# MANUAL ON BENCHMARKING FOR QUALITY IMPROVEMENT OF HEALTH CARE SERVICES

**Changes in Quality Indicators (QIs) Over Time**

Percentage

80
70
60
50
40
30
20
10
0

QI 1    QI 2    QI 3    QI 4

Quality Indicators

- ■ 1st Quarter
- ■ 2nd Quarter
- ■ 3rd Quarter

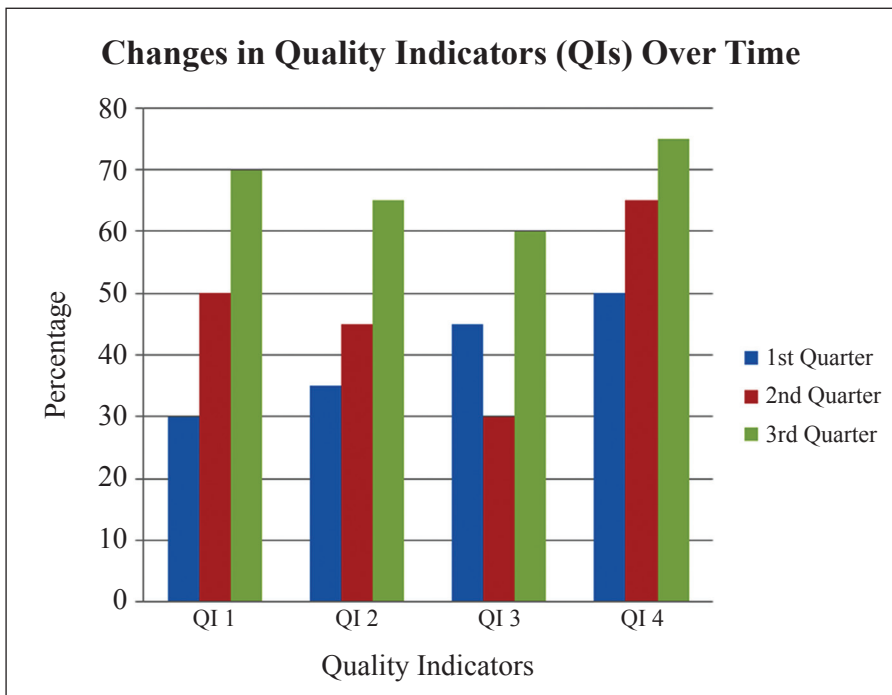**QUALITY ASSURANCE AND STANDARDIZATION DIVISION
MINISTRY OF HEALTH, BHUTAN
2012**

Manual on Benchmarking for Quality Improvement of Health Care Services
Quality Assurance and Standardization Division
Ministry of Health
Kawang Jangsa
Thimphu 11001
Bhutan

This publication contains the collective view of various stakeholders from Ministry of Health.

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## ACRONYMS

| | |
|---|---|
| **BHU** | Basic Health Unit |
| **BMHC** | Bhutan Medical and Health Council |
| **CME** | Continuing Medical Education |
| **CQI** | Continuous Quality Improvement |
| **DHO** | District Health Officer |
| **EQAS** | External Quality Assessment System |
| **ER** | Emergency Room |
| **FYP** | Five Year Plan |
| **GNHC** | Gross National Happiness Commission |
| **HAMT** | Hospital Administration and Management Transformation |
| **HMIS** | Health Management and Information System |
| **HMT** | Hospital Management Team |
| **HTQC** | Health Technology and Quality Committee |
| **IQAS** | Internal Quality Assessment System |
| **KPI** | Key Performance Indicator |
| **MDG** | Millennium Development Goal |
| **MoH** | Ministry of Health |
| **NEQAS** | National External Quality Assessment System |
| **NITMS** | National Institute for Traditional Medicine Services |
| **NRH** | National Referral Hospital |
| **OPD** | Out-Patient Department |
| **OT** | Operating Theatre |
| **PHC** | Primary Health Care |
| **QA** | Quality Assurance |
| **QAG** | Quality Assurance Group |
| **QA&S** | Quality Assurance and Standardisation |
| **QASD** | Quality Assurance and Standardisation Division |
| **QC** | Quality Control |
| **QI** | Quality Improvement |
| **QM** | Quality Management |
| **RGOB** | Royal Government of Bhutan |
| **RIHS** | Royal Institute for Health Sciences |
| **SOP** | Standard Operating Procedure |
| **STI** | Sexually transmitted infection |
| **ToR** | Terms of Reference |
| **ToT** | Training of Trainers |

## ACKNOWLEDGEMENTS

This handbook can be used in training or as reference guide for health facility teams, administrators and program managers to improve the programmes and activities that they currently deliver, with the ultimate aim of improving quality of care for the end-users. This is in line with the overall thrust of the Tenth Plan which aims to improve the quality of life of Bhutanese people within the overall development philosophy of Gross National Happiness (GNH).

## FOREWORD

Benchmarking is a performance improvement method that has been used for centuries. Recently, it has begun to be used in the healthcare industry where it has the potential to improve significantly the efficiency, cost-effectiveness, and quality of healthcare services. Performance measurement might seem strange to some organizations, but the concept of measuring and monitoring performance is not new to healthcare facilities. Requirements for public overview of healthcare facilities demand that performance data be collected, analyzed, and monitored for improvement measures, record keeping, and accreditation purposes. As a result, most healthcare facilities already track key productivity indicators. Healthcare facilities will be in better position to assess their performance and share comparative information about performance and operations with other facilities for mutual benefit. Indeed, the greatest value to be gained from all of the performance data that healthcare facilities are gathering may well emerge from the process of comparing that data. Healthcare facilities often are similar in the complexity of their organizational structures, operational and clinical services, and corporate missions. That similarity will benefit healthcare facilities as they begin benchmarking efforts.

The spirit that underlies any benchmarking initiative is the desire to learn from and overcome the competition. Benchmarking is about comparing, learning from the outcomes of such comparison, and consequently learning how to do the job better. Its purpose is to help an organization by initiating changes in performance. It consists of setting goals through an evaluation of past performance and current need, and then going after those goals.

I am pleased to introduce and share this manual on benchmarking with all the health workers. I would like to express my appreciation to all those involved in publication of this manual. More so, I urge all the health care professionals to use this manual to compare and improve upon the services that you deliver in your health care facility. Lastly, I hope that this manual would contribute in enhancing the productivity and efficiency of quality health care services to the people of Bhutan.

(Nima Wangdi)
   Secretary
Ministry of Health

# 1. INTRODUCTION

## 1.1. Benchmarking in healthcare facilities

Business survival is increasingly difficult in the contemporary world. In order to survive, organizations need a commitment to excellence and a means of measuring that commitment and its results. Benchmarking provides one method for doing this. Benchmarking is a performance improvement method that has been used for centuries. Recently, it has begun to be used in the healthcare industry where it has the potential to improve significantly the efficiency, cost-effectiveness, and quality of healthcare services.

In the contemporary world, business survival is defined as long-term economic viability achieved through excellent performance. To maintain the excellence needed for survival, however, business enterprises must find a way of consistently measuring and improving their performance.

Performance measurement might seem strange to some organizations, but the concept of measuring and monitoring performance is not new to healthcare facilities. Requirements for public overview of healthcare facilities demand that performance data be collected, analyzed, and monitored for continual improvement of services. As a result, most healthcare facilities already track key productivity indicators. Healthcare facilities will be in an even better position to assess their performance and share comparative information about performance and operations with other facilities for mutual benefit. Indeed, the greatest value to be gained from all of the performance data that healthcare facilities are gathering may well emerge from the process of comparing that data. Healthcare facilities often are similar in the complexity of their organizational structures, operational and clinical services, and missions. That similarity will benefit healthcare facilities as they begin benchmarking efforts.

The spirit that underlies any benchmarking initiative is the desire to learn from and overcome the competition. Benchmarking is about comparing, learning from the outcomes of such comparison, and consequently learning how to do the job better. Its purpose is to help healthcare facility by initiating changes in performance. Its goals are to make advances in performance so that a healthcare facility performance better and thrives in a competitive environment. The process is relatively simple. It consists of setting goals through an evaluation of past performance and current need, and then going after those goals.

The extensive measuring and comparing involved in the modern benchmarking process focuses on a different battle, however, namely finding and closing performance gaps and further improve in delivery of services. The potential for performing better is in itself a prime motivator for change and urgency to find solutions that speed delivery, increase access, decrease costs, and satisfy customers has grown. Benchmarking within the healthcare facility offers the opportunity for a quick response to that need.

## 1.2. How to use this manual

This manual explains how to undertake benchmarking of data on quality indicators for monitoring Continuous Quality Improvement (CQI). It is aimed at Quality Assurance Teams (QAT)/Hospital Administration and Management Transformation (HAMT) teams at all levels of the healthcare services in Bhutan.

The process of benchmarking requires data collection by relevant health staff and the entry of that data into spreadsheets so that the quality indicators can be monitored on a regular basis as a means of assessing how effective are the Action Plans for quality improvement.

The manual can be used by all staff to provide an overview of the process of benchmarking for quality improvement. Appropriate section should be studied by particular groups of staff who have specific responsibility for that activity. For example the section on data collection & entry (3.2 and 3.3) should be studied carefully by those staff who will be involved in entering data from quality indicator collection into the EXCEL spreadsheets. The section (3.6) on Reporting Formats and frequencies will be of special interest to the Regional Quality Assurance, HAMT Cluster Focal person, Data Assistant and Medical Record Technician (MRT). Section 3.7 describing a dashboard for National Priorities for Quality Improvement will be of particular importance to the senior managers with responsibility for improving quality and performance of the healthcare services.

Anyone involved in health facility QA/HAMT teams would do well after studying this manual.

## 1.3. What is continuous quality improvement (CQI)?

The National Health Policy states that the aim of the health policy is "Every client receives safe, appropriate, and effective quality care, and service provider's work together to contribute to a high-performing health system in line with the national health policy ultimately realising the Gross National Happiness (GNH)". The overall thrust of the Tenth 5 Year Plan is to improve the quality of life of the people within the overall development philosophy of GNH.

Quality means different things to different people. Many countries struggle in their quest to improve quality in health care because they are unable to quantify quality and identify the extent to which it is being met. This can only be achieved by having:

- Appropriate definitions of quality in health care
- A range and adequacy of methods for measuring and improving quality Evidence-based standards
- Strategies for implementing a programme to assure quality of service delivery for its ultimate beneficiaries.

If a definition for quality of care is to be used by managers and professionals to guide them in their QA activities or by patients to inform them of what to expect, it should be simple, precise, explicit, scientific in nature and robust. The definition of quality of health care in Bhutan is built on the following principles:

- Achievement of standards, indicators and targets
- Consideration of client needs and expectations
- Consideration of available resources (financial, human and time)
- Recognition that there is always room for improvement
- Regular review of quality levels, targets, indicators and standards
- Recognition of government policy

A fitting definition of quality of care provided by the Royal Government of Bhutan's (RGoB) health services is:
*"The ability of our health service to meet the needs of our service users, equitably and acceptably, within the resources available and in line with the policies of the Royal Government of Bhutan".*

Continuous Quality Improvement (CQI) is the systematic application of priority setting, monitoring quality indicators and implementing Action Plans for quality improvement. This requires that Quality Assurance and Quality improvement are embedded into the whole of the Health Service from top to bottom.

The practical steps required to achieve this are:

### 1.3.1. Ministry of Health (National Level)

1.3.1.1. QAG (Quality Assurance Group) comprises of relevant stakeholders, responsible for reviewing and focusing the quality of healthcare services. It should be now integrated into the management structure of the MoH such as the responsibility of the High Level Committee (HLC) to make review of quality as a focus of the meeting every three months

1.3.1.2. Make an Annual Plan for quality improvement

1.3.1.3. Select three quality issues as National Priorities for quality improvement

1.3.1.4. Define quality indicators for each of these priorities that can be measured at health facility level

1.3.1.5. Require Heath Facilities to make quality improvements on these priorities and to monitor their own quality indicators

1.3.1.6. Monitor Quality Indicators every three months through a "dashboard" of Quality Indicators. This can be done through the HLC

1.3.1.7. Identify poorly performing health facility and support them in extra efforts to improve the quality of their services

1.3.1.8. Require the QASD to produce an Annual Report on the Quality of Healthcare service in Bhutan, which can form a section of the Annual Health Report or news letter or news magazine, and the Dashboard of Quality Indicators can be used in the National Statistics Report section on Health

1.3.1.9. Disseminate information on quality of healthcare service to health staff and the general public

1.3.1.10. Identify an Annual Budget for QA and quality improvement

1.3.1.11. Engage in the International and Regional drive towards Health Care quality improvement through membership of the International Society for Quality in Health Care (ISQua) and National Accreditation Board for Hospitals and Healthcare Providers (NABH)

### 1.3.2. Regional health facility level

1.3.2.1. Make a Regional Annual Plan for quality improvement following the MoH Annual Plan

1.3.2.2. Train health facility staff in QA and quality improvement in line with the training they have received at the Training of Trainers Workshop

1.3.2.3. Complete the "dashboard" of Quality Indicators every three months for Health Facilities in their own Region

1.3.2.4. Use the Regional Dashboard to identify poorly performing health facilities and support them in improving their performance

1.3.2.5. Identify good practice in quality improvement in their Region and disseminate to other health facilities

1.3.2.6. Produce an Annual Report on Quality of Health Care in their own Region

### 1.3.3. District & Geog health facility level

1.3.3.1. Make a Facility Annual Plan for quality improvement following the MoH and Regional Annual Plans

1.3.3.2. Train health facility staff in QA and quality improvement

1.3.3.3. Complete the "dashboard" of Quality Indicators every three months for their own Health Facility

1.3.3.4. Produce an Annual Report on Quality of Health Care in their own health facility.

1.3.3.5. Identification of the local priority area

# 2. QUALITY INDICATORS AND BENCHMARKING

## 2.1. What is a quality indicator?

A Quality Indicator is a simple tool for illustrating the level of quality achieved by a service in regard to a particular aspect of quality. For example, we all recognize that leaving patients waiting in Out Patient Department (OPD) clinics causes inconvenience to them and is seen as poor quality. Hence any simple measure of waiting time provides us with a way on monitoring quality of this aspect of OPD service delivery. However it is important that we use indicators that are accurate and reliable when comparing quality between facilities and over time (from one quarter to the next). We also need the indicators to be efficient so that staff don't spend all their time gathering data on quality rather than delivering a good quality service. Finally it's important that staff can relate the indicator to the aspect of quality it is designed to monitor, and therefore can easily make use of it in their efforts to improve quality through quality improvement Action Plans.

**Good quality indicators are SMART!**

*"SMART INDICATORS"*

- *Specific*

- *Measurable*

- *Attainable*

- *Reliable*

- *Timely*

To be really useful for assisting the process of Continuous Quality Improvement, quality indicators need to:

- Reflect quality issues that are of concern to both providers and users of services

- Should be "Well defined"

- Measurable in a reliable way

- Truly reflect the aspect of quality that they refer to

Experience has shown that a single indicator is unlikely to capture all the important features of a quality issue.

## 2.2.  What is benchmarking?

Benchmarking is a process for finding, adapting, and consistently applying best practices and implementing them to become the best of the best. The concept of learning from others' experience is perhaps as old as human society; however, the first widely publicized use of the term "benchmarking" was by the Xerox Corporation in Rochester, New York, USA in the 1970s. It was defined by Xerox as "the continuous process of measuring products, services, and practices against the company's toughest competitors or those companies renowned as industry leaders". In general, the two key concepts in benchmarking are the idea of systems or processes and the concept of "benchmarks."

Perhaps the best way to understand this idea is to see Benchmarking as the practice of being humble enough to admit that someone else is better at something and being wise enough to try and learn how to match and even surpass them at it.

## 2.3.  The benchmarking process

Productive ideas and methods are not limited to a single industry. Cross-industry benchmarking also can offer excellent opportunities for borrowing good ideas and processes. But finding suitable partners with applicable ideas from other industries can be time consuming and costly. For example, calling a fire department to discuss the process of bringing both equipment and manpower to an emergency site can generate a number of exciting ideas, but finding the

"best performing" fire department would take long hours of research. Because benchmarking is an ongoing effort, working first within the healthcare facility for short- and medium-term solutions will help position a facility for later cross-healthcare initiatives.

Information about the exact steps involved in the benchmarking process varies its degree of detail depending on its source. However, the degree of detail in the individual steps will not, in itself, add to the success of the benchmarking effort. Success rests with the basics, and those basics are identified in the steps listed below.

### 2.3.1.  Planning

The planning phase of a benchmarking effort involves three steps. They are (1) identifying exactly what will be benchmarked; (2) identifying the best competitors as potential benchmarking partners, and (3) determining what method will be used to collect data for comparison.

Success in benchmarking is primarily a function of these steps in the process, which relate to obtaining and using the right comparative data. In fact, different approaches to the benchmarking process can result as a function of just when data enters the process chronologically. Bench markers either can determine the health facilities and topics before sharing data and information, or they can share data and information first in order to determine health facilities and topics.

When bench markers study and use internal data to determine benchmark topics first, the whole process really begins with defining, measuring, and tracking specific internal indicators. The healthcare facility can draw internal information from its own quality assurance activities, financial management systems, budget reports, productivity reports, pay-roll reports, or any other internal information sources that maintain reliable records of performance. Most healthcare facilities have already defined and currently track productivity indicators such as clinical, quality, and functional indicators. Internal information allows bench markers to understand a healthcare facility performance more completely, which then makes possible a comparison with the performance of other healthcare facilities.

Alternatively, bench markers can obtain and use external data to determine benchmark topics and select benchmark health facilities. They begin by compiling external information developed primarily from comparative

databases and, secondarily, from studies, reports, publications, research, and other published sources. The value of this approach is in the fact that those who select the health facilities before studying comparative information may discover that they have not selected the best performers for their benchmarking.

### 2.3.2. Analysis
The steps in the analysis phase of a benchmarking effort are (1) analyzing collected data to identify competitive gaps, and (2) projecting future performance levels and changes in the competitive gap based on those performance levels.

Reviewing internal and external information for comparative differences and practices will allow bench markers to identify performance gaps and performance drivers. In so doing, bench markers will discover the best opportunities for improvement. The desirable process or function used by the best performer may not be transferable, however. Only through a thorough understanding of their own health facility will bench markers know what changes are appropriate or feasible. After the appropriate goals and changes are identified, the process of change can begin.

### 2.3.3. Integration
Once bench markers have identified the needed parameters of change for their health facilities, they must integrate their findings into the health facility organization. They can do this by (1) communicating their bench-marking findings back to their health facilities, (2) writing a set of objectives to establish functional goals for the health facility, and (3) developing an action plan to reach the objectives and goals.

Once common objectives, goals, and action plans are in place, an health facility can initiate the active process of change.

### 2.3.4. Action
The last phase of the benchmarking process involves initiating the desired changes themselves. The steps include (1) implementing the action plans and monitoring their progress, and (2) recalibrating benchmarking measurements.

Successful bench marking is establishing accountability and a specific time frame for completion of the change process ensures success. Without them,

change and its benefits can lag. If bench markers use reliable internal and external information to develop their analysis and choose improvements, then the change process has a sound basis and can move forward with less resistance and greater chance for success. Further monitoring will ensure all of the integrated change will bring anticipated improvements.

Nothing remains the same in a competitive environment, however, and benchmarking efforts must continue if a health facility is to benefit fully from them. In recalibrating their benchmarking efforts, health facility review their benchmarking process to verify that they remain the best performer. Alternatively, health facilities can seek another health facility and set new goals.

## 3. LINKED BENCHMARKING SYSTEM FOR MONITORING QUALITY INDICATORS

### 3.1. What indicators should be covered by the benchmark system?

Collecting accurate and reliable data takes time and resources. Therefore the number of indicators on which data should be collected each year should be limited to those that are essential and critical for monitoring the quality of services on the quality priorities selected in the Annual Planning Cycle. Given what has been said above that "a single indicator is unlikely to capture all the important features of a quality issue" then even for one quality priority there may be four or five indicators required. It has been proposed that six national priorities should be focused on each year. Therefore a minimum data set of around 30 indicators will be required. The specific indicators should be identified according to the criteria set in Annexure 5.2 (Defining the quality indicators for quality priorities).

These criteria are:

*A title for the Quality Indicator: This should reflect the quality concern being monitored (e.g. Waiting time in OPD)*

*A definition of the indicator: How do we define waiting time in OPD (e.g. time between the patient's appointment and the patients seeing the Doctor)*

## 3.2. Data collection: how often, data forms, data collectors

The essence of health service quality monitoring is to obtain an accurate picture of what changes are happening to aspects of the quality of service delivery. To do this it is important that we use indicators that are accurate and reliable when comparing quality between facilities and over time (from one quarter to the next). We also need the indicators to be efficient so that staff don't spend all their time gathering data rather than delivering quality healthcare service. There are many indicators that relate to quality in the HAMT Key Performance Indicators (KPIs) set. Therefore these indicators can already be used for relevant aspect of service quality. For example to get the patient's perception of the service quality and patient overall satisfaction, it is recommend that surveys be carried out on patients' experience of their use of the health facilities through In-patient and Out-patient surveys. Example questionnaires for these Exit Surveys are given in Annexure 5.7 & 5.8. It seems equally important that staff views on quality and their satisfaction with the performance of the facilities should be monitored. In order to undertake such a survey, example survey questionnaire is provided in Annexure 5.9.

A quality indicator is only as good as the data it depends upon and for the data to be of good quality requires good data collectors. Hence training in questionnaire administration is vitally important for monitoring quality.

Finally it is important that staff who are delivering the services within the facilities can relate the indicators which are monitored to aspects of quality of the service they provide and therefore can easily make use of data collected in their efforts to improve quality through quality improvement Action Plans.

## 3.3. Data entry and data analysis

Data entry is the process of typing data into the spreadsheet that will analyse the indicators and provide the benchmarking graphs. Staff entering data into these spreadsheets should be trained in EXCEL data entry, including checking for errors by double entry. Section 3.4, the basic information is provided to allow QA/HAMT teams, Data Assistant and MRT to construct their own purpose built Excel spreadsheets for the collection entry and analysis of specific indicator measures. In the next section 3.5 provides information on tailor made spreadsheets for analysing data from patient surveys and from key KPI indicators.

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## 3.4. Purpose built excel spreadsheets

Open a new EXCEL spreadsheet with a relevant name, for example "Central Regional Referral Hospital (CRRH), Gyalegphu OPD chambers 2011"

On sheet 1 type the name of the KPI data that is being analysed in the first row of the sheet. E.g. "CRRH, GAYLEGPHU DATA FOR CHAMBER 3 WAITING TIMES 2011"

**Step 1.** On first sheet copy the data for the first chamber for each month that data has been collected. *For example* in row 4 column B enter "July 2011", in row 4 column C enter "Aug 2011", and in row 4 columns D enter "Sept 2011"

Copy the data from your KPI spreadsheets into the relevant columns under these headings. This is what your spread sheet should look like now.

| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | GELEPHU DATA FOR CHAMBER 3 WAITING TIME | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | Jul-11 | Aug-11 | Sep-11 | |
| 5 | | 3 | 21 | 33 | |
| 6 | | 8 | 33 | 40 | |
| 7 | | 7 | 11 | 45 | |
| 8 | | 1 | 21 | 33 | |
| 9 | | 8 | 26 | 11 | |
| 10 | | 21 | 29 | 20 | |
| 11 | | 20 | 47 | 12 | |
| 12 | | 4 | 26 | 38 | |
| 13 | | 24 | 28 | 37 | |
| 14 | | 33 | 33 | 42 | |
| 15 | | 32 | 40 | 36 | |
| 16 | | 12 | 35 | 64 | |
| 17 | | 22 | 40 | 26 | |
| 18 | | 4 | 24 | 42 | |
| 19 | | 17 | 49 | 53 | |
| 20 | | 32 | 27 | 50 | |
| 21 | | 26 | 46 | 87 | |

**Step 2.** Now for the data in each month's column, calculate the percentage of patients waiting less than the MoH recommended target (in minutes). To do this we use the **COUNTIF** function available in **EXCEL.**

Let's assume for the purpose of this example that the target is 30 minutes and the data for July are contained in cells B5 to B69.

Place the cursor in the cell at the bottom of the data column for July 2011, which is cell B70, then press the function key *"fx"* and select ***COUNTIF*** function.

In the "Range argument" highlight the column of data for July 2011 and press the *"Enter"* key

In the "Criteria argument" type *"< 30"*.
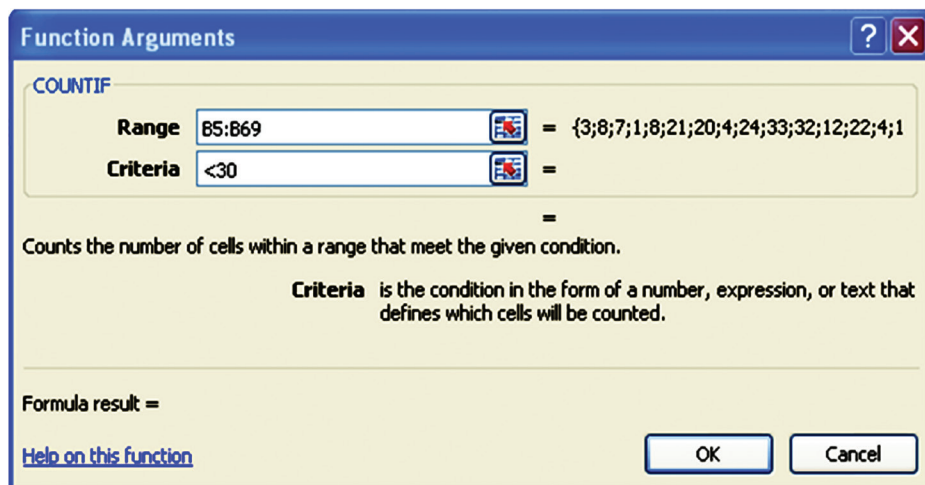


This will give the number of patients waiting less than 30 minutes in that column of data.

**Step 3.** For the purpose of providing an indicator measure it is sensible to turn this into a percentage of patients waiting less than 30 minutes. This we can do by multiplying the number by 100 and dividing by the total number of patients in that column.

For example if the data on waiting time are contained in cells 5 to 69 of column B then we type =100*(COUNTIF (B5:B69,"<30")/65), where 65 is the number of patients in that column of data.

**Step 4.** Then in row 3 column G type "Percentage of patients waiting < 30 minutes." Copy the month labels in row 4 columns B to D into row 4 columns G to I. This is what the spreadsheet should like at this stage

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| L17 | | | $f_x$ | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I | J |
| 1 GELEPHU DATA FOR CHAMBER 3 WAITING TIMES 2011 | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | Percentage of patients waiting < 30 mins | | | |
| 4 | Jul-11 | Aug-11 | Sep-11 | | | Jul-11 | Aug-11 | Sep-11 | |
| 5 | 3 | 21 | 33 | | | | | | |
| 6 | 8 | 33 | 40 | | | | | | |
| 7 | 7 | 11 | 45 | | | | | | |
| 8 | 1 | 21 | 33 | | | | | | |
| 9 | 8 | 26 | 11 | | | | | | |
| 10 | 21 | 29 | 20 | | | | | | |
| 11 | 20 | 47 | 12 | | | | | | |
| 12 | 4 | 26 | 38 | | | | | | |
| 13 | 24 | 28 | 37 | | | | | | |
| 14 | 33 | 33 | 42 | | | | | | |
| 15 | 32 | 40 | 36 | | | | | | |
| 16 | 12 | 35 | 64 | | | | | | |
| 17 | 22 | 40 | 26 | | | | | | |

**Step 5.** Next, under each month label, copy the data from the last cell of the corresponding relevant column of data in columns B, C and D. The simple way to do this is to type "=" in the appropriate cell and click on the cell which contains the value calculated in step 3, for example for July this cell B70. So the entry for the cell under July 2011 in row 8 should look like this "=B70".

| | Alignment | | | | Number | | | | St |
|---|---|---|---|---|---|---|---|---|---|
| $f_x$ | =B70 | | | | | | | | |
| D | E | F | G | H | I | J | |
| 3 WAITING TIMES 2011 | | | | | | | |
| | | | | | | | |
| | | | Percentage of patients waiting < 30 mins | | | | |
| Sep-11 | | | Jul-11 | Aug-11 | Sep-11 | | |
| 33 | | | 76.92308 | 65.21739 | 45.12195 | | |
| 40 | | | | | | | |
| 45 | | | | | | | |

Repeat this process for "Aug" and "Sept" columns.

This is what the spreadsheet should look like now:

| Clipboard | | Font | | | Alignment | | Number | | | St |
|---|---|---|---|---|---|---|---|---|---|---|

E17 · *fx*

| | A | B | C | D | E | F | G | H | I | J |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | GELEPHU DATA FOR CHAMBER 2 WAITING TIMES 2011 | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | Percentage of patients waiting < 30 mins | | | |
| 4 | Jun-11 | Jul-11 | Aug-11 | Sep-11 | | | Jun-11 | Jul-11 | Aug-11 | Sep-11 |
| 5 | 33 | 1 | 53 | 25 | | | 57.5 | 68.42105 | 57.77778 | 41.37931 |
| 6 | 19 | 4 | 45 | 56 | | | | | | |
| 7 | 30 | 2 | 30 | 48 | | | | | | |
| 8 | 47 | 4 | 56 | 4 | | | | | | |

**Step 6.** Now we are ready to draw the graph of waiting time for months July to Sept 2011. From the menu at the top of the spreadsheet select the Insert tab. Select the Column option and choose the first chart design which is 2D clustered column.

Then select the range of cells that you wish to display, in this case these are G3 to I5. Press "ENTER" and the graph will automatically appear. As illustrated here:

| Percentage of patients waiting <30 mins | | | A |
|---|---|---|---|
| Jul-11 | Aug-11 | Sep-11 | |
| 76.9231 | 65.2174 | 45.122 | |

**% of patients waiting less than 30 mins in chamber 3**

Jul-11   Aug-11   Sep-11   ■ Series1

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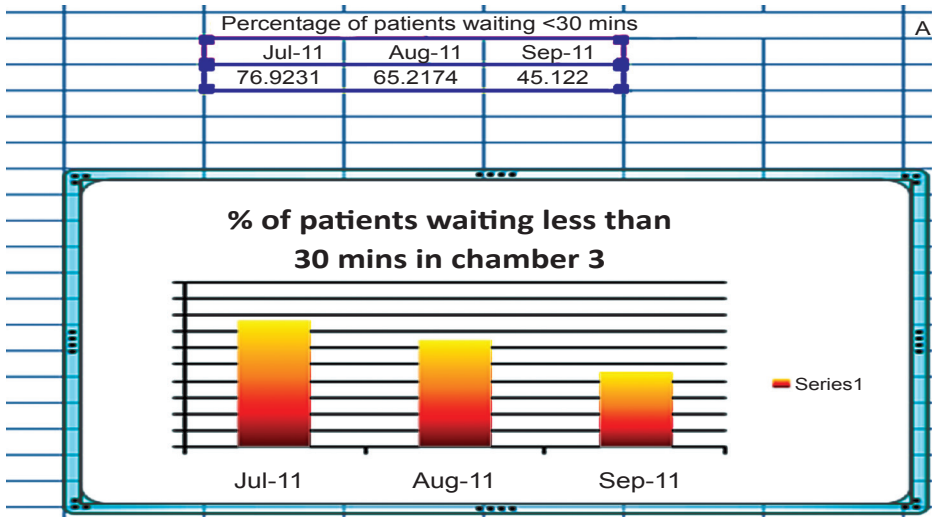
You can drag this graph to anywhere in the worksheet and enlarge it as desired.

Now you can go on to develop more worksheets for other Indicators. Have fun experimenting with the design of the charts (such as changing colours and in fills, adding chart titles and text boxes, etc.).

## 3.5. Tailored excel spreadsheets

In order to facilitate the work of QA/HAMT teams, Data Assistant and MRT at District and Regional levels in analysing the data from quality indicator data collection, a number of tailor-made spreadsheets have been designed. These cover:

- OPD Out-patient Exit Survey data

- Hospital In-patient Survey data

- Key KPI indicators from the HAMT which most directly reflect quality concerns.

For these Excel spreadsheets the work of the QA/HAMT team is limited to data entry of the raw data only. Internal links between the worksheets of the Excel workbook will automatically produce the measure of the relevant quality indicators, expressed as a percentage such that increases in the quality indicator reflect increasing quality of service delivery.

These EXCEL files are available directly from QASD at MoH, and it is anticipated that they will soon be available for downloading from the MoH website – www.health.gov.bt .

## 3.6. Reporting formats and frequencies

Using the techniques described in this manual allows QA/HAMT teams to report their data in a graphical fashion and makes the need for laborious written reports superfluous. By graphing the data from each round of data collection in a continuous way their reports will build an ongoing picture of the way in which performance and quality are changing and will guide QA/HAMT teams and their facility staff to prioritising those aspects of service delivery where performance and quality are relatively poor.

The following charts from CCRH, Gaylegphu provide a good illustration.

**Percentage of patients waiting less than 30 mins by month and chamber**
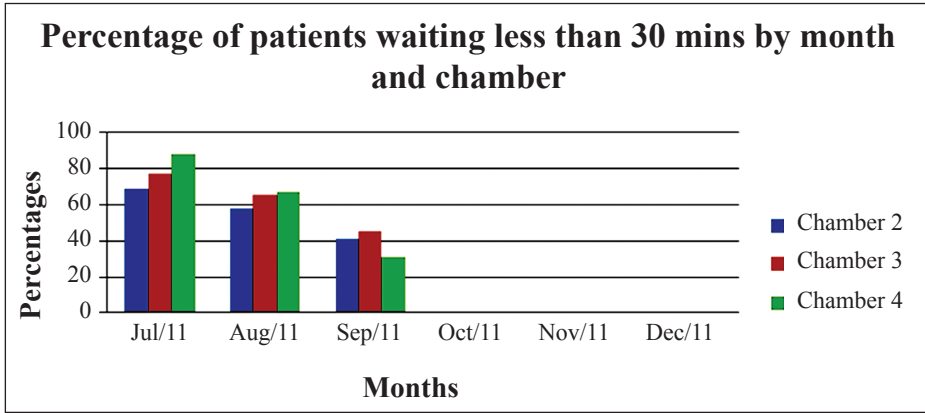


We can immediately see that waiting is becoming an increasing problem since fewer patients are being seen within 30 minutes in succeeding months from July to Sep 2011.

At the regional level the HAMT/QA team can collate the reports into a graph that allows comparisons across all the regions hospitals and other health facilities.



Quality Assurance and Standardization Division, Ministry of Health | Linked Benchmarking System for Monitoring Quality Indicators

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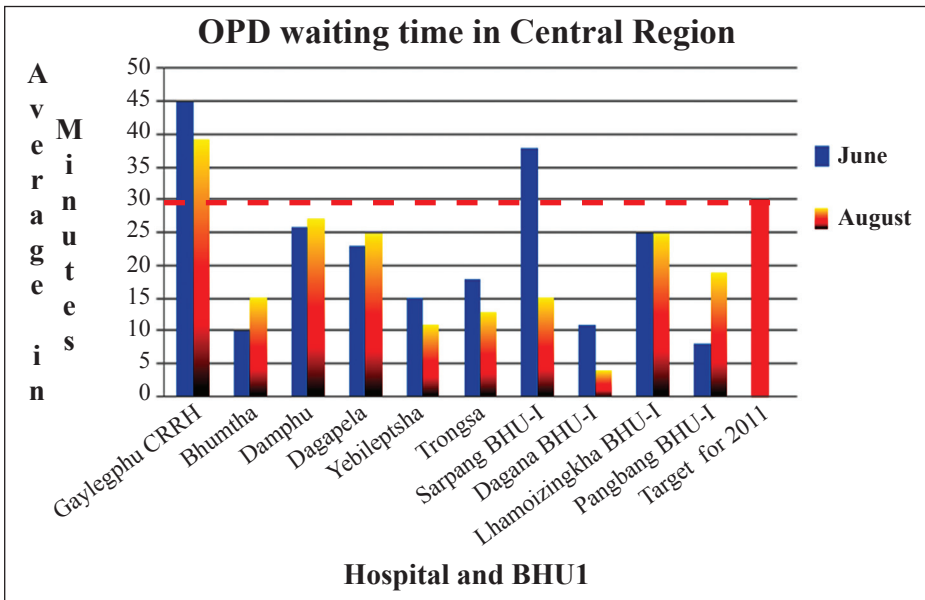
Here we can see at a glance that the majority of facilities are improving and meeting the national target, CRRH, Gaylegphu still needs to make greater efforts if it is to meet the target. Needless to say it is more difficult for those larger hospitals such as CRRH, Gaylegphu to reduce waiting time and this may bring us to the conclusion that targets should be sensitive to workload at each facility. It is only by using that data charted in such a way that these analyses of the quality problems become possible. Again this demonstrates the importance of using data to understand quality issues rather than concentrating solely on data collection.

For the purpose of benchmarking it is better to collect good data on a quarterly basis rather than unreliable data more frequently. All indicators of organisational performance demonstrate random fluctuations from one week to the next. Therefore, looking at trends in indicators on a weekly or monthly basis may simply reflect these random variations rather than meaningful changes in performance and quality.

## 3.7.  A dashboard for national priorities for quality improvement

For those managers at the top of the MoH such as the Secretary of Health it is difficult for them to keep up with a large number of charts on numerous indicators as a means of keeping their finger on the pulse of quality improvement and quality problems in the health services of Bhutan. The top level managers require a simple way of seeing the levels of quality on key indicators across the regions and overall across the nation. The simple dashboards are developed from the data of the graphs for each Region. Such a dashboard gives a quick snapshot of regional and national performance on a key indicator. In the diagram below for example we can see the percentage of facilities meeting the target set for waiting time by region and across the nation as a whole.
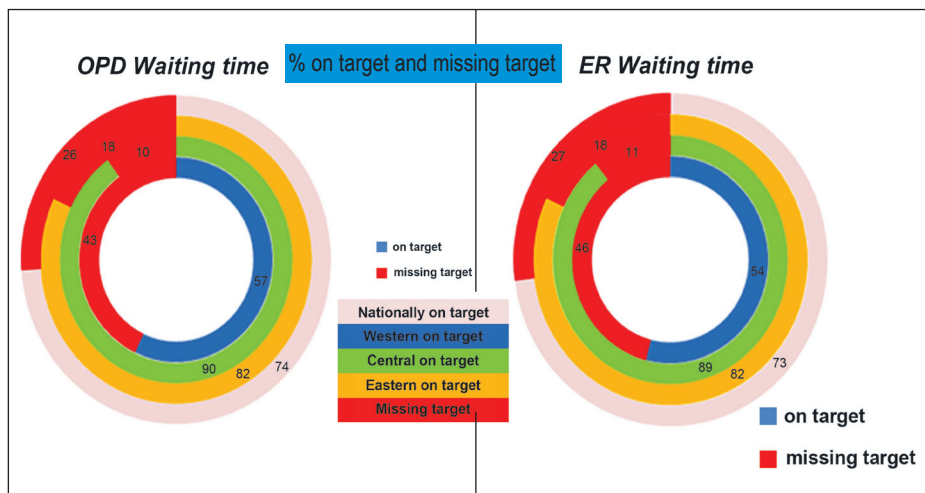
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## 5. ANNEXURE

### 5.1. Annexure: Some key quality indicators from the HAMT KPI set

| KPI code | KPI (Assets) | Definition |
|---|---|---|
| A1 | Cost of consumables per patient | = Total cost of the consumables used across all the assets in the health facility/ Total number of patients attended (inpatient + outpatient) |
| OP1 | Waiting time by time of the day | = Time gap between a patient's entering and leaving the health facility, monitored in 3 parts depending upon the time of entry: morning (9-11 am), noon (11 am-1 pm) and afternoon (1-3 pm) |
| OP4 | Unavailability of Essential drugs | = Number of instances when the health facility is not able to serve an essential drug to a patient, where instance is an event when a patient has to go back without even giving the substitute of the out of stock drug |
| OP8 | Lab test wastage | = (Number of patients not collecting a lab test report/ Total number of lab test reports generated)x100 |
| OP10 | Percentage of patients satisfied | = (Number of survey forms that carry a satisfactory rating from patients/ Total number of filled survey forms)x100 |
| W1 | Hospital infection control | = Number of infections detected in the swab lab tests |
| ER1 | Average emergency response time for consultation during day and night | = Time gap between an emergency patient's reporting to the health facility and him/ her seeing a consultant, monitored in 2 parts, during day (10 am-12 am) and night (12 am-10 am) |

## 5.2. Annexure: Defining the Quality Indicators for Quality Priorities

- ▪ *Indicators for Continuous Quality Improvement*
    - ✓ Name of indicator

- ▪ *Definition*
    - ✓ How is the indicator defined?

- ▪ *Indicator*
    - ✓ What data is required for monitoring this indicator?
    - ✓ How is the data collected for this indicator?
    - ✓ How often is the data collected?
    - ✓ What should be the sample size?
    - ✓ Who collects the data?

- ▪ Analysis
    - ✓ How will data be analyzed? Normally this will be by calculating a proportion (from a numerator and a denominator) and then charted as a bar-graph with a baseline and Subsequent measures indicated as Quarter 1 (Q1), Quarter 2 (Q2), and Quarter 3 (Q3) etc.

**Changes in QIs 2011**

A bar graph titled "Changes in QIs 2011" with the y-axis labeled "Percentages" (0 to 100) and the x-axis labeled "Indicator" showing Indicator 1, Indicator 2, and Indicator 3. Legend: Baseline, Q1, Q2, Q3.

- Indicator 1: Baseline 40, Q1 50, Q2 60, Q3 75
- Indicator 2: Baseline 30, Q1 35, Q2 40, Q3 50
- Indicator 3: Baseline 20, Q1 30, Q2 40, Q3 50
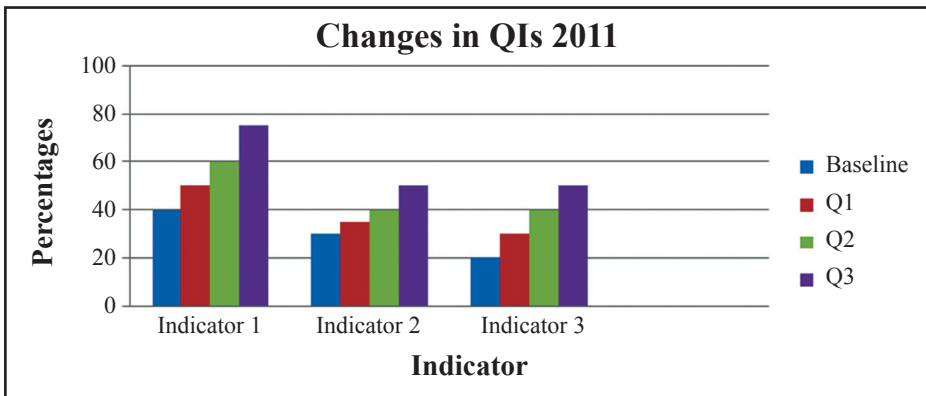
- *Interpret*

  ✓ Comments on how to interpret the graphs. Are changes due to quality improvement or other factors?

- Action

  ✓ What follow-up actions should now be taken?

- *Responsible*

  ✓ Who should be responsible for follow-up actions?

  An Example of a Quality Indicator: Waiting Time in Hospital OPD clinic

- *Definition*

  ✓ **Waiting time A:** Time between the patient's appointment and the patient actually seeing Doctor/Assistant Clinical Officer

  ✓ **Waiting time B:** Consultation time (time spent in the consultation room with the Doctor/Assistant Clinical Officer).

  ✓ **Waiting time C:** The overall time that the patient spends in the hospital

- *Data*

  ✓ Obtained from appointment slip/prescription.

  ✓ Hospitals sample size = 100 every month,

- *Analysis*

  ✓ Waiting A = Percentage of patients who are seen by Doctor/Assistant Clinical Officer within 30 minutes of appointment.

  ✓  Waiting B = % of patients spending 5-10 minutes in consultation

  ✓  Waiting C = % of patients spending < 2hrs in health facility
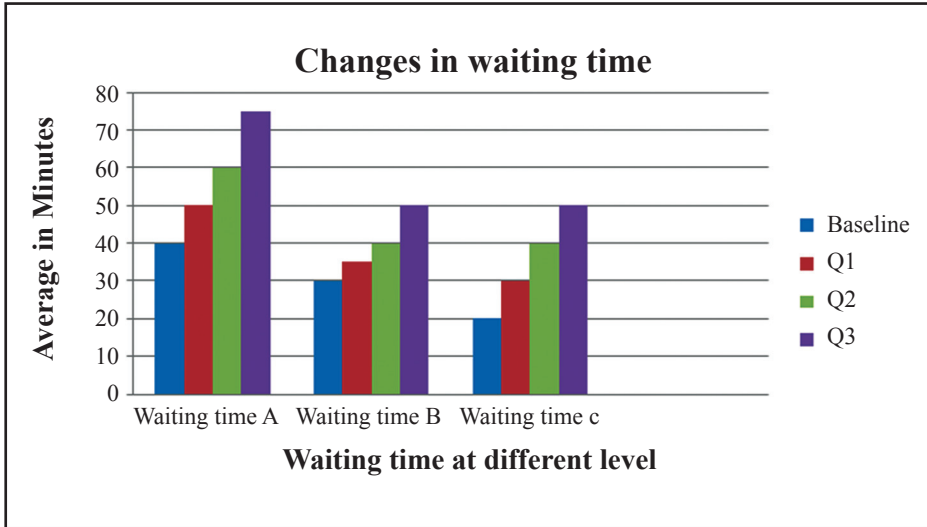


- **Interpret**

  ✓  The data indicate that all three indicators of waiting time are showing improvement over the period of monitoring.

- **Action**

  ✓  Share the data on Waiting Time with the patients, staff and local community

- **Responsible**

  ✓  HAMT teams/Health Facility Management committee.

## 5.3. Annexure: Example of quality improvement tools and its range of steps

| Tool | Quality Improvement Step | | | |
|------|--------------------------|---|---|---|
| | Step 1: Identify | Step 2: Analyze | Step 3: Develop | Step 4: Test & Implement |
| Data Collection | √ | √ | √ | √ |
| Brainstorming | √ | √ | √ | |
| Creative thinking techniques | √ | | √ | |
| Prioritization Tools<br>Voting<br>Criteria Matrices | √<br>√ | √<br>√ | √<br>√ | |
| Expert decision making | √ | √ | √ | √ |
| Flow Chart | √ | √ | √ | √ |
| Cause and Effect Analysis | | √ | | |
| Statistical & data presentation<br>Bar and Pie Chart<br>Run Chart | √<br>√ | √<br>√ | | √<br>√ |
| Benchmarking | √ | | √ | |
| QA Story Telling | √ | √ | √ | √ |

## 5.4. Annexure: Example of quality improvement tools and its uses

| Tools | Use |
|---|---|
| Data collection | - Identifying and analyzing problems<br>- Developing and testing, implementing solutions<br>- Demonstrate the effectiveness of interventions<br>- Maximizes the usefulness of QI tools |
| Brainstorming | - A group process used to generate a large number of ideas about specific issues in a nonjudgmental environment<br>- Generate ideas and insights<br>- Draw experiences of each member<br>- Creative ideas have been suppressed in the group |
| Voting | - A quick and efficient way to make a decision<br>- When there are quite and dominant members<br>- There is an opportunity to follow up with team building exercise |
| Criteria Matrix | - The core area for improvement has been identified but requires further focus<br>- The group agrees that a solution is needed but disagrees about where to start<br>- Resources for testing and implementation are scarce |
| Flowchart | - Understand process<br>- Consider ways to simplify process<br>- Recognize unnecessary steps in a process<br>- Determine areas for monitoring or data collection<br>- Identify who will be involved or affected by the improvement process |
| Cause Effect Analysis Diagram (CEAD) | - Use it at the beginning stage<br>- To broaden thinking about the possible reasons for a problem<br>- To develop hypothesis about the cause of the situation |
| Bar and Pie-charts | - To define or choose problems to work on<br>- Analyzing problems, verifying causes or judge solutions<br>- Present results that compares different groups |
| Run Chart | - Detect trend over time<br>- Determine if there is a change in a process |
| Histogram | - The data are continuous, such as temperature, time or number<br>- There are large amount of data that are difficult to understand in tables |

| | |
|---|---|
| Pareto Chart | - Focus on areas of priority<br>- Prioritize factors and put them in graphical form in a simple and quick manner |
| Benchmarking | - Develop plans to address needs for improvement<br>- Borrow and adapt successful ideas from others<br>- Understand what has already been tried |
| Control Chart | - Monitors the performance of a system<br>- Distinguish between special and common cause of variation<br>- Discover and track variation in processes |

## 5.5. Annexure: Example of data entry format for indicators

| **Hospital Name:** | | | |
|---|---|---|---|
| **Month:** | | **Date:** | |
| *Indicator* | *Number* | *Total Number* | *Percentage* |
| 1. Patient told on ways to prevent HIV transmission | | | |
| 2. Patient told on PMTCT | | | |
| 3. Patient examined | | | |
| 4. Told instructions about illness | | | |
| 6. Told if to return or not | | | |
| 7. Patients who had privacy | | | |
| 8. Received all drugs | | | |
| 9. Received all drugs (from records) | | | |
| 10. Drugs in stock (from records) | | | |
| 11. Staff attitude very good | | | |
| 12. Clinic very clean | | | |

## 5.6.  Annexure: Example of formula reference sheet

| INDICATOR | FORMULA |
|---|---|
| Proportion of patients who were given information on HIV transmission | Number of patients saying they were given information divided by Number of patients interviewed multiplied by 100 |
| Proportion of patients who were informed on ways to prevent HIV transmission from mother to child | Number of patients saying they were informed on PMTCT divided by Number of patients interviewed multiplied by 100 |
| Proportion of patients seen without an unnecessary delay | Number of patients saying they were seen without a delay divided by Number of patients interviewed multiplied by 100 |
| Proportion of patients examined by the doctor/ health care worker | Number of patients examined by the doctor/ HCW divided by  Number of patients interviewed multiplied by 100 |
| Proportion of patients told the diagnosis | Number of patients told diagnosis divided by Number of patients interviewed multiplied by 100 |
| Proportion of patients given instructions about how to take their treatment | Number of patients given instructions by the doctor divided by Number of patients interviewed multiplied by 100 |
| Proportion of patients having privacy during consultation | Number of patients having privacy during consultation divided by Number of patients interviewed multiplied by 100 |
| Proportion of patients receiving all drugs prescribed | Number of patients who received all drugs prescribed divided by Number of patients interviewed multiplied by 100 |
| Proportion of patients perceiving staff attitude to be very good | Number of patients saying staff attitude is very good divided by Number of patients interviewed multiplied by 100 |
| Proportion of patients perceiving clinic to be clean | Number of patients saying clinic is very clean divided by Number of patients interviewed multiplied by 100 |
| Proportion of patients feeling very satisfied with their visit | Number of patients saying they were satisfied divided by Number of patients interviewed multiplied by 100 |

## 5.7. Annexure: OPD Exit Interview

*We are conducting a survey with users of our facility to find out what you think about our services. This will help us to improve quality services to future clients. Your answers are strictly confidential and we thank you for your participation and honesty.*

| Date: | Region: | Hospital: | Sex: M/F | No: |
|---|---|---|---|---|
| 1. How long did you wait before you saw the doctor? [  ] < 30mins [  ] 30mins–1hr [  ] 1-2hrs [  ] > 2hrs | | | | |
| 2. Was there any unnecessary delay before you saw the doctor? | | | [  ] Yes [  ] No [  ] N/A | |
| 3. Did the doctor listen to you to describe your concerns? | | | [  ] Yes [  ] No [  ] N/A | |
| 4. Did the doctor examine you? | | | [  ] Yes [  ] No [  ] N/A | |
| 5. Did you have privacy during your consultation? | | | [  ] Yes [  ] No [  ] N/A | |
| 6. Did the doctor tell you what is wrong with you? | | | [  ] Yes [  ] No [  ] N/A | |
| 7. Did doctors tell you whether or not you need to return? | | | [  ] Yes [  ] No [  ] N/A | |
| 8. Did you have laboratory test? If yes....... Did you receive the laboratory test report? | | | [  ] Yes [  ] No [  ] N/A | |
| 9. Did you receive all the drugs that were prescribed? | | | [  ] Yes [  ] No [  ] N/A | |
| 10. Were you given instructions about how to take your treatment? | | | [  ] Yes [  ] No [  ] N/A | |
| 11. How long did you wait to receive your drugs [  ] < 30mins [  ] 30mins–1hr [  ] 1-2hrs [  ] > 2hrs | | | | |
| 12. Overall, what was the attitude of the staff towards you? | | | [  ] Very good [  ] Fair [  ] Poor | |
| 13. What was the state of cleanliness of the hospital and toilets? | | | [  ] Very good [  ] Fair [  ] Poor | |
| 14. Overall what did you think about the service you received today? | | | [  ] Very good [  ] Fair [  ] Poor | |

15. Are there any other special comments you wish to make?

*Thank you for your time*

## 5.8. Annexure: In-patient exit interview

We are conducting a survey with users of our facility to find out what you think about our services. This will help us to improve quality services to future clients. Your answers are strictly confidential and we thank you for your participation and honesty.

| Date: | Region: | Hospital: | Sex: M/F | No: |
|---|---|---|---|---|
| 1. How long did it take for you to be admitted onto the ward, from arrival at the hospital? <br> **[  ] < 30mins [  ] 30mins–1hr [  ] 1-2hrs [  ] > 2hrs** | | | | |
| 2. When you had important questions to ask a doctor, did you get answers that you could understand? | | | **[  ] Yes [  ] No [  ] N/A** | |
| 3. When you had important questions to ask a nurse, did you get answers that you could understand? | | | **[  ] Yes [  ] No [  ] N/A** | |
| 4. Sometimes in a hospital, one doctor or nurse will say one thing and another will say something quite different. Did this happen to you? | | | **[  ] Yes [  ] No [  ] N/A** | |
| 5. If you had any anxieties or fears about your condition or treatment, did a doctor discuss them with you? | | | **[  ] Yes [  ] No [  ] N/A** | |

| | |
|---|---|
| 6. Did doctors talk in front of you as if you weren't there? | [   ] Yes [   ] No [   ] N/A |
| 7. Did you want to be more involved in decisions made about your care and treatment? | [   ] Yes [   ] No [   ] N/A |
| 8. If you had any anxieties or fears about your condition or treatment did a nurse discuss them with you? | [   ] Yes [   ] No [   ] N/A |
| 9. Were you ever in pain? **If yes............** Do you think the hospital staff did everything they could to help control your pain? | [   ] Yes [   ] No [   ] N/A |
| 10. If your family or someone else close to you wanted to talk to a doctor, did they have enough opportunity to do so? | [   ] Yes [   ] No [   ] N/A |
| 11. Did the doctors or nurses give your family or someone close to you all the information they needed to help you recover? | [   ] Yes [   ] No [   ] N/A |
| 12. Did a member of staff explain the purpose of the medicines you were to take home in a way you could understand | [   ] Yes [   ] No [   ] N/A |
| 13. Did a member of staff tell you about medication side effects to watch for when you went home? | [   ] Yes [   ] No [   ] N/A |
| 14. Did someone tell you about danger signals regarding your illness or treatment to watch for after you went home? | [   ] Yes [   ] No [   ] N/A |
| 15. Did you have privacy on the ward during your hospital stay? | [   ] Yes [   ] No [   ] N/A |
| 16. Overall, did you feel you were treated with respect and dignity while you were in hospital? | [   ] Yes [   ] No [   ] N/A |
| 17. What was the state of cleanliness of the ward and toilets? | [   ] Yes [   ] No [   ] N/A |
| 18. Overall, what was the attitude of the staff towards you? | [   ] Yes [   ] No [   ] N/A |
| 19. Overall what did you think about the service you received in this hospital? | [   ] Yes [   ] No [   ] N/A |

20. Are there any other special comments you wish to make?

*Thank you for your time*

## 5.9. Annexure: Staff Satisfaction Survey

As a valuable member of the hospital, we seek your feedback to continue improving the work environment and quality culture at Hospital.

It will take approximately 15-20 minutes to complete the survey. Your responses will be confidential and you will not be individually identified.

| Sl. No. | **Advancing the Vision** | 1-Low | 2 | 3 | 4 | 5-High | Not Applicable |
|---|---|---|---|---|---|---|---|
| 1 | I understand the vision of the Hospital. | | | | | | |
| 2 | My CMO/MO/Manager/Head provides a clear direction for the organization's future. | | | | | | |
| 3 | I know how my work contributes to the Hospital's overall vision and mission. | | | | | | |
| 4 | I know how my work contributes to the Hospital's overall vision and mission. | | | | | | |
| | My Organization | 1-Low | 2 | 3 | 4 | 5-High | Not Applicable |
| 5 | Hospital provides opportunities for growth and improvement. | | | | | | |

| | | 1-Low | 2 | 3 | 4 | 5-High | Not Applicable |
|---|---|---|---|---|---|---|---|
| 6 | I am proud to say that I work at the Hospital. | | | | | | |
| 7 | I understand how my work contributes to the success of the ward/unit & the organization. | | | | | | |
| 8 | I would recommend Hospital to my friends and family as a good place to work. | | | | | | |
| 9 | My unit has clearly defined objectives | | | | | | |
| 10 | I know what is expected of me in my job | | | | | | |
| 11 | Management encourages all staff in my unit to identify and satisfy customer needs | | | | | | |
| 12 | Management demonstrates commitment in service excellence | | | | | | |
| | **My Job** | 1-Low | 2 | 3 | 4 | 5-High | Not Applicable |
| 13 | My talents and abilities are used well in my current position. | | | | | | |
| 14 | I am provided the resources I need to be effective in my job. | | | | | | |
| 15 | I am motivated to go "above and beyond" what is expected of me in my job. | | | | | | |
| 16 | I am able to maintain an appropriate work-life balance in my job. | | | | | | |
| | **My Career** | 1-Low | 2 | 3 | 4 | 5-High | Not Applicable |
| 17 | I have annual objectives/goals on which I am evaluated at the end of the year. | | | | | | |
| 18 | I am encouraged to take initiative in determining my own career development. | | | | | | |

| | | 1-Low | 2 | 3 | 4 | 5-High | Not Applicable |
|---|---|---|---|---|---|---|---|
| 19 | I am given the opportunity to develop my skills at Hospital. | | | | | | |
| 20 | I view Hospital as my long term career choice. | | | | | | |
| | **Quality Service** | 1-Low | 2 | 3 | 4 | 5-High | Not Applicable |
| 21 | My ward/unit has a focus on "Quality". | | | | | | |
| 22 | My work environment supports excellent customer service. | | | | | | |
| 23 | My ward/unit strives for quality work/service for the Hospital. | | | | | | |
| | **Internal Operations** | 1-Low | 2 | 3 | 4 | 5-High | Not Applicable |
| 24 | There are generic policies and procedures to perform duties in the hospital | | | | | | |
| 25 | There are policies and procedures to perform duties in my ward/unit | | | | | | |
| 26 | I understand and able to interpret policies and procedures | | | | | | |
| 27 | Are you encouraged to become involved and committed to change rather than being forced to comply | | | | | | |
| 28 | Conflict in my ward/ unit is dealt with effectively and fairly | | | | | | |
| 29 | There is diversity tolerance in Hospital | | | | | | |
| 30 | There is a free flow of information and feedback within the hospital | | | | | | |
| | **My Supervisor** | 1-Low | 2 | 3 | 4 | 5-High | Not Applicable |
| 31 | I receive appropriate guidance from my supervisor. | | | | | | |
| 32 | My supervisor contributes towards a positive work environment. | | | | | | |

| | | 1-Low | 2 | 3 | 4 | 5-High | Not Applicable |
|---|---|---|---|---|---|---|---|
| 33 | My supervisor effectively resolves interpersonal issues/conflicts. | | | | | | |
| 34 | I receive encouragement to come up with new/creative ways of doing things. | | | | | | |
| 35 | My supervisor gives me regular feedback on how I am doing. | | | | | | |
| 36 | I get along with supervisor | | | | | | |
| 37 | My supervisor respects me and listens to me | | | | | | |
| 38 | I am satisfied with the performance review system through which my annual performance is evaluated. | | | | | | |
| | **Team Work** | 1-Low | 2 | 3 | 4 | 5-High | Not Applicable |
| 39 | Other team members from other units are always within to give assistance in my unit of crisis | | | | | | |
| 40 | I have good idea of functions in other related unit within the hospital | | | | | | |
| 41 | In my unit we discuss most of work related problems and agree on an action plan | | | | | | |
| 42 | In my unit we work as a team | | | | | | |
| 43 | I know the different roles of my team members in my unit | | | | | | |

## Additional Information (mandatory)

Regular

Temporary                    Unit:

_____

| **Grade** | **Age** | **Gender** | **Service at Hospital** |
|---|---|---|---|
| ☐ Grade up to 8 | ☐ 18-29 | ☐ Male | ☐ Up to 1 year |
| ☐ Grade 9 to 13 | ☐ 30-44 | ☐ Female | ☐ Between 1 to 5 years |
| ☐ Grade 14 and above | ☐ 45-55 | | ☐ More than 5 years |
| | ☐ 56 and above | | |

Any other suggestions:

1. ...................................................................................................................

2. ...................................................................................................................

3. ...................................................................................................................

4. ...................................................................................................................

*Thank you for your participation in this survey. Your feedback is extremely valuable and we appreciate your participation in this process.*