THE REPUBLIC OF UGANDA

Ministry of Health

5S Implementation Guidelines in Uganda

May 2013

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ACRONYMS

AAKCP	Asia-Africa Knowledge Co-creation Program
CQI	Continuous Quality Improvement
DGHS	Director General Health Services
DHO	District Health Officer
DHT	District Health Team
GH	General Hospital
GoU	Government of Uganda
HC	Health Centre
HMIS	Health Management Information system
HRO	Highly Reliable Organization
HSD	Health Sub-District
HSSIP	Health Sector Strategic and Investment Plan
JICA	Japan International Cooperation Agency
MDGs	Millennium Development Goals
M & E	Monitoring and Evaluation
MoH	Ministry of Health
MoLG	Ministry of Local Government
NHP	National Health Policy
PHC	Primary Health Care
QA	Quality Assurance
QAD	Quality Assurance Department
QAP	Quality Assurance Programme
QC	Quality Control
QI	Quality Improvement
QIF	Quality Improvement Framework
QIP	Quality Improvement Program
QIT	Quality Improvement Team
QoC	Quality of Care
RRH	Regional Referral Hospital
TQM	Total Quality Management
VHT	Village Health Team
WIT	Work Improvement Team

FOREWORD

Health services provided in health facilities in the country leave much to be desired in terms of quality. Inadequate funding, shortages of human resources and other key health resources, poor infrastructure, piecemeal quality improvement interventions, inadequate coordination, and more concentration on the technical aspects of quality have been the stumbling blocks. To this end, it has been understood that successful QI in health services depends mostly on the ability to create and sustain a foundation for QI interventions.

This guide has come in a timely manner as the Ministry is in the initial years of implementing the Second National Health Policy and the Health Sector Strategic and Investments Plan 2010/11 – 2014/15, which focuses on achieving universal coverage with quality health and health-related services. This strategic direction resulted in the development of the National Quality Improvement Framework and Strategic plan which provides a common framework for all public and private health institutions, partners, and stakeholders to coordinate, plan, mobilise resources, implement, monitor, and evaluate quality improvement initiatives in Uganda in order to "ensure the provision of high quality health services and contribute to the attainment of good quality of life and well-being at all levels of health care".

Districts and partners involved in QI are expected to develop their own plans and implement evidence-based QI interventions which apply the principle of an iterative cycle of improvement – Plan, Do, Check, Act (PDCA cycle) in addition to the 5S-CQI-TQM methodology as a fundamental background to continuous quality improvement.

For the successful implementation of 5S-CQI-TQM, health workers of all cadres working with facilities and programs should fight the greatest enemies to them. These enemies are "cynicism" and "indifferent attitude". A positive attitude (mind-set change) is the cornerstone for the successful implementation of 5S-CQI-TQM and other QIPs. This document will be a guide to all hospitals and other health facilities and vertical programs in implementing QIPs. It will help all facilities to build a strong foundation onto which other QIPs will build in the implementation of their QI approaches. The Ministry therefore recommends the day-to-day use of this guide by all health workers and other stakeholders to achieve quality improvement in health services.

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DIRECTOR GENERAL HEALTH SERVICES

ACKNOWLEDGEMENT

The National 5S guidelines have been developed over a period of one year incorporating the Uganda experience and examples in implementing 5S activities in Tororo General Hospital as the national showcase and other Quality Improvement initiatives in Uganda.

The guidelines were developed through a consultative process which involved person to person contact, a series of consultative meetings, and review of local and international quality improvement and 5S-CQI-TQM documentations. The whole process was spearheaded by the 5S Project Coordination Team which included;

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The guidelines were developed referred to the concept and ideas from the document below.

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EXECUTIVE SUMMARY

The Ministry of Health Second National Health Policy and Health Sector Strategic and Investment Plan 2010/11 – 2014/15 prioritises the provision of quality health and contribute to the attainment of good quality life and well-being at all levels of health care. In Uganda, it has often been pointed out that the quality of health care services has some problematic aspects causing inefficient and ineffective service resulting in dissatisfaction among service providers and users. Quality Assurance in the health sector in Uganda started in 1994 to ensure the quality of health service provision was maintained following decentralisation.

Countries in Asia also faced the same kind of challenges in the provision of hospital services. To improve the situation, some Asian countries took action to improve the quality of health care using the 5S (Sort, Set, Shine, Standardise, and Sustain) principles, which were developed by Japanese manufacturers such as Toyota to improve the quality of their products and customer satisfaction in collaboration with the Japan International Cooperation Agency (JICA).

The implementation of 5S-CQI-TQM in Uganda started in 2007 at Tororo General Hospital as the pilot hospital and registered marked improvement in Quality of Care in terms of patient and employee satisfaction as a result of a better work environment and improved communication. By March 2011, 5S had been scaled up to include one Regional Referral Hospital, 6 General Hospitals, 3 Health Centres IVs in Tororo District and the District Health Office of Tororo. All facilities were at different levels of implementation.

A situation analysis of Quality Improvement initiatives in Uganda carried out in 2010 identified among other findings that there were many Quality Improvement initiatives in the country but with weak mechanisms to coordinate the many initiatives at the Central and Local Government levels. It is against this background that the MoH Quality Assurance Department developed the National Quality Improvement Framework and Strategic Plan to guide and harmonise all Quality Improvement initiatives.

MoH recommends initiation of Quality Improvement interventions to start with the 5S approach as a fundamental background to Continuous Quality Improvement and then introduce appropriate Quality Improvement initiatives. The implementation of 5S-CQI-TQM will utilise the existing structures and systems of MoH and will be implemented at all levels by both public and private health care providers in a phased manner. An M&E system will be instituted to reinforce the 5S-CQI-TQM logical framework for a Ugandan context.

1 SITUATION ANALYSIS OF QI ACTIVITIES IN UGANDA

1.1 INTRODUCTION

The provision of quality health care is one of the top priorities in the Second National Health Policy and Health Sector Strategic and Investment Plan (HSSIP) 2010/11 – 2014/15. Good quality of care enhances client satisfaction and their use of services. It increases job satisfaction and motivation among service providers, leading to the effective and efficient utilisation of resources.

In Uganda, it has often been pointed out that the quality of health care services has some problematic aspects. Ugandans do not receive the services they need in terms of missed opportunities, leading to waste and inefficiency, delayed care leading to dissatisfaction and ineffective services or systems. Ugandans are harmed by the services they receive, e.g., medical errors generate additional costs and waste, leading to inefficiency and dissatisfaction. Under the chronic shortage of medical resources, the challenge is a matter of the management of this system for delivering obtainable quality health care services.

Quality Assurance (QA) in the health sector in Uganda started in 1994 as the Quality Assurance Program (QAP) which was created to support health service delivery in a decentralised system. As roles devolved to the districts, MoH had to ensure the quality of health service provision was maintained at the same level as before. The QAP transitioned to the Quality Assurance Department under the Directorate of Planning and Development in 1998. QAD is responsible for the coordination, planning, resource mobilisation, monitoring, and evaluation of QI interventions within the various MoH departments, programs, projects, health institutions, and the entire health care delivery system.

Countries in Asia also faced the same kinds of challenges in the provision of hospital services. To improve the situation, some Asian countries took action to improve the quality of health care using the 5S (Sort, Set, Shine, Standardise and Sustain) principles, which were developed by Japanese manufacturers such as Toyota to improve the quality of their products and customer satisfaction in collaboration with the Japan International Cooperation Agency (JICA).

A situation analysis of QI initiatives in Uganda conducted by Uganda Capacity Program in November 2010 identified among other findings that:

- There were many QI initiatives in the country mostly donor driven with a shared vision and common purpose of improving QoC;
- The QI management system was not well developed;
- There were weak mechanisms to coordinate the many QI initiatives both at the Central and Local Government (LG) levels;
- There were inadequate linkages between the different QI implementers and MoH supervision, monitoring, and evaluation system;

QI was not well institutionalised in the health service delivery chain in the country as such each quality actor had their own standards and approach. It is against this background that

QAD, under its mandate, developed the National Quality Improvement Framework (QIF) and Strategic Plan to guide and harmonise all QI initiatives in the health sector in line with NHP II and HSSIP 2010/11 – 2014/15.

The combination of 5S and other evidence-based QI interventions is a concerted effort to address the needs and expectations of both the internal and external clients in a systematic way.

1.2 5S AS THE ENTRY POINT OF ALL QUALITY IMPROVEMENT

5S is a management tool which originated in the Japanese manufacturing sector. It is used as a basic, fundamental, systematic approach for productivity, quality, and safety improvement in all types of organisations.

Although 5S originated in the manufacturing environment, it translates well to other work situations including hospitals, general offices, telecommunication companies, etc. **The 5S are abbreviations of the Japanese words *Seiri, Seiton, Seiso, Seiketsu, and Shitsuke.*** In English, the 5S were translated as ***Sort, Set, Shine, Standardise, and Sustain.*** In a practical context, words in the local language are more effective for people to understand easily, and thus the facilitators of 5S-CQI-TQM in some countries have translated the 5S English words into the local language.

Often, improvement of work processes is sustained only for a while, and workers drift back to old habits and managers lose the determination and perseverance. 5S in contrast involves all staff members in establishing new disciplines so that they become the new norms of the organization i.e. internalization of concepts and development of a different culture. 5S is the initial step toward establishing CQI-TQM.

1.3 ADOPTION OF 5S-CQI-TQM APPROACHES

In 2006, based on observations of the movements of countries in Asia, JICA planned to conduct a training course for supporting developing African countries to gain skills and knowledge for Total Quality Management (TQM) for better hospital services. The Asia-Africa Knowledge Co-creation Program (AAKCP) aims to provide a forum where Asian and African countries share knowledge and experiences, and thereby facilitate each participating country to create its own method of development that best suits each country's context. Several African countries were informed about the opening of the AAKCP training course, and 8 African countries (Eritrea, Madagascar, Tanzania, **Uganda,** Malawi, Kenya, Senegal, and Nigeria) participated. The approach advocated is 5S – Continuous Quality Improvement – Total Quality Management (5S-CQI-TQM), using the 5S principles as the entry point. Initial AAKCP seminars were conducted in March 2007 followed by the AAKCP field workshop in Sri Lanka in July 2007.

The implementation of 5S-CQI-TQM in Uganda started in 2007 at Tororo General Hospital as the pilot hospital and registered marked improvement in the QoC in terms of patient and employee satisfaction as a result of a better work environment and improved

communication (The Baseline Survey of 5S-CQI-TQM, 2011). By March 2011, 5S had been scaled to include a number of hospitals in Uganda (Bududa, Busolwe, Entebbe, Gombe, Kapchworwa, Masafu and Mbale) and a number of Health Centres (HC) IVs in Tororo district.

According to the monitoring and periodical evaluation of 5S activities at Tororo General Hospital and other hospitals, the 5S-CQI-TQM approach was verified as a practical, cost effective and efficient intervention for the improvement of the work environment that support the effective implementation of other QI interventions. Therefore, MoH adopted 5S-CQI-TQM concepts as one of the QI interventions to be included in the National Quality Improvement Framework and Strategic Plan 2010/11 – 2014/15.

2 BASIC CONCEPTS OF 5S-CQI-TQM

2.1 QUALITY AND SAFETY IN HEALTH

2.1.1 QUALITY

While health care facilities are performing a valuable service to the public, stakeholders, including the public itself, are unsatisfied and complaining. This is because the services provided are not focused on the customer's expectations and the services are not attractively presented to the customer.

Expectations that are not met include non-health expectations such as dignity, basic human needs, human rights, prompt attention in care and treatment, confidentiality, communication, autonomy, etc. Other unmet expectations are the health expectations. Hospitals that fail to deliver these expectations express such failure as hospital accidents. These failures can be active failures when rules and procedures are violated at the site of treatment or action, or they can be latent failures created as design failure, building failure and regulatory or policy failures.

2.1.2 SAFETY

A report by the Institute of Medicine[1] stated that errors cause between 44,000 and 98,000 deaths every year in American hospitals and over one million injuries. The biggest killers include:

- Hospital associated infections
- Drugs errors
- Patients accidents
- Communication problems
- Disorganized work environment

The hospital industry is a hazardous industry. However, while the hospital industry has many employees of different categories, involved in risky procedures to save patients and with many conflicts, other hazardous industries tend to have fewer employees of fewer categories involved in risky procedures to make a product or provide a service and usually with less conflict. Hospitals appear to be far behind other high-risk industries in ensuring basic safety.

2.1.3 HIGHLY RELIABLE ORGANISATIONS (HROS)

HROs are organizations in which errors can have catastrophic consequences but which are consistently avoiding such errors. To accomplish this, they conduct relatively error free operations over a long period of time and consistently make good decisions resulting in high quality and reliability. Examples of such organizations include aviations and airlines, air traffic control, and nuclear power plants. Could hospitals do the same?

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[1] The Institute of Medicine(IOM) released a report in1999 entitled "To error in HUMAN:BUILDING A SAFE HEALTH SYSTEM"

HROs have the following characteristic elements;

i. They frequently audit processes and procedures to make sure that they are correct, efficient, effective, and pertinent.

ii. They constantly do risk management by assessing the risk involved in all their undertakings and take preventive and effective measures.

iii. They avoid quality degradation by continuous quality improvement including the adoption of new inventions.

iv. They have a good system of command and control by having a system that assures good leadership and good decision-making processes, as well as effective monitoring and evaluation processes.

v. Employees are well motivated by the existence of a good reward system.

vi. Migrating decision-making is made possible by the existence of clearly known protocols coupled with a good communication system in the organisation.

vii. A back-up system is always in place and known to all pertinent employees in the organisation.

viii. Formal rules and procedures are in place and are observed. There is a hierarchy but this should be differentiated from a bureaucracy with negative implications.

Therefore to achieve such characteristics, a high quality of service provision has to be attained. Where symptoms of poor quality are seen, it is impossible to provide services with safety. To achieve high quality, systems used in implementation have to constantly be improved, because quality fails when systems fail. It is therefore important to note the following:

- **The first order of problem solving** is to remove the immediate obstacles for patient care. But in doing so, nothing removes the chances of problems occurring again.
- **The second order of problem solving** must be system organisation to prevent problems from recurring.

2.2 STRATEGIC MANAGEMENT

Strategic Management is the most effective and efficient way to start, change or stop whatever we are or want to do. Strategic Management can also be defined as a joint operation of intellectual activities of planning and continuing exercise of work environment improvement, which leads to quality services and high productivity.

2.2.1 WHY DO WE HAVE TO MANAGE OUR WORK?

Managing our work will lead to our enjoyment of work. One of the strategic entry points to QI is the working environment improvement, which can easily be achieved by the implementation of the 5S concept. The other strategic entry point is the implementation of the planning activities. These planning activities include strategic analysis, strategic choice,

and strategic control. While there are various models of implementing the planning activities the most important and vital point is the need to always improve on what already exist leading to CQI.

Implementing working environment improvement together with intellectual activities of planning with CQI will lead to acquiring the TQM framework thus enabling the provision of quality services and high productivity.

FIGURE 1: 5S-CQI-TQM FRAMEWORK
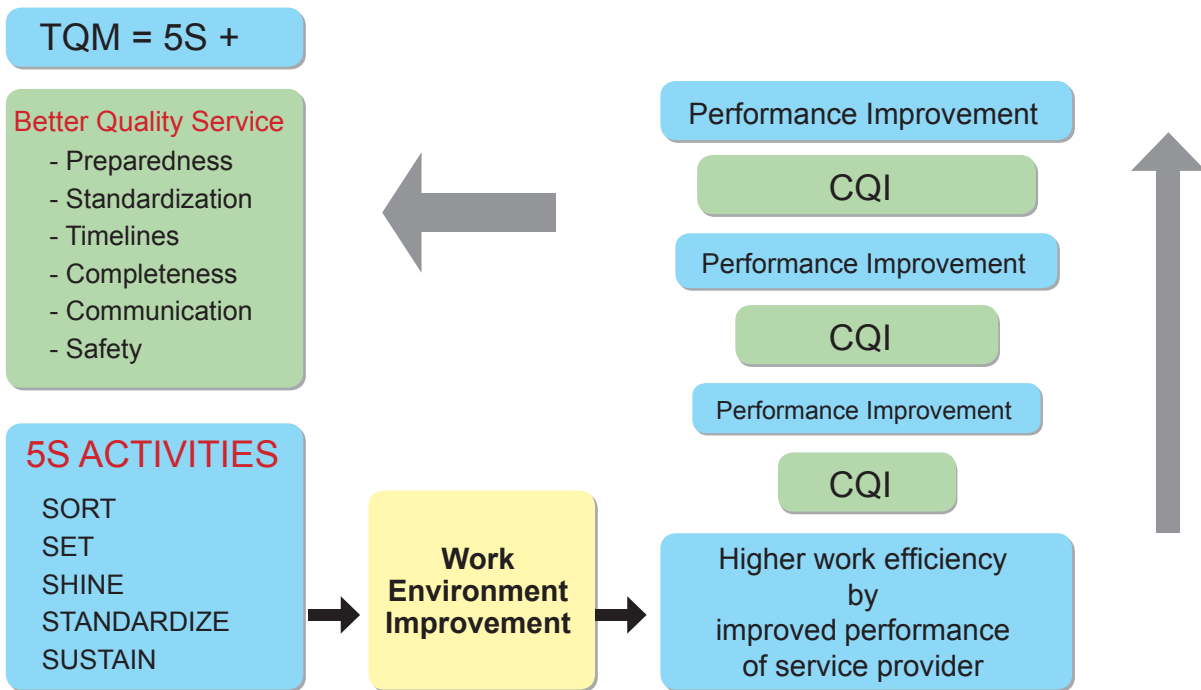
2.3 WORK ENVIRONMENT

The betterment of the work environment is the first challenge in CQI. Without a well-organized venue for the work, service providers cannot provide well-prepared, standardized, and timely services with proper communication with clients which means that they cannot reach the standards of quality of service.

The Work environment is not an entity with only a physical environment, such as buildings, equipment, and instruments. It includes functional aspects of the working venues, such as personnel team, meetings, recording/reporting system, time arrangement for work and communication systems among staff and external counterparts.

Environment often defines the behaviour of the people. If the physical structure and other in-house facilities are comfortable to them, their muscular and mental stresses are greatly reduced. They fulfill their work easily and efficiently. On the contrary, under unfavorable and inconvenient work environment, where they have to use extra energy to overcome the inconvenience, people's willingness to the work naturally deteriorates.

The responsibility of a manager includes the arrangement of the obtainable best work environment for the team mates and staff. One approach that we can employ is CQI called KAIZEN in Japanese language. The instrument for the initiation of this approach is 5S-Principles[2].

2.4 WHAT IS 5S?

5S is a management tool, which originated from the Japanese manufacturing sector. It is used as a basic, fundamental, systematic approach for productivity, quality and safety improvement in all types of organizations.

5S is literally five abbreviations of Japanese terms with five initials of S. These are *Seiri, Seiton, Seiso, Seiketsu, and Shitsuke.* In English, 5Ss were translated as *Sort, Set, Shine, Standardize, and Sustain.* In practical context, local language words are more effective for people to understand easily thus, facilitators of 5S-CQI-TQM in some countries have translated 5-S English words into local language e.g. in Kiswahili these are: **Sasambua** (Sort), **Seti** (Set), **Safisha** (Shine), **Sanifisha** (Standardize) and **Shikilia** (Sustain).

These are explained briefly below:

Sort: Remove unused stuff from your venue of work; and reduce clutter (Removal / organization)

Set: Organize everything needed in proper order for easy operation (orderliness)

Shine: Maintain high standard of cleanness (Cleanness)

Standardize: Set up the above three Ss as norms in every section of your place by use of Standard Operating Procedures and checklists (Standardize)

Sustain: Train and maintain discipline of the personnel engaged. (Discipline)

The five steps of Sort-Set-Shine-Standardise-Sustain are a sequence of activities to improve the work environment to be as convenient and comfortable as possible and thereby also improve service contents with respect to preparedness, standardisation, and timeliness. Health personnel are technology oriented, since everyone depends on health services, which are based on specific techniques. 5S activities are the tools to prepare the best obtainable stage for them to make the most use of their skill and knowledge. The conceptual frame work is shown in Figure 2.

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[2] Prof.HANDA Yujiro, Moses SINKKALA. 2005. "Strategic Management and Continuous Quality Improvement(CQI) using 5S Principles"
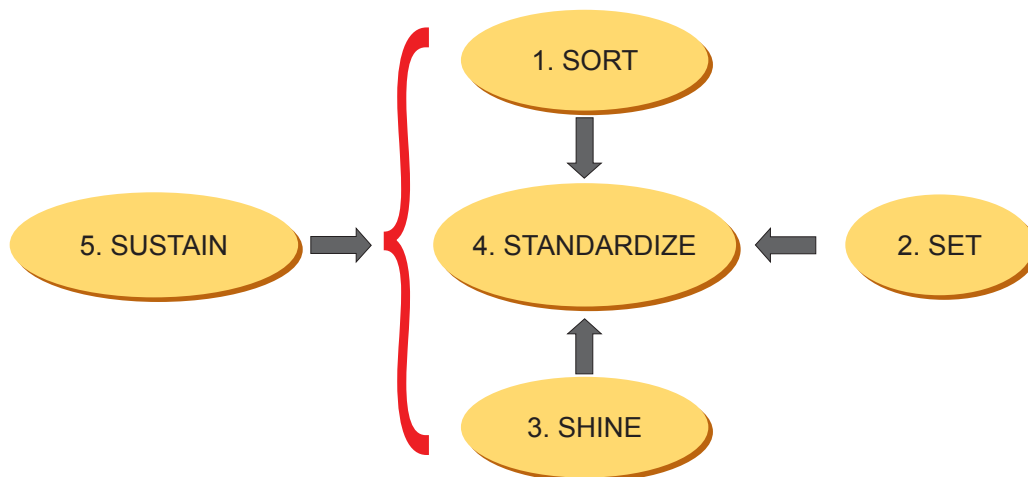
Two different grades are identified in the standard of 5S activities in the service sector particularly in health services.

Grade 1: This refers to the physical environment

Grade 2: This refers to software matters such as:
- Job sequence and contents,
- Time management,
- Communication systems such as meetings and briefings.

The guidance of a health facility management should be strategic to be able to reach the standard on the above Grade 2 and tackle the functional aspects of the work (health care) for the betterment.

2.4.1   WHAT ARE THE 5S PRINCIPLES?

The 5S Principles are reliable instruments to make a break-through in the work environment and staff attending to various types of jobs in your Institution. This is not only a concept but also a set of actions, which has to be conducted systematically with the full participation of the staff serving the institution. 5S activities are practiced in a real participatory effort to improve the quality of both the work environment and the service contents that are delivered to your clients using the improved environment.

Targets of 5S principles are:

• Zero changeovers leading to product/ service diversification
• Zero defects leading to higher quality
• Zero waste leading to lower costs
• Zero delays leading to on time delivery
• Zero injuries from promotion of safety
• Zero breakdowns bringing better maintenance
• Zero customer complaints i.e. customer satisfaction
• Zero red ink i.e. betterment of organization's image

Further, introduction of 5S is expected to instill a team culture, increase morale and motivation and improve job satisfaction. They are simple but effective methods to organize the workplace (Hirano and Talbot, 1995). In the long-term the implementation of the 5S principles also helps in creating positive altitude in the workforce.

2.4.2 5S FOR HEALTH INSTITUTIONS

Health facilities and hospitals are the typical targets of 5S, since these systems are rather complicated and difficult to maintain for delivery of various services in the best obtainable condition. There are divisions, as implementation units (Clusters), which need to have respective objectives, as an essential functional component of the institution. Table 1 below gives some examples of divisions and expected outcomes.

TABLE 1: EXAMPLES ON DIVISIONS AND EXPECTED OUTCOMES

Divisions	Expected outcomes of routine work
OPD	Outpatients are nicely treated with minimum waiting time
Laboratory	Standardized and quick laboratory tests are available
Pharmacy	Drugs are well managed and delivered to the clients precisely
Patient Ward	Inpatients receive treatment under comfortable environment.
Delivery room	Normal deliveries are conducted in a safe, clean and efficient system
Operation Theatre	Surgical care is given under a safe, clean and efficient system
Central Sterilization Supply Department	Supply and sterilization system supports the safety and cleanliness
Hospital Director's / Superintendent's Office	Office works as the centre for decision-making and management.
Administrative office	Office is functioning as the management centre.
Nursing Officer's office	Office works as the management center for nursing/ auxiliary staff
Room for staff	The utility provides staff relaxation and readiness to work.
Maintenance technician's office	Technician can be ready for repair with organized works place and tools
Security guard office	Guard can work by standardized way and keep discipline
Kitchen	Foods supplied to in-patients are safe

The above is an example of the target setting for clusters (implementation units) at a health unit. To have a tangible outcome, each division is required to fulfill the task in the best obtainable working condition while avoiding excessive workload to the staff in charge. The workload should be moderate under stimulating working condition to allow the staff to be innovative in developing various ideas or proposals for the betterment of the jobs and the outcomes. It is, however, not easy to realize the above situation, in reality. Too many clients, too much paperwork and too much complexity in the reporting system are often seen in workplaces.

These are all targets of 5S activities. By the continuous actions of Sort-Set-Shine-Standardize-Sustain, you can reduce your workload and make the most use of given working hours for your service to the clients and in addition to that, you will be able to have ample tea time, because your system becomes lean and maximally efficient because of 5S. You sorted necessary and unnecessary things at your workplace and discarded unnecessary items. Then you set nicely the essential items in the best order for the convenience of your operation. You always make the venue shining by daily cleaning and also standardize the process of Sort-Set-Shine successfully. In the process of the standardization, you acquired good attitude to be in driver's seat of this CQI and 5S effort to sustain and improve the "Quality of Service" of the health facility or hospital.

2.5 CONTINUOUS QUALITY IMPROVEMENT

2.5.1 WHAT IS CQI?

CQI is an approach developed in manufacturing sector in Japan to improve the productivity. It is a process of CQI by means of a non-stop process to uplift the standard of the work environment and contents to the obtainable best condition and maintain it as user-friendly and convenient as possible. CQI has to be practiced by all categories of staff including the management team. Top management is not an exception and should participate in the process. For top management of a project or institution; and for activities, including community-based health services, it is crucial to make this process a "Movement or Campaign" within the organization as a management target.

In addition to that, it is a "Means of Monitoring". CQI itself has a function to monitor the on-going work and task given to each unit of the system. In a health institution, for example, CQI can monitor the performance of each section of the hospital ranging from Hospital Manager's office to the respective patient wards. The major tool for the initiation of the CQI process is 5S.

2.5.2 HEALTH SERVICE AND CQI

Health service is also an outcome of a complex process, as in the case of car industry, requiring "Quality of Product". This "Product" is "Service" which is handled by various groups of people. Therefore, managers of health services have to strengthen the internal mechanism of their organizations to involve all staff in the movement to promote CQI.

Specific targets for CQI have to be given by top- and /or middle-level management staff to all divisions or implementation units at health facility or hospital set up. We need a situation, where every division always looks into the potentiality of making the job easier, more effective and more efficient within the given circumstances by mobilizing their capacities to create new ideas. Small ideas sometimes initiate efficiency and effectiveness. Ideas from the workforce have to be considered by the top management (Bottom to top uptake of ideas).

2.6 TOTAL QUALITY MANAGEMENT

Total Quality is a description of the culture, attitude and organization of a health facility that strives to provide clients with services that satisfy their needs. The culture requires quality in all aspects of the facility's operations, with processes being done right the first time and defects and waste eradicated from operations.

TQM is a method by which management and employees can become involved in the continuous improvement of the services. TQM is a health service management strategy aimed at embedding awareness of quality in all organizational processes. It is a comprehensive and fundamental rule or belief for **Leading & operating** an organization aimed at continuously **improving performance** over a long term by focusing on **Customers** while addressing the needs of all stakeholders.

3 IMPLEMENTATION OF 5S

In this chapter, actual implementation of 5S activities is explained in detail. Implementation of 5S activities is believed to reflect moral and management level of an organization. If the sense of belonging of staffs to the organization is high, the work place will be automatically well organized, clean and systematic. However, change management of a system is bound to be difficult and complex in any organization. Implementing a QI system often faces difficulties due to deficiencies in leadership, support and motivation of management and staff, information management, organizational structure, and culture (team work, learning orientation, etc.).

It is necessary to create a good working environment to make health workers and service users satisfied. However, only top to bottom approach alone will not be able to improve working environment, as sense of belonging of staffs to organization is not going to change easily. Therefore, big attitude change and mutual effort by both management and other health workers are necessary to improve working environment.

FIGURE 3: 5S IMPLEMENTATION APPROACH
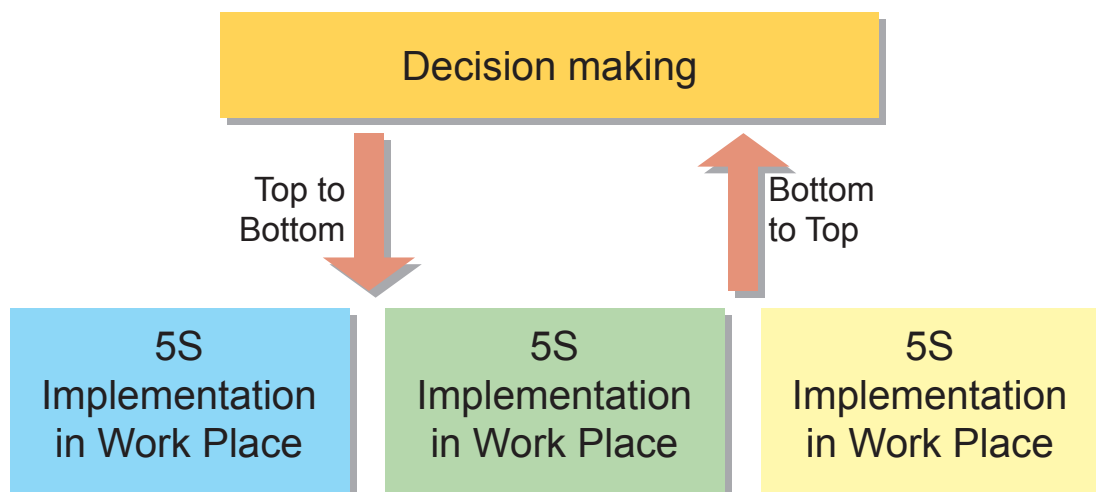
The implementation of 5S activities should not be a onetime or short-term event. It is better to make it a habit of the staffs so that sustainability of 5S activities will be high. To make **5S** a habit of health workers, it is necessary to clarify how the work place environment should be, and share that image to all staff. Here are the keys for the successful implementation of 5S activities:

1. Continued commitment and support by top management

2. 5S starts with education and training

3. There are no observers in 5S, everyone participates 5S activities

Note that what is required for implementing 5S principles are: a little knowledge, a little hard work, a little dedication and a very big positive attitude!

3.1 5S IMPLEMENTATION PHASES

5S is usually implemented gradually - often over a one- or two-year period of time. The following implementation phases and duration of each phase are recommended for effective and efficient implementation of 5S activities.

The implementation phases should be considered carefully at the time of development of the action plan. Inserting many activities in the first two phases will delay the implementation process. Selection of few target areas and prioritisation of activities for each targeted area according to the implementation phase leads to the successful implementation of 5S.

TABLE 2: PHASES OF 5S IMPLEMENTATION

	Phases	Approximate time period	Example of activities
1	Preparatory phase	Three months	Dissemination, Management level training, Quality Improvement Team (QIT) formation, Situation analysis, Target area(s) selection
2	Introductory phase	Six months	Staff level Training, Work Improvement Team (WIT) formation, Sorting-Setting-Shining activities
3	Implementation phase	Two years	On going monitoring, Standardizing activities
4	Maintenance phase	Two to three years	Refresher training, recognition and award

The phases of implementing 5S-CQI-TQM activities have a total of ten (10) steps. The Preparatory phase has five (5) steps; the Introductory phase has three (3) steps; the Implementation phase has one (1) step; and the Maintenance phase has one (1) step. In each step there are many activities that need to be done to accomplish it. The 5S-CQI-TQM activities flow chart is illustrated in Figure 4.

FIGURE 4: 5S IMPLEMENTATION FLOWCHART

Maintenance

Implementation

Introductory Phase

Preparatory Phase

QIT & WIT should work together for standardization for smooth implementation of SOPs/System organization

Step 10

Consider improving the condition more & more. Repeat 5S cycles for Sustain

Step 9

Proper practice of S1 – S2 and develop standards and regulations for both administrative and technical aspects for Standardization of practice

Step 8

Conduct Sort/Set/Shine activities at targeted area(s) to be the 5-S showcase

1st time of Sorting can be a big event. However, after that, It should not be one time Activity! All 3-S must be daily practiced!

Step 7

WIT is better be established at targeted area(s) for ownership of QI program and commitment

Step 6

Provide 5-S training to staffs in the targeted area(s)

Step 5

Identify the priority area(s) =Target area(s) to be improved based on the analysis

Step 4

Conduct situation Analysis (Problem finding + Solutions) Take photos of current situation as baseline data

Step 3

QIT should be established in hospital management team for leadership and commitment for QI

On going monitoring and evaluation by QIT and WIT

Step 2

Provide 5-S training to hospital management team

Step 1

Dissemination/Sensitisation of 5S-CQI-TQM concepts

3.1.1 PREPARATORY PHASE

The preparatory phase aims at making managers and staffs understand and adopt 5S-CQI-TQM concepts. It is also important to know "where and how you are". The time allocation for this phase is approximately three (3) months.

Step-1: Dissemination/ Sensitisation of 5S-CQI-TQM concepts:

As stated above, 5S starts with "Education". The entire staff in your health facility can be targeted for dissemination/sensitisation of 5S-CQI-TQM concepts.

At the time of dissemination/ sensitisation, true meaning of 5S must be conveyed to the staff. 5S is often incorrectly characterized as "standardized cleanup", however it is much more than cleanup.

> *"5S is a philosophy and a way of organizing and managing the workspace and work flow with the intent to improve efficiency by eliminating waste, improving work-flow and reducing unreasonable process".*

The following points should be emphasised during the dissemination/sensitisation:

i. 5S is to improve the working environment for the smooth implementation of QI activity (Foundation of all QIP)
ii. 5S is not in conflict with any other QI approaches that have already been introduced in Uganda's Health Sector
iii. 5S is not a onetime event. It should be practiced day by day and made a culture of the health facility. Periodical training is necessary for both the management and department/section level for sustainability.

Step-2: Training for Management level

One of the keys for successful 5S implementation is "Strong leadership and commitment". Therefore, Training for Management level is essential for implementation of 5S-CQI-TQM activities to gain initiative and leadership from the management.

In this training, the concepts of 5S-CQI-TQM must be well understood and adopted by managers and the steps of 5S-CQI-TQM activities implementation should be explained logically. It is better to focus on the following contents in the management level training;

- 5S-CQI-TQM concepts
- Situation analysis methodology for hospital/institution
- How to establish Quality Improvement Team (QIT) and its roles and responsibilities
- Action plan[3] making
- How to establish a Work Improvement Team (WIT) and relationship with QIT

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[3] See Annex 2: Format of Action Plan

- Monitoring and evaluation of 5S activities
- Training methods with teaching material development for staffs

It is important to develop 5S-CQI-TQM Action Plan (version 0) at the end of the training.

Step-3: Formulation of QIT

After the training of management level, it is recommended to establish a team (if not in existence for other QI programs) taking lead to implement QI activities, called the QIT.

The members of the QITs should be selected according to the MoH National QIF structures. A team that includes top and middle management has to coordinate initial planning and implementation. This leads to improved speed of decision-making and increased commitment for QI in the hospital.

The main roles of QIT in 5S-CQI-TQM are as follows:

- To train hospital staff on 5S-CQI-TQM
- To conduct situation analysis
- To implement 5S-CQI activities for common problems of the hospital
- To conduct periodical monitoring and provide technical advice to WIT
- To record all QI activities conducted in the hospital
- To review situation and the action plan
- To provide necessary inputs for 5S-CQI-TQM activities

Step-4: Execution of Situation Analysis

CQI is a problem solving process for TQM. Therefore, it is necessary to conduct situation analysis to find problems, cause(s) and come up with possible solutions.

After the management level training, the QIT should identify quality situation at their work place. When the QIT conducts the analysis, it must be equipped with digital camera and **photographs** of work place must be taken to record the current situation prior to 5S implementation. These are useful for comparison and measuring the progress (before-after) of activities. Observation and interview from staff are also important methods for the analysis.

The analyzed result should be used to modify the action plan (version 0) for proper understanding of situation and development of action plan (version 1) to start 5S activities. Moreover, it will be used for staff to understand "how your working environments are".

Step-5: Selection of Target area(s)

Selection of "Target area(s)" is highly recommended for successful implementation of 5S activities. Proper implementation of 5S activities at targeted area(s) is to make a "showcase" (model of 5S), which makes staff understand "what is 5S about" (Seeing is believing!)

When selecting the target(s), DO NOT select sections or departments that are facing lots of problems as it will take long time to solve the problems and will be difficult to make them as

a "showcase". The number of target(s) can be decided according to the capacity of QIT and other resources. Criteria of target selection are described in the box below.

Criteria of target selection will be:

- **There is someone who has commitment to implement QI Program, in the section;**

- **Situation of section/department needs to be improved for better customer care; and**

Once 5S is successfully introduced to the targeted area(s) and a mechanism to sustain the activities is in place, expansion to other target area(s) can be executed.

3.1.2 INTRODUCTORY PHASE

Step-6: Training for Staff level

One of the keys for successful 5S implementation is "everyone's participation". Therefore, training of the entire staff at targeted area(s) is essential. During the training, the following contents should be focused:

- 5S-CQI-TQM concepts
- Situation analysis method for department/section level
- 5S tools
- Roles of QITs and establishment of WITs
- Development of the action plan for the department/section
- Self monitoring and evaluation

Step-7: WIT Development

A team is defined as a group of people working together to achieve a common goal for which they share responsibility; It can also be defined as a high performing task group whose members are interdependent and share a common performance intent.

Benefits of working as a team comprise sharing of the knowledge, skills and experiences of different members which builds confidence among the members and collective decision making, sharing responsibility, tackle issues in synergy manner and there is also mutual support and cooperation between team member thus in the end accomplish QI.

Teamwork is vital in achieving CQI and is at the heart to improve quality. Usually the teams take a problem as an opportunity and the team members' support each other effort .One big tree does not make a forest.

WITs are essential for implementation of departmental/section level QI activities. Their aim is to provide staffs with opportunities for meaningful involvement and contribution in solving problems and challenges. The teams meet regularly to identify, analyze, and solve problems and improve their outputs in their work unit. They also implement improvement measures or recommended them to management. The bottom line outcome includes higher quality outputs, and improvement productivity.

The Formation of WITs essentially necessitates pursuing several steps in team formation which are; forming, storming, performing and closing. The norms of the team generally consist of:

- Close relationships developed and the team demonstrating cohesiveness,
- Team group rules and boundaries agreed,
- Cooperation,
- Team identify and member enjoy camaraderie with one another, and
- Commitment to working out differences and giving constructive feedback

High performing teams usually establish urgency and direction, pay particular attention to meeting, set some clear rules for behaviour, spend a lot of time together, exploit the power of positive feedback, recognitions and rewards, etc.

Team meetings should be conducted regularly as per schedule. Minutes of the meetings including the attendance record of the participants should also be kept properly and appraised regularly (see Figure 5 on how it operates). Some of the tips of effective team meeting take account of; meeting agenda prepared on time and distributed to the members, time management and maintain focused discussion, encouraged and support participation of all members, etc.

Among the areas which WITs seek to effect qualitative improvement includes; services to the customer/public, workflow, efficient use of resources, work environment and safety. The WIT leader and members are obliged to take their roles and in addition to be familiar with the importance of the team facilitator and the position of the QIT in their facilities.

FIGURE 5: HOW DOES A WIT OPERATE

Step 1 Identify areas to be improved		Step 7 Monitor and take corrective action
Step 2 Prioritize & Select areas to be improved		
Step 3 Collect, examine & analyze data		Step 6 Implement
Step 4 Develop proposals/recommendations		Step 5 Communicate recommendations to management
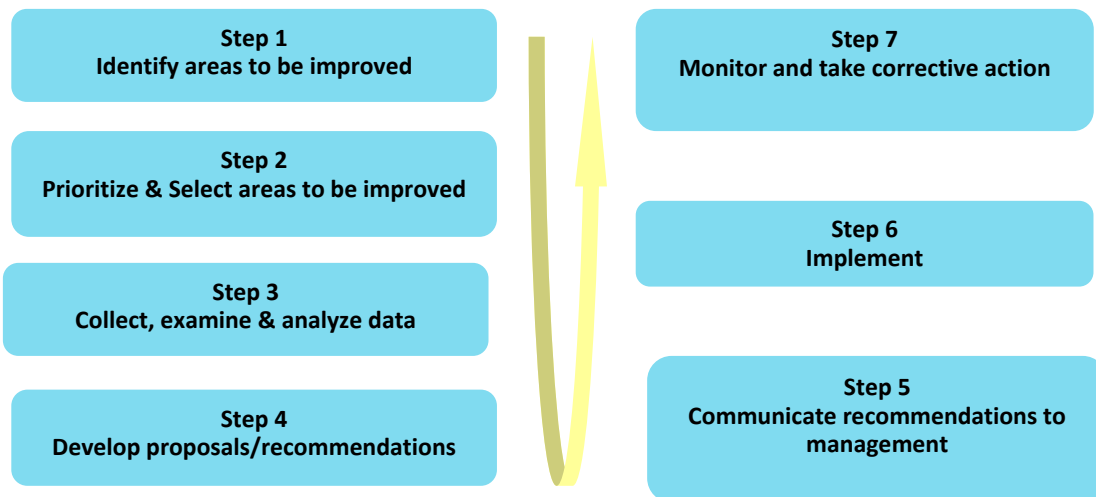
Step-8: Practice of *Sort, Set and Shine*

The practice of **Sort** (Seiri) starts from the identification of unwanted items in the workplace. It has to be initiated by disposing everything that is no longer needed after identification of unwanted items through red tagging (see Chapter 4: 5S tools for Actual Implementation).

A Simple way of Sorting is to categorize all equipment, machines and furniture into three (3) categories; Unnecessary (not need it), May/May not be necessary (May not need it), and Necessary (Need it) as depicted in Figure 6.

Unnecessary:

Unnecessary items should be discarded, if the item is not repairable. If the item is repairable, repair it and stored as it may needed other department/sections or other hospitals.

May/May not be necessary (May not need it):
May be necessary items mean that the items are not used often (once a month) or it is functioning but not used in current workflow. This kind of items should be stored in sub-store of department/sections or should be used in other department/sections which need them.

Necessary (Need it):
Necessary items should be organized properly according to current workflow. This will be explained in "Setting" activities.

FIGURE 6: HOW TO PRACTICE SEIRI (SORT)
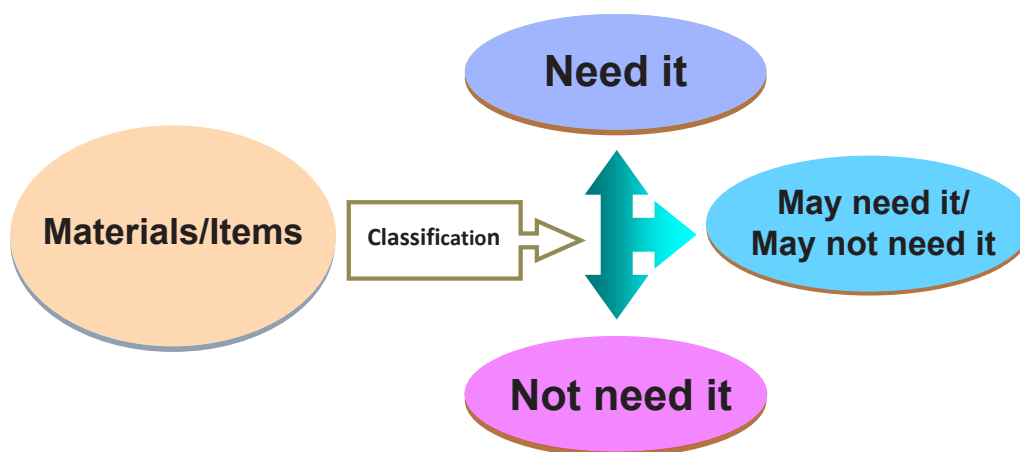
Remaining items have to be arranged and stored according to frequency of use. All areas including floors, cupboards and tabletops have to be cleaned. The changes made have to result in more efficient work than before. A central store may be allocated to store unwanted items for 'just in case'. Rules for regular disposal need to be established.

When unwanted items are collected from various departments/sections, the following things must be recorded and filed for smooth discarding procedures:

1) Name of item,
2) Inventory number,
3) Where it was and
4) Where it will be stored

The "Unwanted item store" should be established and all unwanted items stored in until complete the discarding process. If the size of unwanted items is large and not repairable, space for unwanted items should be created within the hospital compound with safe storing measures in mind.

The practice of **Set (Seiton)** emphasizes the proper orderliness of things in the workplace. Signboards are set at the entrance for easy access of the locations of the organisation. All locations are named or numbered. Every item has to be labeled with an inventory number (discretely) and assigned a location. The assigned location is marked on the item and at the location. Visual controls including colour coding are practiced. Files and cupboards are indexed. X-axis-Y-axis alignment is practiced in the positioning of items (see chapter 4 on 5S tools). Items are placed to facilitate easy access and to optimize workflow.

The practice of **Shine (Seiso)** is the cleaning stage. All the items including the floors, walls, windows and equipment are cleaned. Appropriate cleaning tools, methods and materials are identified and practiced. Waste bins are made available at required places. Cleaning maps and schedules are developed for the continuous practice of cleaning. Waste bins colour coding must follow the standard colour coding in Policy in Uganda.

> *Note that since 5S tasks appear minor, staff may not concentrate on 5S after the initial implementation. Inspections through monitoring teams and continuous evaluations of all work units are essential to keep track of 5S program.*

3.1.3 IMPLEMENTATION PHASE

In this phase, the aim is to practice S1 to S3 properly and generate a <u>maintenance system</u> for S1 to S3. The time allocation of this phase is approximately two (2) years.

Step-9: Proper practice of S1 to S3 to generate maintenance system, development standards and regulations

Standardization (Seiketsu) establishes the regular and continuous practice of maintaining tidiness, orderliness, and cleanliness (first 3-Ss). All processes and procedures of the organisation are standardized to reduce the cycle time, to reduce waste, to improve safety and to improve outcome. Thus, the following kinds of activities are implemented in this phase:

- Development of Standard Operational Procedures (SOPs),
- Display, marking of safety signs and marks
- Garbage typing collection system (infectious/non-infectious, recycling etc), following the national guidelines
- Colour coding for linen system
- Zoning for storing/parking equipment

"Checklists" should be developed for each activity/service area and utilise it for standardization.

Another important thing is to equalize the following during this phase:

- Individual capacity,
- Quality, productivity and Safety,
- Information
- Staff's mindset towards to CQI activities.

Equalization (Heijyunka) is important for reducing variability. Variability is the cause of creating needless work in the workflow. Therefore, consider equalizing the followings:

- *Individual capacity:*
  Standard Operational Procedures, Information sharing

- *Quality, Productivity and Safety:*
  Standard Operational Manual and Standard Operational Procedures

- *Staff's mindset towards to* CQI *activities:*
  Fair performance evaluation and awards to good practice, equal opportunity of training

- *Information:*
  Sharing of policy/strategy for QI and current situation of CQI activities

3.1.4 MAINTENANCE PHASE

This phase aims to maintain people to follow good work habits and keep workplace rules.

The Maintenance phase is an on-going phase hence has no time limit. However, it is expected that within three (3) years of entering this phase all the necessary structures and accountability systems be in place. All health workers (staff) will be shaped to follow workplace rules and habits. S1-S4 will be the culture of the entire staff and the facility management.

Step-10: Making 5S activities a culture of your facility

Sustain (Shitsuke) is about the discipline to maintain the consistent practice of 5S. Training programs are carried out for employees. Competitions are organised and good practices are rewarded. Authoritarian rule is not practiced and employees are motivated to internalize 5S. Training should include organisation-wide meetings where management and employees announce their results. This acts as an incentive to motivate staff and to practice benchmarking.

Once again, since 5S tasks appear minor, staff may not concentrate on 5S after the initial implementation. Inspections through supervision teams and continuous evaluations of all work units are essential to keep track of the 5S program. The following activities are expected to be conducted in this phase:

- Periodical training of staff

- Periodical monitoring by both supervision team from management and departmental monitoring team.
- Quality competitions and rewarding good practices
- 5S Poster development and display
- Establishment of 5S corner within department/section
- Display of 5S progress chart/table/graphs

Tips for successful 5S implementation

"5S in mind"

5S is usually used for "things", however, it is important to implement "5S in your mind" for practicing 5S activities appropriately.

Sort your mind to concentrate on your work

Set your mind to organize your work

Shine and **Standardize** your mind to enjoy your work and maintain your way of working

Sustain your mind to carry out your work actively and maintain your work quality

"5S in brain"

Sort in your brain is to clarify your work on what / for whom / what purpose / how / by who and by when

Set in your brain is to prioritize your work

Shine in your brain is to manage your work step by step

Standardize in your brain is to remove barriers of managing your work

Sustain of your brain is to solve problems and execute your work continuously

This is very important for changing your attitude in a positive way and accelerates 5S implementation appropriately

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Doing 5S of the mind and brain is very important for changing your attitude in positive way and accelerates 5S implementation appropriately.

3.2 FROM 5S TO CQI PROCESS

After this step, the CQI process meets client's satisfaction. Productivity and safety must be considered in the process of CQI. However, even though stepping up to CQI process, 5S activities must be continued to maintain the foundation of QI. The CQI framework is illustrated in Figure 7.

Figure 7: CQI Framework for health services

Vision, Credo and Mission of health service delivery in realized

⬆

Quality and Safety of services is further improved

⬆

**QUALITY;
Patient-centeredness, Equity, Effectiveness of care, Efficiency in resource utilization Timeliness, Safety**

Performance and excellence in service delivery

⬆

Clients/Need focus, Leadership, Strategic Plan, Capacity development, of human resources investment, Participatory process, Management, Information and Analysis, Sharing organizational outcomes

CQI for improving service contents by WITs and suggestion scheme

⬆

Work Environment Improvement through 5S ⬌ **Maximum utilization of available resources within the system**

Additional resource input based on evidence provided through exercises in 5S-CQI ⬌

CQI teaches individual skills for working effectively in small groups, solving problems, documenting and improving processes, collecting and analyzing data and self-management within a peer group. CQI activity must deal not only with improving results, but also more importantly with improving capabilities to produce better results in the future.

The WIT is the main actor of CQI activities. As mentioned before, the WIT is established in department/section to discuss problems within the department/section, and find solution or improvement measures against the problems.

CQI focuses on:

- Moving rapidly from planning to implementation
- Making continued progress rather than waiting to find the perfect solution;
- Worker involvement and teamwork;
- Addressing the root causes of problems; and
- Process improvement from the systems perspective.

The following steps should be taken for CQI activities.

i. Selecting a CQI topic (where/what to improve)
ii. Sharing views on the importance of the selected topic in the WIT
iii. Situation analysis and feasibility check-up (how is it at the moment and what are the root causes of the problem are)
iv. Objective setting for improvement (how it should be)
v. Objective analysis for identifying measures (how to improve)
vi. Alternative analysis and selecting approach (what kind of method can be applied)
vii. Formulating a plan of operation with 5W1H; Why, What, Who, Where, When and How (plan how to do it, by when, who will, etc.)
viii. Installing monitoring mechanism with indicators (how is the plan going)
ix. Building in measures for sustainability and preventing setback (how we can keep it)
x. Building in measures for impact creation for other parts of the organisation
xi. Summarizing experienced constraints during the activity and suggestions to top management

CQI activities should be implemented with a designated **time frame** for maximizing teamwork and work efficiency.

> *Note that WIT members may suggest many issues/problems to be improved. Number of suggestions made by WIT members must be recorded. However, the section/department does not need to take improvement actions for all the suggestions. Pick up the issues that are common to all WIT members and clients first and take improvement actions. The issues are not common to all, try to be integrated with other issues to be improved.*

3.3 FROM 5S-CQI TO TQM

TQM is a method by which management and employees can become involved in the continuous improvement of the services. TQM is a health service management strategy aimed at embedding awareness of quality in all organizational processes.

Figure 8 indicates what the health facility management team should consider. At the beginning, consider creating good working environment to enable health workers to be competent towards providing high quality of services. Consider clients satisfaction to improve clinical and non-clinical (responsiveness) issues with CQI activities. Other related issues such as financial, human resource management should be considered. Considering quality in all services, in all departments and sections is called TQM.

FIGURE 8: FROM 5S-CQI TO TQM
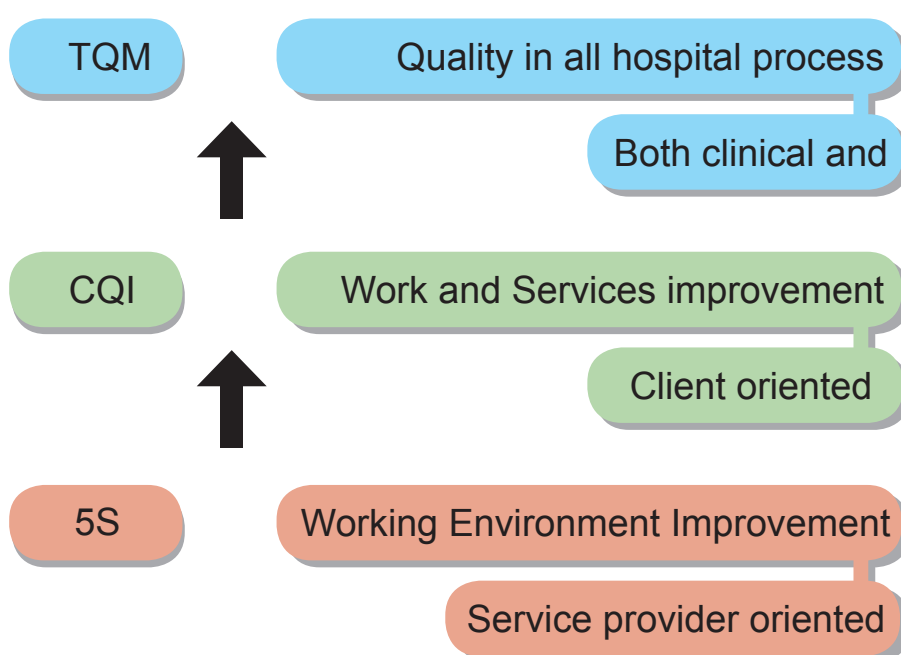
TQM processes are divided into four sequential categories: Plan, Do, Check, and Act as illustrated in the PDCA cycle Figure 9.

Planning phase

- define the problem to be addressed,
- collect relevant data, and
- ascertain the problem's root cause;

Doing phase

- develop and implement a solution, and
- decide upon a measurement to gauge its effectiveness;

Checking phase

- confirm the results through before-and-after data comparison;

- Measure the new processes and compare the results against the expected results to ascertain any differences.

Acting phase

- document results,
- inform others about process changes, and
- make recommendations for the problem to be addressed in the next PDCA cycle.

Actual implementation of TQM at health facility, all staff should get training on PDCA cycle to equip them for problem-solving process within their work place. WITs should use PDCA cycle for CQI practice.

FIGURE 9: PDCA CYCLE
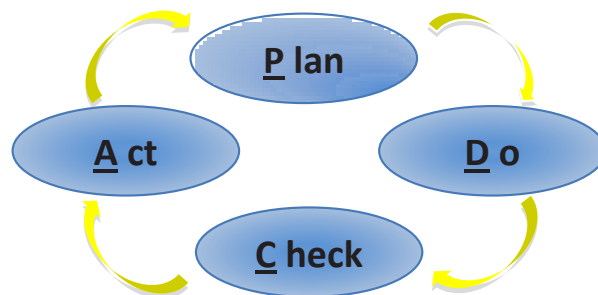
3.3.1 MANAGING CHANGE AND IMPLEMENTATION OF CQI

Change management of a system is bound to be difficult and complex in any organisation.

It is often seen to slow down or stop CQI activities. There are few characteristics observed behind the organisation that slow down or stop CQI activities;

- Management of the organisation prioritise "profit" over customer satisfaction
- Management of the organisation has weak leadership and hesitates to "change"
- Copy CQI methodology and implement without proper understanding and adoption of the concept.
- Management of the organization does not recognize the importance of user-friendliness

Even where management of the organization has strong leadership and 5S-CQI-TQM concept is well adopted by managers, there are some organizations that slow down or stop CQI activities. In this case, "resistance to changes" is observed among workers.

"Un-cooperative staff or resistance to change" in the organisation affects "cooperative staff" to have negative thinking and attitude on CQI activities. It is often observed that those "Un-cooperative staff or resistant to changes" are senior staff of institution and usually those personnel are well experienced and skilled. Un-involvement of experienced and skilled personnel in CQI activities is inexpedient as skills and knowledge of those personnel are very effective for QI.

Therefore, it is necessary to change mindset of "un-cooperative staff or resistant" for successful implementation of CQI activities.

Here are the hints for how to change mindset of un-cooperative staff or resistant.

- Show examples and explain the effectiveness and necessity of 5S using data, pictures etc.

- Remove "unnecessary work" from current workflow

- Remove variability of work (Equalization/Leveling)

- Make work procedures clear and develop Standard Operating Procedures

- Explain what we can do if 5S is introduced

Once resistance to "change" is reduced, managers should aim to build mutual understanding and communication mechanism between management and workers. As previously mentioned, the QITs and WITs are very important for the development of this mechanism.

3.4 5S AS FOUNDATION OF ALL QI PROGRAMS

The Implementation of 5S will serve as a foundation of all other QI Initiatives. The photographic baseline assessment is a yardstick to show other hospital staff the real situation. This will also stimulate the hospital staff towards an urge to reject the status quo. From this point, the 5S principles are implemented starting with a few targeted areas and use the results from these areas; to win support from the remaining areas to implement the 5S principles. On improvement of the work environment from 5S implementation; then other QIPs can now come in to improve various aspects of quality in health services, including the technical issues. Re-assessment is done using the 5S assessment checklist to maintain the practice, and also other tools can also be used as a more comprehensive tool covering the technical issues.

It is important for all health workers to note that 5S should continue to be implemented, as other QIPs are introduced. This will facilitate the quick realisation of outcome and the impact of other QIPs introduced in health services provision.

FIGURE 10: 5S-CQI-TQM AS A FOUNDATION OF ALL OTHER QIPS
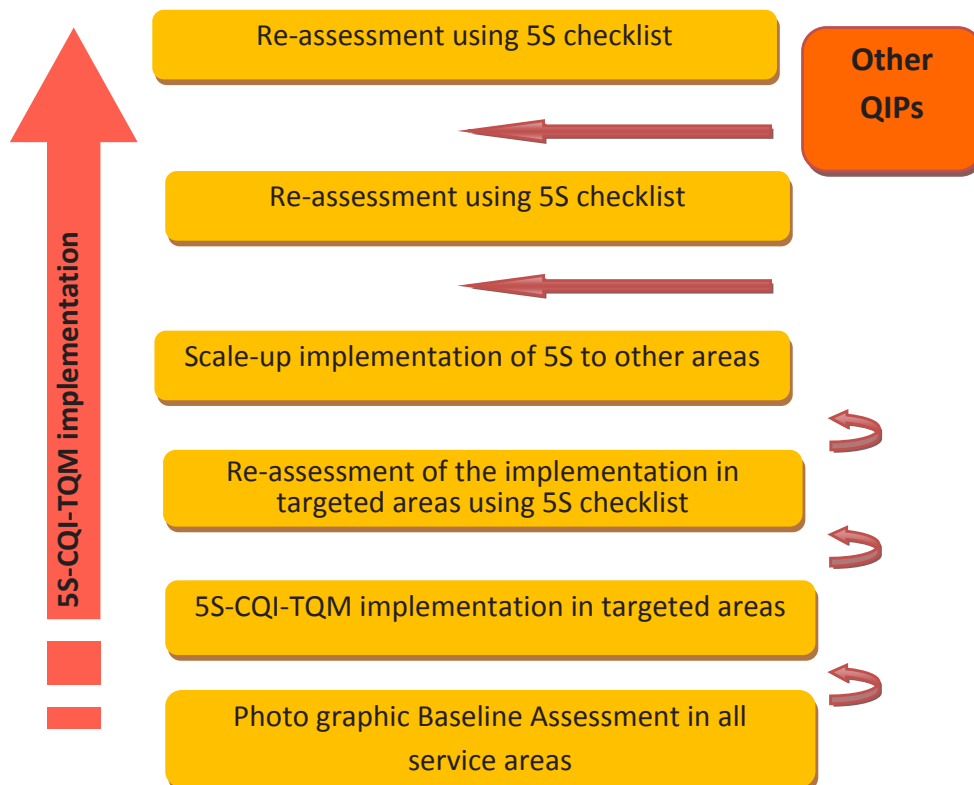
3.5 5S-CQI-TQM COORDINATION & IMPLEMENTATION STRUCTURES

The 5S-CQI-TQM coordination and implementation structures will be aligned to the National QIF and Strategic Plan operational structures (Figure 11).

FIGURE 11: NATIONAL QUALITY IMPROVEMENT COORDINATION STRUCTURE
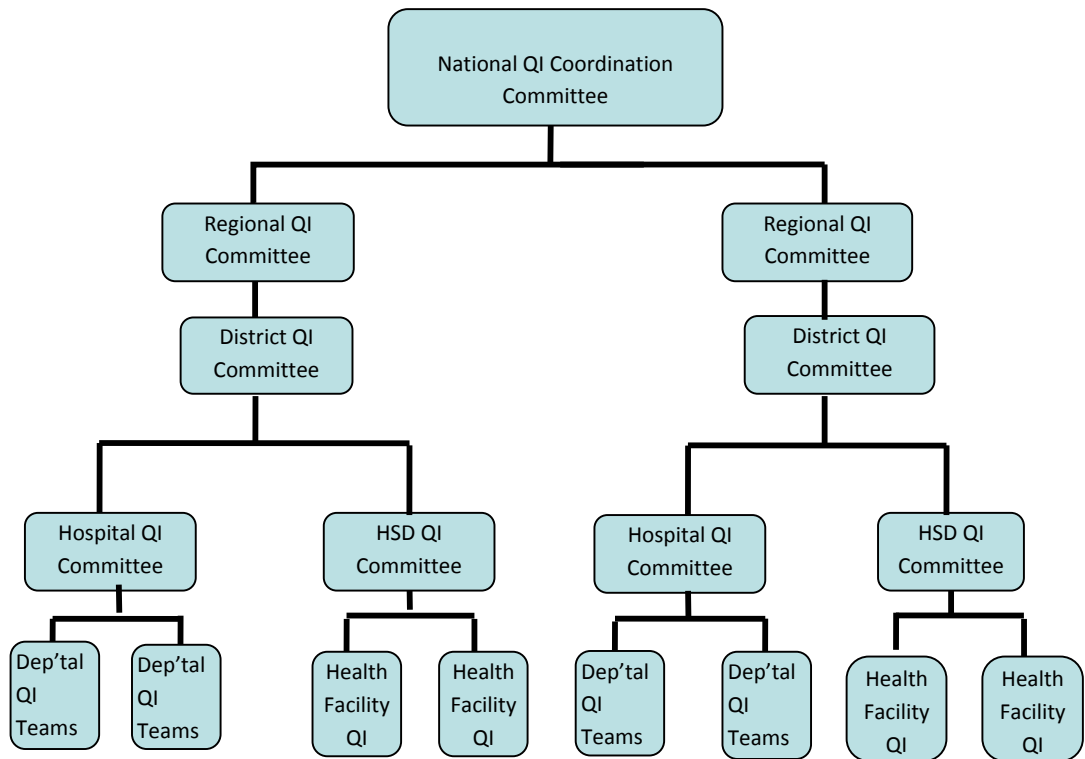
3.5.1 COORDINATION OF 5S-CQI-TQM

The QI coordination structure ranges from the MoH Top Management to the service users with the QAD having the overall operational oversight and coordination roles. 5S-CQI-TQM Focal Persons if different from the QI Focal Persons will be co-opted on the various QI Committees and teams.

The MoH Top management comprising of the Ministers, Permanent Secretary, Director General Health Services, Directors, Heads of Departments and other Health Policy Advisory Committee (HPAC) members will be responsible for reviewing and approving QI policies and strategies guided by the QAD with input from the National QI Coordination Committee. The QAD shall work closely with the Clinical Department which is responsible for coordination of clinical service delivery in all health facilities.

Quality Assurance Department

The responsibilities of the QAD will include;

1) Developing national standards and guidelines for 5S-CQI-TQM.
2) Dissemination of the guidelines to the regions, districts and stakeholders.
3) Coordinate the planning, resource mobilization, monitoring and evaluation of 5S-CQI-TQM interventions within the health sector
4) Working with training institutions to develop and implement the national 5S-CQI-TQM training curriculum and training manual.
5) Participate in capacity building for 5S-CQI-TQM among providers through training and technical assistance.
6) Coordinating support supervision at all levels in regard to 5S-CQI-TQM issues.
7) Documenting quality of care best practices and share information with other interested stakeholders for adaptation.
8) Convening national 5S-CQI-TQM stakeholders meetings
9) Recognizing and rewarding good performers.

Clinical Services Department

The responsibilities of the Clinical Services Department will include;

1) Offering technical support in terms of identifying 5S-CQI-TQM priorities in health facilities and presenting them to the QAD for discussion by the National QI Coordination Committee and 5S-CQI-TQM Steering Committee.
2) Collaborating with the QAD in planning, resource mobilization, monitoring and evaluating 5S-CQI-TQM activities in the health sector
3) Identifying 5S-CQI-TQM Facilitators and Focal Persons at National and Regional Level
4) Coordinating and supporting 5S-CQI-TQM training at all levels (national, regional, district, health centers and community).
5) Following up and mentoring for 5S-CQI-TQM at all levels
6) Compiling and submitting 5S-CQI-TQM performance reports to the QAD on a quarterly basis.

3.5.2 5S-CQI-TQM IMPLEMENTATION STRUCTURE

The implementation of 5S-CQI-TQM will utilize the existing structures and systems of the health sector. This will maximise utilization of resources and ensure that 5S-CQI-TQM is mainstreamed and integrated within the health system.

5S-CQI-TQM activities will be implemented at all levels of the National Health System (Figure 12) and health facility level by both the public and private health care providers.
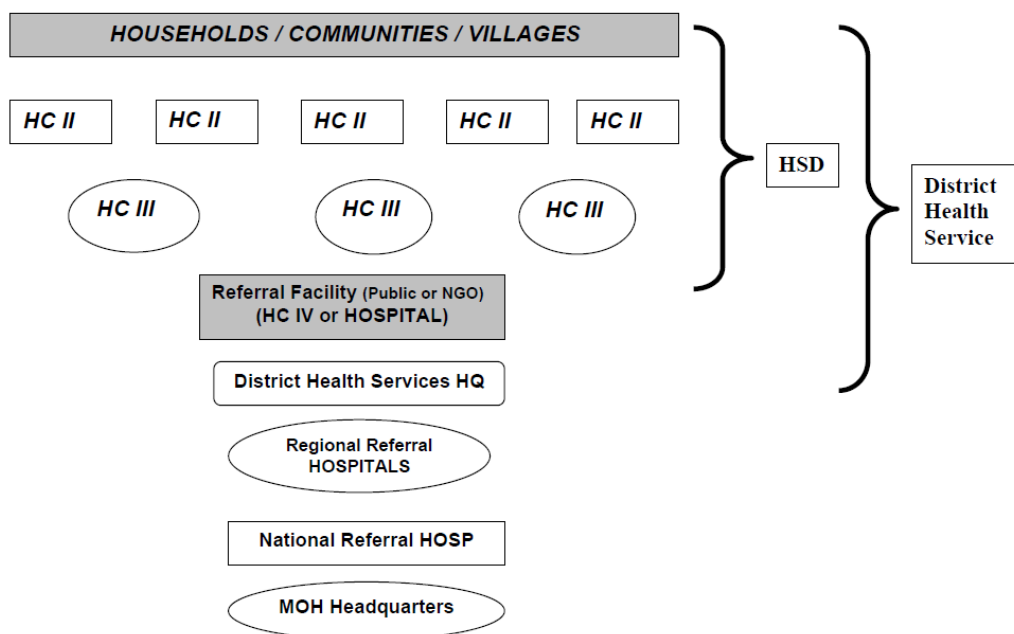
Implementation of the various 5S-CQI-TQM activities will be the responsibility of specific programs/projects, departments and institutions which shall have designated 5S-CQI-TQM Focal Persons.

Development Partners will be responsible for offering technical and financial support to relevant levels in consultation with the MoH Top Management and guided by the QAD on the existing gaps, priorities and community needs. Also participate in planning, training, supervision, monitoring and evaluation activities.

Implementing Partners may be supported by the Development Partners to offer technical and financial support to public, private and community based service providers. This should be done in consultation with the QAD and guided by the existing gaps, priorities and community needs. Implementing partners will engage the DHOs in the day-to-day 5S-CQI-TQM intervention operations.

Health service providers including the private and public sectors and community based organizations will plan, implement, monitor and evaluate 5S-CQI-TQM interventions in line with the national planning guidelines, National QIF & Strategic Plan, National supervision and inspection guidelines; and M&E plan. Compile and submit periodic reports including documentation and sharing of best practices.

Communities and Service users will participate in identifying and planning for services needed, utilize the services provided and provide feedback on quality of services using established mechanisms.

3.6 5S-CQI-TQM EXPANSION PLAN

The MoH plans to expand 5S as the foundation for all QI initiatives in Uganda at all levels of service delivery. 5S expansion will be implemented in line with the National QIF and Strategic Plan which guides on using existing structures, implementation in an integrated approach, creating a critical mass of QI implementers and champions, monitoring and evaluation with benchmarking.

The expansion of 5S in Uganda is based on the success registered in Tororo General Hospital which became a "National 5S showcase" hospital. By June 2012, 5S was introduced in 15 hospitals (Bududa, Bugiri, Busolwe, Entebbe, Gombe, Kabale, Kapchorwa, Masafu, Masaka, Mbale, Mubende, Hoima, Lira, Arua and Moroto; and a number of HC IVs including the District Health Office in Tororo, Busia and Kabale district. All facilities are at varying levels of implementation. The 7 Regional Referral Hospitals (Arua, Hoima, Kabale, Lira, Mbale, Masaka, and Moroto) and Entebbe General Hospital shall serve as "**5S Showcases"** in the regions (Regional 5S model hospitals) where they are located.

Once 5S-CQI-TQM activities are implemented, and start showing some improvement of work environment at "Regional 5S Showcase hospitals", they will be able to disseminate the 5S-CQI-TQM concepts to other hospitals within the region, and conduct trainings.

FIGURE 13: 5S-CQI-TQM EXPANSION MODEL

Conduct cascade training to health facilities in each Region
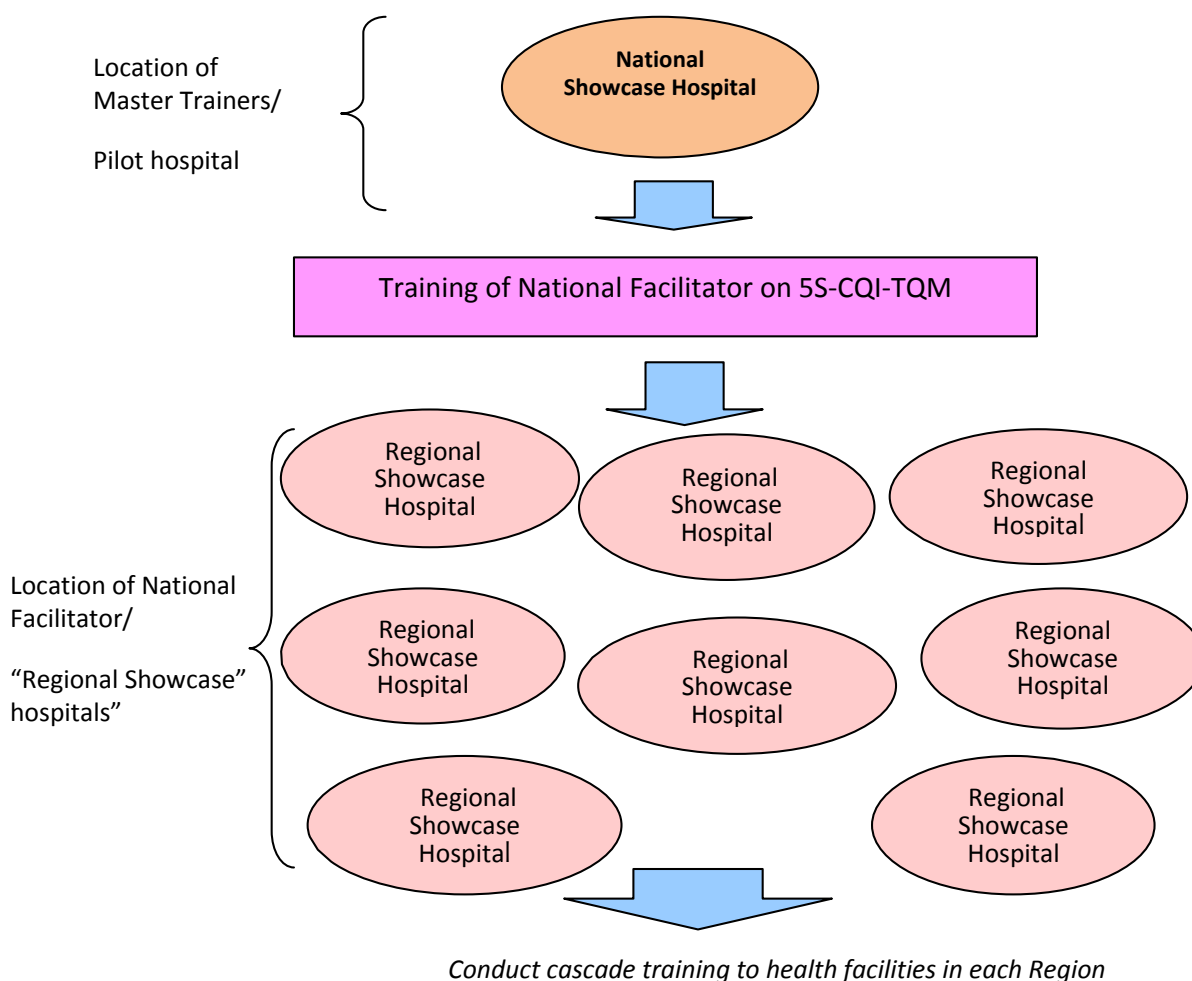
The 5S Principles and concepts shall be disseminated to Regional QI Committee (RQICs) and District QI Committees (DQICs). Knowledge and skills on 5S will be used effectively whenever RQICs and DQICs conduct supportive supervision which will always include a component of improvement of working environment.

The following map indicates the location of "Regional 5S showcase hospitals" and responsible area for the cascade training system.

FIGURE 14: REGIONAL 5S SHOWCASE HOSPITALS AND THEIR RESPONSIBILITY AREAS FOR CASCADE TRAINING
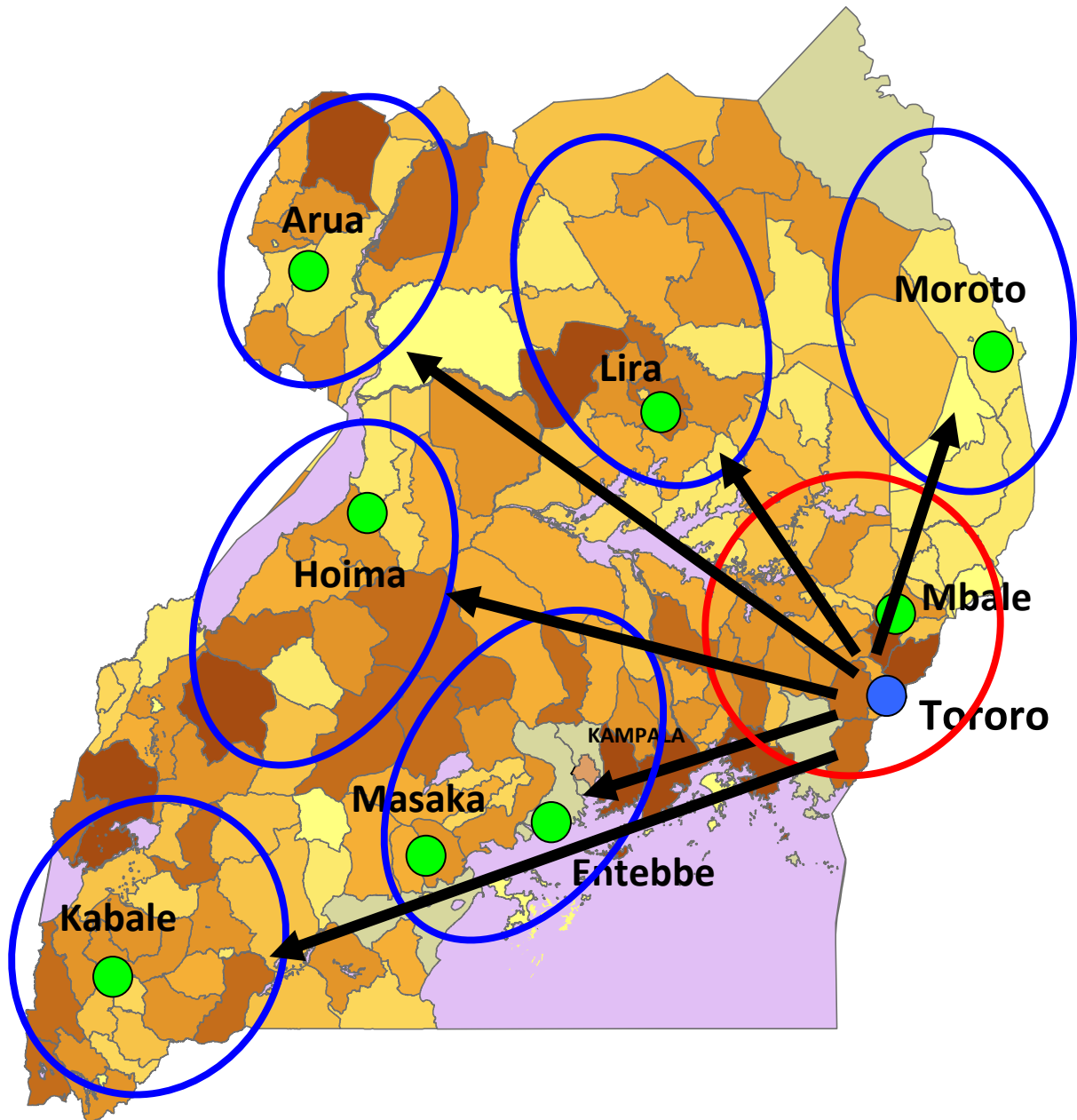
4   5S TOOLS

"5S tools" are utilized to practice 5S (Sort, Set, Shine, Standardize, and Sustain) appropriately. "5S tools" can be combined and used for more effective implementation of 5S activities. All tools require an agreed set of rules, and those rules hove to be known by everyone utilizing the facilities and services.

4.1 5S TOOLS FOR ACTUAL IMPLEMENTATION

4.1.1 ALIGNMENT

- Useful for S2 "SET" activities.

- It is useful for organizing files, equipment, materials and other things in order to improve orderliness and beautification.

4.1.2 NUMBERING/ALPHABETICAL CODING

- Useful for S2 "SET" activities.

- This is to organise files and other items numerically or alphabetically.

- It helps users to find necessary items or information quickly and easily.

- It is very useful for practicing the "*Can See-Can Take Out – Can Return*" principle*.*

4.1.3 RED TAG

- Useful for "S1"

- Use it when you cannot decide whether an item is "necessary" or "not necessary".

- Record necessary information on the Red Tag, stick or hang it on the item that one cannot
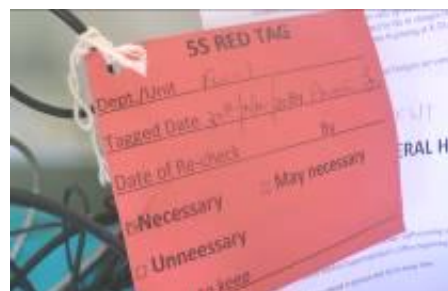
make decision on.

- If the items is not used for 1 month = Unnecessary item

- If the item is used within 1 month = Necessary item

4.1.4 SAFETY SIGNS

- Useful for S2 "SET" and S4 "STANDARDISE" activities.

- This is used to warn visitors and workers to pay attention to hazardous items.

- Most hazardous items, which are commonly used in health facilities, have international/national standardized safety signs.

- Therefore, it is recommended to use common safety signs

4.1.5 COLOUR CODING

- Useful for S4 "STANDARDIZE" activities.

- This tool is used for making facility users understand the meaning of something by using different colours.

- It is often used for waste segregation, the categorisation of areas/zones for particular items

- There are some national policies and guidelines for the accepted national colour coding for different types of waste.
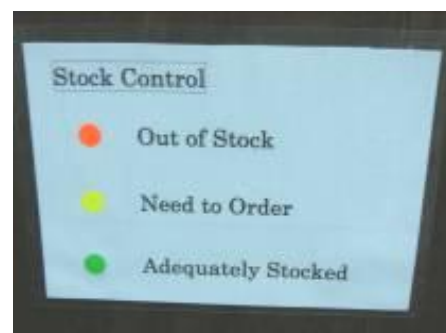
4.1.6 SIGNBOARDS / MAPPING

- Use for S4 "STANDARDIZE" activities.

- This is used for identifying the location of places and guiding facility users to the place where they want to visit.

- Use common languages that are understood by all; in this case Kiswahili, Luganda and English are acceptable.

4.1.7 LABELING

- Useful for S2 "SET" and S4 "STANDARDIZE" activities.

- This is used for the identification of each item and to organise them properly.

- This is especially useful for filing and storing items in cabinets/store shelves.

4.1.8 SYMBOLS

- Useful for S2 "SET" and S4 "STANDARDIZE" activities.

- This is used for making everyone to understand the meaning of something by marks/symbols with no or with a minimum of explanation.

4.1.9 X-Y Axis

- Useful for S2 "SET" and S4 "STANDARDIZE" activities.

- This is used for the improvement of orderliness and beautification;

- This is especially useful for displays and posters display. It is important to remove old/outdated posters from notice boards regularly to keep them tidy.

4.1.10 Zoning

- Useful for S2 "SET" and S4 "STANDARDIZE" activities.

- This is used to identify or recognize the proper location or storage of items.

- This helps people to understand "Where something is supposed to be".

4.1.11 5S Corner

This is effective for S5, "SUSTAIN" activities. Utilize existing notice boards or establish new ones. There are three types of 5S corner.

- Type 1: 5S corner for all hospital staff at administration block

- Type 2: 5S corner for visitors (patients, caregivers, etc) at OPD waiting room, corridor

- Type 3: 5S corner for all departments/ward staff at each department/ward

On the 5S corner, the following information is displayed.

- 5S posters,

- Pictorial Progress Report,

- Implementation Progress Chart/Table

- M&E information (target areas, schedule, method etc.)

- Training information (target personal, schedule, venue, topics etc.)

- QIT/WIT Meeting information (schedule, venue, agenda etc)

- Mission statement on QI

- Information on waste bin colour coding and type of waste

Table 3 clarifies what kind of information should be displayed at which type of 5S corner.

TABLE 3: CLARIFICATION OF 5S CORNERS

Information on 5S corner	Types of 5S corner		
	Administration	OPD Waiting/Corridor	Dept./Ward
5S posters	Y	Y	Y
Pictorial Progress Report	Y	Y	Y
Implementation Progress Chart/Table	Y	NA	Y
M&E information	Y	NA	Y
Training information	Y	NA	Y
QIT/WIT Meeting information	Y	NA	Y
Mission statement on QI	Y	Y	Y
Information on waste bin color coding and type of waste	Y	Y	Y

Y: necessary to display   NA: Not applicable

5S tools are utilized by the following 5S stages.

TABLE 4: 5S TOOLS UTILIZED BY 5S STAGES

	5S tools	S1	S2	S3	S4	S5
1	Alignment	●	●	●		
2	Numbering, Alphabetical cording		●		●	●
3	Red tag	●				
4	Safety signs			●	●	●
5	Color cording		●	●	●	●
6	Sign board		●		●	●
7	Labeling		●		●	
8	Symbols				●	●
9	X-Y axis		●	●	●	
10	Zone		●		●	
11	5S Corner				●	●

4.2 5S TOOLS FOR ENHANCEMENT OF VISUAL CONTROL

4.2.1 WHAT IS VISUAL CONTROL?

Visual control refers to **means, devices, or mechanisms** that were designed to manage or control our operations (processes) so as to meet the following purposes:

Make the problems, abnormalities, or deviations from standards visible to everyone and thus corrective action can be taken immediately.

- Display the operating or progress status in an easy to see format.
- Provide instruction.
- Convey information.
- Provide immediate feedback to people.

4.2.2 WHAT ARE THE POTENTIAL BENEFITS OF VISUAL CONTROL?

Implementing visual control in the hospital would help health workers to expose abnormalities, problems, deviations, waste, unevenness, and unreasonableness to facility users, thus corrective actions can be taken immediately to:

- Correct the problems
- Reduce operational costs
- Reduce possible waste
- Shorten services lead-time and thus keep the delivery of services on time
- Reduce inventory
- Ensure a safe and comfortable work environment

4.2.3 PRACTICE OF VISUAL CONTROL

The main purpose of visual control is to organize the working area such that facility users can tell whether things are going well or are a mess without the help of experts. Visual control can be implemented using either the actual or analogue items.

Actual Items:

- Designate a Location (position) for each item.
- Indicate Quantity (or maximum level of inventory):
- Distinguish items from each other.
- Specify Form (Document).

Analogue Items:

- Colours
- Shapes (Contour)
- Symbols
- Characters (Verbal)
- Numbers
- Graphs/Table

The following table shows an example of the usage of 5S tools that will help to enhance visual control within a health facility. It is reminded that _all tools require an agreed set of rules_. Often colour coding and symbols have international rules or regulations that are well known by people. In that case, it is better to use rules that are adopted by majority of people.

The entire staff in the health facility must be informed of all rules and everyone must follow the rules. Display the rules at the 5S corner or notice a board is helpful for everyone to remind them of the meaning of colours or symbols.

TABLE 5: EXAMPLE OF USAGE OF 5S TOOLS FOR VISUAL CONTROL

Analog items	5S tools	Example of usage	Actual items
Colours	1. Colour cording	1.1 Waste bin for infectious and general waste 1.2 Disinfectant containers (IPC regulation) 1.3 Linen system 1.4 Oxygen tank storage (full-blue, empty-red)	Distinguish items from each other
Shapes	2. Zoning	2.1 Marking of Stretcher/wheel chair parking, 2.2 Car parking 2.3 Position of waste bin	Designate a Location
Symbols	3. Symbols	3.1 Indication of Stretcher/wheel chair parking, 3.2 Toilet, 3.3 No smoking area 3.4 Dangerous areas (high voltage, incinerator etc)	Distinguish items from each other
Characters	4. Alphabet coding 5. Labeling 6. Signboard	4.1 Open registry files keeping, 5.1 Store/Stock management for medical supplies 6.1 Direction to facilities in hospital 6.2 Identification of facilities in hospital	Designate a Location
Numbers	7. Numbering	7.1 Medical records keeping, 7.2 Administration files keeping	Designate a Location
Graphs/ Table	8. Check list 9. X-Y Axis	8.1 Progress report, evaluation result 9.1 Notice, poster display on notice boards/5Scorner	Specify Form (Document) & Indicate Quantity

5 MONITORING AND EVALUATION OF 5S-CQI-TQM

Monitoring and Evaluation (M&E) is an integral component of QI in health services. Health managers, persons responsible for hospitals/departments, program managers/staff, and other health workers; need to know about data collection, processing, analysis, and use for QI. The knowledge about M&E helps health workers in the health sector to effectively monitor and evaluate their health facilities or programs; and hence strengthen the performance. This chapter aims at highlighting M&E essentials for the implementation of 5S-CQI-TQM.

5.1 M&E ESSENTIALS FOR THE IMPLEMENTATION OF 5S-CQI-TQM

5.1.1 DEFINITION OF MONITORING AND EVALUATION

(a) Monitoring refers to an on-going activity to track progress against planned task in the implementation of activities in a health facility or program. Data are systematically collected, analysed and used to provide information to policy makers, health managers, directors, persons in charges, program managers and others (including stakeholders), for use in planning and management.

Monitoring aims at providing regular feedback and oversight of the implementation of activities in relation to plans, resources, infrastructure, and use of services by the community served.

(b) Evaluation represents a set of procedures and analytical tools to examine how health interventions or programs are implemented; their level of performance; and whether they have the impact they were intended to have. Evaluation helps to assess the effectiveness, relevance and impact of a health intervention/program towards achievement of the set goals.

5.1.2 IMPORTANCE OF MONITORING AND EVALUATION

M&E is crucial in QI programs/approaches. It is particularly so due to the fact that it:

- Assists Health Managers, Directors, Person in charge, Program Managers/Staff, and others in the health sector in performing the day-to-day management of health facilities and programs.

- Provides information for strategic planning and the design and implementation of health interventions and programs.

- Assists in making informed decisions on the prudent use of the meager resources available.

- Helps to improve performance by identifying those aspects that are working according to plan, and those aspects, which need a mid-course correction.

- Tracks changes in services provided and in the desired outcomes.

- Assists to better the human condition in terms of safe work environment, and improved health status.

- Implements a system for transparent accountability.

5.1.3 INTERACTION BETWEEN 5S-CQI-TQM IMPLEMENTATION AND M&E

The Figure below shows the phases of 5S-CQI-TQM implementation and how the M&E comes in. There are two things depicted here that need to stay in the minds of health workers is that; firstly, M&E is a continuous process; secondly, the 5S activities are never a onetime implementation. They should be done on daily basis.

FIGURE 15: INTERACTION BETWEEN 5S-CQI-TQM AND M&E
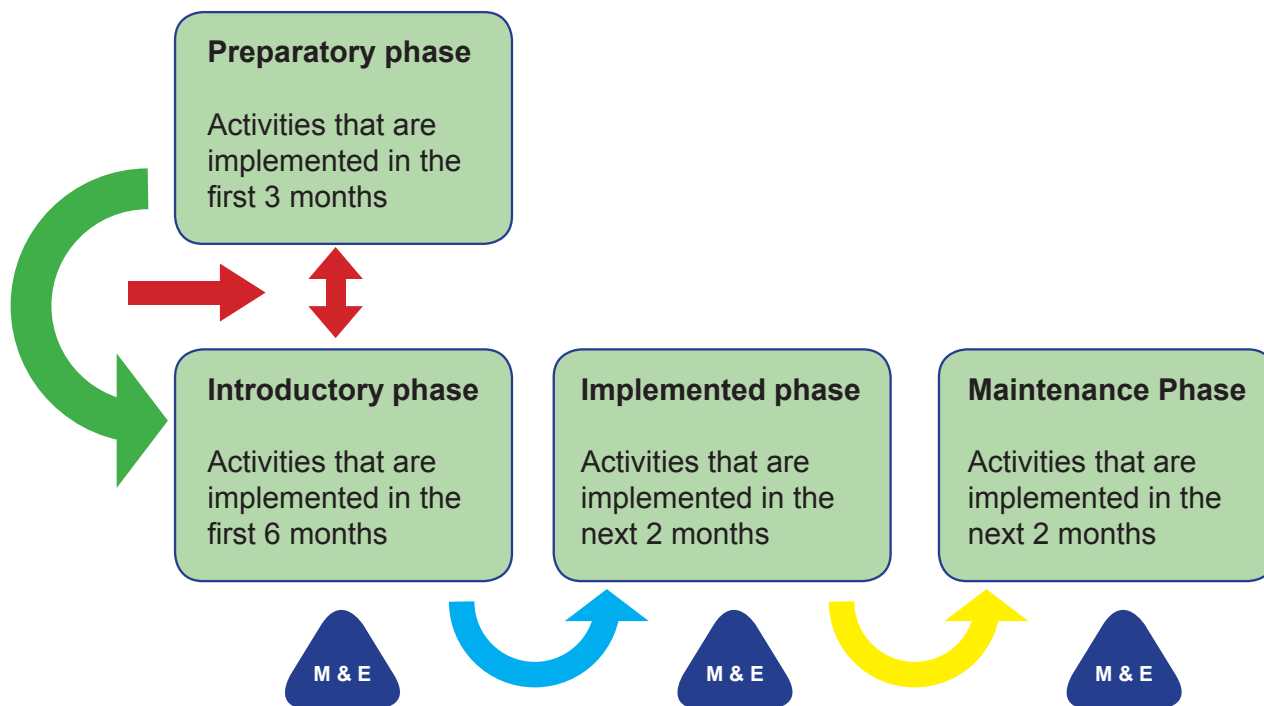
5.2 5S-CQI-TQM LOGICAL FRAMEWORK

The Logical framework visualizes the factors that drive an intervention. The 5S-CQI-TQM approach in Uganda will be operationalised within the National QIF and Strategic Plan results framework (Figure 16) The framework links the 5S-CQI-TQM approach to the desired impact (QI in health services). It incorporates some key contextual factors for successful implementation of 5S-CQI-TQM.

FIGURE 16: QI RESULTS FRAMEWORK

Goal: To ensure provision of high quality health services and contribute to the attainment of good quality of life and well-being at all levels of health care.

RESULT 1:
A harmonized approach to QI in health service delivery

RESULT 2:
Improved quality of health care and patient safety at all levels

RESULT 3:
Dynamic interaction between health care providers and consumers of health care

Priority Interventions

- Development of national 5S-CQI-TQM guidelines and tools
- Development and definition of 5S-CQI-TQM assessment indicators.
- Development of a national 5S-CQI-TQM training manual
- Strengthening data recording and reporting
- Liaise with academic institutions for review and update of the pre-service QI training curriculum to include 5S.
- Support the development of a QI Research Agenda

Priority Interventions

- Training for 5S-CQI-TQM at all levels
- Supervision, mentoring and M&E of 5S-CQI-TQM activities
- Use of research /evidence based data.
- Implement evidence based QI initiatives.
- Development of a recognition and reward mechanism
- Documentation and dissemination of 5S-CQI-TQM best practices

Priority Interventions

- Strengthening coordination initiatives among different institutions
- Conduct client and provider satisfaction surveys
- Create awareness on roles and responsibilities of service providers (Clients Charter)
- Create awareness on patients rights, roles and responsibilities (Patients Charter)

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5.3 5S-CQI ASSESSMENT INDICATORS

The 5S-CQI assessment indicators will be based on the three quality indicator domains in the National QIF and Strategic Plan. These include the structural, process and outcome indicators.

Structural/Input indicators

- o Accessibility to health care services taking consideration of continuity of services
- o Availability of trained health workers
- o Availability of medicines and supplies
- o Availability of standards and guidelines
- o Work environment organisation
- o Logistics supply and management

Process indicators

- o Use of standards and guidelines
- o Organisational management for implementation 5S-QI
- o Risk and harm reduction and control practices
- o Testing and documentation of changes
- o Data management, use and dissemination
- o Staff attitude to work

Outcome indicators

- o Balance and equitable health care to reduce variations across different social characteristics
- o Waiting time and crowding at service points
- o Responsiveness in the institution health care system
- o Community participation
- o Level of utilisation of services in priority area
- o Extent to which health care is delivered in a manner which maximizes resource use and avoids waste
- o Client satisfaction

Each organisation / health facility shall identify specific 5S assessment indicators, source of data and reporting periodicity based on the QI project implemented. These indicators shall be reviewed from time to time to suit the QI activities implemented.

The MoH identified eight (8) 5S core indicators (Table 6) to be monitored at national level. Of these 3 are structural/input, 2 process and 3 outcome indicators. See Annex 6.9 for the 5S core indicator definitions.

TABLE 6: 5S CORE INDICATORS

	Indicators	Frequency	Source of data	Means of Verification
	Structural/Input Indicators			
1.	Number / % of hospitals trained in 5S	Biannually	Training data base	Training Reports
2.	Number / % of trained hospitals implementing 5S activities	Quarterly	District QIT reports	Assessment reports
3.	Number / % of target facilities which started CQI activities	Quarterly	District QIT reports	Assessment reports
	Process Indicators			
4.	Number / % of WITs in hospitals implementing 5S at level 10 of 5S implementation (Maintenance Phase)	Annually	District QIT reports	5S-CQI-TQM M&E sheets
5.	Percentage of units in target hospitals with functional WITs.	Quarterly	Assessment reports	WIT meeting records
	Outcome Indicators			
6.	Percentage of clients expressing satisfaction with health services	Annually	Client / Provider satisfaction surveys	Survey reports
7.	Percentage of providers expressing satisfaction with health services	Annually	Client / Provider satisfaction surveys	Survey Reports
8.	Outpatient department utilization ratio	Quarterly	HMIS	Quarterly HMIS Reports

5.4 5S-CQI-TQM Assessment Methods and Tools

The methods of data collection will be a combination of quantitative and qualitative methods. As far as possible, standardized data collection tools and techniques will be used. Most data in respect of some indicators will be collected annually, and any survey-based indicators will be collected at baseline, mid-term where possible and project end.

The specific tools and methods will among others include;
* The Health Management Information System (HMIS) for review of routine health information e.g. OPD attendance, In-patient admissions and deaths, Immunization coverage, deliveries, ANC attendance, Family planning utilization, HCT uptake, ART uptake, etc.
* Project databases for project specific data;

- Human Resource Information System for staffing levels;
- Logistics Management Information System;
- Specific questionnaires will be designed for evaluation surveys and client/provider satisfaction surveys;
- Standardized checklist will be used to collect other quality measurement data e.g. audit of individual patient records, death audits and review, clinical audits, observation of service delivery, critical incidents –adverse events, mystery clients, peer reviews;
- Patient complaint system e.g. suggestion boxes, complaint's desk;
- Other proven tools and methodologies.

5.5 Monitoring Mechanism

Monitoring of 5S-CQI-TQM activities will be integrated in to the overall monitoring mechanism for all QI activities. M&E shall be carried out by both the coordination and implementation structures for QI.

QI committees / team meetings, supervision visits, periodic performance reviews, surveys and evaluations will be carried out for monitoring at the various levels as outlined below.

5.5.1 Monitoring at national Level:

The following activities will be conducted at national level to track progress on implementation of QI interventions:

1. Monthly QAD meeting will receive and address pertinent QI issues.
2. Quarterly National QI Coordination Committee meetings will be conducted to track progress.
3. Quarterly QI supervision visits to institutions, Referral Hospitals, Local Governments and implementing partners.
4. Quarterly QI progress reports compiled by program and project managers and submitted to QAD.
5. Progress reports shall be shared in the National QI Committee meetings
6. National QI stakeholders' meetings / conferences to share achievements, best practices and challenges.

5.5.2 Monitoring at Regional Level

The following activities will be conducted at regional level to track progress on implementation of the regional QI plan:

1. Quarterly Regional QI Coordination Committee meetings.
2. Quarterly supervision visits to implementing facilities.
3. Quarterly QI progress reports compiled and submitted to QAD and National Program / Project Managers.
4. Quarterly QI performance review at the regional performance review meetings.

5.5.3 Monitoring at district Level

The following activities will be conducted at regional level to track progress on implementation of the district QI plan:

1. Monthly District QI Committee meetings to track progress.
2. Quarterly supervision visits to Health Sub-Districts.
3. Quarterly QI progress reports compiled and submitted to the Regional QI Coordination Committee / Project Managers.
4. Quarterly QI performance review at the district performance review meetings.

5.5.4   MONITORING AT HEALTH SUB-DISTRICT LEVEL

The following activities will be conducted at regional level to track progress on implementation of the HSD QI plan:

1. Monthly HSD QI Committee meetings.
2. Quarterly supervision to health facilities.
3. Quarterly HSD QI progress reports compiled and submitted to the DHO.
4. Quarterly QI performance review meetings.

5.5.5   MONITORING AT FACILITY LEVEL

The following activities will be conducted at health facility level to track progress on implementation of the facility QI plan:

1. Monthly health facility meetings.
2. Internal supervision within health facilities.
3. Quarterly facility QI progress reports compiled and submitted to the HSD.
4. Presented at HSD performance review meetings.

FIGURE 17: PERFORMANCE MONITORING CHANNEL

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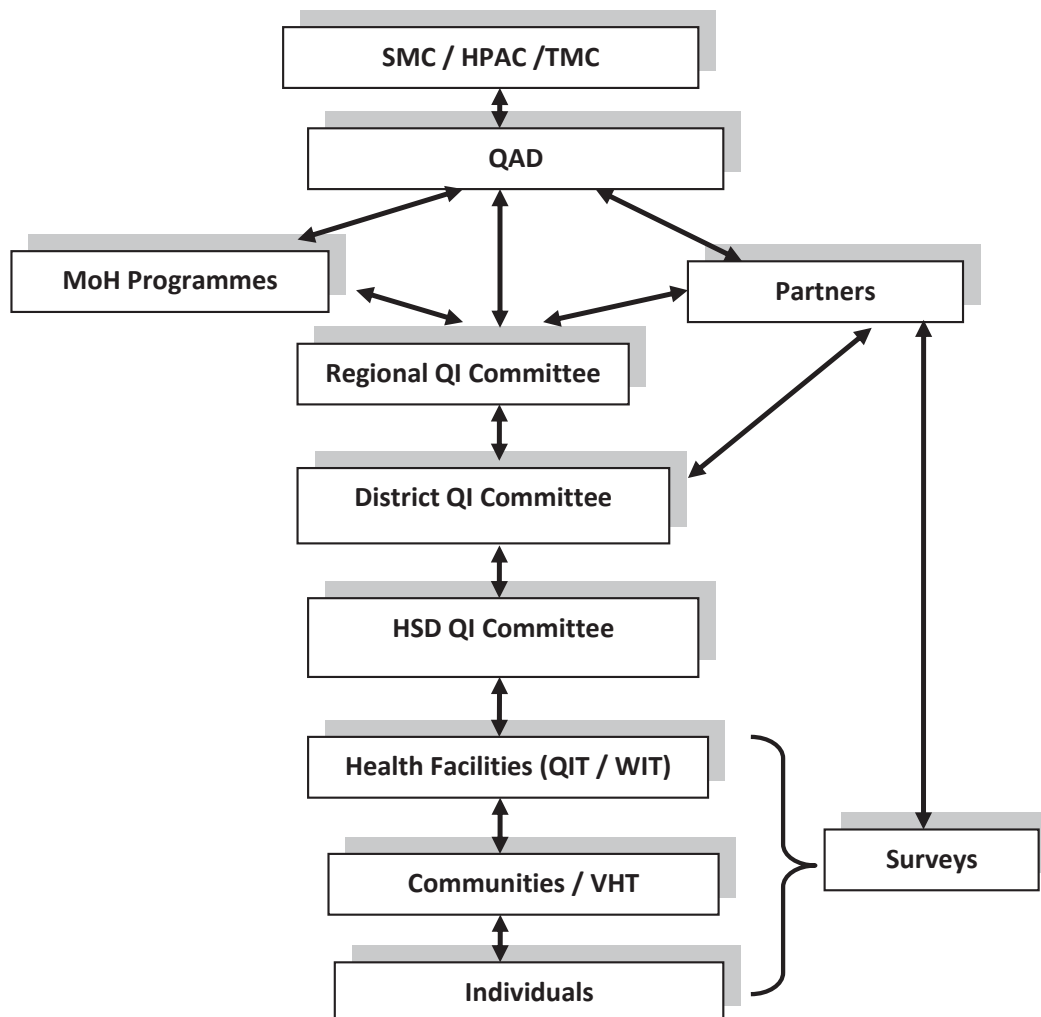
5.5.6 MONITORING BY QITS

QITs have the responsibility of conducting M&E of 5S activities within the health facilities. Monitoring visits and exchanging opinions with WIT is important to find problem(s) and have ideas to solutions. Provide technical support/advice, mentoring or coaching, if necessary. Points of monitoring and evaluation are as follows:

- Organisational leadership and ownership
- Strategy development
- Performance of Sort, Set, Shine, Standardize and Sustain activities
- Performance of WITs

Note that organisational leadership, ownership and performance of Sort, Set, Shine, and Standardize and Sustain activities are evaluated by using the sheet attached in Annex 5. If 5S activities are in place and become a culture of the hospital (maintenance phase), consider going to next step and monitor and evaluate the following issues for TQM achievements. Indicators vary from hospital to hospital. Thus, select indicators that match with your organisation.

- Hospital health care delivery system
- Health care results such as "average of a health intervention", "hospital mortality and morbidity rate"
- Financial results such as "cost performance"

5.5.7 MONITORING BY WITS

WIT has the responsibility for conducting the monitoring and evaluation of day-to-day 5S practices and CQI activities that are suggested and executed within their workplace. The process and progress of 5S + CQI activities must be documented and share the results within the departments/sections. WIT will also communicate the results to the hospital QIT. WIT should develop their own checklist to suit their work environment.

5.6 EVALUATION OF 5S-CQI-TQM

Evaluation of 5S-CQI-TQM intervention shall be carried out at baseline, mid-term and end-term of specific projects. The evaluations will be conducted to determine the baseline situation and then periodically to examine how 5S-CQI-TQM interventions are implemented; their level of performance; and whether they have the impact they were intended to have.

The evaluation findings shall be disseminated in form of reports and shall be used for future programming and feed into subsequent health sector strategic plans and policy.

5.7 INFORMATION DISSEMINATION

5S-CQI-TQM data will be translated into information that is relevant for decision-making. Data will be packaged and disseminated in formats that are determined by management at the various levels. Program performance data shall be packaged and displayed at the various

health facilities using agreed formats. The timing of information dissemination should fit in the planning cycles and needs of the users.

Data shall be disseminated to the wider audience through meetings, conferences, journals and newsletters.

6 ANNEX

6.1 ANNEX: FORMAT: SITUATION ANALYSIS (1)

Format : Situation Analysis (1) – Hospital Environment–

1: Hospital Environment

No.	Check points	No	Partly	Yes	Comments (Findings)
1.1	Is signboard of the hospital visible from road?	0	1	2	
1.2	Is visiting-hours notice board displayed at the hospital gate?	0	1	2	
1.3	Are direction signboards to facilities clearly displayed?	0	1	2	
1.4	Are direction signboards to wards/department clearly displayed?	0	1	2	
1.5	Are all doors marked clearly?	0	1	2	
1.6	Are waste bins kept at various places for visitors use?	0	1	2	
1.7	Are gardens, passages, parking, around building free of clutters?	0	1	2	
1.8	Is parking area clearly marked?	0	1	2	
1.9	Is waste bins categorized by types of waste with color cording?	0	1	2	
1.1	Is waste dumping point separated according to types of waste?	0	1	2	
1.11	Is there water taps located around the hospital building and functional?	0	1	2	
1.12	Is there generator located and functional?	0	1	2	
1.13	Is the hospital compound in order and clean?	0	1	2	

Other findings

6.2 ANNEX: FORMAT: SITUATION ANALYSIS (2)

Format : Situation Analysis(2) – Workplace Environment and Attitude

2. Workplace Environment		Name of Unit			
No.	Check points	No	Partly	Yes	Comments (Findings)
2.1	Is department/section/ward's signboard clearly displayed at the entrance?	0	1	2	
2.2	Is changing room for staff located?	0	1	2	
2.3	Are walls, windows, doors free of advertisement posters and stickers?	0	1	2	
2.4	Is work areas adequately illuminated?	0	1	2	
2.5	Is work areas adequately ventilated?	0	1	2	
2.6	Are all water taps in the workplace functional?	0	1	2	
2.7	Are all electric plug points in the workplace functional?	0	1	2	
2.8	Are cleaning tools stored properly?	0	1	2	
2.9	Are floors, walls, windows, toilets, change rooms in working order & clean?	0	1	2	
2.10	Is there cleaning responsibility maps/list, and the schedule displayed?	0	1	2	
2.11	Are outside / inside areas of the premises free of clutter?	0	1	2	
2.12	Are unwanted items removed from Premises, Offices, working bench etc.	0	1	2	
2.13	Is notice board arranged properly without old / unnecessary information?	0	1	2	
2.14	Are tops and insides of all cupboards, shelves, tables, drawers, etc. free of unwanted items	0	1	2	
2.15	Are all machines/Rooms/Toilets labeled with identification labels	0	1	2	
2.16	Are switches, fans regulators, etc., labeled	0	1	2	
2.17	Are all equipment/tools/files, etc., arranged according to workflow?	0	1	2	
2.18	Are waste bins separated for infected materials, sharps, and general garbage with color cording?	0	1	2	
2.19	Are all items that inside cupboards, shelves, tables, drawers, etc. free of unwanted items properly organized?	0	1	2	
2.20	Is first aid kit/ fire distinguisher located in the workplace	0	1	2	
2.21	Is furniture/beds aligned properly?	0	1	2	
2.22	Are all equipment/tools are maintained properly and functional?	0	1	2	
2.23	Is there department/section/ward meeting to gain/share information among workers?	0	1	2	
2.24	Is there standardized work instructions/manuals at the workplace?	0	1	2	

3. Attitude of staff

No.	Check points	No	Partly	Yes	Remarks
3.1	Interview internal clients' expectations.	0	1	2	
3.2	Interview external clients' expectations.	0	1	2	

Other findings

6.3 ANNEX: IMPROVEMENT ACTION PLAN WITH 5S-CQI-TQM

For:..

Developed by: ....

Date: ....

1. Issues and challenges of the Region/District

2. Institutional Analysis

Overall situation of the facility:

Areas/Sections/Departments	Problems	Expectation of service users

3. Problem Statement

4. Goal

5. Objectives

Outputs	Indicators	Means of Verification

6. Target areas for implementation of 5S

1)
2)
3)

7. Action Plan

Phase of implementation	Activity for improvement	Target	Resources input	Time Frame									Responsibility	Means of Verification
				20…				20…						
				1	2	3	4	1	2	3	4			
Preparatory Phase Activities that are implemented in first three months														
Introduction Phase Activities that are implemented in next six months														
Implementation Phase Activities that are implemented in next two years														
Maintenance Phase Activities that are implemented an ongoing base to maintain the previous phases														

6.4 Annex: 5S before and after report form

5S before and after report form

Name of reporter: _____   [ ] Male   [ ] Female

Position: _____   Reporting Date: _____

Title of QI Project:_____

  1[ ] Sort   2 [ ] Set→ (details:) 3 [ ] Shine

Workplace (venue):_____

Duration for taking improvements:_____

Cost: _____UGX   [ ] No cost

Responsible person: _____

Cooperative Person: _____

Reasons (why did you select this action?):

Photo	Photo

Effect of improvement:

_____

6.5 FORMAT: OBSERVATION SHEET FOR 5S TOOLS

Format : Observation Sheet for 5S Tools

Name of Unit		Name	

5S tools

Red Tag,Alphabetical Cording,Numbering,Labeling/Taping,Safety Sign,Sign Board,Zone,X-Y Axis, Alignment,Symbols,Color Coding,5S Coner

Findings : Benefit and Challenges of 5S tools

	5S tools	Place found	Findings		Suggestion
			Benefit	Challenges	
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

6.6 FORMAT: M&E FOR THE PROGRESS OF 5S ACTIVITIES

Foromat : M & E SHEET FOR THE PROGRESS OF 5-S ACTIVITIES

Date: /   /

(D / M / Y)

	HOSPITAL:						DEPARTMENT:
	DESCRIPTION	Very poorly	Poorly	Farely	Well	Very well	**AWARD MARKS Enter the result in this column**
1	**LEADERSHIP** Role & Commitment of Management, Sustainability of 5-S activity, Training Programme for Middle Mgt., Setting up 5-S Committees, 5-S Campaigns.						
1.1	5-Scommitment, knowledge, Awareness of Executive & Supervisors	1	2	3	4	5	
1.2	5-S Involvement & Commitment ofExecutives & Supervisors	1	2	3	4	5	
1.3	5-S progress meeting, evaluatio, training conducted by Patrol team and WIT Minutes	1	2	3	4	5	
1.4	5-S guideinle is available and 5-S manual developed with many relevant details	1	2	3	4	5	
1.5	Evidence of trainings conducted for Managers and health workers	1	2	3	4	5	
	TOTAL	**Full mark 25**					**0**
		Acquired marks / 25 x 100 =					**0**

2	**SEIRI – (SORTING)** Clutter free Environment in Premises, Inside Offices, Work Place, etc. Evidence of removal of unwanted items should be evident all around.						
2.1	Unwanted items removed from Premises, Offices, Work Places including drawers, cabinets and shelves	1	2	3	4	5	
2.2	Walls are free of old posters, calendars, pictures	1	2	3	4	5	
2.3	Tops and insides of all cupboards, shelves, tables, drawers, etc. free of unwanted items	1	2	3	4	5	
2.4	Notice Boards – Current Notices with removal instructions	1	2	3	4	5	
2.5	Color cording for waste disposal maintained and standards followed	1	2	3	4	5	
2.6	Rules for disposal with Red Tags, etc.	1	2	3	4	5	
2.7	Maintenance/Prevention of Sorting Projects established with Mechanism to reduce paperwork, stocks, etc.	1	2	3	4	5	
	TOTAL	**Full mark 35**					**0**
		Acquired marks / 35 x 100 =					**0**

3	**SEITON – (SETTING / ORGANISATION)** Ability to find whatever is required with the least possible delay, evidence of eliminating the waste of time throughout the Institute/Organization.						
3.1	Photographic evidence of Pre 5-S Implementation and afterwards	1	2	3	4	5	
3.2	Visual Control methods adopted to prevent mix-up of items (files, equipment, tools etc.)	1	2	3	4	5	
3.3	Directional Boards from hospital entrance to all facilities(office,wards,Laboratory etc.) and corridors are clearly marked	1	2	3	4	5	
3.4	Hospital/Stores, etc., have corridor/floor/ direction clearly marked	1	2	3	4	5	
3.5	All machines/Rooms/Toilets/Switches/fans regulators etc. have identification labels	1	2	3	4	5	
3.6	All items are arranged according to 'Can See', 'Can Take Out' & 'Can Return' principle	1	2	3	4	5	
3.7	X-axis, Y-axis alignment is evident everywhere	1	2	3	4	5	
3.8	Visual Control methods for defects/Rework/Files/Equipment & to prevent mix-up	1	2	3	4	5	
3.9	Gangways clearly marked with Passageways/Entrances & Exit Lines/Curved door openings/Direction of travel	1	2	3	4	5	
3.10	Switches, Fans Regulators, etc., labeled	1	2	3	4	5	
3.11	Maintenance methods of SETTING established and mainted	1	2	3	4	5	
	TOTAL	**Full mark 55**					**0**
		Acquired marks / 55 x 100 =					**0**

4	SEISO – (SHINING / CLEANLINESS) The Cleanliness all round the Institution should have been carried out according to the 5-S Concepts.						
4.1	Floors, Walls, Windows, Toilets, Change Rooms in working order & clean	1	2	3	4	5	
4.2	Daily self arrangement (3 min./5 min.) is practices	1	2	3	4	5	
4.3	Cleaning responsibility Maps and Schedules displayed	1	2	3	4	5	
4.4	Waste bin strategy is implemented	1	2	3	4	5	
4.5	Use of adequate cleaning tools is evident	1	2	3	4	5	
4.6	Storage of cleaning tools – Brooms/Maps/Other equipment	1	2	3	4	5	
4.7	Machines/Equipment/Tools/Furniture at a high level of Cleanliness & maintenance schedules displayed	1	2	3	4	5	
4.8	General appearance of cleanliness all round	1	2	3	4	5	
	TOTAL	Full mark 40					0
					Acquired marks / 40 x 100 =		0

5	SEIKETSU – (STANDARDIZATION) High level of Standardization in all activities carried out in SEIRI, SEITON and SEISO and the evidence of such standards being practiced all around.						
5.1	Adopt 5-S procedures & standardized on Check list, Labels Corridors/Isles & Gangways	1	2	3	4	5	
5.2	5-S procedures adopted & standardized in Corridors/Isles & Gangways	1	2	3	4	5	
5.3	Orderliness in the use of Corridors/Isles/Gangways by Pedestrians	1	2	3	4	5	
5.4	Innovative Visual Control methods implemented	1	2	3	4	5	
5.5	Visuals on Danger/Open & Shut directional Labels on Valves/Doors,	1	2	3	4	5	
5.6	Maintenance/Storage of Files/Records in Offices/Workplaces, etc.	1	2	3	4	5	
5.7	Standardization/Orderliness in Keeping Furniture/Equipment	1	2	3	4	5	
5.8	Standardized check lists for common Administrative Procedures in hospital and department	1	2	3	4	5	
	TOTAL	Full mark 40					0
					Acquired marks / 40 x 100 =		0

6	SHITSUKE – (SUSTAIN / SELF DISCIPLINE) Evidence of an disciplined approach to all 5-S activities through proper Training & Development, which shows the sustainability in the long term.						
6.1	Evidence of regular training program for all categories of Employees in the section	1	2	3	4	5	
6.2	Evidence of 5-S group Activities & promotion of Kaizen Schemes	1	2	3	4	5	
6.3	Evidence in carrying out Internal Audits by WIT	1	2	3	4	5	
6.4	Evidence of Self Discipline among visitors to the Institution	1	2	3	4	5	
6.5	Evidence of 5-S Slogan & Poster Competitions among Employees' Families	1	2	3	4	5	
6.6	Evidence of Self Discipline among visitors to the Institution	1	2	3	4	5	
6.7	Evidence of Self-Discipline in the overall Institution	1	2	3	4	5	
	TOTAL	Full mark 35					0
					Acquired marks / 35 x 100 =		0
	GRAND TOTAL for 5S activities	Full mark 230					0

6.7 CQI ACTIVITY CHECKLIST

Department/Section: ……………………………………….

WIT Leader: ………………………………………………

Month & Year :…………………………………………….

Act #	CQI Activities	Deadline date	Responsible person[a]	Status on the deadline date[b]	Status on the New deadline date
1	Objective: Target:	/ /		☐Done ☐Partially done ☐Not at all New deadline / /	☐Done ☐Partially done ☐Not at all Reason
2	Objective: Target:	/ /		☐Done ☐Partially done ☐ Not at all New deadline / /	☐Done ☐Partially done ☐Not at all Reason
3	Objective: Target:	/ /		☐Done ☐Partially done ☐ Not at all New deadline / /	☐Done ☐Partially done ☐Not at all Reason
4	Objective: Target:	/ /		☐Done ☐Partially done ☐ Not at all New deadline / /	☐Done ☐Partially done ☐Not at all Reason

---

[a] Put name of WIT leader or suggested person

[b] If the status is "Not at all", set new deadline

6.8 CQI DOCUMENTATION JOURNAL

MINISTRY OF HEALTH

Documentation Journal for QI activities

IMPROVEMENT OBJECTIVE	

Name of the Facility _____ **District:** _____ **Region:** _____

Team Leader: _____

Team Members:
_____

Start Date for Improvement Project: _____ **End date:** _____

Improvement Objective:

1. _____
_____
_____

Indicator for the Objective:

_____
_____
_____

Description of Problem:

Briefly describe the problem being addressed and gaps between the current situation and your improvement objectives. State the differences between the MoH standard of care and the current practices. Also describe some of the challenges with the current situation.

Part 2: *Changes Worksheet* **– QI Team Activities:** Please list below the changes that the team has tried out in order to achieve the improvement objective. Write all changes, whether effective or not. Also note when it was started and when it ended (where applicable) to enable you annotate the results.

Planned and Tested Changes:	Start Date:	End Date	Was there any improvement registered?	Comments:
In the space below, list all of the changes that you are implementing to address the improvement objective. Use 1-2 sentences to briefly describe the tested change.	DD/MM/YY	(if applicable) DD/MM/YY	(Yes/No)	Note here any potential reasons why the change did or did not yield improvement; also indicate any change in indicator value observed related to this change.
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				

Part 3: *Graph Template* – Annotated Results:

- Use the graph below to document your progress. Indicate the value of the numerator and denominator.

TITTLE: _____

Indicator Value _____

	0	1	2	3	4	5	6	7	8	9	10	11	12
Time													
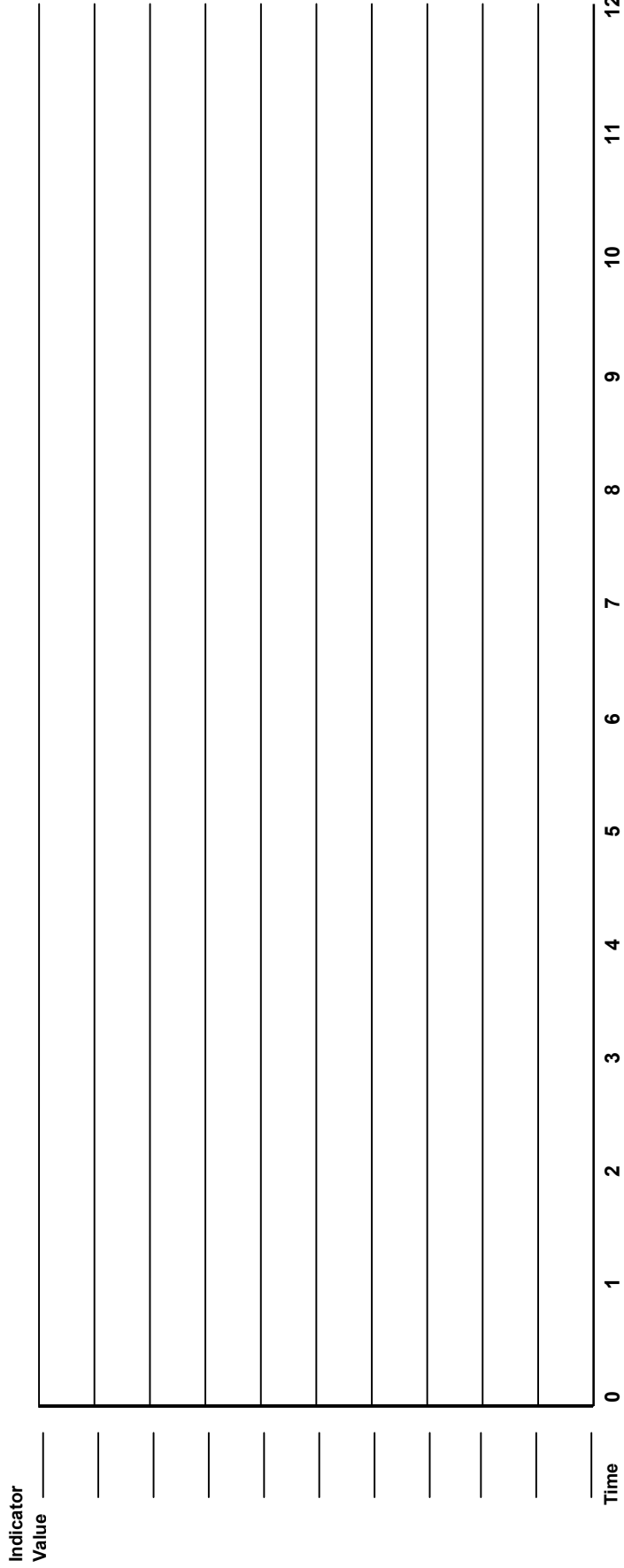
Numerator												
Denominator												
%												

Notes on the Indicator: Write down any additional comments you may have on the performance of indicators. Write anything derived from the changes worksheet and the graph template that might explain the performance trends of the improvement objective.

_____

_____

_____

Notes on Other Observed Effects (lessons learnt): Please write here any effects (positive or negative) you are *currently* observing as a result of the quality improvement effort such as comments from patients, changes in your performance or motivation, improved efficiency or the survival story of a sick patient. You may use your notes to tell the complete story at the next learning session(s).

_____

_____

_____

_____

_____

XIV

6.9 INDICATOR DEFINITIONS

Definition	**The percentage of health facilities trained in 5S**
Numerator	Number of health facilities trained in 5S
Denominator	The total number of health facilities (public & private)
Calculation	Numerator _____ x 100 Denominator
Data sources	Training reports
Associated terms	Health facilities trained in 5S are health facilities that have completed the Preparatory Phase (Steps 1 – 5) and conducted Step 6: Training of staff level (Introductory phase).
Frequency of analysis	Biannually
Disaggregation	By ownership (public, Private-not-for-profit, Private for Profit), level (National Referral, Regional Referral, General hospitals, HC IVs – IIs)
Definition	**The percentage of trained health facilities implementing 5S activities**
Numerator	Number of trained health facilities implementing 5S activities
Denominator	The total number of health facilities (public & private) trained in 5S
Calculation	Numerator _____ x 100 Denominator
Data sources	Assessment reports
Associated terms	Health facilities implementing 5S activities are health facilities that have attained Step 9: Proper practice of Sort, Set and Shine) in the Implementation Phase
Frequency of analysis	Quarterly
Disaggregation	By ownership (public, Private-not-for-profit, Private for Profit), level (National Referral, Regional Referral, General hospitals, HC IVs – IIs)
Definition	**The percentage of 5S Implementing facilities which started CQI activities**
Numerator	Number of 5S implementing facilities which started CQI activities
Denominator	The total number of 5S implementing facilities
Calculation	Numerator

	_____ x 100 Denominator
Data sources	District QIT reports
Associated terms	Health facilities implementing CQI activities are health facilities that have attained the Maintenance Phase of 5S Implementation in all work places and introduced other QIPs to improve other aspects of quality in health services, including technical issues.
Frequency of analysis	Quarterly
Disaggregation	By ownership (public, Private-not-for-profit, Private for Profit), level (National Referral, Regional Referral, General hospitals, HC IVs – IIs)
Definition	**The percentage of Work Improvement Teams (WITs) in health facilities implementing 5S which reached Step 10 of 5S implementation (Maintenance Phase)**
Numerator	Number of WITs in health facilities implementing 5S at level 10 of 5S implementation
Denominator	The total number of WITs in health facilities implementing 5S
Calculation	Numerator _____ x 100 Denominator
Associated terms	A Work Improvement Team is a small group of people working together to achieve a common goal for which they share responsibility and also a high task group whose members are interdependent and share a common performance intent of their unit/department in organisation. The aim of this team is to provide staff with opportunity for meaningful involvement and contribution in solving problems and challenges. Step 10 of 5S implementation is the Maintenance Phase: Making 5S activities a culture of your facility / work place (Sustain)
Data sources	District QIT reports
Frequency of analysis	Annually
Disaggregation	By ownership (public, Private-not-for-profit, Private for Profit), level (National Referral, Regional Referral, General hospitals, HC IVs – IIs)
Definition	**The percentage of units in target hospitals with functional WITs.**
Numerator	Number of units in target hospitals with functional WITs
Denominator	The total number of units in target hospitals
Calculation	Numerator _____ x 100

	Denominator
Data sources	5S-CQI-TQM Assessment reports
Frequency of analysis	Quarterly
Disaggregation	By ownership (public, Private-not-for-profit, Private for Profit), level (National Referral, Regional Referral, General hospitals, HC IVs – IIs)
Definition	**The percentage of clients expressing satisfaction with health services**
Numerator	Number of clients surveyed expressing satisfaction with health services
Denominator	Number of clients surveyed
Calculation	Numerator _____ x 100 Denominator
Data sources	Health Facility Surveys – for facility specific client satisfaction Population based surveys - for National level determination of client satisfaction
Frequency of analysis	Health facility specific data should be collected and analyzed annually. Data from population based surveys is collected and analyzed every 2 - 3 years.
Disaggregation	By sex, location (rural / urban), type of facility
Definition	**The percentage of providers expressing satisfaction with health services**
Numerator	Number of providers surveyed expressing satisfaction with health services
Denominator	Number of providers surveyed
Calculation	Numerator _____ x 100 Denominator
Data sources	Health Facility Surveys – for facility specific client satisfaction
Frequency of analysis	Health facility specific data should be collected and analyzed annually.
Disaggregation	By sex, location (rural / urban), type of facility
Definition	**The number of outpatient visits to health facilities during one year relative to the total population of the same geographical area.**
Numerator	Number of new visits to health facilities for ambulant care

Denominator	Total population for the same geographical area
Calculation	Numerator _____ x 100 Denominator
Data sources	Health service statistics: HMIS
Frequency of analysis	Monthly reporting within the schedule of the HMIS. (Health Unit Monthly Report, Health Unit Quarterly Assessment Report, Health Unit Annual Report).
Disaggregation	By sex, age group, location (urban/rural, districts, regions) and socio-economic characteristics (e.g. education, wealth quintile), type of facility.

7. REFERENCES

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4. Health Sector Quality Improvement Framework and Strategic Plan 2010/2011 – 2014/2015, Ministry of Health, Republic of Uganda.

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