then hard copies of the 'Data Element' and 'KPI_All' spreadsheets should be printed and faxed to the RHB.

Please note that the RHB requires the 'Data Elements' in addition to the KPI results so that regional averages can be calculated.

Appendix 2 User Guide: Hospital EHRIG Database

Background

The Federal Ministry of Health (FMOH) and Regional Health Bureaus (RHB) are leading a sector wide reform to strengthen and improve health services in Ethiopia. Central to these efforts is the *Ethiopian Hospital Reform Implementation Guidelines* (EHRIG) which sets out 124 operational standards for hospital management in the areas of:

- Hospital leadership and governance
- Patient flow
- Medical records management
- Pharmacy services
- Laboratory services
- Nursing care standards
- Infection prevention
- Facilities management
- Medical equipment management
- Financial and asset management
- Human resource management
- Quality management
- Monitoring and reporting.

Hospitals are expected to improve their internal management systems in order to attain all 124 EHRIG standards. Hospitals should self-assess their attainment of the EHRIG standards every quarter and should submit these EHRIG reports to their RHB.

To assist hospitals to record and analyze the attainment of EHRIG standards, and to monitor changes over time, an MSExcel tool has been created (the 'Hospital_EHRIG_Database).

The guidance in this document describes how to use the Hospital EHRIG Database for data collection, reporting, and analysis. Based on the data entered into the tool, tables and charts are automatically generated that show the hospital's progress towards the attainment of standards over time.

Operational Requirements

To use the Hospital EHRIG Database, Excel 2007 is preferred. Using the tool in Excel 2003 will compromise some of the functions of the tool and limit its effectiveness in presenting the hospital's data.

Overview of Hospital EHRIG Database

The Excel Database contains 2 spreadsheets:

1) Data Input

This is the Master spreadsheet into which the attainment of standards should be entered. The spreadsheet covers the time period Q1 2004 until Q4 2004.

The rows are organized by EHRIG chapter. Each row represents a single management standard of EHRIG. At the bottom of the standards for each chapter there are two rows in which the cells automatically calculate the total number and % of standards met for that particular chapter. The final two rows of the spreadsheet show the total number of standards met and total % of standards met for all chapters combined.

First enter the name of your hospital at the top of the spreadsheet. Then, to enter data, identify the appropriate column in accordance with the time period of the report (Q1 2004, Q2 2004 etc). Transcribe the hospital EHRIG assessment results into the appropriate cell on the spreadsheet. If a standard is 'met' enter the number 1. If the standard is unmet enter the number 0.

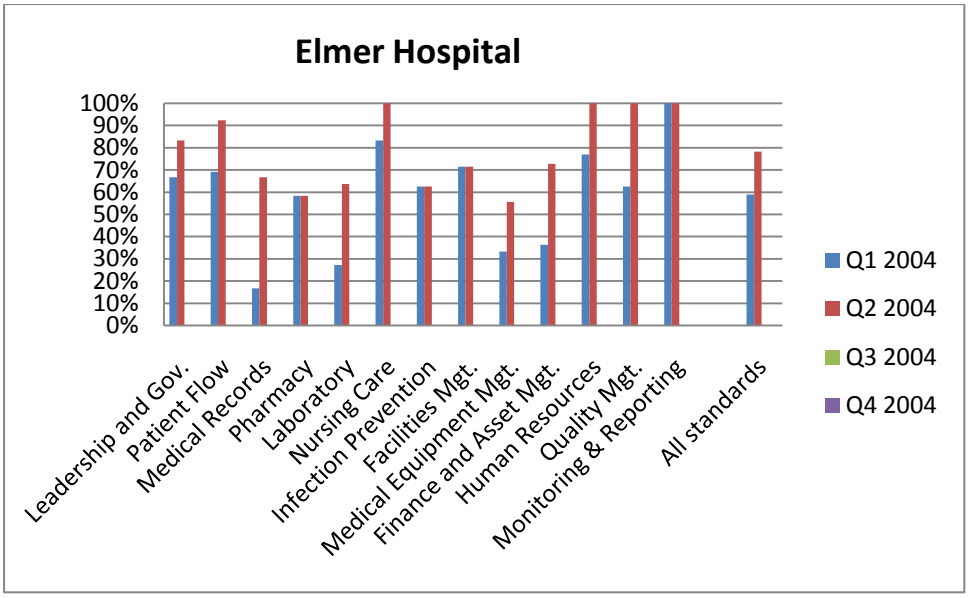
As you enter the data, the spreadsheet will automatically calculate the total number and % of standards met for each chapter, as well as the total number and % for all chapters combined.

2) Tables and charts

This spreadsheet contains tables and charts that are calculated automatically from the entered data.

These show the % of EHRIG standards that are attained for each management area and the total attainment of standards by the hospital, for Q1 2004 until Q4 2004.

	Q1 2004	**Q2 2004**	**Q3 2004**	**Q4 2004**
Leadership and Gov.	67%	83%	0%	0%
Patient Flow	69%	92%	0%	0%
Medical Records	17%	67%	0%	0%
Pharmacy	58%	58%	0%	0%
Laboratory	27%	64%	0%	0%
Nursing Care	83%	100%	0%	0%
Infection Prevention	63%	63%	0%	0%
Facilities Mgt.	71%	71%	0%	0%
Medical Equipment Mgt.	33%	56%	0%	0%
Finance and Asset Mgt.	36%	73%	0%	0%
Human Resources	77%	100%	0%	0%
Quality Mgt.	63%	100%	0%	0%
Monitoring & Reporting	100%	100%	0%	0%
All standards	59%	78%	0%	0%



Providing Data to RHBs

Regional Health Bureaus require hospitals to submit EHRIG reports every quarter.

Ideally the database should be sent electronically to the RHB by email. If this is not possible then hard copies of the 'Data Entry' spreadsheet should be printed and faxed to the RHB.

Appendix 3 User Guide: Regional KPI Database

Background

The Federal Ministry of Health (FMOH) and Regional Health Bureaus (RHB) are leading a sector wide reform to strengthen and improve health services in Ethiopia. To support these efforts, the Medical Services Directorate (MSD) of the FMOH, in collaboration with regional health bureaus (RHBs) and hospital Governing Boards has developed a performance monitoring framework for hospitals, based on a national core set of 36 Key Performance Indicators (KPI) which measure hospital performance in the areas of efficiency, effectiveness, and quality.

The set of KPIs are made up of 59 data elements, which are used in the calculation of the KPIs. Data elements are collected from sourcing documents at the hospital level and used to calculate KPIs by "KPI Data Owners". The hospital "KPI Focal Person" collects all Data Elements and KPI Results from each and every KPI Data Owner and, after approval by the CEO, submits to the RHB.

The RHB should collate and analyze KPI reports from all hospitals in the Region, give feedback to hospitals, and should calculate Regional average KPI results based on the hospital data.

In an effort to support and standardize this process of collection, analysis and dissemination, an MSExcel tool has been developed for each Region (the 'Regional_ KPI_ Database_[*your region*]').

The guidance in this document describes how to use this excel tool in data collection, reporting, and analysis. Based on the data entered into the tool, automatic tables and reports are produced that describe the region's overall performance within a given time period.

Operational Requirements

To use the Regional KPI Database, Excel 2007 is preferred. Using the tool in Excel 2003 will compromise some of the functions of the tool and limit its effectiveness in presenting a given hospital's data.

Entering Regional Information

1. Open the empty database and save it for your particular region

    a. Open document "Regional_KPI_Database"
    b. Under the office button highlight "Save As", click on Excel workbook, and save under the title of "Regional_KPI_Database_[your region]"

2. Click on the "Region_Form" tab and enter the following data into the cells:

    a. Region name
    b. Reporting period: month and year
    c. Name of each hospital in the region
    d. For each hospital enter 'yes' or 'no' to indicate if the hospital has submitted its monthly KPI report
    e. Enter the name of the person who compiled the report and the date the report was compiled
    f. Enter the name of the person who reviewed and approved the report, and the date of approval. Generally the 'Approver' would be the RHB Curative and Rehabilitative Core Process Owner

Entering Data Elements

3. Open the "Data Elements" tab

4. Enter the data elements reported by the hospitals into their respective cells. Make sure to line up with the proper month and quarter.

For Data Elements reported quarterly (Q1, Q2, Q5, Q6, Q7, Q9, Q10, Q27, Q28, Q50, Q51, Q52, Q53, Q54, Q55, Q56, Q57, Q58, Q59) there is one box for three months.

For Data Elements reported bi-annually (Q45, Q46, Q47) there is one box for six months.

For Data Elements reported annually (Q48, Q49) there is one box for all twelve months.

Don't use anything but numbers – remember everything is linked to the data elements sheet and if there is a problem somewhere else, it is probably the result of incorrect data entered into the main sheet.

If a hospital submitted an electronic copy of their data elements using the Hospital_KPI_Database then the data elements can be cut and pasted directly into the Regional_KPI_Database. Otherwise, the KPI data elements have to be transcribed into each cell individually.

Analyzing Data and Producing Reports

When all of the data elements have been correctly entered into the 'Data Elements' sheet, the database will automatically calculate the KPI results and will generate reports for the region.

5. Open the master report under the "KPI_Master" tab

KPI's will be generated for all of the reporting periods that data is entered for and will be displayed in their relevant columns and rows.

Do not try to enter KPI results directly, instead you should ONLY enter the data elements.

6. To view reports for each KPI (Leadership and Governance, Patient Flow etc) click on the appropriate tab.

A table is displayed that shows the quarterly KPI result for each hospital, together with charts for each quarter.

7. To print reports, select the office button, highlight print, and then choose print (the report is already formatted so there is no need to alter specifications)

Setting Regional-Level Targets

It is possible to set regional targets for each of the KPI's and view them next to the actual results of the region.

Region level targets for specific KPIs should be SMART:

- Specific
- Measurable
- Attainable
- Realistic
- Timely

In addition, they should be based on previous, valid information, indicating an upward trajectory of the hospital's performance. Regions should measure their progress based on targets set at the beginning of the year in comparison with their actual performance.

8. Click on the 'Target Form' tab

Enter the quarter and annual targets for each KPI into the appropriate cells.

The targets will automatically appear on the KPI reports, next to the actual data in the tables and graphs.

Interpreting the Data

KPI results should be reviewed by the RHB and feedback given to hospitals. The RHB could present regional reports at the RHB/hospital review meetings and at the MSD/RHB review meetings.

Providing Data to FMOH

MSD requires regions to submit KPI reports every quarter.

Ideally the database should be sent electronically to MSD by email. If this is not possible then hard copies of the 'Data Element' and 'KPI_Master' spreadsheets should be printed and faxed to the RHB.

Please note that MSD requires the 'Data Elements' in addition to the KPI results so that national averages can be calculated.

Appendix 4 User Guide: Regional EHRIG Database

Background

The Federal Ministry of Health (FMOH) and Regional Health Bureaus (RHB) are leading a sector wide reform to strengthen and improve health services in Ethiopia. Central to these efforts is the *Ethiopian Hospital Reform Implementation Guidelines* (EHRIG) which sets out 124 operational standards for hospital management in the areas of:

- Hospital leadership and governance
- Patient flow
- Medical records management
- Pharmacy services
- Laboratory services
- Nursing care standards
- Infection prevention
- Facilities management
- Medical equipment management
- Financial and asset management
- Human resource management
- Quality management
- Monitoring and reporting.

Hospitals are expected to improve their internal management systems in order to attain all 124 EHRIG standards. Hospitals should self-assess their attainment of the EHRIG standards every quarter and should submit these EHRIG reports to their RHB.

RHBs are expected to receive and review hospital reports and to calculate regional averages. By monitoring progress towards attainment of EHRIG standards across the region, each RHB can identify priority areas for improvement and can identify areas where hospitals require additional support from the RHB or other partners.

To assist RHBs to record and analyze the attainment of EHRIG standards by hospitals in the Region, and to monitor changes over time, an MSExcel tool has been created for each RHB (the 'Regional_EHRIG_Database_[*your region*]). Each Regional Database lists all hospitals in the region by name, and contains data entry cells for every one of the hospitals.

The guidance in this document describes how to use the Regional EHRIG Databases for data collection, reporting, and analysis. Based on the data entered into the tool, automatic tables and reports are produced that describe each hospital's overall performance within a given time period and the average performance for the region as a whole.

Operational Requirements

To use the Regional EHRIG Database, Excel 2007 is preferred. Using the tool in Excel 2003 will compromise some of the functions of the tool and limit its effectiveness in presenting a given hospital's data.

Purpose of Regional EHRIG Database

- to establish a database in which to record self-assessment reports from all hospitals in the region on the attainment of management standards that are described in EHRIG
- to assist the RHB with the analysis of data, by providing summary calculations, tables and charts, all of which are generated automatically when data is entered
- to generate summary calculations, tables and charts from which reports and presentations can be prepared both for the RHB and for dissemination to hospitals, FMOH and other stakeholders
- to provide data analysis that will support hospital supervisory site visits and regional review meetings

Overview of Regional EHRIG Database

The Excel Database contains 4 spreadsheets:

3) [your region] Hospitals Data Input

This is the Master spreadsheet into which hospital reports should be entered. The spreadsheet covers the time period Q1 2004 until Q4 2004.

The rows are organized by EHRIG chapter. Each row represents a single management standard of EHRIG. At the end of the list of standards for each chapter there are two rows in which the cells automatically calculate the total number and % of standards met for that particular chapter.

The final two rows of the spreadsheet show the total number of standards met and total % of standards met for all chapters combined.

There are separate columns for each hospital. The hospital names are listed across the top row, and for each hospital there is a separate column for each quarter. To make it easier to enter and analyze data the columns are colour coded (ie all columns for Q1 2004 are coloured blue, for Q2 2004 are coloured pink etc).

The final columns are labeled 'Regional Average'. These show the average of all hospitals in the region combined.

Data entry

Data should be entered as follows:

a) Identify the hospital name at the top of the spreadsheet, and the appropriate column for data entry (in accordance with the time period of the report – Q1 2004, Q2 2004 etc)
b) Transcribe the hospital EHRIG assessment results into the appropriate cell on the spreadsheet. If a hospital reports that a standard is 'met' enter the number 1. If the standard is unmet enter the number 0.

As you enter the data, the spreadsheet will automatically calculate the total number and % of standards met for each chapter, as well as the total number and % for all chapters combined and the regional averages.

Similarly, the database will automatically create the tables and charts contained in the remaining three spreadsheets.

☺ You do not need to do any calculations. Only enter the raw data reported by the hospital. All summaries, tables and charts will be created automatically.

☺ When you enter data for a new quarter update the file name to show the date of the most recent reports. I.e. "Regional _EHRIG_Database_[*your region*]_Q1 2004" should become "Regional _EHRIG_Database_[*your region*]_Q2 2004" when Q2 data is entered.

4) Regional Averages and Charts

This spreadsheet contains two tables and two charts:

i) % standards met, regional average, by chapter: The table lists the Regional Average % of standards met (all hospitals combined) for each quarter. There is also a bar chart which presents this information in graphical form.

ii) Total % of standards met, by hospital: The table lists all hospitals and the total % of standards met by each, together with the Regional Average. The table includes all quarters between Q3 2010 and Q4 2011. There is also a bar chart which presents this information in graphical form.

Do not enter data in this spreadsheet. Everything will be calculated automatically after you complete the Hospitals Data Input spreadsheet.

5) Individual hospital data and charts

This spreadsheet contains tables and charts - one for each hospital. The tables show the % of standards met in each EHRIG chapter by each hospital and also the total % of standards met by that hospital (all chapters combined). The tables include all quarters between Q1 2004 and Q4 2004. The charts show the same information in graphical form.

Do not enter data in this spreadsheet. Everything will be calculated automatically after you complete the Hospitals Data Input spreadsheet.

6) Each chapter, data and charts

This spreadsheet contains 13 tables and charts – one for each chapter of EHRIG. The tables show the % of standards met in that particular EHRIG chapter by each hospital, and the regional average % of standards met in that chapter. The tables include all quarters between Q1 2004 and Q4 2004. The charts show the same information in graphical form.

Do not enter data in this spreadsheet. Everything will be calculated automatically after you complete the Data Input spreadsheet.

Reviewing and Interpreting Data

The data in the excel file is **'Information for Action'**. In other words it is not enough to enter data, you must look at the results, interpret what they mean and decide what action should be taken as a result.

Questions you could ask when interpreting the data include:

- Which hospitals are performing well overall (all chapters combined)? Which are performing poorly?
- For each individual chapter of EHRIG which hospitals are performing well and which are performing poorly?
- Which hospitals are showing the most progress over time? Which hospitals are showing the least progress?
- How is the Region as a whole performing? In which chapters is performance good or improving across the Region? In which chapters is performance poor or showing no improvement? Overall, is the Region improving with time?
- What action should be taken by specific hospitals based on the information? What action should be taken by the RHB?
- Are there any unusual or unexpected results (either good or bad) that should be questioned or investigated further to check the accuracy of data?

Providing Data to MSD

Each RHB should provide quarterly reports to MSD on the attainment of EHRIG standards by each hospital in the Region.

Ideally, the RHB should email an electronic copy of the Database to MSD. If this is not possible then the Data Input Spreadsheet should be printed and faxed to MSD.

Appendix 5 Hospital Key Performance Indicator Definitions and Calculations

KPI 1 % of EHRIG Operational Standards Met

Why is this important?	In order to provide quality, effective and efficient health care, hospitals must have well functioning management systems. The EHRIG operational standards for hospital reform are a set of minimum standards that a well functioning hospital should have in place. There are a total of 124 standards across 13 management areas: • Hospital Leadership and Governance (6 standards) • Patient Flow (13 standards) • Medical Records Management (6 standards) • Pharmacy Services (12 standards) • Laboratory Services (11 standards) • Nursing Care (6 standards) • Infection Prevention (8 standards) • Facilities Management (14 standards) • Medical Equipment Management (9 standards) • Financial and Asset Management (11 standards) • Human Resource Management (13 standards) • Quality Management (8 standards) • Monitoring and Reporting (7 standards) By measuring attainment of each standard (i.e. whether a standards is met or unmet) hospitals can identify areas of weakness in their management systems, identify priorities for improvement and monitor progress over time.
Unit of measurement	%
Numerator	Number of EHRIG operational standards for hospital reform met
Denominator	124 (i.e. total number of EHRIG operational standards for hospital reform)
Formula	Number of EHRIG operational standards for hospital reform met (Q1) ÷ 124 (i.e. the total number of EHRIG operational standards for hospital reform) (Q2) x 100
Data sources	Assessment tool for operational standards of the EHRIG (see 6)
Frequency of reporting	Quarterly

Hospital KPI 1 Data entry form: % of EHRIG operational standards met

Formula: Total number of EHRIG operational standards met (Q1) ÷ 124 (i.e. the total number of EHRIG operational standards for hospital management) (Q2) x 100

Data entry:

Hospital Leadership and Governance Standards Met	= _____
Patient Flow Standards Met	= _____
Medical Records Management Standards Met	= _____
Pharmacy Services Standards Met	= _____
Laboratory Services Standards Met	= _____
Nursing Care Standards Met	= _____
Infection Prevention Standards Met	= _____
Facilities Management Standards Met	= _____
Medical Equipment Management Standards Met	= _____
Financial and Asset Management Standards Met	= _____
Human Resource Management Standards Met	= _____
Quality Management Standards Met	= _____
Monitoring and Reporting Standards Met	= _____

Q1 = Total number of standards met = _____

Q2 = 124 (i.e. the total number of EHRIG operational standards for hospital reform)

Calculation: $\frac{Q1}{Q2} \times 100 = \frac{\quad}{124} \times 100 =$ [ ] % **KPI 1**

KPI 2 Outpatient Attendances

Why is this important?	Hospitals need to know the number of patients treated (inpatient, outpatient and emergency) in order to plan staff numbers, equipment and supply needs. This information informs the annual plan and budget preparations. By monitoring the number of patients treated a hospital can also assess if patient demand is increasing or decreasing over time and investigate further if unexpected changes are seen. For the RHB, knowledge of the number of patients treated at each hospital is necessary to calculate population health service coverage rate, assess access to healthcare services and to plan health care services for the region.
Definition	Total number of new and repeat outpatient attendances (including specialized clinics). Patients who attend the following services should be INCLUDED in the outpatient count: • General outpatient clinics • Specialty outpatient clinics (including Dental, Ophthalmic and Psychiatry) • TB clinics • ART clinics • VCT clinics • MCH clinics (EPI, IMCI, well baby clinics, ANC, PNC, family planning etc) • Private wing clinics EXCLUDE: • All patients attending the emergency department • All emergency maternity attendances (any gestational age)
Unit of measurement	Absolute number
Formula	Number of new and repeat outpatient attendances at public facility (Q3) + Number of new and repeat outpatient attendances at private wing (Q4)
Data sources	Outpatient registration books/database; private wing registration book/database; central registration book/database; HMIS tally forms
Frequency of reporting	Monthly

Hospital KPI 2: Date Entry Form: Outpatient Attendances

Formula: Number of new and repeat outpatient attendances at public facility (Q3) + number of new and repeat outpatient attendances at private wing (Q4)

Date entry:
Q3 = Number of new and repeat outpatient attendances at public facility = _____
Q4 = Number of new and repeat outpatient attendances at private wing = _____

Calculation: Q3 + Q4 = _____ + _____ = ☐ **KPI 2**

KPI 3 Outpatient attendances seen by private wing service

Why is this important?	Through Health Care Finance Reform (HCFR), hospitals are permitted to establish a private wing service. The number of outpatient visits to the private wing service, and the proportion of all outpatient visits that are seen at the private wing, are measures of service availability, patient demand for private wing services and of the success of HCFR implementation by the hospital.
Definition	The proportion of all outpatient visits that are seen at the private wing service. Private wing outpatients includes both new and repeat outpatient visits that are seen by the private wing service All outpatient visits includes all new and repeat visits to *any* outpatient clinic, including: • General Outpatient clinics • Specialty outpatient clinics (including Dental, Ophthalmic, Psychiatry etc) • TB clinics • ART clinics • VCT clinics • MCH clinics (EPI, IMCI, well baby clinics, ANC, PNC, family planning etc) • Private wing clinics EXCLUDE: • All patients attending the emergency department • All emergency maternity attendances (any gestational age)
Unit of measurement	%
Numerator	Number of new and repeat outpatient attendances at private wing (Q4)
Denominator	Number of new and repeat outpatient attendances at public facility (Q3) + Number of new and repeat outpatient attendances at private wing (Q4)
Formula	Number of new and repeat outpatient attendances at private wing (Q4) ÷ [Number of new and repeat outpatient attendances at public facility (Q3) + Number of new and repeat outpatient attendances at private wing (Q4)] x 100
Data sources	Outpatient registration books; private wing registration book or central registration book/database; HMIS tally forms
Frequency of reporting	Monthly

Hospital KPI 3 Date Entry Form: Outpatient attendances seen by private wing service

Formula: Number of new and repeat outpatient attendances at private wing (Q4) ÷ [(Number of new and repeat outpatient attendances at public facility (Q3) + Number of new and repeat outpatient attendances at private wing (Q4)] x 100

Data entry: Q3 = Number of outpatient attendances to public facility = _____
Q4 = Number of outpatient attendances to private wing = _____

Calculation: $\frac{Q4}{Q3 + Q4}$ x 100 = _____ x 100 = [ ] % **KPI 3**

KPI 4: Outpatient waiting time to treatment

Why is this important?	The time that a patient waits from arrival to treatment is a measure of access to health care services. Long waiting times indicate that there are insufficient staff and/or resources to handle the patient load or that those available resources are being used inefficiently. By measuring waiting times a hospital can assess if there is a need for extra personnel and/or other resources in the outpatient department and/or to review patient flow processes to increase the efficiency of service provision.
Definition	Average time from arrival at the outpatient department to treatment consultation with clinical staff member (minutes) For patients <u>who have an appointment</u> and who go immediately to the OPD waiting area (without attending registration or triage), the time of arrival begins at the time when they reach the OPD waiting area. For patients <u>who do not have an appointment</u>, the time of arrival means the time of arrival at the patient registration *or* the time of arrival at triage (whichever is first) EXCLUDE: Patients not seen on the same day
Unit of measurement	Minutes
Numerator	Sum total of outpatient waiting time (in minutes) (Q5)
Denominator	Number of outpatient waiting time cards completed (Q6)
Formula	Sum total of outpatient waiting time (in minutes) (Q5) ÷ Number of outpatient waiting time cards completed (Q6)
Data sources	Survey – see protocol for survey to measure OPD wait time in Appendix 7 The survey should be conducted on Monday and Thursday of the first week of the last month of each quarter
Frequency of reporting	Quarterly

<u>Hospital KPI 4 Date Entry Form: Outpatient waiting time to treatment</u>

Formula: ∑Outpatient waiting time (in minutes) (Q5) ÷ Number of outpatient 'waiting time cards' completed (Q6)

Data entry: Q5= ∑outpatient waiting time = _____ minutes
Q6 = number of 'waiting time cards completed' = _____cards

Calculation $\frac{Q5}{Q6}$ = _____ = ☐ minutes **KPI 4**

KPI 5: Outpatients not seen on same day

Why is this important?	All patients should be seen in OPD on the same day that they register for treatment. By measuring the number and proportion of patients that do not receive a same day service the hospital can assess if there is a need for extra personnel and/or other resources in the outpatient department and/or to review patient flow processes to increase the efficiency of service provision.
Definition	The proportion of all outpatients that do not receive treatment on the same day as registration in the outpatient department
Unit of measurement	%
Numerator	Number of outpatients not seen on same day as registration in OPD during the reporting period (Q7)
Denominator	Number of new and repeat outpatient attendances at public facility (Q3) + Number of new and repeat outpatient attendances at private wing (Q4)
Formula	Number of outpatients not seen on same day as registration during the reporting period (Q7) ÷ [Number of new and repeat outpatient attendances at public facility (Q3) + Number of new and repeat outpatient attendances at private wing (Q4)] x 100
Data sources	OPD registration book
Frequency of reporting	Quarterly

Hospital KPI 5 Date Entry Formula: Outpatients not seen on same day

Formula: [Number of outpatients not seen on same day as registration during the reporting period (Q7) ÷ [Number of new and repeat outpatient attendances at public facility (Q3) + Number of new and repeat outpatient attendances at private wing (Q4)] x 100

Data entry: Q7= number of outpatients not seen on same day as registration during the reporting period = _____ patients
Q3 = number of new and repeat outpatient attendances at public facility
Q4 = number of new and repeat outpatient attendances at private wing

Calculation $\frac{Q7}{Q3 + Q4} \times 100 = \_\_\_\_\_ \times 100 =$ [ ] % **KPI 5**

KPI 6: Emergency room attendances

Why is this important?	Hospitals need to know the number of patients treated (inpatient, outpatient and emergency) in order to plan staff numbers, equipment and supply needs. This information informs the annual plan and budget preparations. By monitoring the number of patients treated a hospital can also assess if patient demand is increasing or decreasing over time and investigate further if unexpected changes are seen. For the RHB, knowledge of the number of patients treated at each hospital is necessary to calculate population health service coverage rate, assess access to healthcare services and to plan health care services for the region.
Definition	The number of emergency room attendances during reporting period INCLUDE: • All patients registered in the emergency room (all ages) EXCLUDE: • All patients triaged and sent to OPD • Patients who were already dead (i.e. no vital signs present) on arrival
Unit of measurement	Absolute number
Formula	Number of emergency room attendances (Q8)
Data sources	Emergency room registration book
Frequency of reporting	Monthly

KPI 6: Data Entry Form: Emergency room attendances

Formula: Total number of emergency room attendances (Q8)

Data Entry: Total number of emergency attendances (Q8) = ☐ **KPI 6**

KPI 7: Emergency room patients triaged within 5 minutes of arrival

Why is this important?	Triage is a process of sorting patients into priority groups according to their need and available resources. The aim of triage is to give priority treatment to those with the most critical conditions, thus minimizing delay, saving lives, and making the most efficient use of available resources. The first five minutes of arrival in the emergency room (ER) is the most critical time to save lives. If assessment and treatment is not initiated during this time then lives will be lost unnecessarily. By monitoring the % of patients triaged within 5 minutes the hospital can assess whether ER services are sufficient and identify the need for additional staff and/or resources and/or service redesign to reduce waiting times in ER.
Definition	Proportion of all patients presenting to the emergency room who were triaged within 5 minutes of arrival at the emergency room
Unit of measurement	%
Numerator	Number of surveyed patients who undergo triage within 5 minutes of arrival in emergency room (Q9)
Denominator	Number of patients included in emergency room triage time survey (Q10)
Formula	Number of surveyed patients who undergo triage within 5 minutes of arrival in emergency room (Q9) ÷ Number of patients included in emergency room triage time survey (Q10) x 100
Data sources	Survey – see Appendix 8 : Protocol for survey to measure % of patients triaged within 5 minutes of arrival in ER The survey should be conducted at 3 different time periods on the first week of the final month of each reporting period as follows: Monday: 8am to 12 noon Wednesday: 12 noon to 5pm Saturday: 5pm to 8am
Frequency of reporting	Quarterly

KPI 7: Data Entry Form: Emergency room patients triaged within 5 minutes of arrival

Formula: Number of surveyed patients who undergo triage within 5 minutes of arrival in emergency room (Q9) ÷ Number of patients included in emergency room triage time survey (Q10) x 100

Data entry:

Q9 = Number of surveyed patients who undergo triage within 5 minutes of arrival in emergency room = _____

Q10 = Number of patients included in emergency room triage time survey = _____

Calculation: $\frac{Q9}{Q10}$ x 100 = _____ x 100 = [ ] % **KPI 7**

KPI 8: Emergency room attendances with length of stay > 24 hours

Why is this important?	Through BPR and other hospital reforms, emergency medical services are being strengthened. Hospitals have emergency room beds where patients can stay for a short period of time to receive emergency treatment. However, the length of stay in the emergency room should always be less than 24 hours. If a patient requires treatment for longer than 24 hours then he/she should be transferred to a ward. If emergency room beds are occupied by patients for more than 24 hours then the emergency room will become congested and there is a danger that the emergency room will not have the capacity for any NEW emergency attendances.
Definition	The proportion of all emergency room attendances who remain in the emergency room for > 24 hours INCLUDE: • All patients registered in the emergency room (all ages) EXCLUDE: • Patients who were already dead (i.e. no vital signs present) on arrival
Unit of measurement	%
Numerator	Total number of attendances who remain in emergency room for more than 24 hrs (Q11)
Denominator	Total number of emergency room attendances (Q8)
Formula	Total number of attendances who remain in emergency room for more than 24 hrs (Q11) ÷ Total number of emergency room attendances (Q8) x 100
Data sources	Emergency room registration book
Frequency of reporting	Monthly

KPI 8 Data Entry form: Emergency room attendances with length of stay > 24 hours

Formula: Total number of attendances who remain in emergency room for more than 24 hrs (Q11) ÷ Total number of emergency room attendances (Q8) x 100

Data entry: Q11 = Number of patients who remain in emergency room for > 24 hrs = _____
Q8 = Total number of emergency room attendances = _____

Calculation: $\frac{Q11}{Q8} \times 100 =$ _____ x 100 = ☐ % **KPI 8**

KPI 9: Emergency room mortality

Why is this important?	The emergency room mortality is a measure of the quality of care provided by the emergency room of the hospital. A high mortality could indicate that the hospital is providing poor quality emergency care with unnecessary patient deaths.
Definition	The number of deaths in emergency room from patients who were alive (i.e. any vital signs present) on arrival per 100 emergency room attendances. INCLUDE: All deaths in emergency room from patients who were alive (i.e. **any** vital signs present) on arrival EXCLUDE: Patients who were already dead (i.e. **no** vital signs present) on arrival
Unit of measurement	%
Numerator	Number of deaths in emergency room from patients who were alive (i.e. any vital signs present) on arrival (Q12)
Denominator	Number of emergency room attendances (Q8)
Formula	Number of deaths in emergency room from patients who were alive (i.e. any vital signs present) on arrival (Q12) ÷ Number of emergency room attendances (Q8) x 100
Data sources	Emergency room register/database
Frequency of reporting	Monthly

KPI 9 Data Entry form: Emergency Room mortality

Formula: The number of deaths in emergency room from patients who were alive (i.e. any vital signs present) on arrival (Q12) ÷ Total number of emergency room attendances (Q8) x 100

Data entry: Q12 = The number of deaths in emergency room from patients who were alive (i.e. any vital signs present) on arrival Number of deaths in ER from patients who were alive on arrival = _____
Q8 = Total number of emergency room attendances = _____

Calculation: Q12 x 100 = _____ *x* 100 = [ ] % **KPI 9**
Q8

KPI 10: Inpatient admissions

Why is this important?	Hospitals need to know the number of patients treated (inpatient, outpatient and emergency) in order to plan staff numbers, equipment and supply needs. This information informs the annual plan and budget preparations. By monitoring the number of patients treated a hospital can also assess if patient demand is increasing or decreasing over time and investigate further if unexpected changes are seen. For the RHB, knowledge of the number of patients treated at each hospital is necessary to calculate population health service coverage rate, assess access to healthcare services and to plan health care services for the region.
Definition	The number of patients admitted (including those transferred from another health facility) during the reporting period. INCLUDE all patients admitted to: • Wards (all patients under the care of the inpatient case team should be included, even if they are admitted to a trolley or stretcher, i.e. do not have a bed) • Clinical facilities (e.g. intensive care units, ophthalmic units) • Neonatal units • Private wing beds The following should be EXCLUDED: • Patients in day units/day surgery • Labouring and delivering mothers who are discharged directly from the delivery room (i.e. who are NOT admitted to an inpatient bed) • Healthy babies who are born in the hospital or who accompany their mother
Unit of measurement	Absolute number
Formula	Number of patients admitted to public facility (Q13) + Number of patients admitted to private wing (Q14)
Data sources	Inpatient register/admission and discharge book/database; Private wing registration/admission and discharge book/database
Frequency of reporting	Monthly

Hospital KPI 10 Date Entry Form: Inpatient admissions

Formula: Number of patients admitted to public facility (Q13) + Number of patients admitted to private wing (Q14)

Data entry: Q13 = Number of patients admitted to public facility = _____
Q14 = Number of patients admitted to private wing = _____

Calculation: Q13 + Q14 = _____ + _____ = ☐ **KPI 10**

KPI 11: Inpatients admitted to private wing service

Why is this important?	Through Health Care Finance Reform (HCFR) hospitals are permitted to establish a private wing service. The number of inpatient admissions to the private wing service, and the proportion of all inpatient admissions that are admitted to the private wing, are measures of service availability, patient demand for private wing services and of the success of HCFR implementation by the hospital.
Definition	% of all admitted patients who were admitted to the private wing during the reporting period.
Unit of measurement	%
Numerator	Number of patients admitted to private wing (Q14)
Denominator	Number of patients admitted to public facility (Q13) + Number of patients admitted to private wing (Q14)
Formula	Number of patients admitted to private wing (Q14) ÷ [Number of patients admitted to public facility (Q13) + Number of patients admitted to private wing (Q14)] x 100
Data sources	Inpatient register/admission and discharge book/database Private wing registration/admission and discharge book/database
Frequency of reporting	Monthly

Hospital KPI 11 Date Entry Form: Inpatients admitted to private wing service

Formula: Number of patients admitted to private wing (Q14) ÷ [Number of patients admitted to public facility (Q13) + Number of patients admitted to private wing (Q14)] x 100

Data entry: Q13 = Number of patients admitted to public facility = _____
Q14 = Number of patients admitted to private wing = _____

Calculation: $\frac{Q14}{Q13 + Q14}$ x 100 = _____ x 100 = ☐ **KPI 11**

KPI 12: Inpatient mortality

Why is this important?	The inpatient mortality is a measure of the quality of care provided by the hospital. High inpatient mortality could indicate that the hospital is providing poor quality care with unnecessary patient deaths.
Definition	The number of deaths per 100 discharged inpatients. INCLUDE: All deaths among patients admitted to public facility Private wing inpatient deaths EXCLUDE: All deaths in emergency room All deaths among non admitted maternities (any gestation)
Unit of measurement	%
Numerator	Number of deaths among admitted inpatients (Q15)
Denominator	Number of deaths among admitted inpatients (Q15) + Number of patients discharged alive (including transfers out) (Q16)
Formula	Number of deaths among admitted inpatients (Q15) ÷ [Number of deaths among admitted inpatients (Q15) + Number of patients discharged alive (including transfers out) (Q16) x 100
Data sources	Discharge registration book
Frequency of reporting	Monthly

Hospital KPI 12 Date Entry Form: Inpatient mortality

Formula: Number of deaths among admitted inpatients (Q15) ÷ [Number of deaths among admitted inpatients (Q15) + Number of patients discharged alive (including transfers out)] (Q16) x 100

Data entry: Q15 = Number of deaths among admitted inpatients = _____

Q16 = Number of patients discharged alive (including transfers out) = _____

Calculation: $\frac{Q15}{Q15 + Q16} \times 100 = \_\_\_\_\_ \times 100 =$ ☐ % **KPI 12**

KPI 13: Delay for elective surgical admission

Why is this important?	Delays in surgery for different conditions are associated with a significant increase in morbidity and mortality. Through BPR, the Government has set a stretch objective that any outpatient who requires a bed should receive the service within 2 weeks. By monitoring the waiting time for surgical admission, hospitals can assess the adequacy of surgical capacity and identify the need for improved efficiency in systems and processes, and/or the need for additional surgical staff and/or resources.
Definition	The average number of days that patients who underwent elective surgery during the reporting period waited for admission (i.e. the average number of days between the date each patient was added to the waiting list to their date of admission for surgery)
Unit of measurement	Days
Numerator	Sum total of number of days between date added to surgical waiting list to date of admission for surgery (Q17) EXCLUDE: Elective Caesarean Sections Emergency Surgery NB: If a cold case patient is admitted on the same day that the decision for surgery is made then their number of days on the waiting list should be counted as zero.
Denominator	Number of patients who were admitted for elective (non-emergency) surgery during the reporting period (Q18)
Formula	Sum total of number of days between date added to surgical waiting list to date of admission for surgery (Q17) ÷ Number of patients who were admitted for elective (non-emergency) surgery during the reporting period (Q18)
Data sources	Surgical registration book
Frequency of reporting	Monthly

Hospital KPI 13 Date Entry Form: Delay for elective surgical admission

Formula: ∑number of days between date added to surgical waiting list to date of admission for surgery (Q17) ÷ The total number of patients who were admitted for elective (non-emergency) surgery during the reporting period (Q18)

Data entry: Q17 = ∑number of days between date added to surgical waiting list to date of admission for surgery = _____

Q18 = The total number of patients who were admitted for elective (non-emergency) surgery during the reporting period = _____

Calculation: $\frac{Q17}{Q18}$ = _____ = ☐ days **KPI 13**

KPI 14: Bed occupancy

Why is this important?	The bed occupancy rate (BOR) is a measure of the efficiency of inpatient services. Hospitals are most efficient at a BOR of 80 – 90%. If the BOR is lower, resources may be wasted. If the BOR is higher than 90% there is a danger of staff burnout and of over-crowding during sudden increases in demand for services. Knowledge of the BOR helps hospitals to identify inefficiencies in service delivery in order to investigate and take action to address this, and also to plan for future staff or other resource requirements. For a RHB, knowledge of the BOR from each hospital helps to assess health service coverage and population access to services as a foundation for health service planning.
Definition	The average percentage of occupied beds during the reporting period
Unit of measurement	%
Numerator	The sum total length of stay in days during the reporting period (Q19) **NB:** The length of stay should ONLY be counted for the actual reporting period. If a patient was admitted during a previous reporting period their length of stay during that previous reporting period should not be counted. Instead, FOR THIS KPI, the patient's length of stay should be counted from the first day of this reporting period to the time of discharge, death or to the end of the reporting period (whichever is first). INCLUDE: • Patients admitted to public facility • Patients admitted to private wing
Denominator	Average number of operational beds during reporting period (Q20) x number of days in reporting period (Q21) An operational (inpatient) bed INCLUDES: • Beds in wards • Beds in clinical facilities (e.g. intensive care units, ophthalmic units where patients are routinely kept for > 24 hours) • Beds temporarily out of use • Beds/cots in neonatal units • Private wing beds The following should be EXCLUDED: • Beds in emergency room or emergency gynecology departments • Beds in day units/day surgery • Temporary beds, e.g. stretchers or trolleys • Observation or recovery beds in the emergency department, operating room or outpatient department • Labour suite beds, e.g. delivery beds/couches, examination beds • Beds for non-patients (e.g. beds for mothers accompanying children) • Beds/cots for healthy babies who are born in the hospital or accompany their mothers
Formula	The sum total length of stay in days during reporting period (Q19) ÷ [Average number of operational beds during reporting period (Q20) x number of days in reporting period (Q21)] x 100
Data sources	Admission/discharge registration books
Frequency of reporting	Monthly

Hospital KPI 14 Date Entry Form: Bed Occupancy

Formula: The sum total length of stay in days during reporting period (Q19) ÷ [Average number of operational beds during reporting period (Q20) x number of days in reporting period (Q21)] x 100

Data entry: Q19 = The sum total length of stay in days during reporting period = _____
Q20 = Average number of operational beds during reporting period = _____
Q21 = Number of days in reporting period = _____

Calculation: $\frac{Q19}{Q20 \times Q21} \times 100 = \_\_\_\_\_ \times 100 = \square$ % **KPI 14**

KPI 15: Average length of stay (ALOS)

Why is this important?	By monitoring length of stay hospitals can assess if patients remain in hospital for longer than is necessary, perhaps due to non clinical reasons, and investigate further if required.
Definition	The average number of days from admission to discharge, death or transfer out. INCLUDE: • Inpatient discharges: discharge is the process by which a patient completes a hospital stay and is discharged from an inpatient ward. • Transfer outs: These are patients who are directly transferred from an inpatient ward to another hospital. • Deaths: All deaths of patients admitted to an inpatient ward should be included • Patients admitted to public facility • Patients admitted to private wing
Unit of measurement	Days
Numerator	Sum of total length of stay for patients who were discharged (including deaths and transfer outs) during reporting period (Q22) **NB:** For this KPI the total length of stay should be counted for all discharged patients, including their length of stay in previous reporting periods. The total length of stay is the time from admission to discharge, transfer or death. A day is measured at midnight, and the day of discharge is not counted as an extra day. This means that a patient admitted today and discharged tomorrow will have one patient day. (Day patients will have zero patient days and should not be included in the total monthly count).
Denominator	Number of patients discharged alive (including transfers out) (Q16) + Number of deaths among admitted inpatients (Q15)
Formula	Sum of total length of stay for patients who were discharged (including deaths and transfer outs) during reporting period (Q22) ÷ [Number of patients discharged alive (including transfers out) (Q16) + Number of deaths among admitted inpatients (Q15)]
Data sources	Inpatient register/admission and discharge register
Frequency of reporting	Monthly

Hospital KPI 15 Date Entry Form: Average Length of Stay

Formula: Sum of total length of stay for patients discharged (including deaths and transfer outs) during reporting period (Q22) ÷ [Number of patients discharged alive (including transfers out) (Q16) + Number of deaths among admitted inpatients (Q15)]

Data entry:

Q22 = Sum of total length of stay for patients discharged (including deaths and transfer outs) during reporting period = _____

Q15 = Number of deaths among admitted inpatients = _____

Q16 = Number of patients discharged alive (including transfers out) = _____

Calculation: $\frac{Q22}{Q15 + Q16}$ = _____ = [ ] days **KPI 15**

KPI 16: Pressure ulcer incidence

Why is this important?	This is an indicator of the quality of care performed by nursing staff in a hospital. Poor nursing care, with inadequate turning of patients in their bed can lead to the development of a pressure ulcer (also called bed ulcer or decubitus ulcer). Pressure ulcers can be fatal when allowed to progress without treatment. By measuring the pressure ulcer rate hospitals can assess the quality of nursing care provided and take action to address any problems identified.
Definition	Proportion of inpatients who develop a pressure ulcer during their hospital stay. Pressure ulcers arise in areas of unrelieved pressure (commonly sacrum, elbows, knees or ankles). Either of the following criteria should be met: • A superficial break in the skin (abrasion or blister) in an area of pressure OR • An ulcer that involves the full thickness of the skin and may even extend into the subcutaneous tissue, cartilage or bone INCLUDE: • New pressure ulcers that arise during the patients admission, during the reporting period EXCLUDE: • Pressure ulcers that were already present at the time of admission • Pressure ulcers that developed in a previous reporting period
Unit of measurement	%
Numerator	Number of inpatients who develop a new pressure ulcer during the reporting period (Q23)
Denominator	Number of patients discharged alive (including transfers out) (Q16) + Number of deaths among admitted inpatients (Q15)
Formula	Number of inpatients who develop a new pressure ulcer during the reporting period (Q23) ÷ [Number of patients discharged alive (including transfers out) (Q16) + Number of deaths among admitted inpatients (Q15)] x 100
Data sources	Routine surveillance - Pressure ulcer report form (see Appendix 9)
Frequency of reporting	Monthly

Hospital KPI 16 Date Entry Form: Pressure Ulcer Incidence

Formula Number of inpatients who develop a new pressure ulcer during the reporting period (Q23) ÷ [Number of patients discharged alive (including transfers out) (Q16) + Number of deaths among admitted inpatients (Q15) x 100

Data entry:

Q23 = Number of inpatients who develop a new pressure ulcer during the reporting period = _____

Q15 = Number of deaths among admitted inpatients = _____

Q16 = Number of patients discharged alive (including transfers out) = _____

Calculation: $\frac{Q23}{Q15 + Q16}$ x 100 = _____ x 100 = ☐ % **KPI 16**

KPI 17: Surgical site infection

Why is this important?	Infection at the site of surgery may be caused by poor infection prevention practices in the operating room or on the ward after completion of surgery. The surgical site infection rate is an indicator of the quality of medical care received by surgical patients and an indirect measure of infection prevention practices in the hospital. By monitoring surgical site infection hospitals can assess the adequacy of infection prevention practices in the hospital and take action to address any problems identified.

Definition	Proportion of all major surgeries with an infection occurring at the site of the surgical wound *prior to discharge*. One or more of the following criteria should be met:
	• Purulent drainage from the incision wound
	• Positive culture from a wound swab or aseptically aspirated fluid or tissue
	• Two of the following:
	  o wound pain or tenderness
	  o localized swelling
	  o redness
	  o heat
	• Spontaneous wound dehiscence or deliberate wound revision/opening by the surgeon in the presence of:
	  o pyrexia > 38C or
	  o localized pain or tenderness
	• An abscess or other evidence of infection involving the deep incision that is found by direct examination during re-operation, or by histopathological or radiological examination
	A major surgical procedure is defined as any procedure conducted under general, spinal or major regional anaesthesia.

Unit of measurement	%
Numerator	Number of inpatients with new surgical site infection arising during the reporting period (Q24) INCLUDE: • Patients undergoing surgery in public facility • Private wing surgical cases
Denominator	Number of major surgeries (both elective & non-elective) performed during the reporting period on public patients (Q25) + Number of major surgeries (both elective & non-elective) performed during the reporting period on private wing patients (Q26)
Formula	Number of inpatients with new surgical site infection arising during the reporting period (Q24) ÷ [Number of major surgeries (both elective & non-elective) performed during the reporting period on public patients (Q25) + Number of major surgeries (both elective & non-elective) performed during the reporting period on private wing patients (Q26)] x 100.
Data sources	Routine surveillance – Surgical Site Infection Report Forms (See Appendix 10) At the end of the reporting period the number of Surgical Site Infection Forms completed during that period should be tallied from each surgical inpatient ward.
Frequency of reporting	Monthly

Hospital KPI 17 Date Entry Form: Surgical Site Infection

Formula: Number of inpatients with new surgical site infection arising within the reporting period (Q24) ÷ [Total number of major surgeries (both elective & non-elective) performed during the reporting period on public patients (Q25) + Total number of major surgeries (both elective & non-elective) performed during the reporting period on private wing patients (Q26)] x 100.

Data entry:

Q24 = Number of inpatients with new surgical site infection arising within the reporting period = _____

Q25 = Total number of major surgeries (both elective & non-elective) performed during the reporting period on public patients = _____

Q26 = Total number of major surgeries (both elective & non-elective) performed during the reporting period on private wing patients = _____

Calculation: $\frac{Q24}{Q25 + Q26}$ x 100 = _____ x 100 = ☐ % **KPI 17**

KPI 18: Completeness of inpatient medical records

Why is this important?	Complete and accurate medical records are essential to maintain the continuity of patient care and ensure that the health provider has full information about the patient when providing healthcare. Through HMIS a standardized medical record has been introduced nationwide. The completeness of this medical record is a measure of the quality of care provided at the hospital.
Definition	Proportion of elements completed of the minimum elements of an inpatient medical record. The MINIMUM elements are*: - Patient Card (Physician notes) – present and all entries signed - Physician/health officer Order Sheet – present and all entries signed - Nursing Care Plan – present and signed - Medication Administration Record – present and all medications given are signed - Discharge Summary – present and signed * The checklist describes the MINIMUM set of documents that should be present in the medical record of EVERY discharged patient. Some inpatient records will contain additional documents and forms (e.g. referral forms, laboratory report forms etc). However for standardization of this indicator, only the items that are listed in the checklist should be included in the survey.
Unit of measurement	%
Numerator	Sum total of medical record checklist scores (Q27)
Denominator	Number of discharged inpatient medical records surveyed (Q28) x 5 (i.e. the number of items in checklist)
Formula	Sum total of medical record checklist scores (Q27) ÷ [Number of discharged inpatient medical records surveyed (Q28) x 5] x 100
Data sources	Audit of medical records against checklist A full protocol for the audit is presented in Appendix 11 5% or 50 (whichever is greater) medical records should be audited
Frequency of reporting	Quarterly

Hospital KPI 18 Data Entry Form: Completeness of inpatient medical records

Formula: ∑medical record checklist score (Q27) ÷ [Total number of discharged inpatient medical records surveyed (Q28) x 5] x 100

Data entry: Q27 = ∑medical record checklist score = _____
Q28 = Total number of discharged inpatient medical records surveyed = _____

Calculation: $\frac{Q27}{Q28 \times 5} \times 100 =$ _____ x 100 = [ ] % **KPI 18**

KPI 19: Deliveries (live and stillbirths) attended

Why is this important?	Hospitals need to know the number of patients who deliver at the hospital, and the number of complicated deliveries in order to plan staff numbers, equipment and supply needs. This information informs the annual plan and budget preparations. For the RHB, knowledge of the number of deliveries attended at each hospital is necessary to calculate population health service coverage rate, assess access to healthcare services and to plan health care services for the region.
Definition	Number of women who gave birth in the hospital
Unit of measurement	Absolute number
Formula	Number of women who gave birth in the hospital (Q29) INCLUDE: All births in hospital, regardless of the department where delivery occurred
Data sources	Delivery registration book
Frequency of reporting	Monthly

KPI 19 Data Entry Form: Deliveries (live and stillbirths) attended

Formula: Total number of women who gave birth in the hospital (Q29)

Data Entry: Q29 = total number of women who gave birth in hospital

Calculation: Q29 = [ ] **KPI 19**

KPI 20: Births by surgical, instrumental or assisted vaginal delivery

Why is this important?	In the health care system of Ethiopia, it is expected that hospitals will manage complicated maternity cases and that uncomplicated pregnancies and normal deliveries should mainly be managed by Primary Health Care Units. By monitoring the % of attended deliveries that are complicated, the hospital and RHB can assess if hospital services are being used appropriately.
Definition	Number of births by surgical, instrumental or assisted vaginal delivery per 100 deliveries attended in the hospital
Numerator	Number of Caesarean sections (Q32) + Number of abdominal surgical deliveries (Q33) + Number of instrumental or assisted vaginal deliveries (Q34) Caesarean Section means delivery of the foetus (including live births and stillbirths) by the abdominal route when the uterus is intact (Q32) Abdominal Surgical Delivery means removal of the foetus, placenta and/or membranes by the abdominal route (including live births and stillbirths) where the uterus is not intact (i.e. ruptured uterus). (Q33) Instrumental or assisted vaginal delivery (Q34) means any vaginal delivery (including live births and stillbirths) using an instrument or manual intervention of the health worker. INCLUDE: • Forceps delivery • Rotational deliveries, e.g. internal podalic version • Vacuum extractions • Craniotomy EXCLUDE: • Episiotomy • Vaginal tears
Denominator	Number of live births attended in the hospital (Q30) + Number of stillbirths attended in the hospital (Q31)
Unit of measurement	%
Formula	[Number of Caesarean sections (Q32) + Number of abdominal surgical deliveries (Q33) + Number of instrumental or assisted vaginal deliveries (Q34)] ÷ [Number of live births attended in the hospital (Q30) + Number of stillbirths attended in the hospital (Q31)] x 100
Data sources	Delivery registration book
Frequency of reporting	Monthly

KPI 20 Data Entry Form: Births by surgical, instrumental or assisted vaginal delivery

Formula: [Number of Caesarean sections (Q32) + Number of abdominal surgical deliveries (Q33) + Number of instrumental or assisted vaginal deliveries (Q34)] ÷ [Number of livebirths attended in the hospital (Q30) + Number of stillbirths attended in the hospital (Q31)] x 100

Data entry: Q30 = Total number of livebirths attended in the hospital = _____
Q31 = Total number of stillbirths attended in the hospital = _____
Q32 = Number of Caesarean sections = _____
Q33 = Number of abdominal surgical deliveries = _____
Q34 = Number of instrumental or assisted vaginal deliveries = _____

Calculation = $\frac{Q32+ Q33 + Q34}{Q30 + Q31}$ x 100 = _____ x 100 = ☐ % **KPI 20**

KPI 21: Institutional maternal mortality

Why is this important?	This indicator reflects both the quality of medical care provided at the hospital and the access to maternity services. For example a high maternal mortality may be due to inadequate treatment of pregnant women after they arrive at the hospital and/or could be due to long delays in seeking medical care that result in women arriving at the hospital in a moribund condition. Through BPR, the government has set a stretch objective that "deaths related to pregnancy and maternity should not occur to 99% of mothers after the patient arrives at the hospital". Hospitals should monitor the proportion of maternal deaths in order to assess the quality of maternal health services. The reasons for every maternal death in the hospital should be investigated and quality improvement measures taken where necessary. For a RHB, knowledge of the number of maternal deaths in the hospital is necessary to calculate the regional, population based maternal mortality rate which will assist to plan future health services and to identify actions that should be taken to increase access to maternal health care services.
Definition	The number of maternal deaths per 100 deliveries
Unit of measurement	%
Numerator	Number of maternal deaths (any gestational age) (Q35) INCLUDE: All maternal deaths should be included, wherever they occur in the hospital. • Ante partum deaths (at any gestational age) • Intrapartum deaths • Post partum deaths (from delivery until 6 weeks post partum) • Direct causes (e.g. haemmorhage, ruptured uterus, eclampsia, obstructed labour, infection etc) • Indirect causes (e.g. heart disease or malaria aggravated by pregnancy) EXCLUDE: Deaths in pregnant women due to incidental or accidental causes, e.g. road traffic accident.
Denominator	Number of women who gave birth in the hospital (Q29)
Formula	Number of maternal deaths (any gestational age) (Q35) ÷ Number of women who gave birth in the hospital (Q29) x 100
Data sources	Delivery register Emergency gynecology database/register Emergency room database/register
Frequency of reporting	Monthly

KPI 21 Data Entry Form: Institutional maternal mortality

Formula: The number of maternal deaths (any gestational age) (Q35) ÷ Total number of women who gave birth in the hospital (Q29) x 100

Data entry: Q35 = The number of maternal deaths (any gestational age) = _____
Q29 = Total number of women who gave birth in the hospital = _____

Calculation: $\frac{Q35}{Q29}$ x 100 = _____ x 100 = ☐ % **KPI 21**

KPI 22: Institutional neonatal death within 24 hours of birth

Why is this important?	This indicator is a measure of the quality of care during delivery and in the immediate post-partum period. A hospital should monitor the early neonatal death rate to assess the quality of maternity care provided and take action to address any problems identified.
Definition	The number of deaths within 24 hours of birth per 100 live births attended in the hospital. INCLUDE: All deaths within the first 24 hours of life among babies who were delivered in the health facility EXCLUDE: Deaths among babies who were admitted AFTER delivery
Unit of measurement	%
Numerator	Number of deaths within 24 hours of birth among babies born alive in the hospital (Q36)
Denominator	Number of live births attended in the hospital (Q30)
Formula	Number of deaths within 24 hours of birth among babies born alive in the hospital (Q36) ÷ Number of live births attended in the hospital (Q30) x 100
Data sources	Delivery register
Frequency of reporting	Monthly

KPI 22 Data Entry Form: Institutional neonatal death within 24 hours of birth

Formula: Number of deaths within 24 hours of birth among babies born alive in the hospital (Q36) ÷ Total number of livebirths attended in the hospital (Q30) x 100

Data entry: Q36 = Number of deaths within 24 hours of birth among babies born alive in the hospital = _____
Q30 = Total number of livebirths attended in the hospital = _____

Calculation: $\frac{Q36}{Q30} \times 100$ = _____ x 100 = ☐ % **KPI 22**

KPI 23: Referrals made

Why is this important?	A high number and proportion of referrals made from the hospital could indicate that the hospital is not providing all services required by the population served, whereas a low number and proportion of referrals might indicate that the hospital is not following referral guidelines and is treating patients beyond its capacity. Knowledge of the number and rate of referrals helps the hospital to plan future service provision. For the RHB, knowledge of the number and rate of referrals made by each hospital helps to monitor the regional Referral System and assists the RHB to identify the need for and plan future healthcare services in the region.
Definition	The total number of patient attendances (inpatient, outpatient, emergency and maternity) who were referred to another facility with a referral paper during the reporting period Emergency referrals are those patients who were advised to seek immediate or life saving medical treatment at another facility. This could include patients referred from the emergency room, patients referred from the emergency gynecology unit, labouring or non-labouring mothers referred from the maternity unit, patients referred from OPD or inpatient wards for immediate or life saving treatment. Non-emergency referrals are those patients who were advised to seek medical treatment at another facility but where the need for treatment was not immediate or life saving. Referrals made by ANY department or service should be included, e.g. • Inpatient admissions • Outpatient attendances • Emergency room attendances • Emergency maternity attendances (any gestational age) • Delivering mothers or neonates • Private wing attendances
Unit of measurement	Absolute number
Formula	Number of emergency referrals made (Q38) + Number of non-emergency referrals made (Q39)
Data sources	Referral register
Frequency of reporting	Monthly

KPI 23 Data Entry Form: Referrals made

Formula: Number of emergency referrals made (Q38) + Number of non- emergency referrals made (Q39)

Data entry: Q38 = Number of emergency referrals made = _____

Q39 = Number of non- emergency referrals made = _____

Calculation: Q38 + Q39 = _____ + _____ = ☐ **KPI 23**

KPI 24: Rate of referrals

Why is this important?	A high number and proportion of referrals made from the hospital would indicate that the hospital is not providing all services required by the population served, whereas a low number and proportion of referrals might indicate that the hospital is not following referral guidelines and is treating patients beyond its capacity. Knowledge of the number and rate of referrals helps the hospital to plan future service provision. For the RHB, knowledge of the number and rate of referrals made by each hospital helps to monitor the regional referral system and assists the RHB to identify the need for and plan future healthcare services in the region.
Definition	The number of patient attendances (inpatient, outpatient, emergency and maternity) who were referred to another facility with a referral paper during the reporting period per 100 patient attendances
Unit of measurement	%
Numerator	Number of emergency referrals made (Q38) + Number of non-emergency referrals made (Q39)
Denominator	Total patient attendances, i.e. Number of new and repeat outpatient attendances at public facility (Q3) + Number of new and repeat outpatient attendances at private wing (Q4) + Number of emergency room attendances (Q8) + Number of patients admitted to public facility (Q13) + Number of patients admitted to private wing (Q14) + Number of women who gave birth in the hospital (Q29) + Number of non-delivering emergency maternal attendances (any gestational age) (Q37)
Formula	[Number of emergency referrals made (Q38) + Number of non-emergency referrals made (Q39)] ÷ [Number of new and repeat outpatient attendances at public facility (Q3) + Number of new and repeat outpatient attendances at private wing (Q4) + Number of emergency room attendances (Q8) + Number of patients admitted to public facility (Q13) + Number of patients admitted to private wing (Q14) + Number of women who gave birth in the hospital (Q29) + Number of non-delivering emergency maternal attendances (any gestational age) (Q37)] x 100
Data sources	Referral register, admission register, outpatient register, emergency register, delivery register/log books or databases
Frequency of reporting	Monthly

KPI 24 Data Entry Form: Rate of referrals

Formula: [Number of emergency referrals made (Q38) + Number of non- emergency referrals made (Q39)] ÷ [Number of new and repeat outpatient attendances at public facility (Q3) + Number of new and repeat outpatient attendances at private wing (Q4) + Total number of emergency room attendances (Q8) + Number of patients admitted to public facility (Q13) + Number of patients admitted to private wing (Q14) + Total number of women who gave birth in the hospital (Q29) + Number of non-delivering emergency maternal attendances (any gestational age) (Q37)] x 100

Data entry:

Q38 = Number of emergency referrals = _____

Q39 = Number of non- emergency referrals made = _____

Q3 = Number of new and repeat outpatient attendances at public facility = _____

Q4 = Number of new and repeat outpatient attendances at private wing = _____

Q8 = Total number of emergency room attendances = _____

Q13 = Number of patients admitted to public facility = _____

Q14 = Number of patients admitted to private wing = _____

Q29 = Total number of women who gave birth in the hospital = _____

Q37 = Number of non-delivering emergency maternal attendances (any gestational age) = _____

Calculation:

$$\frac{Q38+ Q39}{Q3 + Q3 + Q4 + Q8+ Q13 + Q14 + Q29 + Q37} \times 100 = \_\_\_\_ \times 100 = \boxed{} \%$$ **KPI 24**

KPI 25: Emergency referrals as a proportion of all referrals made

Why is this important?	All hospitals should be able to provide emergency medical services. If a hospital has a high proportion of emergency referrals this would suggest that the hospital is not providing adequate emergency services.
Definition	Number of emergency referrals per 100 referrals
Unit of measurement	%
Numerator	Number of emergency referrals made (Q38) Emergency referrals are those patients who were advised to seek immediate or life saving medical treatment at another facility. This could include patients referred from the emergency room, patients referred from the emergency gynecology unit, labouring or non-labouring mothers referred from the maternity unit, patients referred from OPD or inpatient wards for immediate or life saving treatment.
Denominator	Number of emergency referrals made (Q38) + Number of non emergency referrals made (Q39)
Formula	Number of emergency referrals made (Q38) ÷ [Number of emergency referrals made (Q38) + Number of non emergency referrals made (Q39)] x 100
Data sources	Referral register
Frequency of reporting	Monthly

KPI 25: Date Entry Form: Emergency referrals as a proportion of all referrals made

Formula: Number of emergency referrals made (Q38) ÷ [Number of emergency referrals made (Q38) + Number of non emergency referrals made (Q39)] x 100

Data entry: Q38 = Number of emergency referrals made = _____
Q39 = Number of non emergency referrals made = _____

Calculation: $\frac{Q38}{Q38 + Q39}$ x 100 = _____ x 100 = [ ] % **KPI 25**

KPI 26: Average stock out duration of hospital specific tracer drugs

Why is this important?	The availability of hospital specific essential (tracer) drugs is a measure of service availability. Tracer drugs should ALWAYS be available at the hospital. If there is any stock out of tracer drugs the hospital should take action to identify and address the cause. For the RHB, knowledge of the stock out of hospital specific tracer drugs in hospitals helps to assess the adequacy of hospital inventory control processes and the regional Pharmaceutical Supply Chain Management System.
Definition	The number of days in which a hospital specific tracer drug was not available averaged over all hospital specific tracer drugs. The hospital specific tracer drugs are as follows: • Amoxycillin • Oral Rehydration Salts • Arthemisin/Lumphantrine • Mebendazole Tablets • Tetracycline Eye Ointment • Paracetamol • Refampicine/Isoniazide/Pyrazinamide/Ethambutol • Medroxyprogesterone(depo) injection • Ergometrine Maleate Injection/Tablets • Ferrous Sulphate plus Folic Acid • Pentavalent DPT-Hep-Hib Vaccine • Plus an additional 5 drugs, whose availability is mandatory, to be selected by the hospital
Unit of measurement	Days
Numerator	Sum total of stock out days of hospital specific tracer drugs (Q40)
Denominator	Number of hospital specific tracer drugs (Q41)
Formula	Sum total of stock out days of hospital specific tracer drugs (Q40) ÷ 16 (the total number of hospital specific tracer drugs) (Q41)
Data sources	Pharmacy Bin Cards
Frequency of reporting	Monthly

KPI 26 Data Entry Form: Average stock out duration of hospital specific tracer drugs

Formula: ∑stock out days of hospital specific tracer drugs (Q40) ÷ Total number of hospital specific tracer drugs (Q41)

Date entry:

Q40:

(a) Stock out days of Amoxicillin = _____ days
(b) Stock out days of Oral Rehydration Salts = _____ days
(c) Stock out days of Arthemisin/Lumphantrine = _____ days
(d) Stock out days of Mebendazole Tablets = _____ days
(e) Stock out days of Tetracycline Eye Oint. = _____ days
(f) Stock out days of Paracetamol = _____ days
(g) Stock out days of Rifampicin/Isoniazide/Pyrazinamide/Ethambuto = _____ days
(h) Stock out days of Medroxyprogesterone Acetate (depot Provera) = _____ days
(i) Stock out days of Ergometrine Maleate Tablet = _____ days
(j) Stock out days of Ferrous Salt plus Folic Acid = _____ days
(k) Stock out days of Pentavalent DPT-Hep-Hib Vaccine = _____ days

Five mandatory additional hospital tracer drugs

(l) ……. =_____ days
(m) ……. =_____ days
(n) ……. =_____ days
(o) …… =_____ days
(p) …… =_____ days

Q40 = Total stock out days
= a + b + c + d + e + f + g + h + i + j + k +l +m +n +o +p = _____ stock out days
Q41 = Total number of hospital specific tracer drugs (11 + 5) = 16

Calculation: $\frac{Q40}{Q41} = \frac{\_\_\_\_\_}{16} =$ ☐ **KPI 26**

KPI 27: Patient day equivalents per doctor

Why is this important?	This indicator relates to the productivity of doctors and helps the hospital to determine whether doctors are working productively, or are overloaded. The indicator is useful for planning future staff numbers.
Definition	The average number of patient day equivalents per full time equivalent (FTE) doctor
Numerator	Number of patient day equivalents (PDEs) during reporting period A patient day equivalent is equal to ONE inpatient bed day (i.e. one overnight stay by one patient) *or* three outpatient visits *or* three emergency visits *or* three emergency maternity attendances *or* two deliveries. It assumes that the cost of one inpatient day is equivalent to three out outpatient visits *or* three emergency visits *or* three emergency maternity attendances *or* two deliveries. INCLUDE: • Inpatient admissions to public and private facilities • Outpatient attendances to public facility and private wing • Emergency attendances • Deliveries attended I.e. Patient day equivalent = Sum total of length of stay during reporting period (Q19) + [Number of new and repeat outpatient attendances at public facility (Q3) ÷ 3] + [Number of new and repeat outpatient attendances at private wing (Q4) ÷3] + [Number of emergency room attendances (Q8) ÷3] + [Number of non-delivering emergency maternal attendances (any gestational age) (Q37) ÷ 3] + [Number of women who gave birth in the hospital (Q29) ÷ 2]
Denominator	Average number of full time equivalent (FTE) doctors (GPs & Specialists) (Q42) A full time equivalent means a doctor working regular duties of 40 hours per week (excluding on call or duty hours). A doctor working a regular 40 hour week is counted as 1.0 FTE. If a doctor works part time then his/her regular work hours should be converted to a FTE number by dividing the number of regular duty hours by 40. For example a doctor who works 20 hours regular duty per week is counted as 0.5 FTE (i.e. 20 ÷ 40). So if the hospital has 4 full time doctors working 40 hours per week, plus one doctor working 20 hours per week plus one doctor working 10 hours per week then the total FTE is 4.75 (i.e. (4 x 1.0) + 0.5 + 0.25). If the number of doctors changes during the reporting period then calculate the AVERAGE FTE for the period, (i.e. [FTE doctors at beginning of reporting period + FTE doctors at end of reporting period] ÷ 2) INCLUDE:

	• All doctors (both general practitioners and specialists) funded by the hospital or RHB • All doctors (both general practitioners and specialists) who are voluntary or funded by another source EXCLUDE: • Health Officers • Students • Residents & Interns
Formula	{Sum total of length of stay during reporting period (Q19) + [Number of new and repeat outpatient attendances at public facility (Q3) ÷ 3] + [Number of new and repeat outpatient attendances at private wing (Q4) ÷3] + [Number of emergency room attendances (Q8) ÷3] + [Number of non-delivering emergency maternal attendances (any gestational age) (Q37) ÷ 3] + [Number of women who gave birth in the hospital (Q29) ÷ 2]} ÷ Average number of full time equivalent (FTE) doctors (GP & Specialists) (Q42)
Data sources	• Inpatient registration book/ admission and discharge register • Outpatient registration book/register • Private wing registration book/database • Emergency registration book/database • Delivery register/database • Human resource/personnel database
Frequency of reporting	Monthly

KPI 27 Data Entry Form: Patient day equivalents per doctor

Formula: {Sum total of length of stay during reporting period (Q19) + [Number of new and repeat outpatient attendances at public facility (Q3) ÷ 3] + [Number of new and repeat outpatient attendances at private wing (Q4) ÷3] + [Number of emergency room attendances (Q8) ÷3] + [Number of non-delivering emergency maternal attendances (any gestational age) (Q37) ÷ 3] + [Number of women who gave birth in the hospital (Q29) ÷ 2]} ÷ Average number of 'full time equivalent' (FTE) doctors (GP & Specialists) (Q42)

Data entry:

Q19 = Sum total of length of stay during reporting period = _____

Q3 = Number of new and repeat outpatient attendances at public facility = _____

Q4 = Number of new and repeat outpatient attendances at private wing = _____

Q8 = Number of emergency room attendances = _____

Q37 = Number of non-delivering emergency maternal attendances (any gestational age) = _____

Q29 = Number of women who gave birth in the hospital = _____

Q42 = Average number of full time equivalent doctors (GP & Specialists) = _____

Calculation:

[Q19 + (Q3 ÷ 3) + (Q4 ÷ 3) + (Q8 ÷ 3) + (Q37 ÷ 3) + (Q29 ÷ 2)] ÷ Q42 = ☐ **KPI 27**

KPI 28: Patient day equivalents per nurse/midwife

Why is this important?	This indicator relates to the productivity of nurses and midwives and helps the hospital to determine whether nurses and midwives are working productively, or are overloaded. The indicator is useful for planning future staff numbers.
Definition	The average number of patient day equivalents per full time equivalent (FTE) nurse/midwife
Numerator	Number of patient day equivalents (PDEs) during reporting period A patient day equivalent is equal to ONE inpatient bed day (i.e. one overnight stay by one patient) *or* three outpatient visits *or* three emergency visits *or* three emergency maternity attendances *or* two deliveries. It assumes that the cost of one inpatient day is equivalent to three out outpatient visits *or* three emergency visits *or* three emergency maternity attendances *or* two deliveries. INCLUDE: • Inpatient admissions to public and private facilities • Outpatient attendances to public facility and private wing • Emergency attendances • Deliveries attended I.e. Patient day equivalent = Sum total of length of stay during reporting period (Q19) + [Number of new and repeat outpatient attendances at public facility (Q3) ÷ 3] + [Number of new and repeat outpatient attendances at private wing (Q4) ÷3] + [Number of emergency room attendances (Q8) ÷3] + [Number of non-delivering emergency maternal attendances (any gestational age) (Q37) ÷ 3] + [Number of women who gave birth in the hospital (Q29) ÷ 2]
Denominator	Average number of full time equivalent (FTE) nurses/midwives (Q43) A full time equivalent means a nurse or midwife working regular duties of 40 hours per week (excluding on call or duty hours). A nurse or midwife working a regular 40 hour week is counted as 1.0 FTE. If a nurse or midwife works part time then his/her regular work hours should be converted to a FTE number by dividing the number of regular duty hours by 40. For example a nurse who works 20 hours regular duty per week is counted as 0.5 FTE (i.e. 20 ÷ 40). So if the hospital has 30 full time nurses working 40 hours per week, plus three nurses working 20 hours per week plus two midwives working 10 hours per week then the total FTE is 32.00 (30 x 1.0 + 3 x 0.5 + 2 x 0.25).

	If the number of nurses/midwives changes during the reporting period then calculate the AVERAGE FTE for the period,(i.e. [FTE nurses/midwives at beginning of reporting period + FTE nurses/midwives at end of reporting period] ÷ 2) INCLUDE: • All nurses and midwives funded by the hospital or RHB • All nurses and midwives who are voluntary or funded by another source EXCLUDE: • Students
Formula	{Sum total of length of stay during reporting period (Q19) + [Number of new and repeat outpatient attendances at public facility (Q3) ÷ 3] + [Number of new and repeat outpatient attendances at private wing (Q4) ÷3] + [Number of non-delivering emergency room attendances (Q8) ÷3] + [Number of emergency maternal attendances (any gestational age) (Q37) ÷ 3] + [Number of women who gave birth in the hospital (Q29) ÷ 2]} ÷ Average number of full time equivalent (FTE) nurses/midwives (Q43)
Data sources	• Inpatient registration book/ admission and discharge register • Outpatient registration book/register • Private wing registration book/database • Emergency registration book/database • Delivery register/database • Human resource/personnel database
Frequency of reporting	Monthly

KPI 28 Data Entry Form: Patient day equivalents per nurse/midwife

Formula: {Sum total of length of stay during reporting period (Q19) + [Number of new and repeat outpatient attendances at public facility (Q3) ÷ 3] + [Number of new and repeat outpatient attendances at private wing (Q4) ÷3] + [Number of emergency room attendances (Q8) ÷3] + [Number of non-delivering emergency maternal attendances (any gestational age) (Q37) ÷ 3] + [Number of women who gave birth in the hospital (Q29) ÷ 2]} ÷ Average number of 'full time equivalent' nurses/midwives (Q43)

Data entry:

Q19 = Sum total of length of stay during reporting period = _____

Q3 = Number of new and repeat outpatient attendances at public facility = _____

Q4 = Number of new and repeat outpatient attendances at private wing = _____

Q8 = Number of emergency room attendances = _____

Q37 = Number of non-delivering emergency maternal attendances (any gestational age) = _____

Q29 = Number of women who gave birth in the hospital = _____

Q43 = Average number of full time equivalent nurses/midwives = _____

Calculation:

[Q19 + (Q3 ÷ 3) + (Q4 ÷ 3) + (Q8 ÷ 3) + (Q37 ÷ 3) + (Q29 ÷ 2)] ÷ Q43 = ☐ **KPI 28**

KPI 29: Major surgeries per surgeon

Why is this important?	This indicator relates to the productivity of surgeons, and helps the hospital to determine whether surgeons are working productively, or are overloaded. The indicator is useful for planning future surgical staff numbers.
Definition	The number of major surgical procedures per full time equivalent (FTE) specialist surgeon.
Numerator	Number of major surgeries (both elective & non-elective) performed on public patients (Q25) + Number of major surgeries (both elective & non-elective) performed on private wing patients (Q26)) A major surgical procedure is defined as any procedure conducted under general, spinal or major regional anaesthesia. INCLUDE: • all surgeries conducted on patients admitted to public facility • all surgeries conducted on private wing patients EXCLUDE: • all ophthalmic surgery NB: Ophthalmologists and ophthalmic surgery should be excluded because the case mix of ophthalmic surgeons is substantially different from that of other surgeons. In particular, ophthalmic surgery tends to be of shorter duration than other types of surgery and hence inclusion of ophthalmic surgery in the calculation would introduce bias when comparing hospitals that provide an ophthalmic service with those that do not.
Denominator	Average number of FTE specialist surgeons (excluding Ophthalmologists) (Q44) Specialist surgeons INCLUDE: • All surgeons funded by the hospital or RHB • All surgeons who are voluntary or funded by another source EXCLUDE: • Surgical residents and interns • Ophthalmologists
Formula	[Number of major surgeries (both elective & non-elective) performed on public patients (Q25) + Number of major surgeries (both elective & non-elective) performed on private wing patients (Q26)] ÷ Average number of FTE specialist surgeons (excluding Ophthalmologists) (Q44)
Data sources	Surgical/operating room log book Human resources/personnel database
Frequency of reporting	Monthly

KPI 29 Data Entry Form: Major surgeries per surgeon

Formula: [Total number of major surgeries (both elective & non-elective) performed on public patients (Q25) + Total number of major surgeries (both elective & non-elective) performed on private wing patients (Q26)] ÷ Average number of FTE specialist surgeons (excluding ophthalmologists) (Q44)

Data entry:

Q25 = Total number of major surgeries (both elective & non-elective) performed on public patients = _____

Q26 = Total number of major surgeries (both elective & non-elective) performed on private wing patients = _____

Q44 = Average number of FTE specialist surgeons (excluding ophthalmologists) = ____

Calculation: $\frac{Q25 + Q26}{Q44}$ = _____ = ☐ surgeries per surgeon **KPI 29**

KPI 30: Major surgeries conducted in the private wing

Why is this important?	Through Health Care Finance Reform (HCFR) hospitals are permitted to establish a private wing service. The proportion of all major surgeries that are conducted on private wing patients is a measure of the productivity of the private wing surgical service and is a measure of service availability, patient demand for private wing services and of the success of HCFR implementation by the hospital.
Definition	The proportion of all major surgeries that are performed on private wing patients
Numerator	Number of major surgeries (both elective & non-elective) performed on private wing patients (Q26) A major surgical procedure is defined as any procedure conducted under general, spinal or major regional anaesthesia. INCLUDE: • all surgeries conducted on private wing patients EXCLUDE: • all ophthalmic surgery
Denominator	Number of major surgeries (both elective & non-elective) performed on public patients (Q25) + Total number of major surgeries (both elective & non-elective) performed on private wing patients (Q26) EXCLUDE: • all ophthalmic surgery
Formula	Number of major surgeries (both elective & non-elective) performed on private wing patients (Q26) ÷ [Number of major surgeries (both elective & non-elective) performed on public patients (Q25) + Number of major surgeries (both elective & non-elective) performed on private wing patients (Q26)]
Data sources	Surgical/operating room log book
Frequency of reporting	Monthly

KPI 30 Data Entry Form: Major surgeries conducted in the private wing

Formula: Total number of major surgeries (both elective & non-elective) performed on private wing patients (Q26) ÷ [Total number of major surgeries (both elective & non-elective) performed on public patients (Q25) + Total number of major surgeries (both elective & non-elective) performed on private wing patients (Q26)]

Data entry: Q25 = Total number of major surgeries (both elective & non-elective) performed on public patients = _____

Q26 = Total number of major surgeries (both elective & non-elective) performed on private wing patients = _____

Calculation: $\frac{Q26}{Q25 + Q26} \times 100 = \_\_\_\_\_ \times 100 =$ ☐ % **KPI 30**

KPI 31: Attrition rate – physicians

Why is this important?	The attrition rate (turnover) of hospital staff is an indicator of the quality of the working environment for staff. A high turnover indicates that employees are not satisfied with their working environment. When employees are not satisfied in the workplace they tend to be poorly motivated and are less efficient in their work, and less motivated to provide quality healthcare. Additionally, a high staff turnover may have a negative impact on patient care since it may lead to staff shortages and poor continuity of care. There is a shortage of physicians in Ethiopian hospitals, with many leaving the public sector for the private sector; hence the retention of this group of workers is extremely important to the hospital.
Definition	Proportion of physicians who left during reporting period.
Unit of measurement	%

Numerator	Number of physicians (GP & Specialists) who left the hospital during the reporting period (Q45)
	
	INCLUDE:
	• all physicians and specialists employed by the hospital who:
	  ○ left voluntarily or compulsorily
	  ○ left for training of > 3 months duration
	  ○ died during the reporting period
	
	EXCLUDE:
	• health officers
	• all voluntary physicians and specialists
	• short term trainings (<3 months) where the physician is expected to return to the hospital after completion

Denominator	Number of physicians (GP & Specialists) employed by hospital at the beginning of the reporting period (Q46) + Number of physicians (GP & Specialists) hired during the reporting period (Q47)
Formula	Number of physicians (GPs and specialists) who left the hospital during the reporting period (Q45) ÷ [Number of physicians (GP & Specialists) employed by hospital at the beginning of the reporting period (Q46) + Number of physicians (GP & Specialists) hired during the reporting period (Q47)] x 100
Data sources	HR personnel records
Frequency of reporting	Six monthly

KPI 31 Data Entry Form: Attrition rate - physicians

Formula: Number of physicians (GPs and specialists) who left the hospital during the reporting period (Q45) ÷ [Number of physicians (GP & Specialists) employed by hospital at the beginning of the reporting period (Q46) + Number of physicians (GP & Specialists) hired during the reporting period (Q47) x 100

Data Entry:

Q45 = Number of physicians (GPs and specialists) who left the hospital during the reporting period = _____

Q46 = Number of physicians (GP & Specialists) employed by hospital at the beginning of the reporting period = _____

Q47 = Number of physicians (GP & Specialists) hired during the reporting period = ____

Calculation: $\frac{Q45}{Q46 + Q47}$ x 100 = _____ x 100 = ☐ % **KPI 31**

KPI 32: Staff satisfaction

Why is this important?	Hospitals should strive to provide a good working environment for employees, with opportunities for training and development and equitable remuneration. Employees who are satisfied with their working environment are more productive and provide higher quality care. In contrast when workers are dissatisfied in the workplace their productivity tends to be low and the attrition rate is high. The Satisfaction of Employees in Healthcare (SEHC) survey has been developed for use in Ethiopian health facilities. The survey tool measures staff experience and perceptions in relation to training and development opportunities, communication and relationships between staff members, provision of adequate resources to perform the job, and the overall rating of the hospital as a working environment. By monitoring staff satisfaction the hospital can identify areas for improvement and take action to address problems identified.
Definition	Average rating of hospital on a score of 0-10 from SEHC survey
Unit of measurement	Absolute number on a scale of 0 - 10
Numerator	Sum total of rating scores from SEHC surveys (Q48)
Denominator	Number of SEHC surveys completed (Q49)
Formula	Sum total of rating scores from SEHC surveys (Q48) ÷ Number of SEHC surveys completed (Q49)
Data sources	Survey – The survey tool and protocol are under development
Frequency of reporting	Annual

KPI 32 Data Entry Form: Staff satisfaction

Formula: ∑ rating score from SEHC surveys (Q48) ÷ Number of SEHC surveys completed (Q49)

Data Entry: Q48 = ∑ rating score from SEHC surveys = _____
Q49 = Number of SEHC surveys completed) = _____

Calculation: $\frac{Q48}{Q49}$ = _____ = ☐ (on a scale of 0 – 10) **KPI 32**

KPI 33: Cost per patient day equivalent

Why is this important?	The cost per patient day equivalent is a measure of the efficiency of providing services at the hospital. A high cost per patient day equivalent suggests that the hospital is not cost effective when using resources (staff and/or equipment and supplies).
Definition	A patient day equivalent is equal to ONE inpatient bed day (i.e. one overnight stay by one patient) *or* three outpatient visits *or* three emergency visits *or* three emergency maternity attendances *or* two deliveries. It assumes that the cost of one inpatient day is equivalent to three out outpatient visits *or* three emergency visits *or* three emergency maternity attendances *or* two deliveries. The cost per PDE is the average cost of treating one inpatient for one day in the hospital *or* the average cost of 3 outpatients, emergency room or emergency maternity attendances *or* the average cost of 2 deliveries.
Unit of measurement	Ethiopian birr
Numerator	Total hospital operating expenses (Q50). This is all expenses associated with running the hospital including: • Gross salaries and employee benefits • Consumables and supplies • Cost of outsourced services • Professional fees • Rentals • Interest payments • Insurance payment etc EXCLUDE: • Capital expenses
Denominator	<u>Patient Day Equivalents</u> = Sum total of length of stay during reporting period (Q19) + [Number of new and repeat outpatient attendances at public facility (Q3) ÷ 3] + [Number of new and repeat outpatient attendances at private wing (Q4) ÷3] + [Number of emergency room attendances (Q8) ÷3] + [Number of non-delivering emergency maternal attendances (any gestational age) (Q37) ÷ 3] + [Number of women who gave birth in the hospital (Q29) ÷ 2]
Formula	Total operating expenses (Q50) ÷ {Sum total of length of stay during reporting period (Q19) + [Number of new and repeat outpatient attendances at public facility (Q3) ÷ 3] + [Number of new and repeat outpatient attendances at private wing (Q4) ÷3] + [Number of emergency room attendances (Q8) ÷3] + [Number of non-delivering emergency maternal attendances (any gestational age) (Q37) ÷ 3] + [Number of women who gave birth in the hospital (Q29) ÷ 2]}
Data sources	1) Operational expenses: hospital monthly financial statement 2) Patient day equivalents: • Inpatient registration book/ admission and discharge register

	• Outpatient registration book/register • Private wing registration book/database • Emergency registration book/database • Delivery register/database Human resource/personnel database
Frequency of reporting	Quarterly

KPI 33 Data Entry Form: Cost per patient day equivalent

Formula: Total operating expenses (Q50) ÷ {Sum total of length of stay during reporting period (Q19) + [Number of new and repeat outpatient attendances at public facility (Q3) ÷ 3] + [Number of new and repeat outpatient attendances at private wing (Q4) ÷3] + [Number of emergency room attendances (Q8) ÷3] + [Number of non-delivering emergency maternal attendances (any gestational age) (Q37) ÷ 3] + [Number of women who gave birth in the hospital (Q29) ÷ 2]}

Data entry:
Q50 = Total hospital operating expenses = _____
Q19 = Sum total of length of stay during reporting period = _____
Q3 = Number of new and repeat outpatient attendances at public facility = _____
Q4 = Number of new and repeat outpatient attendances at private wing = _____
Q8 = Number of emergency room attendances = _____
Q37 = Number of emergency non-delivering maternal attendances (any gestational age) = _____
Q29 = Number of women who gave birth in the hospital = _____

Calculation:

(Q50) ÷ {(Q19) + [(Q3) ÷ 3] + [Q4) ÷3] + [(Q8) ÷3] + [(Q37) ÷ 3] + [(Q29) ÷ 2]}

= ☐ ETB **KPI 33**

KPI 34: Raised revenue as a proportion of total operating revenue

Why is this important?	Hospital income is from two sources: government budget allocation and raised revenue. Through Healthcare Finance Reform (HCFR) hospitals now have the autonomy to generate income from user fees, private wing and other sources. This is known as raised revenue or non government revenue. Hospitals are expected to generate income that should then be re-invested in the hospital to improve the quality of services provided. By monitoring the amount of raised revenue, and the ratio between raised revenue and total operating revenue the hospital can assess the adequacy of HCFR activities and plan future service improvements.
Definition	Raised revenue as a proportion of total operating revenue (i.e. raised revenue + government operating budget allocation) for the reporting period
Unit of measurement	%
Numerator	Raised revenue during reporting period (Q51) <u>Raised revenue</u> includes all activities that generate income for the hospital with the exception of government budget allocation. For example: user fees, gross income from private wing, sales of food or services, hall rent, donor, etc.
Denominator	Total operating revenue for reporting period, i.e. Government operating budget allocation* for reporting period (Q52) + raised revenue (Q51) *Government operating budget allocation means budget allocated for the general running of a hospital (including staff salaries, consumables and supplies etc). Capital budget allocation should be EXCLUDED. NB: The Government operating budget for the reporting period can be calculated from the annual budget. For example if the reporting period is quarterly then the government budget allocation for the reporting period is the annual budget divided by 4.
Formula	Raised revenue during reporting period (Q51) ÷ [Government operating budget allocation for reporting period (Q52) + Raised revenue during the reporting period (Q51)] x 100
Data sources	Hospital financial statement
Frequency of reporting	Quarterly

<u>KPI 34 Data Entry Form: Raised revenue as a proportion of total operating revenue</u>

Formula: Raised revenue during reporting period (Q51) ÷ [Government operating budget allocation* for reporting period (Q52) + Raised Revenue (Q51) x 100

Data Entry: Q51 = Raised revenue during reporting period = _____

Q52 = Government operating budget allocation for reporting period = _____

Calculation: $\frac{Q51}{Q51+Q52}$ x 100 = _____ x 100 = ☐ % **KPI 34**

KPI 35: Revenue utilization

Why is this important?	Each year, hospitals are expected to prepare an annual plan and identify the budget required to meet that plan. Hospitals should fully utilize their budget by the end of the year. If a hospital spends more than its budget then it will run into debt and will be unsustainable in the long term. If a hospital spends less than its budget this could indicate either improved efficiency OR a failure to fulfill the annual plan. In any case where a hospital over or under-spends its budget further investigation is required to assess the reasons why and take action to correct this if necessary.
Definition	Proportion of budget for the reporting period (both raised revenue and government allocation) that is utilized.
Unit of measurement	%
Numerator	Total hospital operating expenses during reporting period (Q50) + Total capital expenses during reporting period (Q53)
Denominator	Government operating budget allocation for reporting period (Q52) + Government capital budget allocation for the reporting period (Q54) + Raised revenue budget allocation for reporting period (Q55)
Formula	[Total hospital operating expenses during reporting period (Q50) + Total capital expenses during reporting period (Q53)] ÷ [Government operating budget allocation for reporting period (Q52) + Government capital budget allocation for the reporting period (Q54) + Raised revenue budget allocation for reporting period (Q55)] x 100
Data sources	Hospital financial statement
Frequency of reporting	Quarterly

KPI 35 Data Entry Form: Revenue utilization

Formula: [Total hospital operating expenses during reporting period (Q50) + Total capital expenses during reporting period (Q53)] ÷ [Government operating budget allocation for reporting period (Q52) + Government capital budget allocation for the reporting period (Q54) + Raised revenue budget allocation for reporting period (Q55)]

Data entry:

Q50 = Total hospital operating expenses during reporting period = _____

Q53 = Total capital expenses during reporting period = _____

Q52 = Government operating budget allocation for reporting period = _____

Q54 = Government capital budget allocation for the reporting period = _____

Q55 = Raised revenue budget allocation for reporting period = _____

Calculation: $\frac{Q50 + Q53}{Q52 + Q54 + Q55}$ x 100 = _____ x 100 = ☐ % **KPI 35**

KPI 36: Patient satisfaction

Why is this important?	Patient satisfaction with the health care they receive at the hospital is a measure of the quality of care provided. By monitoring patient satisfaction hospitals can identify areas for improvement and ensure that hospital care meets the expectations of the patients served. The Out-Patient Assessment of Healthcare Survey (O-PAHC) and In-Patient Assessment of Healthcare Survey (I-PAHC) have been developed for use in Ethiopian health facilities. These survey tools measure the patient experience related to service availability, cleanliness, communication, respect, medication (prescription, availability and patient information) and cost.
Definition	Average rating of hospital on a score of 0-10 from O-PAHC & I-PAHC surveys
Unit of measurement	Absolute number, on a scale of 0-10
Numerator	Sum total of O-PAHC rating scores (Q56) + Sum total of I-PAHC rating scores (Q58)
Denominator	Number of O-PAHC surveys completed (Q57) + Number of I-PAHC surveys completed (Q59)
Formula	[sum total of O-PAHC rating scores (Q56) + sum total of I-PAHC rating scores (Q58)] ÷ [Number of O-PAHC surveys completed (Q57) + Number of I-PAHC surveys completed (Q59)]
Data sources	Survey – protocol for the patient satisfaction survey is presented in Appendix 12. A minimum of 50 patient outpatients and 50 inpatients should be surveyed. NB: The number of O-PAHC and I-PAHC surveys completed should be equal in order to avoid bias in the calculation Data entry and analysis can be undertaken using the electronic Access database and Excel pre-programmed analytical tool through which summary tables, charts and the average satisfaction rating can be calculated.
Frequency of reporting	Quarterly

Hospital KPI 36 Date Entry: Patient satisfaction

Formula: [∑O-PAHC rating score (Q56) + ∑I-PAHC rating score (Q58)] ÷ [Number of O-PAHC surveys completed (Q57) + Number of I-PAHC surveys completed (Q59)]

Data Entry: Q56 = ∑O-PAHC rating score = _____

Q58 = ∑I-PAHC rating score = _____

Q57 = Number of O-PAHC surveys completed = _____

Q59 = Number of I-PAHC surveys completed = _____

Calculation: $\frac{Q56 + Q58}{Q57 + Q59}$ = _____ = ☐ (on a scale of 0 – 10) **KPI 36**

Appendix 6 Assessment Tool for Operational Standards of the Ethiopian Hospital Reform Implementation Guidelines (EHRIG)

CHAPTER 1. HOSPTIAL LEADERSHIP AND GOVERNANCE				
Std #	**Standard**	**Method of evaluation**	**Unmet = 0 Met = 1**	**Comments**
1.	The Hospital Governing Board is developed using clear and transparent systems and processes and includes a representative sample of community members.	• Interview CEO to identify process of Board selection and appointment • Obtain list of Board members and confirm that there is community representation		
2.	An assigned Board Chairperson leads and manages Board activities.	• Identify Board Chairperson • Confirm that he/she leads the Board by setting agendas, calling Board meetings, creating goals for the Board		
3.	The Board selects the Chief Executive Officer (CEO), who leads on all Hospital operations and functions.	• Interview CEO. Confirm that he/she was selected by Board • Review Job Description or duties of CEO		
4.	The Board approves annual and strategic plans for the Hospital to achieve its goal of improving its community's health and welfare.	• View strategic and annual plans • Confirm that both were approved by Board (by reviewing Board minutes, or confirming signature of CEO or Board Chair on plans)		
5.	The Board has open communication via effective and regular meetings and written minutes of meetings, which are reviewed and approved by vote of the Board members.	• View minutes of previous 3 Board meetings • Confirm that approval of previous meeting minutes is documented in minutes of subsequent meeting • Interview CEO – check frequency and regularity of Board meetings		
6.	The CEO is evaluated annually, consistent with FMOH or Regional Legislation to ensure he/she is meeting operational and strategic plans as established by the Board and the CEO collectively.	• View most recent evaluation of CEO • Confirm that evaluation conducted within past year		
		TOTAL		

CHAPTER 2. PATIENT FLOW				
Std #	**Standard**	**Method of evaluation**	**Unmet = 0 Met = 1**	**Comments**
1.	Procedures are established to ensure efficient patient flow; such procedures are specific to emergency, outpatient, and inpatient settings and seek to reduce patient crowding.	• Obtain a copy of the following protocols: o Triage o Admission o Discharge o Referral o Hospital access/security o Appointment systems		
2.	The Hospital has Emergency triage, staffed with appropriately trained personnel and equipped with necessary equipment and supplies	• Confirm that the hospital has an emergency triage by visiting the site. • View emergency triage protocol • Interview Emergency triage officer to assess staff training and equipment/supply availability in triage area •		
3.	The Hospital has a Central triage, staffed with appropriately trained equipped with necessary equipment and supplies	• Confirm that hospital has a Central triage by visiting the site. • View Central Triage protocol • Interview Central triage officer to determine if staff have received training in triage and confirm that necessary equipment/supplies are available in the triage area		
4.	All patients (except labouring mothers, patients with an appointment for an outpatient clinic or admission) undergo triage.	• Review triage protocol • Interview Triage Officer (s) to determine the types of patients who undergo triage		
5.	Outpatient appointment systems are in place for all disciplines provided by the hospital.	• Confirm that an outpatient appointment system exists by reviewing patient appointment book.		
6.	Appointment systems are in place for elective inpatient admissions in all disciplines that are provided by the hospital.	• Confirm that an elective inpatient appointment system exists by reviewing patient appointment book.		
7.	The hospital has a Liaison and Referral service that: a) Manages bed occupancy b) Facilitates emergency and non-emergency (elective) admissions c) Receives referrals from, and makes referrals to, other facilities in the referral network	• Identify Liaison and Referral officer in the hospital • Interview the Liaison and Referral officer and confirm that he/she: o tracks the bed occupancy rate in the hospital o facilitates admissions o manages referrals o		

8.	The Hospital has written protocols for the admission and discharge of patients that are known, and adhered to, by all relevant staff.	• Identify written protocols for patient admission and discharge • Interview 3 random members of inpatient case team and confirm that they know the criteria for admission and discharge		
9.	The Hospital has a Referrals Service Directory, listing facilities which the Hospital may refer patients to or receive patients from, categorized by the type of clinical services which they provide.	• Obtain a copy of the referrals directory and verify that it includes a list of facilities which the hospital may refer to or receive patients from as well as the clinical services provided.		
10.	Criteria for the referral of patients from the Hospital to other health facilities are established, including standardized referral and feedback forms and necessary clinical documents to accompany referred patients, in accordance with the national referral implementation guidelines.	• Identify written protocol for the referral process and documentation including: o Criteria for referrals o Standardized forms		
11.	The hospital has a standardized method for managing referrals.	• Obtain a copy of the hospital's referral protocol. • Obtain documentary evidence of tracking system (for example referral log book or database).		
12.	Hospital staff members are familiar with the referral systems including relevant referral protocol and forms.	• Interview 3 random staff members from inpatient, outpatient and emergency case team and ask them to describe the hospital's referral protocol. • All interviewed staff should be familiar with and able to fully explain the referral system as per hospital protocol.		
13.	The Hospital promotes and publicizes the referral system throughout the community in order to ensure all constituents are aware of the applicable service pathway.	• Interview CEO or Liaison and Referral Officer to identify the methods by which the hospital promotes and publicizes the referral system throughout the community		
		TOTAL		

CHAPTER 3. MEDICAL RECORDS MANAGEMENT				
Std #	**Standard**	**Method of evaluation**	**Unmet = 0 Met = 1**	**Comments**
1.	The Hospital utilizes a Master Patient Index with a single, unique Medical Record Number for each patient.	• Identify the Master Patient Index • Verify that unique medical record numbers are given to all patients.		
2.	The Hospital utilizes a single, unified registration system for all patients, including in-patients, out-patients, emergency patients, and specialty clinics.	• Interview Head of Medical Records Department (or equivalent) and confirm that only one registration system exists for ALL patients, including inpatients, outpatients, emergency patients, and specialty clinic patients.		
3.	The Hospital utilizes a paper-based or computer-based system to track where the medical record is located at all times.	• View MR tracking system.		
4.	The Hospital utilizes a uniform set of forms that comprise a complete medical record for the duration of a patient's care.	• Verify that medical record guideline outlines the set of forms that must be included in each medical record. • Randomly sample 10 inpatient medical records of patients admitted in the past year, and confirm that each, as a minimum, contains: physician admission assessment, progress notes, nursing care plan, discharge summary.		
5.	The Hospital has medical records management guidelines for proper handling and confidentiality of medical records.	• Obtain copy of written guidelines for handling and confidentiality of medical records.		
6.	The Hospital has orientation and training program for all medical records personnel to ensure awareness of and competency in medical record management procedures.	• Review outline of or documents used in new hire orientation program. • Obtain documentary evidence that all MR personnel have completed the orientation and training program		
		TOTAL		

CHAPTER 4. PHARMACY SERVICES				
Std #	**Standard**	**Method of evaluation**	**Unmet = 0 Met = 1**	**Comments**
1.	The Hospital has a Drug and Therapeutics Committee which implements measures to promote the rational and cost-effective use of medicines.	• Review DTC TOR and confirm that responsibilities include as a minimum: development of the Hospital Formulary; development of standard treatment guidelines; development of policies and guidelines for managing formulary and non-formulary items, establishing mechanisms to identify and address drug use problems, and establishing and overseeing the Drug Information Service.		
2.	The Hospital has a Medicines Formulary listing all pharmaceuticals that can be used in the facility. The Formulary is reviewed and updated annually.	• Obtain copy of Hospital Formulary. Check date of creation or date of most recent update/review and confirm this was undertaken within past year.		
3.	The hospital has outpatient, inpatient, emergency pharmacies and a central medical store each directed by a registered pharmacist.	• Interview CEO. Confirm that the hospital has outpatient, inpatient and emergency room pharmacies and a pharmacy store. Obtain the names and qualifications of the individual(s) in charge of each. Confirm that the individuals in charge are registered BSC Pharmacists.		
4.	The Hospital ensures that all types of drug transactions and patient-medication related information are properly recorded and documented.	• Select random sample of 10 inpatient records and check that there is a Medication Administration Record and that all drugs administered have been signed by the administering health professional. • Interview CEO or senior pharmacist in each case team and confirm that medications are dispensed only with a signed prescription. Visit each dispensing unit and confirm that a Prescription Registration Book is maintained in each.		
5.	The Hospital has SOPs for all compounding procedures carried out.	• Obtain list of all compounding procedures carried out and view a copy of the SOP for each.		

6.	The Hospital provides access to drug information to both health care providers and patients in order to optimize drug use.	• Visit Drug Information Centre. • Interview pharmacist in charge to confirm that the service is available to staff and patients.		
7.	The Hospital has policies and procedures for identifying and managing drug-use problems, including: monitoring adverse drug reactions, prescription monitoring and drug utilization monitoring.	• Obtain copy of policies for monitoring adverse drug reactions, prescription monitoring and drug utilization monitoring.		
8.	The Hospital has a drug procurement policy approved by the DTC that describes methods of quantification, prioritization, drug selection, supplier selection and ordering of pharmaceutical supplies.	• Obtain a copy of the drug procurement policy. • Ensure that policy describes methods of quantification, prioritization, drug selection, supplier selection and ordering of pharmaceutical supplies.		
9.	The Hospital has a paper-based or computer-based inventory management system to reduce the frequency of stock-outs, wastage, over supply and drug expiry.	• View inventory management system and confirm that this contains mechanisms to monitor stock levels and prompt for ordering when supplies reach a predetermined level. • Interview Storeroom Manager (or equivalent) to confirm that all pharmaceutical products are included in the inventory.		
10.	The Hospital conducts a physical inventory of all pharmaceuticals in the store and each dispensing unit at a minimum once a year.	• View copy of physical inventory report. Confirm this was conducted within the past one year.		
11.	The Hospital ensures proper and safe disposal of pharmaceutical wastes and expired drugs.	• View protocol for disposal of pharmaceutical waste.		
12.	The Hospital has adequate personnel, equipment, premises and facilities required to store pharmaceutical supplies and carryout compounding, dispensing, and counseling services.	• Observe the inpatient, outpatient, emergency pharmacies and central store and interview pharmacists in charge to ensure that each has appropriate space to perform duties, store drugs and supplies.		
		TOTAL		

CHAPTER 5. LABORATORY SERVICES				
Std #	**Standard**	**Method of evaluation**	**Unmet = 0 Met = 1**	**Comments**
1.	A current list of laboratory tests provided by the facility and the price of each test is accessible to all clinical staff and patients.	• View list of tests and prices. • Visit various clinical service areas (e.g. OPD, ER) and confirm that copies of the tests and price of each are available.		
2.	Laboratory management ensures that advice on examinations and the interpretation of test results is available to meet the needs and requirements of customers.	• Interview Case Team Heads (inpatient, outpatient, emergency). Confirm that laboratory advice on examinations and interpretation of tests is provided to case teams as required.		
3.	Hospital management ensures that the Hospital laboratory has the necessary space, working environment, reagents, consumables, analyzers and associated equipment needed to conduct the required repertoire of tests.	• Interview Case Team Heads (inpatient, outpatient, emergency). Confirm that the space provided within each laboratory area is sufficient for needs.		
4.	Laboratory staff members monitor stocks of testing reagents and other consumables so that supplies are ordered early and in sufficient quantity to prevent stock-outs or oversupply.	• Interview laboratory technician in each case team (inpatient, outpatient, emergency). Verify that a process to prevent stock out or oversupply is implemented in each case team laboratory. •		
5.	The Hospital Laboratory has available and follows standard operating procedures for: a. Specimen management b. All testing procedures c. Testing algorithms d. Safety procedures and waste management e. The maintenance and monitoring of each piece of equipment f. Quality assurance procedures	• Obtain list of laboratory tests. • View all SOPs. Confirm that an SOP exists for all tests conducted, for specimen management, testing algorithms, safety procedures and waste management and quality assurance processes. • Visit each laboratory (inpatient, outpatient, ER). Select two items of equipment. Confirm that an SOP is located beside each piece of equipment.		
6.	The Hospital has policies and procedures in place for sample collection, transport and disposal.	• View policy.		

7.	The central laboratory has functional overview of all hospital laboratories (e.g. emergency room laboratory, in-patient laboratory etc).	• View organization chart. • Interview senior staff member of Central Laboratory and confirm that Central Lab has functional overview of all laboratory services.		
8.	The laboratory work environment is organized and clean at all times, with safety procedures for handling of specimens and waste material to ensure patient and staff protection from unnecessary risks at all times.	• Inspect inpatient, outpatient and emergency laboratory areas for cleanliness and tidiness.		
9.	The laboratory has a health and safety manual with procedures that include: action in the event of a fire, action in the event of a major spillage of dangerous chemicals or clinical material; action in the event of an inoculation accident; reporting and monitoring of accidents and incidents; disinfection processes; decontamination of equipment; chemical handling; storage and disposal of waste.	• View health and safety manual and check that this includes: action in the event of a fire, action in the event of a major spillage of dangerous chemicals or clinical material; action in the event of an inoculation accident; reporting and monitoring of accidents and incidents; disinfection processes; decontamination of equipment; chemical handling; storage and disposal of waste.		
10.	Laboratory management establishes a policy for the management of data and information that includes: • security • access (including level of access) • confidentiality and data protection • backup system • storage, archive and retrieval • data destruction	• View data management policy. Confirm that this addresses: security, access, confidentiality and data protection, backup system, storage, archive and retrieval and data destruction.		
11.	The laboratory has and implements a quality assurance policy that covers all aspects of laboratory functions.	• View quality assurance policy. Confirm this addresses pre analytical, analytical and post analytical quality assurance. • Request external QA reports. Confirm laboratory takes part in external QA activities. • Request internal QA reports to confirm that laboratory conducts internal QA activities.		
			TOTAL	

CHAPTER 6. NURSING CARE STANDARDS				
Std #	**Standard**	**Method of evaluation**	**Unmet = 0 Met = 1**	**Comments**
1.	The Hospital has established management structures and job descriptions that detail the roles and responsibilities of each nursing professional, including reporting relationships.	• Identify organizational structures within nursing. • Identify job descriptions for nurses and verify that they include responsibilities and reporting relationships.		
2.	The hospital has a nursing workforce plan that addresses nurse staffing requirements and sets minimum nurse to patient ratios in each service area.	• Obtain copy of nursing staffing plan and confirm this establishes nurse to patient ratios for each service area (e.g. inpatient wards, ER, surgical suite, labour and delivery). Confirm the plan identifies mechanisms to reassign nursing staff or call in extra staff to ensure that minimum nurse to patient ratios are maintained at all times		
3.	The Hospital has written policies describing the responsibilities of nurses for the nursing process including the admission assessment, planning, implementation and evaluation of nursing care.	• Identify written policies that describe the nursing process. • Verify that the following are addressed: o Nursing admission assessment o Nursing care planning, implementation and evaluation		
4.	All admitted patients have a nursing care plan that describes holistic nursing interventions to address their needs. The plan is regularly reviewed and updated as required.	• Select a random sample of 10 inpatient records from different wards. Confirm that each contains a nursing care plan.		
5.	The Hospital has established guidelines for verbal and written communication about patient care that involves nurses, including verbal orders.	• Identify written guidelines for nurses' verbal and written communication about patient care.		
6.	The Hospital has standardized procedures for the safe and proper administration of medications by nurses or designated clinical staff.	• Identify written procedures for process of medication of administration. • Verify that procedure addresses safety, proper administration, and administration authority. • Review 10 Medication Administration Records from different wards and confirm that each is completed correctly with the signature of the transcriber and of the individual who administered each medicine dose.		
		TOTAL		

CHAPTER 7. INFECTION PREVENTION				
Std #	**Standard**	**Method of evaluation**	**Unmet = 0 Met = 1**	**Comments**
1.	Hospital Management to supports improvement efforts in infection prevention by ensuring that operational and technical capacity, financial and human resources required to adhere to infection prevention guidelines are available.	• Interview IP lead or chair of IP committee. Confirm that hospital management supports IP activities by assigning adequate budget and personnel for the IP program.		
2.	A designated group and/or individual(s) are in place to effectively implement and monitor infection prevention activities.	• Identify individual(s) responsible for IP activities and review the job description or terms of reference/responsibilities of the individual or group.		
3.	The Hospital has an operational plan for the implementation of infection prevention activities. The plan follows national guidelines and includes guidance on infection prevention practice and procedures and materials.	• Obtain operational plan for infection prevention guidelines. • Verify that the plan was developed based on national guidelines.		
4.	Standard practices that prevent, control and reduce risk of hospital acquired infection are in place.	• Review policy/protocol for IP and confirm that this describes Standard Precautions. • Interview Case Team Heads and confirm that Standard Precautions are implemented by staff.		
5.	The Hospital has an adequate plan to address transmission based precautions for staff, patients, caregivers and visitors.	• Review policy/protocol for IP and confirm that this describes transmission based precautions • Interview Case Team Heads and confirm that Standard Precautions are implemented by staff.		
6.	The Hospital ensures that equipment, supplies and facilities/infrastructure necessary for infection prevention are available.	• Interview Head of each Case Team and confirm that: sufficient PEP materials are available within case team; that water is available in all patient contact areas. Interview the Heads of Housekeeping and Laundry (or equivalent) and confirm that sufficient equipment, cleaning materials and linens are available. Confirm that the hospital has a functioning incinerator.		

7.	All hospital staff are trained using standard infection prevention training materials.	• View IP training materials. • Obtain Documentary evidence that all staff members have been trained in IP.		
8.	The Hospital provides health education to patients, caregivers and visitors, as appropriate on infection prevention practices.	• Interview Case Team Leaders and confirm that each Case Team provides health education to patients, caregivers and visitors, as appropriate on infection prevention and control practices.		
		TOTAL		

CHAPTER 8. FACILITIES MANAGEMENT				
Std #	**Standard**	**Method of evaluation**	**Unmet = 0 Met = 1**	**Comments**
1.	The hospital complies with relevant laws, regulations, and facility inspection requirements.	• Interview CEO to identify any relevant laws, regulations or inspection requirements and confirm that the hospital complies with these.		
2.	Designated hospital staff members are assigned for facility maintenance and safety functions.	• View organization chart. • Confirm on organization chart (or by interview with HR Dept Head) that the hospital has assigned individuals for the following, as a minimum: masonry, plumbing, electrical installation, landscape and garden, sewerage.		
3.	The hospital grounds are regularly inspected, maintained, and, when appropriate, improved to ensure cleanliness of grounds and safety of patients, visitors and staff.	• Interview Facilities Manager (or equivalent). Check process/schedule for grounds inspection and maintenance. • View patient and staff areas (garden, waiting areas etc). Confirm that these are tidy, clean and free from hazards (e.g. discarded equipment or other materials).		
4.	Potable water is available 24 hours a day, seven days a week through regular or alternate sources to meet essential patient care.	• Interview CEO or Head of Facilities. Confirm that an alternative source of water exists (e.g. tank, well). Obtain documentary evidence that the alternate source/ and or mains source are tested for safety at a minimum every six months.		
5.	Electrical services are available 24 hours a day, seven days a week through regular or alternate sources to meet essential patient care.	• Interview CEO or Head of Facilities. Confirm that an alternative power source is available. Confirm that this is sufficient to provide power to essential patient areas including wards, emergency room, labour and delivery and laboratory.		
6.	The hospital has a maintenance centre with technical personnel, sufficient space and adequate ventilation to conduct maintenance and repair work on the facility operating systems (e.g., electrical, water, sanitation, sewerage and ventilation) and equipment. This includes proper hand washing facilities, proper disinfection and cleaning of equipment facilities, a storage area, and a library.	• View maintenance centre. Confirm that this has adequate space and is not crowded. Confirm that the medical equipment service is separated from the general maintenance area. Confirm that there are hand-washing facilities, facilities for cleaning and disinfection, a storage area and a library .		

7.	The maintenance centre has appropriate tools and testing equipment to perform repairs, as well as procedures to ensure the routine calibration of the testing equipment is performed as required.	• Interview Head of Maintenance Dept (or equivalent). Confirm that sufficient tools are available for all maintenance functions and that routine calibration of testing equipment is performed as required.		
8.	The hospital conducts regular preventive and corrective maintenance for all facilities and operating systems (e.g., electrical, water, sanitation, sewerage and ventilation) to ensure patient and staff safety and comfort.	• Interview Head of Maintenance Dept (or equivalent). Confirm that regular preventive and corrective maintenance is conducted. • View maintenance logs. Confirm that maintenance logs exist for, as a minimum: electrical systems, water and sewerage.		
9.	There is a notification and work order system for facility and operating system (e.g., electrical, water, sanitation, sewerage and ventilation) repairs.	• Interview Head of Maintenance Dept (or equivalent). Confirm that a notification and work order system exists. • View at least 5 recent work order requests and reports.		
10.	The hospital has a transport policy for the use of and access to hospital vehicles.	• View transport policy. • View logs of two hospital vehicles and confirm that vehicle use complies with transport policy		
11.	The hospital has a policy addressing access to the hospital premises.	• View policy. • Visit two wards and confirm that all caregivers are wearing appropriate ID badges. • Confirm that all staff interviewed in the course of this assessment are wearing ID badges.		
12.	The hospital has a fire safety plan that addresses both the prevention and response to fires. A 'Fire and Evacuation Drill' is conducted at least annually.	• View fire safety plan. • Obtain documented evidence of most recent Fire Drill and confirm that this was conducted within the past one year.		
13.	The hospital has a plan for responding to likely community or hospital emergencies, epidemics and natural or other disasters.	• View response plan.		
14.	Staff members are trained and knowledgeable about their roles in the plans for fire safety, security, hazardous materials, and emergencies.	• Interview 10 randomly selected staff members from different Case Teams. Confirm that each one knows what action to take and their individual responsibility in the event of a fire, security threat or other emergency.		
		TOTAL		

CHAPTER 9. MEDICAL EQUIPMENT MANAGEMENT				
Std #	**Standard**	**Method of evaluation**	**Unmet = 0 Met = 1**	**Comments**
1.	The Hospital has a Medical Equipment Committee composed of doctors, nurses, technicians, pharmacists, and administrative personnel that oversees the medical equipment management program.	• Review MEC TOR and ensure the following responsibilities are included: develop and monitor implementation of medical equipment strategy; oversee establishment of medical equipment inventory; develop a model medical equipment list; develop and implement medical equipment policies; determine annual budget for medical equipment strategy; review incident reports related to medical equipment. • Verify that MEC membership consists of doctors, nurses, technicians, pharmacists and administrative personnel.		
2.	The Hospital has a paper-based or computer-based inventory management system that tracks all equipment included in the equipment management program.	• View inventory management system and confirm updated within past year. • Confirm (by interview with Head of Equipment Maintenance (or equivalent)) that all medical equipment in the equipment management program is listed in the inventory.		
3.	The Hospital has a paper-based or computer-based spare parts inventory management system. The system is used for ensuring that there is an adequate supply of spare parts on hand.	• View inventory management system. • Confirm (by interview with Head of Equipment Maintenance (or equivalent)) that the inventory system is used to manage the stock of spare parts.		
4.	An Equipment History File is maintained for all medical equipment containing all key documents for the equipment.	• Take a random sample of 10 Equipment History Files and check that each includes: SOP for equipment use, inventory data collection form and risk assessment form.		
5.	The Hospital has policies and procedures in place for acquisition of new medical equipment, commissioning, decommissioning and disposal of equipment, the receipt of donations, and outsourcing technical services.	• Obtain copy of policies and procedures for medical equipment management and verify that they address acquisition, commissioning, decommissioning, disposal, donations, and outsourcing technical services.		

6.	All new equipment undergoes acceptance testing prior to its initial use to ensure the equipment is in good operating condition. Equipment is installed and commissioned in accordance with the manufacturer's specifications.	• Request list of all equipment purchased in the past year. Randomly select 10 items (or all items if less than 10 were purchased) and review Equipment Log File. Confirm that this contains a copy of the Acceptance Test Log Form.		
7.	All equipment users are appropriately trained on the operation and maintenance of medical equipment with standard operating procedures readily available to the user.	• Visit a minimum of 3 different departments/case teams (for example ER, laboratory, pharmacy, delivery, patient wards etc). Select two items of medical equipment in each department. View SOP for each item. Interview staff on duty and confirm that each one has received training on the use and maintenance (where relevant) of the item.		
8.	There is a schedule for inspection, testing and preventive maintenance for each piece of equipment as guided by the manufacturer's recommendations and that schedule is appropriately implemented.	• See 6.4 above. For the 10 randomly selected Equipment History Files confirm that the schedule for Inspection, testing, and maintenance is present in the equipment history file and confirm that inspection, testing and maintenance has been conducted as described in the schedule.		
9.	The Hospital has a notification and work order system for the repair of medical equipment.	• Identify written protocol for medical equipment work orders. • Review at least 5 copies of notification and work order and reports.		
		TOTAL		

CHAPTER 10. FINANCIAL AND ASSET MANAGEMENT				
Std #	**Standard**	**Method of evaluation**	**Unmet = 0 Met = 1**	**Comments**
1.	Bilingual fee posters are displayed beside each departmental reception desk, in all waiting areas and at all cash points. Each poster shows the fees and exemptions and advises patients to obtain and keep receipts for all payments.	• Visit different departments (OPD, ER, inpatient wards and cash collection points) and confirm that bilingual fee posters are clearly displayed. • Confirm that the poster shows fees, exemptions and advises patients to keep receipts for all payments.		
2.	The hospital Accountant prepares a monthly report for the Hospital Management with details of credit granted, credit repaid and balance outstanding.	• View last 3 Financial Statements. • Confirm that these are monthly reports. • Confirm that each provides details of credit granted, credit repaid and balance outstanding.		
3.	The hospital has a procurement policy, approved by the Senior Management Team that details: • The process of submitting procurement requests • The responsible body/person for approval of procurement requests • The means of procuring • Responsible person(s) for purchasing activities	• View policy. Confirm that it details the process of submitting procurement requests, the responsible body/person for approval of procurement requests, the means of procuring and the responsible person(s) for purchasing activities.		
4.	Monthly reconciliation is undertaken for every hospital bank account and any donor grants.	• Obtain list of all bank accounts and donor grants. • View reconciliation documents for last 3 months. Confirm that reconciliation has been done for all accounts and grants. Confirm that each, reconciliation is signed by Accountant.		
5.	Monthly and quarterly reports on revenue, expenditures, receivables, payables, trial balance, the status of budget utilization and others including the hospital's operating margin are prepared by the Finance Department and submitted to the hospital management and Governing Board.	• View most recent 3 reports from Finance Dept to Senior Management and Governing Board. • Confirm that these are monthly reports. • Confirm that reports contains details of revenue, expenditures, receivables, payables, trial balance, status of budget utilization and operating margin.		
6.	Internal and external audit of hospital accounts is conducted as a minimum annually and audit reports are reviewed by the Governing Board.	• View most recent internal and external audit reports. • Confirm this each has been conducted within past year. • Confirm that each was reviewed by the Governing Board (by reviewing Board minutes)		

7.	The hospital has a Memorandum of Understanding with Waiver Certificate Granting Authorities providing details on the type of service and mode of payment.	• Obtain list of all authorities with which hospital has Fee Waiving agreement. • Confirm there is an MOU with each authority. • Confirm the MOU details the type of services to be provided through 'Fee Waivers' and the mode of payment.		
8.	The hospital provides exempted services in accordance with the relevant Regional Legislation and displays a list of exempted services at appropriate locations through the hospital for the information of patients, staff and the public.	• Obtain relevant Regional Health Care Finance Reform Directive. • Obtain list from CEO of all exempted services that are provided by the hospital. • Confirm that the list presented by the CEO matches the exempted service list in the Regional Directive. • Visit various patient services areas (OPD, ER, MCH, wards) and confirm that a list of exempted services is posted at each site.		
9.	In hospitals where a private wing is established, the operations of the private wing are governed by policies and procedures that are approved by the Governing Board.	• Verify if the hospital has a private wing. • If yes, view policies and procedures. • Confirm (by reviewing Board minutes or by signature of Board Chairman on relevant documents) that the policies and procedures are approved by the Governing Board.		
10.	In cases where non-clinical services are outsourced, procedures are in place to monitor the contract and services provided.	• Verify if any services are outsourced. • If yes, obtain list of outsourced services. • View contract for each outsourced service. • Confirm that there is a manager assigned by the contacting firm for each outsourced service. • Confirm that a hospital manager is assigned to monitor each outsourced contract and that clear methods of monitoring are documented and adhered to (e.g. evidence of quality of service provided, adherence to agreed deliverables etc).		
11.	There is a current hospital accounting manual which establishes all policies and procedures relating to financial management in the hospital.	• View accounting manual and confirm it describes policies and procedures for financial management.		
		TOTAL		

CHAPTER 11. HUMAN RESOURCE MANAGEMENT				
Std #	**Standard**	**Method of evaluation**	**Unmet = 0 Met = 1**	**Comments**
1.	The Hospital has a Human Resource Case Team staffed by individuals with management skills and experience dealing with individual personnel matters.	• Identify designated staff members of the HR case team • Check experience of case team members and confirm that personnel staff have requisite skills (training and personnel management experience).		
2.	The Human Resources Case Team maintains a personnel file for each and every hospital employee.	• Interview Head of HR Case Team. Confirm that the hospital has personnel files for all grades of employees • Take a random sample of 10 personnel files from different case teams/departments and ensure that they contain at a minimum: personal contact information, appointment letter, employee job description, medical certificate and performance evaluation.		
3.	The Human Resource Head (or equivalent) is on the Hospital's Senior Management Team.	• Obtain list of SMT members from CEO and confirm that Head of HR Case Team is a member.		
4.	The Hospital has a human resource development plan that addresses staff numbers, skill mix, and staff training and development	• Review a copy of the human resource development plan. • Ensure that it addresses staff numbers, skill mix and staff training and development.		
5.	Each employee's responsibilities are defined a current job description which has been signed by the employee and filed in the personnel file.	• See standard 11.2 above. Confirm that the 10 randomly selected files contain a signed employee job description.		
6.	The Hospital has policies and procedures for recruiting and hiring staff	• Identify written policies for recruiting and hiring staff.		
7.	The Human Resource Case Team provides services to employees to ensure satisfactory productivity, motivation, morale as evidenced by effective policies and procedures for personnel retention, compensation and benefits, training and development and employee recognition	• Identify documented policies that support employee motivation and retention including as a minimum: policy for compensation and benefits, training and development and employee recognition.		

8.	HR policies are documented in an Employee Manual that is distributed to all staff and updated, at a minimum, every 3 years. The Employee Manual contains policies and procedures that define employee/employer relations.	• Obtain a copy of the hospital's Employee Manual • Ensure that it contains Hospital personnel policies and procedures such as working hours, leave, benefits. • Ensure that it has been updated and is current (within 3yr renewal window). • Verify that it has been disseminated among staff by interviewing a random sample of 10 staff and asking them if they have a copy of the employee manual.		
9.	The Hospital has an Employee Code of Conduct that is known and adhered to by staff.	• Obtain a copy of employee code of conduct. • See 11.8 above: interview 10 random staff members from different Case Teams and ask if they are familiar with the Code of Conduct and ask each to describe (in general terms) the areas covered in the Code of Conduct. Confirm that each has a general understanding of the principles and main provisions of the Code of Conduct.		
10.	The Hospital has a performance management process in which all employees are formally evaluated at least annually and action plans for improved performance are documented.	• See Standard 11.2 above. Confirm that the 10 randomly sampled files contain a performance evaluation conducted within the past year (with the exception of new employees who are currently in their probation period). Where relevant, confirm that there is a documented action plan for any staff member with poor performance.		
11.	The hospital regularly conducts a staff survey to assess staff perspectives on the workplace. Summary results are presented to the Senior Management Team and Governing Board.	• View results of last staff survey. • Confirm that survey conducted within last 6 months.		
12.	ID badges and appropriate uniforms are worn by employees at all times.	• Observation. Confirm that each staff member interviewed or observed in the course of the assessment is wearing an ID badge and uniform		
13.	The Hospital has occupational health and safety policies and procedures to identify and address health and safety risks to staff.	• Obtain a copy of occupational health and safety policies and procedures.		
		TOTAL		

CHAPTER 12. QUALITY MANAGEMENT				
Std #	**Standard**	**Method of evaluation**	**Unmet = 0 Met = 1**	**Comments**
1.	The hospital has a Quality Committee that is responsible to devise and implement a Strategy for Quality Management.	• View TOR and list of members of Quality Committee. • View Quality Management strategy. Ensure that strategy includes: o Safety and risk management o Clinical effectiveness o Professional competence o Patient focused care o Patient and public involvement o Benchmarking • Confirm (by interview with CEO or documentary evidence) that reports on implementation of QM strategy are received by Senior Management Team.		
2.	Procedures are established to assess and minimize risk arising from the provision and delivery of healthcare.	• View risk assessments of inpatient, outpatient and ER case teams. • Check date of risk assessment and confirm conducted within the previous 1 year.		
3.	Procedures are established for reporting and analyzing incidents, errors and near misses.	• Confirm that the hospital has an Incident Officer who has a job description that outlines his/her duties in relation to Incident Investigation and management. • View two recent Incident Reports and confirm that the reported incidents were investigated and any necessary follow up action documented by the Incident Officer. •		
4.	Procedures are established to monitor clinical outcome measures and to take action to address any problems identified. Such procedures encourage the participation of all clinical staff.	• Interview chair of QC and ask for list of clinical outcome measures that are monitored regularly. • Ask chair of QC to show the most recent results of at least 3 clinical outcome measures. • Determine (by interview with Chair of QC) that appropriate action was taken in response to the outcome measures.		

5.	The hospital adopts a statement of patient rights and responsibilities, which is posted in public places in the hospital.	• View statement of patient rights and responsibilities. • Visit patient service areas (as a minimum OPD, ER and inpatient wards) and confirm that statement is clearly displayed.		
6.	The hospital monitors patients' experiences with care through patient satisfaction surveys conducted on a biannual basis.	• View results of last patient satisfaction survey. • Confirm that survey conducted within last 6 months.		
7.	The hospital implements a strategy for the involvement of patients and the public in service design and delivery including procedures to be followed when engaging with patients and the public.	• View strategy. • Confirm (by interview with CEO or Chair of QC) that at least two of the following activities have been conducted within the past 6 months: o Suggestion boxes in patient service areas o Complaints procedures o Public meetings o Establishment of patient groups o Activities to engage marginalized groups		
8.	The hospital participates in benchmarking activities to learn from and share good practice with other hospitals.	• Confirm (by interview with CEO or other documented evidence) that hospital participates in benchmarking activities. For example regular attendance at regional hospital/RHB meetings; participation in hospital cluster activities etc.		
		TOTAL		

CHAPTER 13. MONITORING AND REPORTING				
Std #	**Standard**	**Method of evaluation**	**Unmet = 0 Met = 1**	**Comments**
1.	The hospital has an HMIS Monitoring Team (or equivalent) that reviews HMIS indicators and takes action to address any areas of concern.	1. Interview CEO. Confirm that HMIS Performance Monitoring Team (or equivalent) is in place. 2. View TOR of HMIS Monitoring Team to confirm that role includes review of indicators. 3. View minutes of last 3 HMIS performance monitoring team meetings to confirm that HMIS indicators are reviewed and action taken as a result.		
2.	The hospital conducts a self assessment of its own performance at a minimum every quarter, using HMIS indicators and any additional local indicators determined by hospital management.	View copy of last 3 self assessment meetings. Confirm that frequency was at least quarterly.		
3.	The hospital submits monthly, quarterly and annual HMIS reports to the relevant higher office within the agreed time limit.	View HMIS reports for last year. Confirm that monthly, quarterly and annual reports were submitted as per schedule.		
4.	The correspondence between data reported on HMIS forms and data recorded in registers and patient / client records, as measured by a Lot Quality Assurance Sample (LQAS) is ≥80%.	View LQAS result on last 3 HMIS reports. Confirm LQAS is > 80%.		
5.	In collaboration with the CEO, the Governing Board has established performance indicators for the hospital that are described in a Balanced Scorecard (BSC). BSC reports are presented by the CEO to the Governing Board as a minimum every quarter.	1. View list of BSC indicators. 2. View last 3 BSC reports submitted to Governing Board. Confirm that frequency of BSC reports to Governing Board was quarterly as a minimum.		
6.	Indicators included in the BSC are a combination of national/regional indicators and other local indicators as determined by the Governing Board.	View list of BSC indicators and confirm that some are national indicators (HMIS) while others are local indicators set by the Governing Board.		
7.	Hospital staff are oriented to the BSC and case teams/departments determine indicators and monitor their own performance using the BSC.	Identify BSC reports for 3 different case teams (for example Emergency Case Team, Inpatient Case Team, Outpatient Case Team, Finance and Procurement Case Team, Human Resource Case Team etc).		
		TOTAL		

EHRIG ASSESSMENT TOOL SUMMARY TABLE		
Chapter	**Number of Standards Met**	**% of Standards Met**
Leadership and Governance (6 standards)		
Patient Flow (13 standards)		
Medical Records management (6 standards)		
Pharmacy Services (12 standards)		
Laboratory (11 standards)		
Nursing Care Standards (6 standards)		
Infection Prevention and Control (8 standards)		
Facilities Management (14 standards)		
Medical Equipment Management (9 standards)		
Financial and Asset Management (11 standards)		
Human Resource Management (13 standards)		
Quality Management (8 standards)		
Monitoring and Reporting (7 standards)		
Total (124 standards)		

Name of Hospital: **Region:**

Date of assessment: **Name of lead assessor:** **Signature:**

Contact telephone: **Contact email:**

Appendix 7 Survey Protocol: Outpatient Waiting Time to Treatment

Purpose of survey:

The average OPD wait time is one of the Key Performance Indicators that should be reported by hospitals to their Governing Board and to the RHB has a measure of hospital performance.

Period of survey:

The survey should be conducted on Monday and Thursday of the first week of the last month of each quarter.

Role of KPI Owner:

The hospital should assign an 'owner' for the KPI 'Outpatient Waiting Time to Treatment". He/she is responsible to oversee the survey, to select and train surveyors, to issue 'Waiting Time Cards' to each surveyor, to receive completed 'Waiting Time Cards' from the surveyors at the end of the survey period, and to calculate the average wait time at the end of the survey period.

Additionally, at the start of each survey period the KPI Owner should inform all OPD staff that the survey is taking place and should instruct OPD Case Teams to complete the relevant section on the 'Waiting Time Card' for every patient seen and ensure that all Waiting Time Cards are returned to the surveyor at the end of the survey day.

Selection and role of surveyors:

The KPI Owner should assign individuals to act as surveyors. The number of surveyors required will depend on the patient load. However, there should be sufficient surveyors to ensure that the waiting time of each and every outpatient is measured during the study period. As an approximation, the number of surveyors required will be approximately the same as the number of individuals conducting patient registration.

Ideally, the surveyors should be individuals who DO NOT WORK regularly in the outpatient department in order to avoid bias. Surveyors could be volunteers from the community, students or hospital staff assigned from other departments. If necessary, the hospital should provide payment to surveyors according to the number of hours worked.

The surveyors should follow the methodology outlined below to conduct the survey and should submit all completed 'Waiting Time Cards' to the KPI Owner at the end of the survey period.

Role of OPD Case Teams:

A member of each clinical case team should receive the Waiting Time Card from each and every patient seen during the survey period. He/she should record on the Card the time at which the clinical consultation begins, and the name of the case team. Instructions should be

given to each case team to provide all completed cards to the surveyor at the end of the survey day. Case teams should ensure that no Waiting Time Cards are lost or misplaced.

Methodology of Survey:

a) Assign surveyors to the areas where patients arrive at the outpatient department as follows:

- If outpatients undergo registration before triage → assign surveyors to patient registration area
- If outpatients undergo triage before registration → assign surveyors to triage area
- If the hospital has an appointment system and patients go immediately to the OPD waiting area (without passing through registration or triage) → assign surveyors to OPD waiting areas

b) Issue 'Waiting Time Card'

Each surveyor should have a batch of 'Waiting Time Cards' as below:

OPD Waiting Time Card	**Card Number: _____**
Patient name: _____ ___	(completed by surveyor)
Time of patient arrival: _____	(completed by surveyor)
Time clinical consultation begins: _____	(completed by clinical case team member)
Name of case team: _____	(completed by clinical case team

OPD Waiting Time Card	**Card Number: _____**
ታካሚው ስም: _____ ___	(ትሪያጅ ከፍሉ ይሞላል)
ታካሚው የደረሰበት ጊዜ: _____	(ትሪያጅ ክፍሉ ይሞላል)
የህክምና አገልግሎት የጀመረበት ጊዜ): _____	(የኬስ ቲም አባል ይሞላል)
የኬስ ቲመስም: _____	(የኬስ ቲም አባል ይሞላል)

Before any of the Waiting Time Cards are given out, Card Numbers should be written on every card to that they can be easily tracked by the surveyor and the clinical case teams. As soon as a patient arrives at OPD the surveyor should enter the patient's name and time of arrival on a Waiting Time Card and then hand the Card to the

patient. The surveyor should instruct the patient to give the card to a member of the clinical case team.

The Surveyor should keep track of the number of cards issued and the number of cards completed. To do this he/she should keep a tally of the number of Waiting Time Cards issued and follow up any that are missing at the end of the day.

c) Clinical Case Teams receive 'Waiting Time Card'

On arrival in the consultation room, the patient should hand over the Waiting Time Card to a member of the case team. If the patient does not automatically hand this over then a member of the team should request the Card from the patient.

The case team member should record on the Card the time at which the consultation begins. The case team should keep all Cards received from patients.

d) Surveyor collects completed 'Waiting Time Cards'.

At the end of the day (or close of clinic) the surveyor(s) should collect all Cards from each and every Case Team and should compare this with the list of Cards issued. If any cards are missing the surveyor(s) should follow up with the relevant Case Team and determine whether the patient was seen that day.

e) Every effort should be made to ensure that no Cards are missing or lost because this could lead to an inaccurate survey result.**Surveyor calculates waiting time for each patient**

After receiving the Waiting Time Cards from each clinical case team, the surveyor should calculate the wait time for that patient (in minutes) and should enter it onto the Card.

f) KPI Owner calculates average waiting time (KPI 4)

At the end of the survey period the KPI owner should collect all Waiting Time Cards from each surveyor.

The KPI Owner should tally the total wait times and divide by the total number of completed Cards in order to calculate the average wait time during the survey period. In cases where the patient was seen on the same day but the Waiting Time Cards were lost or incomplete, the Waiting Time Cards should be excluded from the survey count.

g) KPI Owner reports to KPI focal person

After calculating Outpatient Waiting Time the KPI owner should report all data elements and KPI result to the KPI focal person. The KPI focal person will then check the calculations and enter them into the KPI report form.

h) Optional, supplementary data analysis

If the average wait time is very long (especially if some patients are not seen on the same day) then the surveyor may also want to record the range (shortest and longest) of wait times.

Similarly, the waiting time for each clinical case team could be analyzed separately to see if there are any differences between clinical teams. This information could help to assess the efficiency of each case team and/or to determine the need for additional clinical staff in particular case teams and/or the need for patient numbers assigned to a specific case team to be decreased or increased.

Appendix 8 Survey Protocol: Emergency Patients Triaged Within 5 Minutes of Arrival

Purpose of survey:

Through BPR, the Ministry of Health has set a stretch objective that 'any patient with the need for emergency treatment should be provided with the service within 5 minutes of arrival at the hospital".

The proportion of emergency patients who undergo triage within 5 minutes is one of the Key Performance Indicators that should be reported by hospitals to their Governing Board and to the RHB has a measure of hospital performance.

Period of survey:

The survey should be conducted during the following time periods during the final week of the reporting period:

Monday: 8am to 12 noon

Wednesday: 12 noon to 5pm

Saturday: 6pm to 8am

Role of KPI Owner:

The hospital should assign an 'owner' for the KPI '% of patients triaged within 5 minutes of arrival in ER". He/she is responsible to oversee the survey, to select and train surveyors, and to calculate the proportion seen within 5 minutes at the end of the survey period.

Additionally, at the start of each survey period the KPI Owner should inform all ER staff that the survey is taking place.

Selection and role of surveyors:

The KPI Owner should assign individuals to act as surveyors. The number of surveyors required will depend on the patient load. However, there should be sufficient surveyors to ensure that the waiting time of each and every emergency patient is measured during the study period.

Ideally, the surveyors should be individuals who DO NOT WORK regularly in the emergency department in order to avoid bias. Surveyors could be clinical or non clinical staff from other hospital departments. If necessary, the hospital should provide payment to surveyors according to the number of hours worked.

The surveyors should follow the methodology outlined below to conduct the survey and should submit all completed 'Triage Data Forms' to KPI Owner at the end of the survey period.

Methodology of Survey:

a) Assign surveyor(s)

One or more surveyors should be assigned to the ER Department for each study time period. The surveyor(s) should be located at the entrance to ER. If the hospital does not have a separate ER department the surveyors should be located in an area where they can identify easily identify emergency cases versus outpatient cases.

b) Surveyors complete 'Triage Data Forms'

Each surveyor should have a batch of 'Triage Data Forms' as below:

Sample Triage Data Form:

Patient number	Time of arrival	Time of triage	Wait time (minutes)	Wait time < 5 minutes? (Yes/No)
1	12.20	12.23	3	Yes
2	12.40	12.46	6	No
3	1.15	1.17	2	Yes
4	2.10	2.25	15	No
5				
6				
7				
8				

As soon as a patient arrives at ER the surveyor should enter the time of arrival on the Triage Data Form. The surveyor should follow the patient until the time of triage (ie until assessment by a clinical staff member). The surveyor should enter the time of triage on the Triage Data Form and calculate the wait time in minutes. The surveyor should then complete the final column on the Triage Data Form to state if the patient was triaged within 5 minutes of arrival (yes or no).

c) KPI Owner calculates % of patients triaged within 5 minutes (KPI 7)

At the end of the survey period the KPI Owner should collect all Triage Data Forms from each surveyor. The KPI owner should calculated the % of patients triaged within 5 minutes as follows:

$$\text{Emergency room patients triaged within 5 minutes of arrival} = \frac{\textit{Total number of patients triaged within 5 min}}{\textit{Total number of patients included in ER survey}} \textit{ x 100}$$

d) KPI Owner reports to KPI focal person

After calculating % of patients triaged within 5 minutes the KPI owner should report all data elements and KPI result to the KPI focal person. The KPI focal person will then check the calculations and enter them into the KPI report form.

Appendix 9 Pressure Ulcer Report Form

This form should be used to report <u>new</u> pressure ulcers arising in patients following admission to hospital.

<u>Definition of Pressure Ulcer:</u>

Pressure Ulcers arise in areas of unrelieved pressure (commonly sacrum, elbows, knees or ankles).

<u>Either</u> of the following criteria should be met:

- A superficial break in the skin (abrasion or blister) in an area of pressure *<u>or</u>*
- An ulcer that involves the full thickness of the skin and may even extend into the subcutaneous tissue, cartilage or bone

Ward (**ዋርድ**):
Name of patient:
Date of admission (**በሽተኛው የተኛበት ቀን**):
Reason for admission/diagnosis (**በሽተኛው የተኛበት ምክንያት**):
Date pressure ulcer detected (**ቁስሉ የተገኘበት ቀን**):
Clinical signs of pressure ulcer (**የአልጋ ቁስል ክሊኒካል ምልክቶች**):
Action taken (**የተወሰደው እርምጃ**): Reported by : Name : _____ Position : _____
Outcome (to be completed at time of discharge) (**ውጤት (በሽተኛው ልወጣ ስል**)): Signed :_____ Position : _____

Appendix 10 Surgical Site Infection Report Form

This form should be used to report infection occurring at the site of surgery in patients who undergo major surgical procedures (i.e. any procedure conducted under general, spinal or major regional anesthesia).

Definition of Surgical Site Infection (SSI):

One or more of the following criteria should be met:

- Purulent drainage from the incision wound
- Positive culture from a wound swab or aseptically aspirated fluid or tissue
- Two of the following:
  - Wound pain or tenderness
  - localized swelling
  - redness
  - heat
- Spontaneous wound dehiscence or deliberate wound revision/opening by the surgeon in the presence of:
  - pyrexia > 38C or
  - localized pain or tenderness

An abscess or other evidence of infection involving the deep incision that is found by direct examination during re-operation, or by histopathological or radiological examination

Ward (**ዋርድ**):	Date SSI detected :
Name of patient :	Date of surgery:
Type of surgical procedure :	
Name of surgeon :	
Clinical signs (**የተወሰደው እርምጃ**):	
Action taken (**የተወሰደው እርምጃ**): Reported by : Name :_____ Position : _____	
Outcome (to be completed at time of discharge) : Signed : _____ Position :_____	

Appendix 11 Audit Protocol: Completeness of Inpatient Medical Records

Purpose of Audit:

The '% of medical records complete' is one of the Key Performance Indicators that the hospital should report every quarter to the Governing Board and Regional Health Bureau.

Frequency of Audit:

The audit should be conducted quarterly.

Role of KPI Owner:

The hospital should assign an 'owner' for this KPI. He/she is responsible to oversee the Medical Record Audit, to select and train Medical Record staff who will conduct the audit, and to liaise with the Medical Records Department to select and obtain the Medical Records which are included in the audit.

Selection and Role of Medical Record Reviewers:

The Medical Record Reviewers should be members of the Medical Records Department. Each should review the assigned Medical Records following the checklist below and submit their completed Forms to the KPI Owner.

Methodology of Survey:

a) **Select and obtain the medical records**

Identify and list all patients who were discharged from an inpatient ward during the reporting period. This information can be obtained from the Medical Records Database or Admission/Discharge Registers.

The sample size of medical records to be surveyed should be 50 or 5% (which ever number is higher) of the discharged patients. After identifying your sample size randomly select patients from the discharged list. Obtain the Medical Records of these patients from the Medical Records Department. If any Medical Record is missing, another patient /Medical Record should be selected as a replacement.

b) **Complete Medical Record Review Form**

For each of the selected Medical Records complete the following Review Form:

Medical Record Review Form		
MR Number:		
Date patient discharged from hospital:		
Ward:		
Inpatient Medical Record Checklist		
Section	**Yes**	**No**
1. Patient Card (Physician Notes): - Is this present? - Are all entries dated and signed?	☐	☐
2. Physician/HO Order sheet: - Is this present? - Are all entries dated and signed?	☐	☐
3. Nursing Care Plan - Is this present? - Are all entries dated and signed?	☐	☐
4. Medication Administration Record - Is this present? - Are all entries dated and signed?	☐	☐
5. Discharge summary - Is this present? - Are all entries dated and signed?	☐	☐
Total number of "Yes" and "No" Checks	_____	_____
MR Reviewed by: Name of Reviewer: _____ Date of Review: _____		

c) KPI owner calculates % of completeness of inpatient medical records

After the appropriate number of medical records have been reviewed the KPI Owner should collect all completed Medial Record Review Forms and calculate the medical record checklist score (number of "yes" checks). The formula for % of completeness of inpatient medical records is as follows:

$$\%\ \text{completeness of inpatient medical records} = \frac{\textit{Sum total of medical record checklist score}}{\textit{Total number of discharged inpatient medical records surveyed}} \times 100$$

d) KPI Owner reports to KPI focal person

After calculating % of completeness of inpatient medical records the KPI owner should report all data elements and KPIresult to the KPI focal person. The KPI focal person will then check the calculations and enter them into the KPI report form.

Appendix 12 Survey Protocol: Patient Satisfaction

Purpose of Survey:

To provide a standardized survey for outpatients' and inpatients' experiences which hospitals can use to monitor patient satisfaction with services, and changes in satisfaction over time.

The Key Performance Indicator "Patient Satisfaction" will be calculated using the average responses to question 19 in the Inpatient – Patient Assessment of Health Care (I-PAHC) survey and question 16 in the Outpatient – Patient Assessment of Health Care (O-PAHC).

Period of Survey:

Hospitals should perform a total of 50 Inpatient and 50 Outpatient surveys each quarter. The surveys should be collected over a time period of one to two weeks. No more than 10 surveys should be collected in a day and surveys should be collected on different days and different times of day (morning and afternoon) over the survey period.

I-PAHC surveys should be administered at the time of discharge. O-PAHC surveys should be given at the end of the outpatient visit right before the patient leaves the outpatient area.

Role of KPI owner:

The hospital should assign an 'owner' for the KPI 'Patient Satisfaction'. He/she is responsible to oversee the survey, to select and train surveyors, to issue O-PAHC and I-PAHC surveys to each surveyor, to receive completed surveys from centralized collection area, calculate patient satisfaction (KPI 36) and response rate, and give all completed surveys to a data entry person who will enter them into the O/I-PAHC Access Database.

Selection and role of surveyors:

Each health facility should assign one or more individuals to administer the surveys to patients. The individual conducting the survey (also referred to as "surveyor") should understand the survey well, including all survey questions and answer choices. To minimize bias the surveyor should not be involved in direct patient care. A surveyor must have good interpersonal skills to interact sensitively with patients and must not lead the patients to particular responses but should administer the survey objectively. Each surveyor must be trained to ensure he/she understands the purpose and process of the PAHC surveys. Surveyors are responsible for collecting all completed surveys and returning them to a centralized collection area determined by the health facility.

Surveys can be completed by the patient themselves (written) or the surveyor may read each survey question to the patient and transcribe the patient response (oral). When orally administering the PAHC survey, the surveyor should read the question exactly as written on the PAHC instrument. If the patient has a query about certain questions on the survey, surveyors should not provide responses or more detail about what the question might be. This will introduce the surveyor's interpretation into the question, which is a form of bias. When encountering such a challenge, the best approach is for the surveyor to remind the respondent

that there is no right or wrong response and that the interpretation of the patient is the best possible one. Then, the surveyor should re-read the question for the patient

Patient recruitment:

Participation is voluntary and patient anonymity must be maintained. No identifying information (such as patient's name) should be collected. All patients must be 18 years old or older. In addition, for I-PAHC, participants must have a hospital stay of 2 days or more. Participants should be excluded from both surveys if cognitively impaired and unable to understand the survey questions. For the outpatient survey, patients should be selected to reflect a diversity of outpatient areas. Emergency room services may also be assessed using the outpatient survey. For the inpatient survey patients should be selected from a range of different wards to reflect the diversity of services.
The surveyor should not select patients based on his/her presumptions about whether the patient appears pleased or not pleased with services rendered.

Methodology of Survey:

a) Assign and train surveyors

Selection and training of surveyors should be in accordance with above stated protocol and should be done well in advance of survey period.

b) Select patients for survey

Surveyors should be provided with a logbook to record the number of patients asked to participate in survey, number of surveys actually completed by patients and what type of survey was administered (written or oral). This is to measure the survey response rate as well as track surveys.
Patient recruitment should be in accordance with above stated protocol. Surveyor should then approach the patient to inquire if he/she is interested in completing a patient survey. The surveyor should explain the purpose of the survey and assure the patient of his or her anonymity. If the patient does want to participate they must then give their consent verbally before the survey can be administered.

c) Oral or written completion of survey

The survey may be completed by the patient themselves (written) or administered by the surveyor who will transcribe the patient's answers (orally). An ID number should be assigned to each survey sequentially as it is conducted. The ID should be entered on the survey form and in a logbook.

Written Survey:
Surveyors will provide a blank patient survey to the patient to be completed by him/herself. Patient should complete the survey at the time it is distributed and be notified of a centralized collection area where they can return their completed survey.

The surveyor should record the Survey No. in logbook and identify it as a "written survey".

Oral Survey:
If the patient requests that the survey be conducted orally surveyors will read each question on the survey to the patient, transcribing the responses of the patient on to the survey form. The surveyor should record the Survey No. in a logbook and identify it is as "oral survey". Once the survey is completed the surveyor should deliver it to a centralized collection area for the KPI data owner to collect.

d) KPI owner calculates Patient Satisfaction Indicator and response rate

At the end of the survey period the KPI owner should collect all completed Inpatient and Outpatient surveys from the centralized collection area. The KPI owner should calculate Patient Satisfaction using patient answers to question 19 on the Inpatient survey and question 16 on the Outpatient Survey, "On a scale of 0-10 (0 being the worst facility, 10 being the best facility), how would you rate this health facility". The formula for the indicator is as follows:

$$\textbf{Patient Satisfaction} = \frac{\sum \textit{O-PAHC rating score} + \sum \textit{I-PAHC rating score}}{\textit{Number of O-PAHC surveys completed} + \textit{Number of I-PAHC surveys completed}}$$

Additionally the KPI owner should calculate the response rate of the survey. This information should be collected by the surveyors and can be found in their logbook. The formula for response rate is as follows:

$$\textbf{Response Rate} = \frac{\textit{Number of completed survey}}{\textit{Total number of patients asked to complete survey}} \textit{ X 100}$$

e) KPI Owner reports to KPI focal person and Data Entry Person

After calculating Patient Satisfaction the KPI owner should report all data elements and indicator to the KPI focal person. The KPI focal person will then check the calculations and enter them into the KPI report form.
Additionally, all surveys should be given to the appropriate data entry person to enter into the Access Database. See Appendix 7 for guidance.

I-PAHC Survey:

Survey #	Department:	Ward:
Male ☐1 Female ☐2	Date (DD/MM/YYYY):	Age:

	Never	Sometimes	Usually	Always
1. During this health facility stay, how often did nurses treat you with courtesy and respect?	1☐	2☐	3☐	4☐
2. During this health facility stay, how often did nurses listen carefully to you?	1☐	2☐	3☐	4☐
3. During this health facility stay, how often did nurses explain things in a way you could understand?	1☐	2☐	3☐	4☐
4. During this health facility stay, how often did doctors/health officers treat you with courtesy and respect?	1☐	2☐	3☐	4☐
5. During this health facility stay, how often did doctors/health officers listen carefully to you?	1☐	2☐	3☐	4☐
6. During this health facility stay, how often did doctors/health officers explain things in a way you could understand?	1☐	2☐	3☐	4☐
7. I could distinguish between doctors/health officers and nurses.	1☐	2☐	3☐	4☐
8. During this health facility stay, how often was the room you were sleeping in kept clean?	1☐	2☐	3☐	4☐
9. During this health facility stay, how often was the area around you quiet at night?	1☐	2☐	3☐	4☐
10. During this health facility stay, how often did you have enough personal privacy?	1☐	2☐	3☐	4☐
11. During this health facility stay, did you experience any pain?	1☐ Yes	2☐ No, Skip 12 & 13		
12. During this health facility stay, how often was your pain well controlled?	1☐	2☐	3☐	4☐

13. During this health facility stay, how often did staff do everything they could to help you with your pain?	1☐	2☐	3☐	4☐
14. During this health facility stay, were you given any medication that you had not taken before?	1☐ Yes	2☐ No, Skip 15 & 16		
15. Before giving you any new medication, how often did staff tell you what the medicine was for?	1☐	2☐	3☐	4☐
16. Before giving you any new medication, how often did staff describe possible side effects in a way you could understand?	1☐	2☐	3☐	4☐
17. Did anyone discuss with you what symptoms to look out for after you left the health facility?	1☐ Yes	2☐No		
18. Was it easy to find your way around the health facility?	1☐ Yes	2☐ No		
19. On a scale of 0-10 (0 being the worst facility, 10 being the best facility), how would you rate this health facility?	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ 0 1 2 3 4 5 6 7 8 9 10 Worst facility……..…Best facility			
20. Would you recommend this health facility to your friends and family?	1☐ Definitely no	2☐ Probably no	3☐ Probably yes	4☐ Definitely yes
21. Did you have to pay for this health facility stay?	1☐Yes	2☐ No, Skip Q22		
22. Do you consider this health facility stay too expensive?	1☐ Yes	2☐ No		

O-PAHC Survey

Survey No.		Health Facility Name:
Male ☐$_1$ Female ☐$_2$	Age	Date (DD/MM/YYYY):
Morning/Afternoon		Department:

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. During this visit, nurses treated me with courtesy and respect.	$_1$☐	$_2$☐	$_3$☐	$_4$☐
2. During this visit, nurses listened carefully to me.	$_1$☐	$_2$☐	$_3$☐	$_4$☐
3. During this visit, nurses explained things in a way I could understand.	$_1$☐	$_2$☐	$_3$☐	$_4$☐
4. During this visit, doctors/health officers treated me with courtesy and respect.	$_1$☐	$_2$☐	$_3$☐	$_4$☐
5. During this visit, doctors/health officers listened carefully to me.	$_1$☐	$_2$☐	$_3$☐	$_4$☐
6. During visit, doctors/health officers explained things in a way I could understand.	$_1$☐	$_2$☐	$_3$☐	$_4$☐
7. I could distinguish between doctors/health officers and nurses.	$_1$☐ Yes	$_2$☐ No		
8. The outpatient department was clean.	$_1$☐	$_2$☐	$_3$☐	$_4$☐
9. The bathrooms/latrines were clean (leave blank if not applicable).	$_1$☐	$_2$☐	$_3$☐	$_4$☐
10. I was prescribed new medication at this visit.	$_1$☐ Yes	$_2$☐ No, Skip Q11, 12, & 13		
11 The staff told me what the medication was for.	$_1$☐ Yes	$_2$☐ No		
12 The staff described the medications possible side effects in a way I could understand.	$_1$☐ Yes	$_2$☐ No		
13 All the medications I needed were available at the drug dispensary here.	$_1$☐ Yes	$_2$☐ No		
14 Someone discussed with me what symptoms to look out for after I left the health facility.	$_1$☐ Yes	$_2$☐ No		

15. It was easy for me to find my way around the facility.	1☐ Yes 2☐ No			
16. On a scale of 0-10 (0 being the worst facility, 10 being the best facility), how would you rate this health facility?	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ 0 1 2 3 4 5 6 7 8 9 10 Worst……..……..……Best			
17. I would recommend this outpatient department/clinic to my friends and family.	1☐ Definitely no	2☐ Probably no	3☐ Probably yes	4☐ Definitely yes
18. I had to pay for this outpatient visit.	1☐ Yes 2☐ No, Skip Q19			
19. I consider this outpatient visit too expensive.	1☐ Yes 2☐ No			

[Inpatient Assessment of Health Care (I-PAHC)]

ተኝተው በሚታከሙት ታካሚዎች ላይ ጥናት

የጥናት ቁ.	ክፍል	ዋርድ
ወንድ ☐1 ሴት ☐2	ቀን (ቀ/ወ/ዓ/)	እድሜ

	መቼም	አንድ አንዴ	አብዛኛውን ጊዜ	ሁል ጊዜ
1. በዚህ የጤና ተቋም በነበረዎት ቆይታ ነርሶች በትህትና እና በአክብሮት ሕክምና ለእርስዎ የሰጡት ምን ያህል ጊዜ ነው?	1☐	2☐	3☐	4☐
2. በዚህ የጤና ተቋም ቆዩታዎ፣ ምን ያክል ጊዜ ነው ነርሶች በጥሞና ያዳመጥዎት?	1☐	2☐	3☐	4☐
3. በዚህ የጤና ተቋም ቆዩታዎ፣ ምን ያክል ጊዜ ነው ነርሶች ነገሮችን እርስዎ በሚገባዎት መልኩ ያብራሩሎት?	1☐	2☐	3☐	4☐
4. በጤና ድርጅቱ ቆይታ ጊዜዎ በሐኪሞች/ጤና መኮንኖች የሚሰጥ አገልግሎት ምን ያክል ትህትናንና አክብሮትን የተላበሰ ነበር?	1☐	2☐	3☐	4☐
5. በዚህ የጤና ተቋም ቆዩታዎ፣ ምን ያክል ጊዜ ነው ዶክተሮች/የጤና መኮንኖች በጥሞና ያዳመጥዎት?	1☐	2☐	3☐	4☐
6. በዚህ የጤና ተቋም ቆዩታዎ፣ ምን ያክል ጊዜ ነው ዶክተሮች/የጤና መኮንኖች ነገሮችን እርስዎ በሚገባዎት መልኩ ያብራሩሎት?	1☐	2☐	3☐	4☐
7. ዶክተሮችን/ጤና መኮንኖች ከነርሶች በትክክል ለይቼ አውቃልሁ።	1☐	2☐	3☐	4☐
8. ሆስፒታል በቆዩበት ወቅት፣ የታከሙበት ክፍል ምን ያክል በንፅህና ተጠብቆ ነበር?	1☐	2☐	3☐	4☐
9. በጤና ተቋም በነረበርዎት ቆይታ ያሉበት አካባቢ በምሽት ጊዜያት ፀጥታ የሰፈነበት ነበርን?	1☐	2☐	3☐	4☐
10. በዚህ የጤና ተቋም ቆዩታዎ የሆስፒታሉ ሰራተኞች ምን ያክል የራስዎ የሆነ ጊዜ ሰጥቶዎታል?	1☐	2☐	3☐	4☐
11. በዚህ የጤና ተቋም በነረበርዎት ቆይታ የህመም ስሜት (Pain) ተሰምቶዎት ነበርን?	1☐ ነበር	2☐ አልነበረም, ጥያቄ 12 እና 13ን ይለፏቸዉ		
12. በዚህ የጤና ተቋም ቆዩታዎ፣ ምን ያክሉን ጊዜ ነዉ የህመም ስሜት (Pain) እንዲታገስሎዎት የተደረገው?	1☐	2☐	3☐	4☐
13. በዚህ የጤና ተቋም ቆዩታዎ፣ ምን ያክሉን ጊዜ ነው የጤና ተቋሙ ሰራተኞች የህመም ስሜት (Pain) እንዳሰማዎት የተቻላቸዉን ሁሉ ያደረጉሎት?	1☐	2☐	3☐	4☐
14. በዚህ የጤና ተቋም ቆዩታዎ፣ ከዚህ በፊት ወስደዉት የማያውቁት መድሃኒት ተሰቶታል?	1☐ አዎ	2☐ አልታዘዘልኝም፣ ጥያቄ 15 እና 16ን ይለፏቸዉ		
15. አዲስ መድሃኒት ከመሰጠቱ በፊት ሰራተኞች መድሃኒቱ ለምን እንደሚጠቅም አብራርተውልዎታልን?	1☐	2☐	3☐	4☐
16. ምንም አይነት አዲስ መድሃኒት ከመስጠታቸው በፊት ምን ያክል ጊዜ ነው የሆስፒታሉ ሰራተኞች እርስዎ በሚገባዎት መልኩ በመድሃኒቱ ምክንያት ሊከሰቱ የሚችሉ ችግሮችን የገለጹሎት?	1☐	2☐	3☐	4☐
17. በዚህ የጤና ተቋም ሲዎጡ ስለ በሽታዉ ምልክቶችና ስሜቶች ከጤና ባለሙያዎቸ በቂ ግንዛቤ አግኝተዋል?	1☐ ነው		2☐ አይደለም	
18. በዚህ የጤና ተቋም ዉስጥ የሚፈልጉትን ቦታ ለማግኘት ቀላል ነበር?	1☐ ነው		2☐ አይደለም	
19. ከ0-10 ባሉት ደረጃዎች ለዚህ የጤና ተቋም የምሰጠው ውጤት እንደሚከተለው ነው _____ (0አነስተኛው ደረጃ ሲሆን 10 ደግሞ ከሁሉ የተሻለውን ተቋም የሚወክል ነው)	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ 0 1 2 3 4 5 6 7 8 9 10 እጅግ ዝቅተኛ.....እጅግ ከፍተኛ			
20. ጓደኞቾትንና ቤተሰቦቾን ወደዚህ የጤና ተቋም እንዲሄዱ ይመክሯቸዋል?	1☐ በፍጹም አላደርገዉም	2☐ አይመስለኝም	3☐ ይመስለኛል	4☐ በእርግጠኝነት አደርገዋለሁ
21. ለአሁኑ ቆዩታዎ በዚህ የጤና ተቋም መክፈል ነበረብዎት?	1☐ አዎ	22☐ አልነበረም፣ ወደ ጥያቄ 22 ን ይለፉት		
22. የአሁኑ ወጪዎ በዚህ የጤና ተቋም ውድ ነው ብለው ያስባሉ?	1☐ አዎ	2☐ አልነበረም		

[Outpatient Assessment of Health Care (O-PAHC)]

የተመላላሽ ታካሚዎች ጥናት

የጥናት ቁ.		የጤና ተቋሙ ስም
ወንድ ☐1 ሴት ☐2	እድሜ	ቀን (ቀ/ወ/ዓ/)
ጠዋት/ከቀትር በኋላ		መምሪያ

	በጣም አልስማማም	አልስማማም	እስማማለሁ	በጣም እስማማለሁ
1. በዛሬው ክትትሌ ነርሶች በአክብሮትና በትህትና አስተናግደዉኛል።	1☐	2☐	3☐	4☐
2. በዛሬው ክትትሌ ነርሶች በጥሞና አዳምጠውኛል።	1☐	2☐	3☐	4☐
3. በዛሬው ክትትሌ ነርሶች ነገሮችን እኔ በሚገባኝ መልኩ አብራርተውልኛል።	1☐	2☐	3☐	4☐
4. በዛሬው ክትትሌ ዶክተሮች/የጤና መኮንኖች በአክብሮትና በትህትና አስተናግደዉኛል።	1☐	2☐	3☐	4☐
5. በዛሬው ክትትሌ ዶክተሮች/የጤና መኮንኖች በጥሞና አዳምጠውኛል።	1☐	2☐	3☐	4☐
6. በዛሬው ክትትሌ ዶክተሮች/የጤና መኮንኖች ነገሮችን እኔ በሚገባኝ መልኩ አብራርተውልኛል።	1☐	2☐	3☐	4☐
7. ሐኪሞችን/የጤና መኮንንኖችን ከነርሶችን ለይቼ ማወቅ ችያለሁ።	1☐አዎ		2☐ አይ	
8. የተመላላሽ ታካሚዎች ክፍል ንጽህናውን የጠበቀ ነበር።	1☐	2☐	3☐	4☐
9. መታጠቢያ ክፍሎች/መፀዳጃ ቤቶች ንጽህናቸው የተጠበቀ ነበር (ይህ አግባብነት ከሌለው ባዶ ይተዉ)	1☐	2☐	3☐	4☐
10. በዚህ ጉብኝት አዲስ መድሃኒት ታዞልኛል።	1☐ አዎ	2☐ አልታዘዘልኝም፣ ጥያቄ 11,12 እና 13 ይለፏቸዉ		
11. ሰራተኛው መድሃኒቱ ለምን እንደሚወሰድ ገልፀውልኛል።	1☐ አዎ		2☐ አልነገሩኝም	
12. ሰራተኛው ሊገባኝ በሚችል መልኩ የመድሃኒቱን የጎንዮሽ ጉዳት ገልፀውልኛል	1☐ አዎ		2☐ አልነገሩኝም	
13. የምፈልጋቸውን መድሃኒቶች ሁሉ በጤና ድርጅቱ የመድሃኒት መሸጫ አግኝቻለሁ።	1☐ አዎ		2☐ አልነገሩኝም	
14. የጤና አገልግሎቱ ሰራተኞች እርስዎ በሚገባዎት መልኩ በመድሃኒቱ ምክንያት ሊከሰቱ የሚችሉ የጎንዮሽ ችግሮችን ገልጸዎሎታል?	1☐ አዎ		2☐ አልነገሩኝም	
15. በጤና አገልግሎት መስጫዉ ዉስጥ ከአንድ ቦታ ወደ ሌላው ለመሄድ ቀላል ነበር?	1☐ አዎ		2☐ አልነገሩኝም	
16. ከ0-10 ባሉት ደረጃዎች ለዚህ የጤና ተቋም የምሰጠው ውጤት እንደሚከተለው ነው (0አነስተኛው ደረጃ ሲሆን 10 ደግሞ ከሁሉ የተሻለውን ተቋም የሚወክል ነው)	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ 0 1 2 3 4 5 6 7 8 9 10 እጅግ ዝቅተኛ..... እጅግ ከፍተኛ			
17. ይህ የተመላላሽ ታካሚዎች ክፍል/ክሊኒክ ጥሩ አገልግሎት እንደሚሰጥና እንዲገለገሉበት ለጓደኞቼ እና ለቤተሰቦቸ አማክራለሁ።	1☐ በፍጹም አላደርገዉም	2☐ አይመስለኝም	3☐ ምንአልባት	4☐ በእርግጠኝነት አደርገዋለሁ
18.. በዚህ የተመላላሽ ታካሚዎች ክፍል በተሰጠኝ አገልግሎት መክፈል ነበረብኝ	1☐ አዎ		2☐ አልነበረብኝም፣ ወደ ጥያቄ 19 ይሂዱ	
19. ይህ የተመላላሽ ታካሚዎች ክፍል ሕክምና በጣም ውድ ነው ብዬ አስባለሁ።	1☐ አዎ		2☐ አይደለም	

Appendix 13 O-PAHC and I-PAHC Database and Analytical Tool

Using the Access Database to enter data:

Two data entry forms have been created in Microsoft Access – one for I-PAHC and the second for O-PAHC. The questions on each survey are listed in the database exactly as they appear on the questionnaire.

Who should enter the data?

Data entry should be conducted by individuals with excellent attention to detail and good keyboarding skills. The data entry person should enter the data reliably and without error. Data entry should require no more than 4 minutes per survey; therefore, entering 50 surveys in total should take approximately two hours. This should provide adequate time for entry and checking entered data. It is the responsibility of the data entry staff to check all of his/her work before submitting to supervisor for spot check.

How is data entered?

1. Open the Access Database
2. Select I-PAHC or O-PAHC
3. Select 'Add New'
4. Enter survey number and other relevant patient and survey details on the top of the form
5. Enter all the responses exactly as on the survey. Leave any unanswered questions blank.
6. After entering all responses from a single survey, go back and check that each entered response is accurate
7. Click on 'Save'
8. Select "Add New " to take you to the next blank survey form.

Spot checking

After all data has been entered, a supervisor should perform a spot check for each batch. Spot checking requires randomly selecting a number of surveys per batch (of 50) to check whether the data entry clerk has accurately entered all responses from the paper surveys. A supervisor should randomly select at least 5 surveys from each batch of 50 to ensure the accuracy and quality of all entered data. In the event that *any* errors are found by the supervisor during the spot check, he/she should then proceed to checking 100% of that batch for further errors.

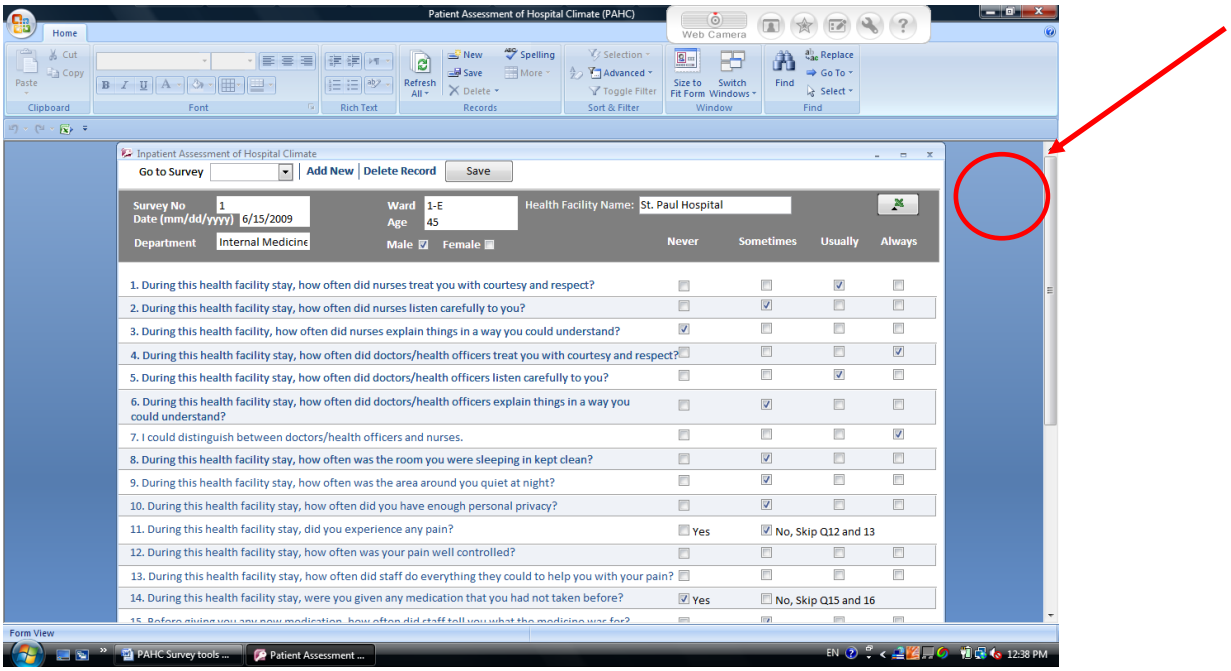
Using the Excel Tools to analyze data:

Two Microsoft Excel Analysis Tools have been created to analyze the patient surveys – one for I-PAHC and one for O-PAHC. The Pre-Programmed Analysis Tools generate tables and graphs automatically.

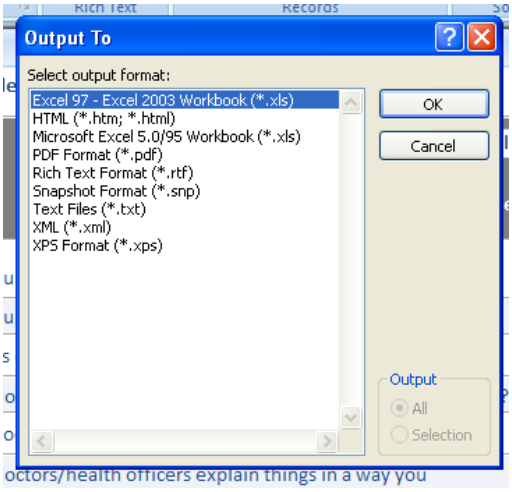
Step 1: Exporting Access Data to Excel

1) Open the Microsoft Access database you want to analyze

2) Click on the Excel icon on the upper right hand corner as seen in the photo below:



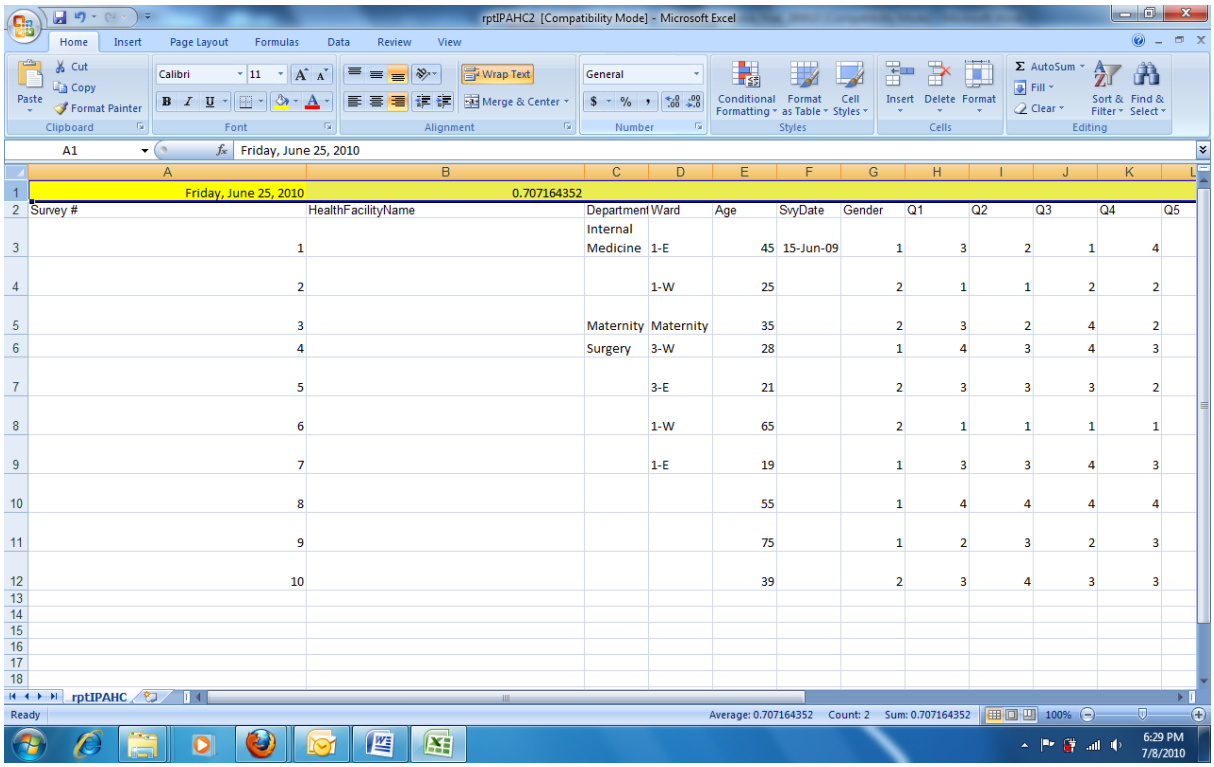
3) The following dialog box will appear. Select Excel 97 – Excel 2003 Workbook (*.xls) and click 'OK'



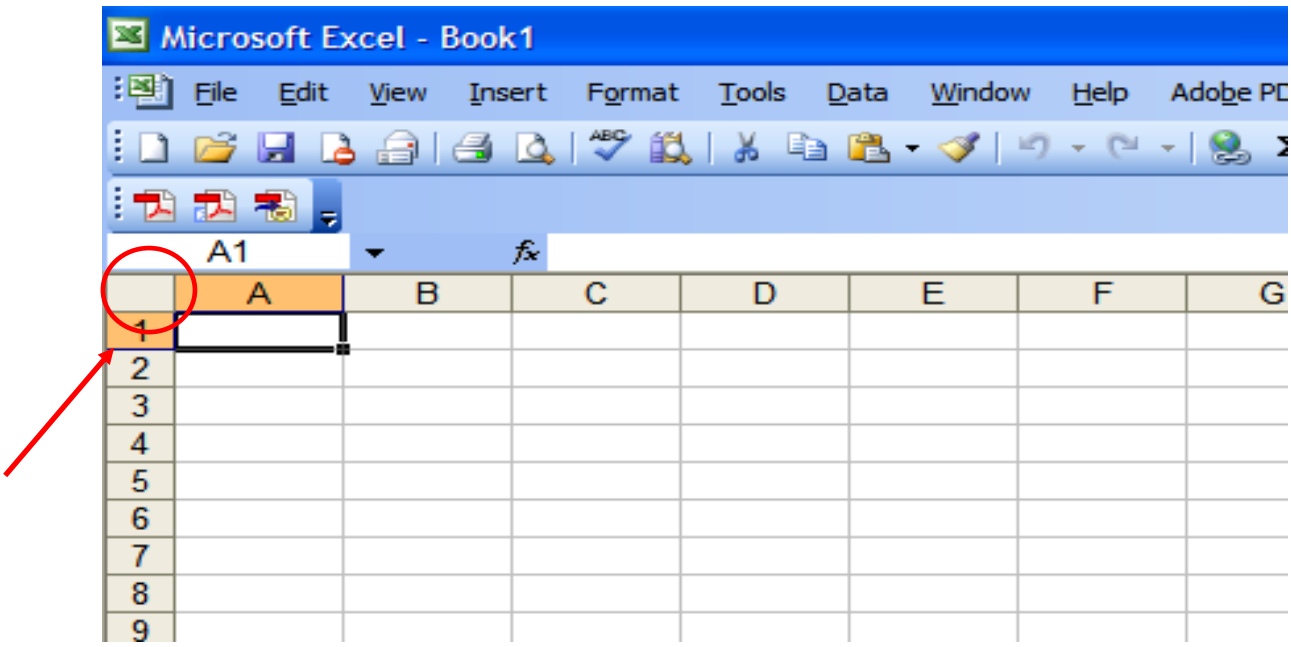
4) Save the file. The data should show up in a new Excel file as rptIPHAC or rptOPHAC

Step 2: Copying data from Excel File into Pre-programmed Analytical Tool

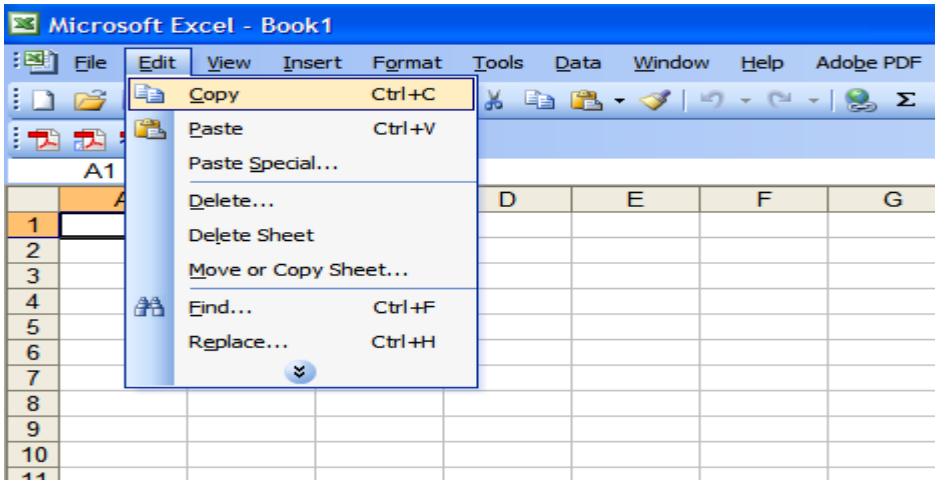
1) Open the Excel spreadsheet that you exported from the database (rptIPHAC or rptOPHAC). It should look like this:



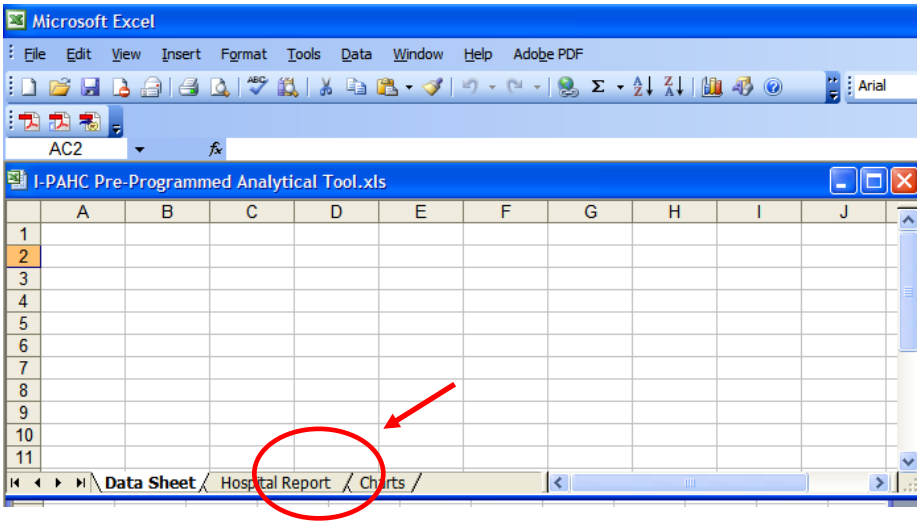
2) In the Excel file, click the cell in the upper left corner to select all cells.



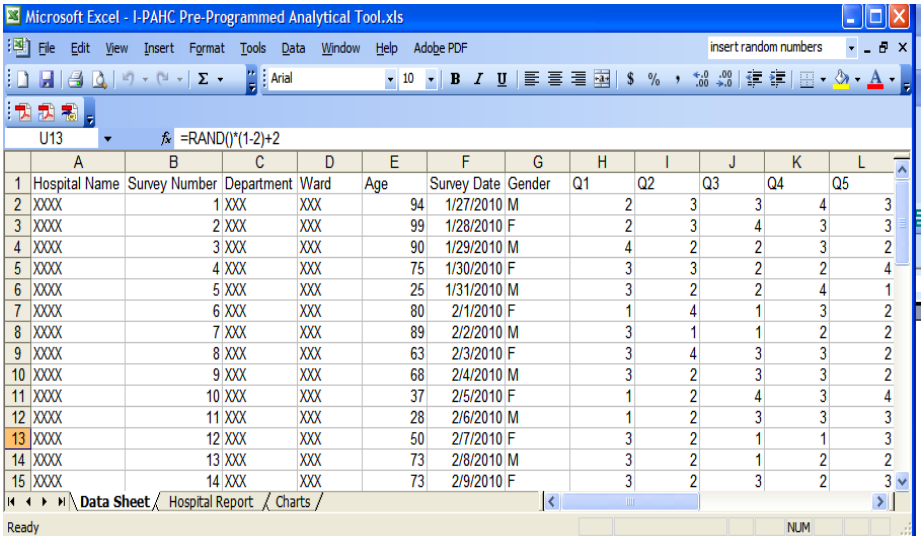
3) With all of the cells selected click on ‘Edit’ and select ‘Copy’



4) Now open the pre-programmed Excel Analytical Tool and click on the 'Data Sheet' tab

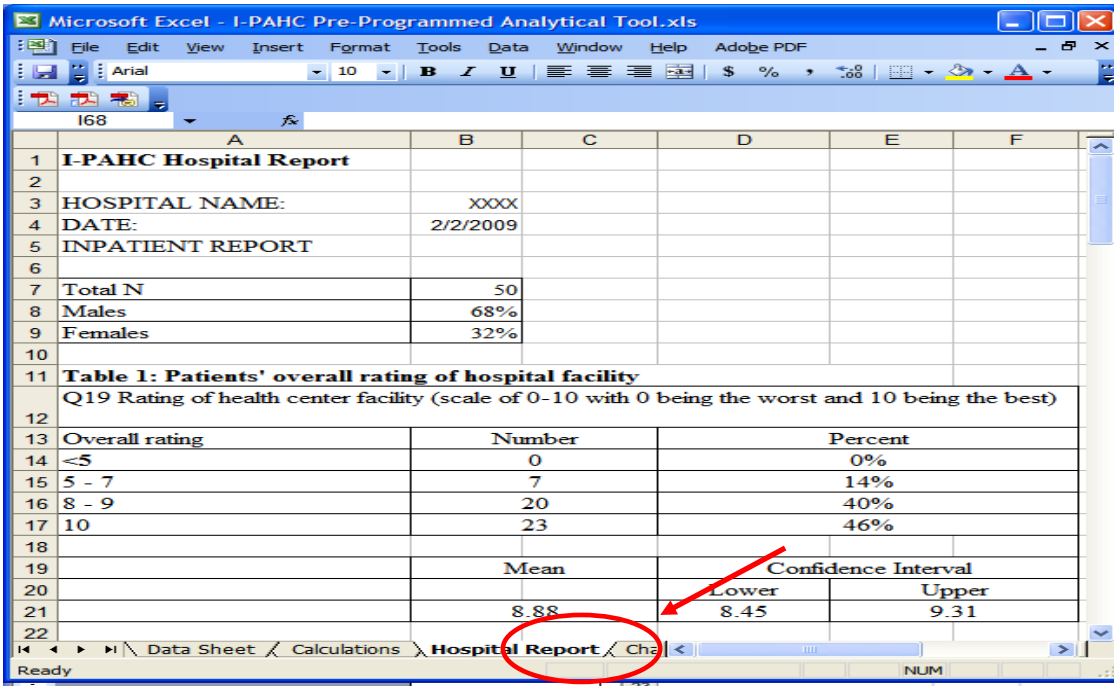


5) Select 'Edit' then 'Paste'. Data should then appear on the worksheet.

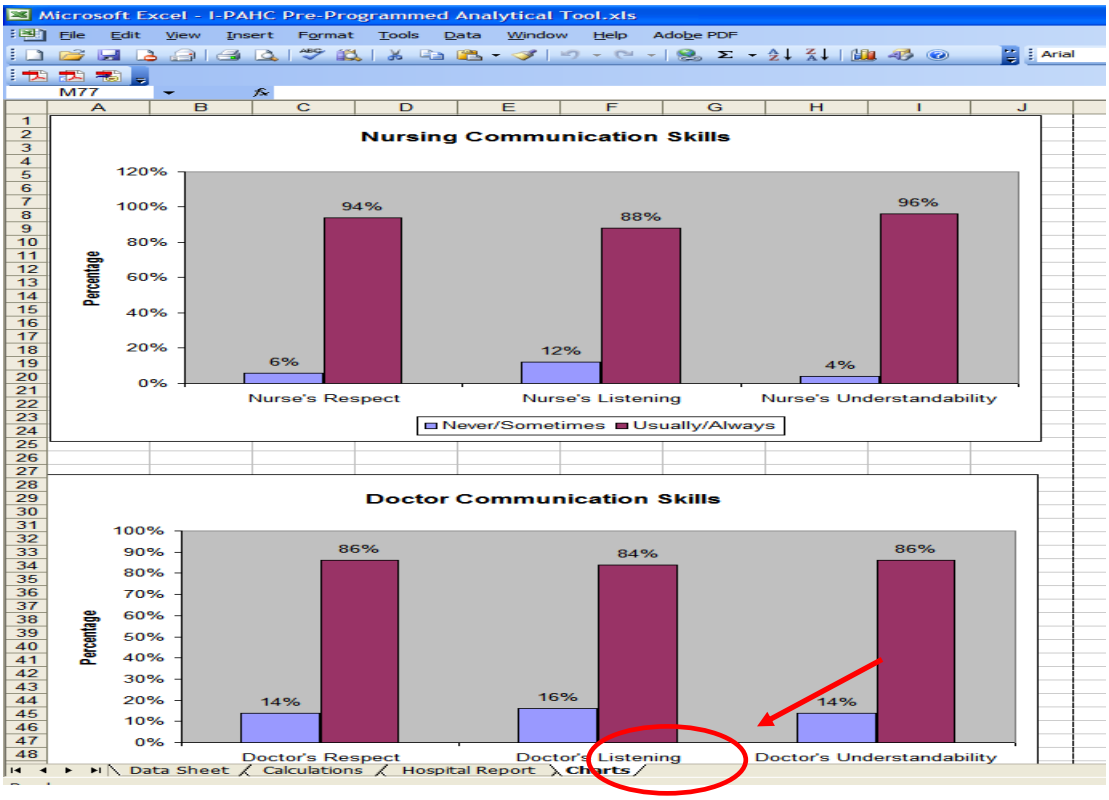


Step 3: Viewing Analyzed Data

1) Click on the 'Hospital Report' tab to view a table of the analyzed data



2) Click on the 'Charts' tab to view graphs of the analyzed data



Step 4: Using Analytical Tool tables and charts

Tables depicting I-PAHC and O-PAHC data will be automatically generated by the pre-programmed analytical tools. When preparing the survey report the tables can be copied and pasted into a word document.

To copy the tables from excel into a word document take the following steps:

1. In the pre-programmed analytical tool open the spreadsheet entitled Health Facility Report
2. Highlight the cells that you want to copy
3. Select edit and 'copy'
4. Open the word document
5. Put cursor in area where you want the table to be inserted
6. Select edit and 'paste'.

Example I-PAHC Table Report:

I-PAHC Report

HEALTH FACILITY NAME: XXXX DATE: 3/25/2011

INPATIENT REPORT

Total N	50
Males	68%
Females	32%

Table 1: Patients' overall rating of health facility

Q19 Rating of health facility (scale of 0-10 with 0 being the worst and 10 being the best)			
Overall rating	Number	Percent	
<5	0	0%	
5 – 7	7	14%	
8 – 9	20	40%	
10	23	46%	
	Mean	Confidence Interval	
		Lower	Upper
	8.88	8.45	9.31

Table 2: Patients' recommendation of health facility to friends and family

	Definitely No	Probably No	Probably Yes	Definitely Yes	N
Q20 Would recommend this health facility to friends and family	88%	0%	4%	8%	26

Table 3: Patient ratings of nurse communication during health facility stay

	Never	Sometimes	Usually	Always	N
Q1 Nurses treated patients with courtesy and respect	0%	6%	22%	72%	50
Q2 Nurses listened carefully to patients	0%	12%	28%	60%	50
Q3 Nurses explained things in understandable ways	0%	4%	34%	62%	50

Table 4: Patient ratings of doctor communication during health facility stay

	Never	Sometimes	Usually	Always	N
Q4 Doctors/Health Officers treated patients with courtesy and respect	0%	14%	28%	58%	50
Q5 Doctors/Health Officers listened carefully to patients	0%	16%	36%	48%	50
Q6 Doctors/Health Officers explained things in understandable ways	0%	14%	38%	48%	50

Table 5: Ability to distinguish between doctors and nurses

	Never	Sometimes	Usually	Always	N
Q7 Could distinguish between doctor/health officers and nurses	0%	8%	32%	60%	50

Table 6: Patients' assessment of physical environment during health facility stay

	Never	Sometimes	Usually	Always	N
Q8 Room was clean	0%	2%	44%	54%	50
Q9 Area around patients quiet at night	4%	20%	58%	18%	50

Table 7: Patient's assessment of personal privacy during health facility stay

	Never	Sometimes	Usually	Always	N
Q10 Staff made sure patients had enough personal privacy	8%	4%	18%	70%	50

Table 8: Patients' assessment of pain control during health facility stay

	Never	Sometimes	Usually	Always	N
Q12 For those who experienced pain, pain was well controlled	5%	70%	15%	10%	20
Q13 For those who experienced pain, staff did all they could to help patients with the pain	20%	5%	10%	65%	20

Table 9: Patients' assessment of medication communication

	Never	Sometimes	Usually	Always	N
Q15 For those given new medicine, staff told what medicine was for	77%	0%	12%	12%	26
Q16 For those given new medicine, staff explained possible side effects in a way patients could understand	88%	0%	4%	8%	26

Table 10: Patient discharge preparation for post-discharge health issues

	Yes	No	N
Q17 Given information about what symptoms to look for after discharge	80%	20%	50

Table 11: Ease of finding way around the health facility

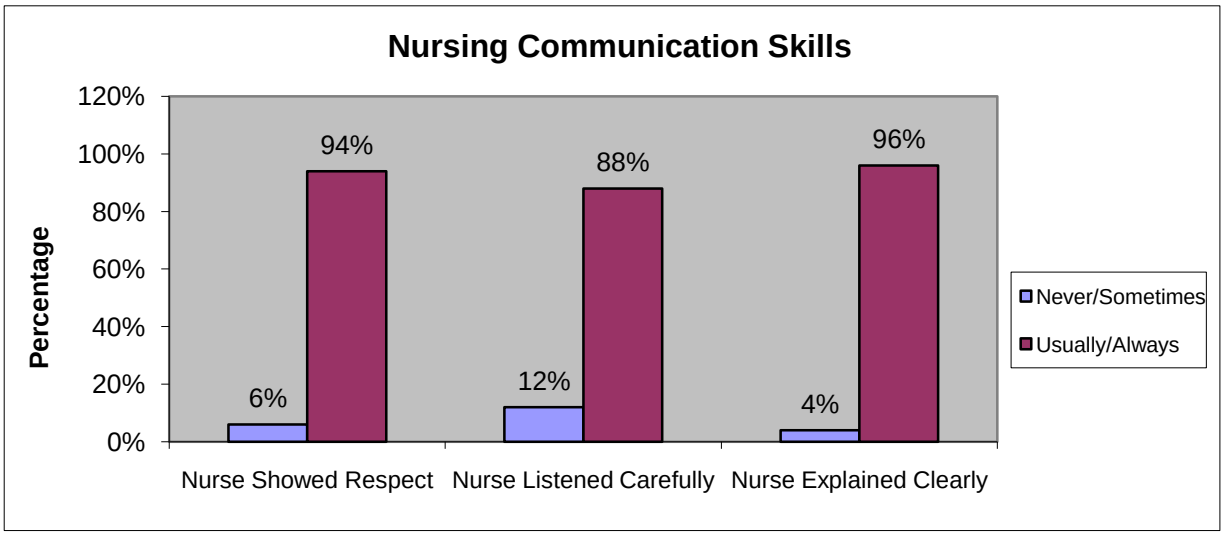
	Yes	No	N
Q18 Easy to find way around health facility	60%	40%	50

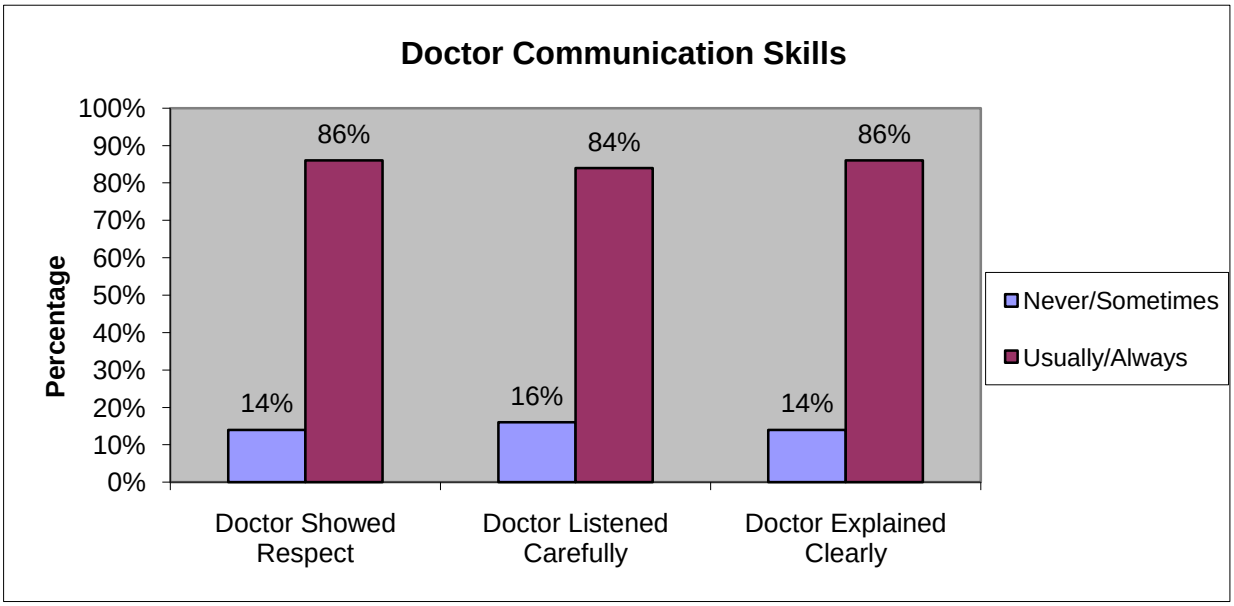
Charts depicting I-PAHC and O-PAHC data will also be automatically generated by the pre-programmed analytical tools. When preparing the survey report the charts can be copied and pasted into a word document.

To copy the charts from excel into a word document take the following steps:

1. In the pre-programmed analytical tool open the spreadsheet entitled Charts
2. Highlight the cells around the chart that you want to copy
3. Select edit and 'copy'
4. Open the word document
5. Put cursor in area where you want the chart to be inserted
6. Select edit and 'paste'.

Example I-PAHC Charts:





Preparing a Patient Satisfaction report

A report on the findings of each patient survey should be prepared for facility management and other relevant bodies. Useful information to describe in the report includes:

- The reason why the health facility conducted the survey
- The dates when the survey was conducted
- The service areas (different outpatient departments or inpatient wards) where the survey was conducted
- The number of survey respondents and response rate
- Tables and charts showing the findings of the survey
- Discussion on the findings of the survey.
- Comparison with previous survey findings - if previous surveys have been conducted the findings of this survey should be compared, and any significant differences should be highlighted
- Recommendations for follow up action (if relevant)
- A copy of the survey questionnaire

NB: The tables and charts that were created automatically by the Pre-Programmed Excel Analysis Tool can be cut and pasted into a Word Document and used for the report.

Appendix 14 Template for Site Visit Briefing Document

This template should be used in the preparation phase of the supportive site visit process to provide all team members with information about the hospital. The site visit leader should complete prepare the document and distribute it to team members prior to the site visit.

Site visit briefing document:

Hospital Name: _____ **Region:** _____ **Type of Hospital:** _____

Document prepared by: _____ **Date of completion:** _____

Section 1: Review of hospital data, reports and information			
What data, reports and information have been reviewed? (Tick all that apply)			
Most recent site visit report		Hospital response/action plan to most recent site visit report	
Hospital annual report		Hospital KPI reports	
Partner reports on hospital		Hospital Self Assessment reports on attainment of EHRIG standards	
Other (please describe)			

Section 2: Site visit briefing notes

Summary of action agreed following previous site visit

Enter here a summary of the action that the hospital was expected to take following the previous site visit (based on the most recent hospital response and action plan)

Describe (if known) whether the hospital has undertaken this action and any issues that remain.

Summary of hospital performance

Enter here a summary of information gathered from the most recent KPI report and EHRIG report

Strengths or successes of hospital

Enter here areas of performance that appear strong based on KPI/EHRIG reports or information gathered from other sources

Areas of possible weakness

Enter here areas of performance that appear weak based on KPI/EHRIG reports or information gathered from other sources

Evidence that requires validation

Enter here any data that should be checked/validated during the site visit. For example selected KPI data or selected EHRIG standards

Areas for investigation

Enter here areas of the hospital that should be investigated during the site visit (based on the information entered above). This could include follow up on actions that should have been completed following the previous site visit, or performance issues that have been identified through the KPI or EHRIG reports.

Be sure to include areas that are possible strengths of the hospital so that best practice can also be identified.

Service areas to be visited

Enter here the specific service areas of the hospital that should be visited by members of the site visit team. This will be based on the information entered above. For example, MR Department, Billing Offices/Finance Dept, ER Department, Inpatient Wards etc

Staff members to be interviewed

Enter here the staff members who should be available for interview during the site visit. This should be based on the information entered above. For example, CEO, SMT, Head of MR, Finance Head, ER Case Team Leader, IP Case Team Leader etc

Additional information for the hospital to prepare

Enter here any addition information that the CEO should prepare for your visit. If feasible this information should be sent to the site visit team before the site visit. However if this is not possible then the information may be presented at the opening meeting of the site visit. For example; patient or staff survey results etc

Enter here any unresolved action from the previous site visit. Include a description of progress made by the hospital or RHB (if relevant) to resolve the issue.

Section 3: Scheduling
Date of proposed site visit:
Date hospital CEO informed of site visit:

Appendix 15 Template for Site Visit Report

The following is a template with guidance for preparing a supportive supervision site visit report. It should be used after conducting a hospital site visit and reviewed by all team members. Once agreed the report should be sent to the hospital CEO for comments. Once finalized the report should be distributed to the RHB and all relevant stakeholders.

Cover Page

Should include region, name of hospital, names of site visit team members, date of site visit and date of report completion

Table of Contents

Introduction

This section should include background information about the site supervision process, general hospital information (hospital level, services offered, catchment population, etc.)

Main Findings

This section should provide a summary of the findings of the site supervision team. It informs readers of:

- Key findings from the site visit
- Strengths and improvements made
- Areas for improvement
- Overall progress in implementing hospital reforms (EHRIG, BPR, BSC, etc.)

Recommendations

This section should describe any follow up actions the hospital should take based on the findings of the site supervision team.

Conclusion

Appendix 16 Template for Hospital Response to Site Visit Report

Hospital Name: _____ Region: _____ Date of Site Visit: _____

Site visit team members:

Hospital response:

Enter here any specific comment you have on the Site Visit Report. State if you accept the findings and recommendations of the site visit report.

If there are any observations or comments made in the site visit report that you think are inaccurate describe those here.

Action plan:

Include an action plan that describes:

- *The specific action that the hospital will take to address the recommendations made in the site visit report*
- *The responsible person for each action*
- *The timeline to complete each action*

Support expected from RHB or other partners

Enter here any support or action that you expect the RHB or other partners to take to assist the hospital to fulfill its action plan or to respond to recommendations made by the site visit team.

Suggested areas for review during next site visit

Enter here any suggestions you would like to make to the site visit team for their next visit to the hospital. This could be areas of the hospital that were not reviewed during the current site visit where you would like to demonstrate good practice, or areas where you would like the site visit team to have better understanding of the challenges you face.

Any other comments

Enter here any other comments you have. For example suggestions on how the site visit process could be improved