South Sudan Health Sector Quality Improvement Framework and Strategic Plan
2017-2021

December 2016
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Abbreviations

HMIS   Health Management Information System
CPA   Comprehensive Peace Agreement
WHO   World Health Organization
NGO   Non-Governmental Organization
SWOT   Strengths Weaknesses Opportunities and Threats
PESTEL   Political Economic Social Technological Environmental and legal environments
PHCU   Primary Health Care Unit
PHCC   Primary Health Care Centre
BPHNS   Basic Package of Health and Nutrition Services
HUMC   Health Unit Management Committee
GAM   Generalized Acute Malnutrition
SAM   Severe Acute Malnutrition
MDG   Millennium Development Agenda
OPD   Out Patient Department
STI   Sexually Transmitted Infections
HIV/AIDS   Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
TB   Tuberculosis
UNICEF   United Nations Children’s Fund
RTI   Respiratory Tract Infection
NCD   Non-Communicable Diseases
ANC   Ante Natal Care
MoH   Ministry of Health
SMoH   State Ministry of Health
EMF   Emergency Medicines Fund
IDSR   Integrated Disease Surveillance and Response
HRH   Human Resources for Health
CHW   Community Health Workers
TBA   Traditional Birth Attendant
USAID   United States Agency for International Development
DFID   Department for International Development
UK   United Kingdom
EU   European Union
IDA   International Development Agency
CMS   Central Medical Stores
PMIS   Pharmaceuticals Management Information System
GDP   Gross Domestic Product
USD   United States Dollar
HDP   Health Development Partners
HSS   Health Systems Strengthening
PHC   Primary Health Care
WBG   Western Bahr el Ghazal
NBG   Northern Bahr el Ghazel
CIDA   Canadian International Development Agency
SIDA   Swedish International Development Agency
WASH   Water and Sanitation Hygiene
MCH   Maternal-Child Health
HPF   Health Pooled Fund
WB   World Bank
IT   Information Technology
IDSR  Integrated Disease Surveillance and Response
EWAR  Early Warning and Response
DG   Director General
M&E  Monitoring and Evaluation
NTD  Neglected Tropical Diseases
FP   Family Planning
VCT  Voluntary Counselling and Testing
MMR  Maternal Mortality Rate
IMR  Infant Mortality Rate
UFMR under Five Mortality Rate
EPI  Expanded Program for Immunization
DFCA Drugs and Food Control Authority
HF   Health Facilities
Foreword
1 Introduction

1.1 Background
The South Sudan Development Plan (SSDP) (2011-2013) prioritises social and human development as a priority focus for investment besides conflict prevention and security, governance and economic development. It recognises the poor health status of the population (high maternal and infant mortality rates) and underscores good health as critical factor for productivity and economic development\(^1\). It further recommends expansion of access to *quality* basic health services to improve health outcomes as the main health sector objective to feed into the development plan. To this end, rehabilitation and construction of health facilities, strengthening human resources for health, improvement of medicines and health supplies availability, and provision of equipment were proposed as major objectives for the health sector. These informed the development and implementation of the first National Health Policy and the Health Sector Development Plan (HSDP) 2012-2016.

A review of the first National Health Policy as the basis for the second National Health Policy 2015 - 2025 however revealed that implementation of the first National Health Policy, emphasised access to health services, both geographical and financial and less on the quality of services provided\(^2\). Interventions were also focused to primary health care facilities at the expense of hospital services. Consequently, hospital systems did not receive as much support for improving infrastructure, management systems, hospital care and monitoring of performance\(^2\).

A significant finding of the Rapid Health Facilities Assessment in 2014\(^3\) and the situational analysis in 2015\(^4\) showed a relatively poor performance against quality indicators. When assessed for service availability, only 23% of Primary Health Care Centres (PHCCs) offered a minimum of child health services, 56% offered immunization, and 60% offered antenatal care five days per week. Only 3% of PHCCs had the minimum technical staff employed according to MOH standards, and only 13% had one of each required cadre. Nine percent had the minimum required infrastructure (which included a working ambulance) and 6% had all essential equipment needed to perform IMCI consultations, although 67% had a working vaccine refrigerator. Infection control was particularly worrisome, with only 8% of PHCCs having the basics in place. Less than 30% had some means to properly sterilize instruments, and only 64% had soap for hand washing\(^5\). Availability of protocols, standards and guidelines were inadequate and when available, adherence to these by health workers was said to be

\(^{1}\) RSS 2011; South Sudan Development plan 2011-13

\(^{2}\) The Republic of South Sudan. Health Situational Analysis 2014. Analysis for the National Health Policy Update. 31\(^{st}\) October 2014.

\(^{3}\) MoH 2014. Rapid Health Facility Survey 2013


\(^{5}\) MoH 2014. Rapid Health Facility Survey 2013
very poor. Health workers in 21% of PHCCs consistently prescribed the appropriate treatment for common childhood diseases, and caretakers in 47% of facilities consistently understood how to administer the medications they were given.¹ Mortality figures were high, with 11% of facility deaths were maternal deaths, giving a *facility based maternal mortality rate* of 1,084 maternal deaths per 100,000 live births and nearly one out of every ten pregnant mothers (8%) who went to deliver in health facilities ended up with fresh still birth (4,281)⁶. Utilization of health services was low, with facilities reporting seeing about one quarter of the expected number of ANC and sick child consultations for their catchment area. The low health services utilisation rates were linked to inadequate health service coverage (availability), access barriers to health services and concerns about quality of health care.

These findings led to a drastic shift in the Second National Health Policy which now emphasizes quality and patient safety in order to ensure efficient and effective utilization of resources at all levels of healthcare. The Second National Health Policy puts the client and community at the forefront and adopts a client-centered approach with consideration for both the supply and demand side of healthcare.

Seven social values, guide the development and implementation of the second National Health Policy. These are⁶:

1. Health and health services is a human right; equitable access shall be pursued.
2. Patient, Staff and community Safety shall guide quality improvement decisions.
3. Honesty and integrity shall govern use of resources for implementation of National Health Policy.
4. Commitments made in the vision, mission, goals and objectives shall be pursued.
5. All individuals seeking health services shall be treated with dignity and respect.
6. Team work and Professional ethics shall underpin health service delivery.
7. The environment will be protected and sustained.

Quality of Care (QoC) is an important component of the Second National Health Policy. Good quality health care enhances clients’ satisfaction and their use of services; it increases job satisfaction and motivation among service providers, leading to effective and efficient utilization of resources; and it improves health outcomes.

The overall goal of the health sector during 2015 - 2025 is “a strengthened health system and partnerships that overcomes barriers to efficient delivery of the BPHNS and effectively respond to quality and safety concerns of communities while protecting the populations from impoverishment and social risk.

To achieve this goal, the health sector shall focus on achieving universal coverage with quality health, and health related services through addressing the following strategic objectives.

1. To strengthen health service organization, and infrastructure development for effective and equitable delivery of the Basic Package of Health and Nutrition Services: The specific objectives for objective 1 are:
   - To ensure universal access to all the interventions of the BPHNS by all communities in South Sudan

• To ensure quality and safety of health services delivery at all levels (Hospitals, PHCC, and PHCU)
• To improve quality of secondary health care by investing in, diagnostics, blood transfusion and ambulance services.
• To develop essential health infrastructure to ensure quality and safety of health services delivery
• Build Emergency and Disaster Preparedness; and response capability for International Health Regulation, disaster risk reduction, prompt response, and recovery.

2. To strengthen leadership and management of the health system and increase health system resources for improved health sector performance. The specific objectives for objective 2 are:
   • To scale up the production and strengthen management and development of the health workforce required for delivery of the BPHNS.
   • To ensure equitable access and rational use of quality essential medicines, health supplies and vaccines
   • To secure adequate healthcare financing that fosters universal health coverage
   • To improve the use of strategic information for decision making by strengthening the health management information system and monitoring and evaluation
   • To strengthen the stewardship of the health sector so as to provide an enabling environment for effective service delivery

3. To strengthen partnerships for healthcare delivery and health systems development. The specific objectives for objective 3 are:
   • To strengthen health partnerships for healthcare delivery and health systems development

The Health Sector Quality Improvement Framework (HSQIF) and Strategic Plan are aligned to strategic objective 1 above. The health sector aims to provide services of an acceptable level of quality, to ensure the clients are able to maximize the health benefits from available care. It is recommended that the implementation of the HSQIF is accelerated based on the "little steps approach". The "Little Steps" approach begins by defining Quality Improvement (QI) concepts, goals, and processes in a manner congruent with the target setting and that builds upon existing systems, structures, and values. Despite immediate short-term needs, an approach emphasizing incremental QI achievements may be more effective in yielding sustainable improvements in health care quality at the national or local level7.

Figure 1: The Little Steps Approach

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1.2 The HSQIF Development Process

The Health Sector QI Framework was developed by the MoH with active support and participation of various stakeholders and experts involved in QI locally and internationally. These included: service providers, programme managers, Development Partners (DP), International Quality Improvement experts, and CSOs in the health sector. These provided technical support and relevant strategic information for the framework.

The process for the development of the framework involved three phases:

- The first phase involved literature and document analysis to conceptualize QI issues from a global and national perspective.

- The second phase involved conducting a scoping study of existing QI initiatives in the country based on available literature and stakeholder interview responses. The scoping study identified existing QI initiatives, experiences and lessons. It also analyzed the strengths and weaknesses as well existing opportunities and impending threats for the QI initiatives. This phase provided a significant basis for the HSQIF.

- The third phase will involve a national health care quality improvement strategy meeting which will be convened in Juba, South Sudan from 13th - 16th December, 2016. This meeting will provide a forum for various departments within the MoH, selected partners, and international QI experts to share experiences, clarify the role of government partners, and agree strategies and methodologies for implementing health care QI initiatives at national and local levels. Stakeholders technical inputs will be collated and incorporated and consensus will be generated for the HSQIF.

1.2.1. Findings from desk review of documents

We reviewed a total of 20 documents and existing literatures on quality of care, quality improvement and quality assurance in health care. This involved a rigorous review of published journals, National Health Policies, Health Sector Strategic Plans, technical programme strategies and reports, World Health Organisation (WHO) documents on quality of
1.2.2. Findings from the Quality Assurance scoping study

To support ongoing initiatives by the government of the Republic of South Sudan, to strengthen health care system, the Health Pooled Fund (HPF) commissioned one international consultant to conduct desk review and a scoping study on quality assurance (QA) of health care in South Sudan (Phase 1) with the aim of supporting the development of a policy framework for QA in South Sudan (Phase 2). Phase 1 activity was conducted from 26th October – 7th December 2015. The international consultant utilised a mix of methods and approaches including documents review, qualitative data collection from key stakeholders (key informant interviews) and health facility assessment.

A total of 27 stakeholders were identified as key informants and being critical to the scoping exercise, these included 14 Ministry of Health officials and 13 development partners. Of these, 23 (85.2%) were interviewed, consisting of 12 (86%) MOH officials and 11 partners (85%). As some stakeholders were said not to be available in Juba during this period further efforts were made to interview them by Skype Conference.

A Rapid Health Facility Assessment of one County Hospital and one Primary Health Care Centre in Eastern Equatorial State (EES) was conducted. This was in Nimule County Hospital and Pageri PHCC. The aim of the facility audit was to document availability of infrastructure, basic equipment logistics and supplies, availability of QA teams and tools (death audits, clinical audits, etc.), supportive supervision, record keeping and reporting. The officer in charge of each facility was interviewed using a Rapid facility assessment tool and observations were conducted to assess the general cleanliness of the environment, provision of client friendly services, availability of drugs and supplies, etc.

The scoping exercise revealed that: there were many quality of care issues in South Sudan health facilities, these cut across both primary and secondary levels of care; the root causes of quality of care issues include lack of political will, inadequate funding, and issues related to human resources for health; no specific policy on quality of care exists; a specific policy on QA is not necessary as participants expressed various concerns with developing a new policy which will meet with bureaucratic bottlenecks; QA interventions implemented in South Sudan; and proposed actions to prioritise QA in South Sudan. The themes are discussed below.

a. Quality of Care issues in health facilities in SS

Participants identified various quality of care problems at both primary health care (PHC) and secondary health care levels. They mentioned that these issues were very complex and multifaceted. The quality of care issues identified include:

- Absence or non-adherence to the use of policies and guidelines that governs services;
- Poor coordination in the development and dissemination of policies, protocols and guidelines
- Lack of resources-equipment, drugs and supplies;
- Poor attitude, lack of respectful maternity care;
Avoidable errors, inadequate diagnosis and treatment

b. Absence or non-adherence to the use of policies and guidelines that governs services

Majority of the participants explained that protocols, guidelines and standards were not available to govern provision of care. Although some guidelines especially on treatment of infectious diseases (TB, cholera) were said to be available, participants mentioned that these were not fully used by health care providers. Reasons given for non-use of protocols and guidelines included: low level of education of health care providers; guidelines developed and distributed to health care facilities but health care providers were not trained on how to use them or why they are important.

c. Poor coordination in the development and dissemination of policies, protocols and guidelines

Some participants also mentioned that most of the guidelines were being developed by development partners based on individual area of focus. For example: Guidelines on Emergency Obstetric Care are being led by Jhpiego through the MOH. Some guidelines are being developed by IMC through funds from HPF. Other guidelines developed by IMA, WHO, H4+ partners, UN Women all have at various points developed guidelines on various aspects of care. There was however no central coordination during the development of these guidelines and majority were said to be available in individual partners’ data bases and not disseminated.

d. Lack of resources-equipment, drugs and supplies

Lack of resources-equipment, drugs and supplies was mentioned by all stakeholders as a major issue affecting quality of care at all levels of health care system in South Sudan. For most facilities, adequate supplies and equipment were said not to be available on a consistent basis.

e. Poor attitude and lack of respectful care

Poor attitude from health care providers, lack of women friendly services and lack of respectful care were some other quality of care issues described by stakeholders. Stakeholders went on to explain that the poor attitude from staff were due to work overload as a result of inadequate number of staff; lack of motivation due to poor pay; inadequate training which makes health workers think they are always right and superior to the client; and issues related to cultural differences with some health workers not wanting to care for clients from another culture (Box 5).

f. Avoidable errors, inadequate diagnosis and treatment

Participants explained that significant levels of error occur within health care, which often result in injury to patients. Various examples of misdiagnosis, over prescription and mistreatment were described by participants. These were said to cut across all categories of health workers and at all levels of care. Participants explained that the poor quality pre-service education has resulted in health professionals not being trained in methods to improve patient safety by reducing hazards in health care, and to make the consequences of errors less serious when they do occur.
Majority of the stakeholders (91.3%; n= 21/23) believed that these quality of care issues are similar and cut across both PHC (PHCU and PHCC) and Hospital (County and state). The remaining two stakeholders however believed that the situation in the Hospitals are worse with poorer quality of care than at PHCC level. The situations in Hospitals were said to be as a result of greater focus of development partners on primary health care with limited funding and support to Hospitals. These were said to have resulted in dilapidated hospital infrastructures, inadequate supplies and poor staffing which have greatly compromised the quality of secondary care. This has also resulted in most hospitals introducing user fees as a coping mechanism against the inadequate funding which have resulted in further impoverishment of the poor, client dissatisfaction and low utilisation of services.

These shortcomings endanger the health and lives of all patients, add costs to the health care system, and reduce productivity.

g. Root causes of these quality of care issues
Many root causes were identified as determining factors for the quality of care issues described above. These were:

- **Lack of political will for quality improvement**
- **Poor financing**: Budget allocation to health was said to be less than 5% for the year 2015/16.
- **Human resources for health issues**: including inadequate number of health workers; inadequate training of health workers during pre-service education; lack of update for qualified health workers with many health workers not having received in service training for a very long time. Participants explained that most health care professionals in South Sudan have erroneous, outdated, or no information or skills which have been linked to misdiagnosis, mistreatment, and over prescription.
- **Poor capacity at the County Health Department**: County Health Departments are expected to guide and provide supportive supervision to County Hospitals, PHCC and PHCU. These supervisions were however said to be infrequent and not supportive. Supportive supervisors have also been said to lack the capacity to provide technical guidance to health workers during visits.

h. There is no specific policy on quality of care
Participants noted that although quality of care was mentioned in the national health policy, HRH policy and the Reproductive health policy of South Sudan, no policy specifically on QA exists.

i. A specific policy on QA is not necessary
While probing participants further on the issue of non-availability of a policy framework on QA, participants were asked the question “what framework should be in place for successful implementation of QA interventions”. In response to this question, all participants except two (one MOH official and one partner), categorically stated that having a policy specifically for quality of care was not necessary. They explained that the key policies on health in South Sudan contained quality of care statements and provided enough framework to guide quality of care. Some of these participants also went ahead to explain that quality of care issues in South Sudan needed urgent action and not another policy document that will take too much time and end up being unused. They described various instances of policies that remained in draft statuses and were never finalised nor approved by the legislatures.
Participants went ahead to explain that rather than a policy, what will be useful is to have a "standard operating procedure on quality of care" or an "implementation guideline" on how to improve quality at various level of care in South Sudan. It was suggested that this will help avoid the bureaucratic bottleneck that a policy will experience and will help to focus attention, resources and efforts quickly on this very important issue.

j. QA interventions or initiative implemented in SS
Various measure to improve QA in South Sudan were described, these ranged from a national health facility assessment conducted in 2011\(^6\) to various health programmes which had quality improvement elements as part of their initiatives. These QA measures are described below:

The Rapid Health Facility Assessment: Further to an earlier mapping exercise led by LATH in January-March 2009, in 2011, a Rapid Health Facility Assessment (R-HFA) was conducted. The R-HFA had two objectives: to assess the quality of health care delivery services in South Sudan; and to strengthen the capacity of the MOH to perform rapid assessments. The R-HFA was planned to be implemented annually to supplement data from routine Health Management Information System (HMIS). R-HFA utilised Lot Quality Assurance Sampling (LQAS), a sampling method that classifies individual states according to their performance based on predefined performance targets using very small samples.

A total of 156 health facilities were sampled (15-16 health facilities per state), consisting 9 Hospitals, 67 PHCCs and 80 PHCUs. In general, findings of the R-HFA revealed low performance across all health facilities with only 23% of the health facilities offering all the three essential child health services (sick child consultations, immunisation and growth monitoring) and 63% offer antenatal care. With regards staffing, only 15% of health facilities met the barest minimum standard for the number of qualified human resources (at least 1 Community Health Worker and dispenser in PHCUs; and at least 2 nurses, 2 laboratory technicians/assistants, 2 dispensers and 2 medical assistants in Hospitals and PHCCs). The R-HFA study concluded that although facilities are receiving regular contact with the health care system, seen by regular training and supervision, overall performance was poor.

Further to the recommendations from the R-HFA, two interventions were implemented. These were: through the following programmes: The USAID-funded Health System Transformation Project 2 (HSTP -2) and the Integrated Services Development Programme (ISDP).

The HTSP was a USAID funded MNCH programme led by Management Sciences for Health (MSH). Although this programme had a duration of 5 years, it was however phased out at the end of the second year. During the two years of the programme (2010-2012), MSH introduced quality of care initiative in every targeted state. They identified and supported some health facilities which were called “fully functional service delivery point” to serve as model health facility to other health facilities. Quarterly assessment to the model facilities were conducted until these model health facilities were able to perform to their optimal level.

The Jhpiego led ISDP implemented quality of care initiative in two states of South Sudan (Central Equatorial State (CES) and Western Equatorial State (WES)) from 2013-2015. Using a quality of care framework developed by Jhpiego (Standard Based Management and

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\(^6\) LATH. Report of the rapid Health facility assessment conducted in South Sudan. MOH. Republic of South Sudan. May 2011.
Recognition (SBM-R)\(^9\), ISDP identified 5 key areas of care provision. These were: infection prevention, basic emergency obstetric and newborn care (BEmONC), focused antenatal care (FANC), labour and delivery, and postnatal and essential newborn care. Priority was given to identifying standards and implementing interventions on infection prevention and providing regular supportive supervision by the implementing team. Remarkable results were achieved following these interventions with improved quality of care and increased utilisation of services in intervention facilities compared with facilities without interventions (control). Some of the challenges identified during the ISDP programme were related to frequent staff transfers especially at the county level which resulted in inconsistent supervision and inadequate supplies from the government.

**k. Proposed actions to prioritise QA in South Sudan**

Participants described key interventions that will help to improve and institutionalise QA in South Sudan. These are:

- Prioritise and develop a standard operating procedure on QA.
- Establish better coordination and leadership for QA in the MOH. Some of the suggestions included: creating a dedicated unit for quality of care within the MOH at both national and state levels or setting up a Steering working group to work on QA. The Quality of care unit will provide leadership, manage and or provide oversight for all national or state initiatives regarding quality assurance and continuous quality improvement. This unit will work across the various directorates within the MOH and will closely collaborate with development partners and professional regulatory bodies to support quality improvement in health services.
- Coordinate and standardise available guidelines and protocols on various aspects of care. Although HPF led standardisation of some guidelines, these should however be more comprehensive. Once finalised they should be disseminated to all health facilities and trainings implemented on the use. A central unit within the MOH should thereafter ensure adherence to the use of protocols, standards and guidelines at all levels of care.

The findings of this scoping study elucidate the urgent need for the establishment, institutionalization, harmonization and coordination of QI initiatives in the country. It is against this background that the MoH, with support from HPF, developed the Health Sector Quality Improvement Framework (HSQIF) and Strategic Plan to guide and harmonize all QI initiatives in the health sector in line with the second National Health Policy 2015-2025.

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2. The Health Sector Quality Improvement Framework and Strategic Plan

This section describes the HSQIF and strategies for improving quality of care by the health sector in South Sudan.

2.1. Purpose of the HSQIF and Strategic Plan

The HSQIF and Strategic Plan has been developed in recognition that the health sector needs to prioritise, harmonize, coordinate and institutionalize, QoC interventions in South Sudan. The HSQIF and Strategic Plan provides a common framework for all public and private health institutions, partners and stakeholders to coordinate, plan, mobilize resources, implement, monitor and evaluate quality improvement initiatives in order 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”. This should be done while ensuring responsiveness, transparency and accountability for service delivery.

The target audience for the HSQIF and Strategic Plan include: policy makers, planners, program managers, programs and projects implementers, Development Partners, health service providers, partners in public and private sectors, CSOs, CBOs and Health Consumers.

2.2. The Health Sector Quality Improvement Framework

It is envisaged that the HSQIF will encourage stakeholders and health workers at all levels to appreciate the role of QI in the health sector. QI has the potential to optimize the use of limited resources available from governments and global initiatives targeted at achieving shared aims. Demonstrable improvements in quality encourage greater investment in health systems by increasing stakeholder confidence that resources are being effectively and efficiently utilized.

The framework for improving quality of care in South Sudan will be based on the framework for improving clinical quality adapted from Batalden and Stolz)(Figure 2)\(^{10}\). In this framework improvement looks at two major components: what is done (content) and how it is done (process of care). Either component could lead to improvement, but the most powerful impact occurs by addressing both simultaneously. This framework requires evidence based norms, standards, protocols, and guidelines to be in place and these are used to identify gaps and measure performance improvement. The QI initiatives adopted by the MoH shall operate within this framework.

Existing national standards, protocols and guidelines will be used and where lacking will be developed and disseminated. QI approaches will be implemented at all levels using applicable initiatives with a cycle of learning and improvement.

\(^{10}\) Batalden P.B. and Stolz P.K. 1993. A framework for the continual improvement of healthcare: Building and applying professional and improvement knowledge to test changes in daily work.
### 2.3. The Quality Improvement Strategic Plan

The QI Strategic Plan 2017-2021 has been developed to provide a common strategic framework for QI in South Sudan during a five-year period. The plan will guide all QI initiatives by all parties at all levels in the health sector. As such, achievement of its targets is a collective responsibility of all stakeholders and service providers.

The Strategic Plan introduces strategic objectives meant to achieve broad ranging improvement in the five-year period. These set of objectives and the related interventions are strategic objectives designed to improve the capacity of the health system to provide high quality services (Table 1 and Figure 3).

### 2.4. Goal and Objectives

The goal and objectives of the HSQI Strategic Plan are derived from Strategic Objective 1 and respective specific objectives in the Second National Health Policy 2015-2025.

**2.4.1. Goal**

The goal of the HSQIF and Strategic Plan is 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”.

**2.4.2. Strategic QI Objectives for Health Systems Strengthening**

The strategic objectives for health systems strengthening are:

1. To provide a harmonized and integrated approach to quality improvement in health service delivery throughout the health sector
2. To improve quality of health care and patient safety at all levels including the private sector while ensuring efficient utilization of available resources.
3. To provide client centered services with the aim of improving the quality and responsiveness (including gender responsiveness) of health services provided.

**2.4.3. Strategic Interventions**

Operationalisation of the HSQIF and Strategic Plan will be through implementation of selected priority interventions for QI (Figure 3) at various levels of service delivery. Interventions will be geared towards:

1. Building local capacity to implement QI at the facility level, including developing
permanently QI structures as appropriate;
2. Strengthening national, sub-national and facility level capacity for implementation, supervision and monitoring of quality and QI activities;
3. Increasing government and civil society participation in QI initiatives to create a broad base of stakeholders and advocates for high quality health care;
4. Raising motivation and providing incentives for health care providers to implement QI, improve compliance with national and international standards, and achieve improved outcomes through reward and recognition mechanisms;
5. Promoting the development of a permanent culture of quality practice for all including the MoH, professional bodies, pre-service training institutions, state and county health authorities, CSOs, facility managers, and practitioners.
6. Addressing both the quality of clinical care and the quality of non-clinical aspects of service, including availability, accessibility, patient safety, risk management, accreditation, coordination and continuity of care including referrals, case management, discharge planning, and complaints.
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 and integrated approach to quality improvement in health service delivery throughout the health sector

Priority Interventions
- Develop and disseminate the HSQIF and Strategic Plan.
- Develop / review national QI manuals, protocols, guidelines and tools.
- Develop / review and disseminate quality of care standards and indicators.
- Develop national in-service and pre-service training curricula for quality of care.
- Develop national in-service and pre-service training curricula.
- Infrastructure development and reorganization for Health Systems Strengthening.
- Support the development of a QI Research Agenda.

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

Priority Interventions
- Training for QI at all levels
- Strengthen data recording and reporting
- Supervision, mentoring/coaching, M&E
- Use of research/evidence based data
- Implement evidence based QI initiatives
- Establish patient safety practices
- Establish a risk management system
- Establish clinical audit and peer reviews
- Establish MDSR and PNDSR
- Establish an accreditation system for health facilitate
- Strengthen IPC mechanisms
- Improve pharmaceuticals safety
- Develop a recognition and reward mechanism
- Document and disseminate best practices
- Encourage peer learning through collaboration fora

RESULT 3:
Client-centred health care provided

Priority Interventions
- Strengthen coordination initiatives among different institutions
- Conduct client satisfaction surveys
- Develop and implement a feedback/compliant management system
- Develop and implement PIPs
- Create awareness on roles and responsibilities
- Strengthen HUMCs
- Involve VHTs/Communities in QI
Table 1: Five Year Strategic Plan 2017 – 2021 for the QI Strategic Objectives for HSS

<table>
<thead>
<tr>
<th>Interventions</th>
<th>Actions</th>
<th>Responsibility</th>
<th>Financial</th>
<th>Output Indicators</th>
<th>Means of Verification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development and dissemination of the HSQIF and Strategic Plan</td>
<td>Conduct consultative meetings</td>
<td>MoH / QAD</td>
<td>X</td>
<td>No. of meetings</td>
<td>Reports</td>
</tr>
<tr>
<td></td>
<td>Print and binding of the HSQIF</td>
<td>MoH / QAD</td>
<td>X</td>
<td>No. of copies printed</td>
<td>Supervision</td>
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<tr>
<td></td>
<td>Dissemination of the HSQIF</td>
<td></td>
<td>X</td>
<td>No. of copies disseminated</td>
<td>Reports</td>
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<tr>
<td>Planning for QI</td>
<td>Development of QI annual workplan</td>
<td>All levels</td>
<td>X X X X</td>
<td>Annual workplans</td>
<td>Workplans</td>
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<tr>
<td>Development of national QI manuals, tools, protocols, guidelines and standards</td>
<td>Conduct stakeholders’ meetings</td>
<td>MoH / QAD</td>
<td>X</td>
<td>No. of meetings</td>
<td>Reports</td>
</tr>
<tr>
<td></td>
<td>Print and disseminate the manuals, tools and standards</td>
<td>MoH / QAD</td>
<td>X</td>
<td>No. and types of guidelines, tools and standards developed</td>
<td>Availability and use of guidelines, tools and standards</td>
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<tr>
<td></td>
<td>Develop a QI Communication strategy</td>
<td>QAD</td>
<td>X</td>
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<td>Communication Strategy</td>
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<tr>
<td>Develop a National in-service QI training manual</td>
<td>Develop TORs for Consultancy</td>
<td>QAD</td>
<td>X</td>
<td>Terms of Reference developed</td>
<td>Terms of Reference</td>
</tr>
<tr>
<td></td>
<td>Procure Consultancy services for development of training manual</td>
<td>QAD / DP</td>
<td>X</td>
<td>Consultant procured</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Consultative meetings for consensus building</td>
<td>QAD</td>
<td>X</td>
<td>No. of Meetings</td>
<td>Minutes</td>
</tr>
<tr>
<td></td>
<td>Printing and binding of National In-service QI training manual</td>
<td>QAD</td>
<td>X</td>
<td>National in-service QI training manual</td>
<td>In-service Q I training</td>
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<tr>
<td>Liaise with health sciences institutes and other academic institutions for review</td>
<td>Make recommendations for review and update of the pre-service QI training curriculum</td>
<td>MoH / HRD / MoE</td>
<td>X X X</td>
<td>No. of Training Institutions with modules incorporating QI</td>
<td>Concept note</td>
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</tr>
<tr>
<td>Training curriculum</td>
<td>Training of QI Facilitators</td>
<td>QAD / DPs / Programs</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Establish a database for QI trainees</td>
<td>QAD</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td></td>
<td>Establish a Quality Facilitator Certification</td>
<td>QAD / DPs</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Infrastructure development and reorganization for Health Systems Strengthening</td>
<td>Clarify and document implementation structures, roles and responsibilities for all stakeholders</td>
<td>MoH / QAD</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Facilitation and coordination of QI activities at the national, state, county and health facility levels</td>
<td>MoH / DPs / State Committees / County Committees</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Support the development of a QI Research Agenda</td>
<td>Conduct intervention and operational QI research</td>
<td>DPs / Research Institutions</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Gather, develop and disseminate the continuum of medical care to promote effective models of care that are responsive to the needs of patients</td>
<td>Researchers / Managers</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Use of research data/evidence based data for planning QI interventions</td>
<td>Policy Makers</td>
<td>X</td>
<td>X</td>
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</table>

**Strategic Objective 2:** To improve quality of health care and patient safety at all levels including the private sector while ensuring efficient utilization of available resources.
<table>
<thead>
<tr>
<th>Interventions</th>
<th>Actions</th>
<th>Responsibility</th>
<th>Financial</th>
<th>Output Indicators</th>
<th>Means of Verification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build capacity for QI at all levels of the health service that include planning and assessment participation of both internal and external clients.</td>
<td>Conduct QI Training Needs</td>
<td>QAD</td>
<td>X</td>
<td>Training Need Assessment conducted</td>
<td>Report</td>
</tr>
<tr>
<td></td>
<td>Training of National / State QI Trainers</td>
<td>MoH / DPs</td>
<td>X</td>
<td>No. of QI trainers</td>
<td>Reports</td>
</tr>
<tr>
<td></td>
<td>Training of health workers at all levels</td>
<td>MoH / DPs</td>
<td>X</td>
<td>No. and cadre of health workers trained by level and state</td>
<td>Reports</td>
</tr>
<tr>
<td>Strengthening data recording and reporting System</td>
<td>Mentoring and coaching for QI at all levels of health care system</td>
<td>MoH / DPs</td>
<td>X</td>
<td>No. of mentoring / coaching activities</td>
<td>Reports</td>
</tr>
<tr>
<td></td>
<td>On/off site technical assistance opportunities by a pool of QI experts as well as experience program staff</td>
<td>MoH / DPs</td>
<td>X</td>
<td>No. of health providers participating in activities</td>
<td>Reports</td>
</tr>
<tr>
<td></td>
<td>Create a national culture of quality which empowers individual health care leaders, and providers to play an integral part in QI in their respective environments</td>
<td>MoH / DPs</td>
<td>X</td>
<td>No. of health facilities by level implementing QI</td>
<td>Reports</td>
</tr>
<tr>
<td></td>
<td>Revise HMIS guidelines to include QI indicators and their use</td>
<td>MoH/ DPs</td>
<td>X</td>
<td>QI indicators incorporated in the HMIS</td>
<td>Revised HMIS</td>
</tr>
<tr>
<td></td>
<td>Develop standardized data formats for data collection and reporting with the HMIS and M&amp;E plan to avoid duplication of efforts</td>
<td>MoH/ DPs</td>
<td>X</td>
<td>Standardized formats for data collection</td>
<td>Format and available utilized</td>
</tr>
<tr>
<td></td>
<td>Train staff on data capture and reporting</td>
<td>DPs</td>
<td>X</td>
<td>No. of staff trained</td>
<td>Reports</td>
</tr>
<tr>
<td></td>
<td>Provide technical assistance for data collection process at the facility level through county and state</td>
<td>MoH</td>
<td>X</td>
<td>No. of supervision / mentoring visits</td>
<td>Reports</td>
</tr>
<tr>
<td>Assist providers to adapt to</td>
<td>DPs</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Interventions</td>
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<td>Financial</td>
<td>Output Indicators</td>
<td>Means of Verification</td>
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<td></td>
<td>17 18 19 20 21</td>
<td>facilities utilizing new information technologies</td>
<td></td>
</tr>
<tr>
<td>Information technologies to improve service efficiencies</td>
<td></td>
<td></td>
<td></td>
<td>No. of reports submitted timely</td>
<td>Reports</td>
</tr>
<tr>
<td>Timely share individual and comparative performance data and reports with internal and external stakeholders</td>
<td>Managers</td>
<td>X X X X X</td>
<td></td>
<td>Reports</td>
<td></td>
</tr>
<tr>
<td>Provide routine feedback using findings to improve activities</td>
<td>Health Facility Manager</td>
<td>X X X X X</td>
<td></td>
<td>Reports</td>
<td></td>
</tr>
<tr>
<td>Analyze data on the national, state, county and facility level to identify opportunities, gaps, priorities and programmatic decision making</td>
<td>Managers at all levels</td>
<td>X X X X X</td>
<td></td>
<td>Observations</td>
<td></td>
</tr>
<tr>
<td>Supervision, monitoring and evaluation of QI</td>
<td>Conduct regular Supportive supervision monitoring and mentoring</td>
<td>QAD Program / Project Managers</td>
<td>X X X X X X</td>
<td>No. of planned supportive supervision, monitoring and Mentoring visits conducted</td>
<td>Reports</td>
</tr>
<tr>
<td></td>
<td>Routinely evaluate QI interventions based on standardized tools to reflect progress towards stated goals</td>
<td></td>
<td>X X X X X X</td>
<td>No. of evaluation studies</td>
<td>Evaluatio n Reports</td>
</tr>
<tr>
<td></td>
<td>Create a system of recognition and awards for achievements in QI and performance measurement through involvement of providers and</td>
<td>Managers</td>
<td>X X X X X X</td>
<td>No. of providers recognized and rewarded</td>
<td>Reports</td>
</tr>
<tr>
<td></td>
<td>Compile and submit QI performance reports</td>
<td>Managers</td>
<td>X X X X X X</td>
<td>No. of QI reports submitted</td>
<td>Reports</td>
</tr>
<tr>
<td></td>
<td>Period performance review meetings</td>
<td>QAD Regional Coordinators DHOs</td>
<td>X X X X X X</td>
<td>No. of performance review meetings held</td>
<td>Reports</td>
</tr>
<tr>
<td></td>
<td>Implement Scale up QI initiatives at all levels</td>
<td>Managers</td>
<td>X X X X X X</td>
<td>No. of facilities by</td>
<td></td>
</tr>
<tr>
<td>Interventions</td>
<td>Actions</td>
<td>Responsibility</td>
<td>Financial</td>
<td>Output Indicators</td>
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</tr>
<tr>
<td>evidence based quality improvement initiatives</td>
<td>Integrate QI in all service delivery programs</td>
<td>DPs</td>
<td></td>
<td>level implementing QI interventions</td>
<td>Reports</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>17 18 19 20 21</td>
<td>% improvement in health outcomes (coverage indicators for specific program areas e.g. HIV, RH, EPI, Malaria, TB, etc.)</td>
<td></td>
</tr>
<tr>
<td>Establish patient safety practices</td>
<td>Identify and adopt patient safety goals</td>
<td>QI Committees</td>
<td>X  X  X  X  X</td>
<td>Patient safety goals identified annually</td>
<td>Reports</td>
</tr>
<tr>
<td></td>
<td>Train staff on patient safety practices</td>
<td>CHS CS</td>
<td>X  X  X  X  X</td>
<td>No. of staff trained</td>
<td>Reports</td>
</tr>
<tr>
<td></td>
<td>Establish an adverse event and near-miss reporting system</td>
<td>CHS CS</td>
<td>X  X  X  X  X</td>
<td>Reporting system established</td>
<td>Observation</td>
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<tr>
<td></td>
<td>Develop active networks of patients and providers</td>
<td>Health Consum</td>
<td>X  X  X  X  X</td>
<td>No. of networks developed</td>
<td>Reports</td>
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<tr>
<td></td>
<td>Empower and educate patients and the public, as partners in the process</td>
<td>CSOs</td>
<td>X  X  X  X  X</td>
<td>No. of sessions and people educated</td>
<td>Reports</td>
</tr>
<tr>
<td>Establish a risk management system in all health facilities</td>
<td>Each facility to undertake annual risk appraisal</td>
<td>Managers</td>
<td>X  X  X  X  X</td>
<td>No. of facilities undertaking annual risk appraisal</td>
<td>Reports</td>
</tr>
<tr>
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<td>Establish learning networks for failure and pro-active risk assessment</td>
<td>CHS CS</td>
<td>X  X  X  X  X</td>
<td>No. of learning sessions held</td>
<td>Reports</td>
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<tr>
<td></td>
<td>Develop action plans developed to help reduce the probability of risk occurring</td>
<td>Managers</td>
<td>X  X  X  X  X</td>
<td>No. of facilities with action plans developed to manage risk</td>
<td>Availability of the plans</td>
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<td>Interventions</td>
<td>Actions</td>
<td>Responsibility</td>
<td>Financial</td>
<td>Output Indicators</td>
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<td></td>
<td></td>
<td></td>
<td>17 18 19 20 21</td>
<td>No. of health workers oriented and implementing</td>
<td>Reports</td>
</tr>
<tr>
<td>Establish safe surgery checklists</td>
<td>Guidance, templates and training to be done</td>
<td>QAD</td>
<td>X X X</td>
<td></td>
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<td>Introduce the WHO’s safe surgery checklist in all NRH, RRH and General hospitals</td>
<td>Clinical Services</td>
<td>X X X</td>
<td>No. of hospitals using the checklist</td>
<td>Availability of the checklist</td>
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<tr>
<td>Establish MDSR and PNDR</td>
<td>Conduct MDSR and PNDR</td>
<td>Maternity Services</td>
<td>X X X</td>
<td>No. of hospitals carrying out MDSR and PNDR</td>
<td>Supervisory visits</td>
</tr>
<tr>
<td>Establish clinical audit and peer reviews</td>
<td>Set guidelines for clinical audits</td>
<td>Clinical Services</td>
<td></td>
<td>No. of hospitals carrying out clinical audits</td>
<td>Supervisory visits</td>
</tr>
<tr>
<td></td>
<td>Carry out clinical audits and peer reviews</td>
<td>Hospital Managers</td>
<td>X X X</td>
<td>No. of hospitals carrying out clinical audits and peer reviews</td>
<td>Reports</td>
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<tr>
<td>Strengthen infection prevention and control mechanisms</td>
<td>Integrate the National Infection Prevention and</td>
<td>QAD</td>
<td>X X</td>
<td>IPC guidelines integrated</td>
<td>Guidelines</td>
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<tr>
<td></td>
<td>Printing and binding of IPC Guidelines</td>
<td>QAD</td>
<td>X</td>
<td>Guidelines printed</td>
<td>Guidelines</td>
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<tr>
<td></td>
<td>Disseminated of IPC guidelines to all health facilities</td>
<td>QAD</td>
<td>X</td>
<td>Availability of IPC guidelines at all facilities</td>
<td>Supervision reports</td>
</tr>
<tr>
<td></td>
<td>Orientation of health workers on infection prevention and control practices</td>
<td>QAD</td>
<td>X X X X X</td>
<td>No. of health workers oriented</td>
<td>Reports</td>
</tr>
<tr>
<td></td>
<td>Provision of adequate amounts of infection prevention and control supplies</td>
<td>NMS</td>
<td>X X X X X</td>
<td>Quantity of infection prevention and control supplies procured</td>
<td>Stock cards</td>
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<tr>
<td>Improve hospital waste handling and management</td>
<td>CHS CS</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
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<tr>
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<th>Actions</th>
<th>Responsibility</th>
<th>Financial</th>
<th>Output Indicators</th>
<th>Means of Verification</th>
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<td>17 18 19 20 21</td>
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<tr>
<td><strong>Improve pharmaceuticals safety</strong></td>
<td>Develop system for identifying and controlling high hazard medication (e.g. narcotics and anticoagulants).</td>
<td>Pharmacy Division</td>
<td>X X X X X</td>
<td>Narcotics and anticoagulant controlled</td>
<td>Systems</td>
</tr>
<tr>
<td></td>
<td>Put in place a system to help reduce errors in prescription, inappropriate use of medications and adverse</td>
<td>Clinical Services / QAD</td>
<td>X X X X X</td>
<td>Health facilities Using treatment guidelines</td>
<td>Improve pharmaceuticals safety</td>
</tr>
<tr>
<td><strong>Establish accreditation systems for health facilities</strong></td>
<td>Define service standards, criteria, implementation arrangements and tools</td>
<td>QAD</td>
<td>X</td>
<td>Accreditation system developed</td>
<td>Criteria and tools in place</td>
</tr>
<tr>
<td></td>
<td>Orientation of hospitals on the accreditation</td>
<td>QAD</td>
<td>X X</td>
<td>No. of hospital staff oriented</td>
<td>Reports</td>
</tr>
<tr>
<td></td>
<td>Accreditation of public and private hospitals</td>
<td>Accreditation Body</td>
<td>X X X</td>
<td>No. of hospitals accredited</td>
<td>Reports</td>
</tr>
<tr>
<td></td>
<td>Accreditation of laboratories</td>
<td>CPHL</td>
<td>X X X X X</td>
<td>No. of laboratories accredited</td>
<td>Reports</td>
</tr>
<tr>
<td><strong>Documentation and dissemination of best practices</strong></td>
<td>Fill documentation journals</td>
<td>Implementers</td>
<td>X X X X X</td>
<td>No. of QI implementers with up to date journals</td>
<td>Reports</td>
</tr>
<tr>
<td></td>
<td>Provide opportunities for peer learning through learning networks, clinic-to-clinic mentoring and newsletters</td>
<td>Managers</td>
<td>X X X X X</td>
<td>No. of learning sessions, mentoring sessions and newsletters</td>
<td>Documentatio n journals Reports</td>
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**Strategic Objective 3: To provide client-centered health care services.**

<table>
<thead>
<tr>
<th></th>
<th>Conduct coordination meetings</th>
<th>Coordinating structures</th>
<th>X X X X X</th>
<th>No. of coordination meetings conducted</th>
<th>Minutes</th>
</tr>
</thead>
</table>
different institutions to improve quality and responsiveness of health services | Conduct stakeholder meetings at different levels | QAD DPs | X | X | X | X | No. of stakeholder meetings conducted | Minutes
--- | --- | --- | --- | --- | --- | --- | --- | ---
<table>
<thead>
<tr>
<th>Interventions</th>
<th>Actions</th>
<th>Responsibility</th>
<th>Financial 17</th>
<th>18</th>
<th>19</th>
<th>20</th>
<th>21</th>
<th>Output Indicators</th>
<th>Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conduct surveys</td>
<td>Conduct client satisfaction surveys</td>
<td>QAD DPs Manager</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>No. of surveys conducted periodically</td>
<td>Reports</td>
<td></td>
</tr>
<tr>
<td>Development and implementation of a feedback / complaint management system at MoH, state, county offices, and Health facilities</td>
<td>Identification and establishment of appropriate methods for obtaining client feedback / complaints</td>
<td>All Managers</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>No. of methods for obtaining client feedback</td>
<td>Reports</td>
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<tr>
<td></td>
<td>Develop a standardized process through which patient’s complaints are carefully documented, investigated, and remedial action taken (Complaints management plan)</td>
<td>All Managers</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>No. of institutions with functional complaint management system</td>
<td>Reports</td>
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<td>Develop and implement Performance Improvement Plans</td>
<td>Improve staff satisfaction</td>
<td>All Managers</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>No. of staff satisfied with their job</td>
<td>Reports</td>
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<tr>
<td></td>
<td>Conduct performance assessment</td>
<td>All Managers</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>No. of staff meeting performance targets</td>
<td>Reports</td>
<td></td>
</tr>
<tr>
<td>Create awareness on roles and responsibilities in the health sector</td>
<td>Customize and roll out client charters</td>
<td>All Managers</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>No. of service delivery level charters developed</td>
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<tr>
<td>Create awareness on rights, roles and responsibilities</td>
<td>Translate and disseminate patient’s charter</td>
<td>QAD</td>
<td>X</td>
<td>X</td>
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<td>No. of Patient charter translated and disseminated</td>
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<tr>
<td>Strengthen the Health Unit Management Committees</td>
<td>Review HUMC guidelines to capture QI issues</td>
<td>Clinical Services</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>No. of HUMC members inducted</td>
<td>Reports</td>
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</tr>
<tr>
<td></td>
<td>Induction of HUMCs</td>
<td>Clinical Services</td>
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<td>No. of HUMC members inducted</td>
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<td>Interventions</td>
<td>Actions</td>
<td>Responsibility</td>
<td>Financial</td>
<td>Output Indicators</td>
<td>Means of Verification</td>
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<td></td>
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<tr>
<td>Involvement of Village Health Teams/Communities in QI</td>
<td>Develop Partnership Defined Quality manual for QI interventions</td>
<td>LGs / Partners</td>
<td>X X X X</td>
<td>No. of facilities with functional committees</td>
<td>PDQ manual developed Manual</td>
<td></td>
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<tr>
<td></td>
<td>Training of health providers and VHTs/Peers on QI principles and community responsiveness</td>
<td>Partners /MoH</td>
<td>X X X X</td>
<td>Number trained</td>
<td>Reports</td>
<td></td>
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<tr>
<td></td>
<td>Community dialogue</td>
<td>HPE / CSOs / CBOs</td>
<td>X X X X</td>
<td>Number trained</td>
<td>Reports</td>
<td></td>
<td></td>
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<td>No. of community dialogues</td>
<td>Reports</td>
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3. Themes and Methodologies for QI in South Sudan

3.1. Guiding Themes for QI

The following themes should be recognized and adopted to guide designing, planning and implementation of QI in South Sudan.

1. **A culture of safety and improvement** that rewards improvement and is driven to improve quality is important. The culture is needed to support a quality infrastructure that has the resources and human capital required for successfully improving quality.
2. QI Committees need to have the right **stakeholders** involved.
3. QI Committees and stakeholders need to understand the problem and root causes. There must be a consensus on the definition of the problem. To this end, a clearly defined and universally agreed upon metric is essential. This agreement is as crucial to the success of any improvement effort as the validity of the data itself.
4. Use a **proven, methodologically sound approach** without being distracted by the jargon used in QI. The importance given to using clear models, terms, and process is critical, especially because many of the quality tools are interrelated; using only one tool will not produce successful results.
5. **Standardizing care processes** and ensuring that everyone uses those standards should improve processes by making them more efficient and effective—and improve organizational and patient outcomes.
6. **Evidence-based practice** can facilitate ongoing QI efforts.
7. Implementation plans need to be **flexible** to adapt to needed changes as they come up.
8. Efforts to change practice and improve the quality of care can have **multiple purposes**, including redesigning care processes to maximize efficiency and effectiveness, improving customer satisfaction, improving patient outcomes, and improving organizational climate.
9. **Appropriate use of technology** can improve team functioning, foster collaboration, reduce human error, and improve patient safety.
10. Efforts need to have **sufficient resources**, including protected staff time.
11. **Continually collect and analyze data and communicate results** on critical indicators across the organization. The ultimate goal of assessing and monitoring quality is to use findings to assess performance and define other areas needing improvement.
12. **Change takes time**, so it is important to stay focused and persevere.
13. Health system interventions are usually multimodal; **concurrently addressing providers, patients and system level interventions**.

Health Systems Strengthening (HSS) will specifically include QI. Quality is a mediator between the six WHO HSS building blocks and achieving desired health outcomes. The WHO HSS building blocks are:

1. **Service delivery**: QI closes the gap between actual performance and achievable practice.
2. **Health workforce**: QI enhances individual performance, satisfaction and retention.
3. **Information**: QI enhances the development and adoption of information systems.
4. **Medical products and technology**: QI improves the appropriate, evidence-based use of limited resources.

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5. **Financing**: QI helps optimize the use of limited resources and reduces the cost of financial transactions.

6. **Leadership and governance**: QI strengthens measurement capacity, stewardship, accountability and transparency.

Figure 4: WHO HSS Building Blocks

### The WHO Health System Framework

![WHO Health System Framework Diagram]


#### 3.2 Methodology for QI in South Sudan

Literature review of the various QI methodologies indicates that although the presentation of various modern QI methodologies seems different, the content and basic principles are very similar and in most cases complement each other.

In South Sudan, counties and partners involved in QI shall implement evidence based targeted QI models and interventions which apply the principle of an iterative cycle of improvement – Plan, Do, Study, Act (PDSA cycle). The MoH recommends initiation of QI interventions in health facilities to start with the 5S which is the initial component of the 5S - Continuous Quality Improvement (CQI) – Total Quality Management (TQM) methodology as a fundamental background to CQI and then introduce appropriate QI interventions which:

- apply the principle of an iterative cycle of improvements;
- apply systematic assessment of service delivery processes;
- use data measurement and statistics in daily work;
- recognize the organizational dimension of improvement; and
- recognize the need for commitment from leadership as well as active engagement of frontline clinical staff;
- involve patients / clients.
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. Internal clients are the health staffs and external clients are the health service users and communities. Each of these groups may expect different things from health services.

The health provider (Internal Client) can provide quality care if he/she has:
- Adequate knowledge and skills.
- Enough resources- staff, drugs, supplies, equipment and transport etc
- Safe and clean workplace.
- Opportunity to regularly improve himself/herself.
- Is well paid and rewarded for good work.

The health care manager (Internal Client) sees quality care as:
- Managing efficiently the resources of the health facility.
- Health staff achieving set targets.
- Health staff being regularly supported and supervised.
- Having adequate and competent staff to provide care.
- Staff being disciplined.
- Providing enough resources for work.

The Patient/Client (External Clients) want services that:
- Are delivered on time by friendly and respectful staff;
- Are safe, produce positive result and that they can afford;
- Provide them with adequate information about their condition and treatment;
- Provide them with all the drugs they need;
- Give privacy.
- Are within their reach (distance) and given in a language they can understand.

In addition, programmes will provide logistical management and financial support; technical support; support community participation; supporting favourable local team climate at (national, district, facility or community); and establishment of peer support linkages between or among the agencies or programmes. Also, interventions may focus on any healthrelated problem (e.g. Performance Improvement for Health Workforce, Quality of Care in HIV/AIDS, Systems Strengthening, Occupational safety, etc). By implementing their interventions, programmes or agencies shall be creating solutions to quality issues within the health sector, as long as their priorities lie within the national health goals and framework. As much as possible, program specific interventions should try to use the Health Systems Strengthening approach in designing interventions in coordination with existing QI partners.

### 3.2.1. 5S Method

In order to set the best stage for health personnel to make maximal use of their skills and knowledge, the MoH recommends the 5S method as the foundation for all QI initiatives in the country. 5S is a management tool, which originated in Japanese manufacturing sector. It is used as a basic, fundamental, systematic approach for productivity, quality and safety improvement in all types of organizations.

Usually, improvement of work processes often is sustained only for a while, and workers drift back to old habits and managers lose the determination and perseverance. 5-S 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. Although the 5-SSs originated in the manufacturing environment, they translate well to other work situations including hospitals, general offices, telecommunication companies etc. 5 Ss are abbreviations of the Japanese words Seiri, Seiton, Seiso, Seiketsu, and Shitsuke. In English, 5Ss were translated as Sort, Set, Shine, Standardize, and Sustain.

5-S is the initial step towards establishing TQM. There will be no conflict in the implementation of 5-S activities even though organizations are already implementing other QI interventions. 5-S will support all QI interventions to move forward.

3.2.1.1 Objectives of 5S
1. Improved productivity: Health workers being diverted from service delivery to look for equipment, medicines, registers, and so on is the most frustrating form of lost time in any health facility. With 5S often-needed items are stored in the most accessible location and correct adoption of the standardization approach means that they are returned to the correct location after use.

2. Improved work environment / infrastructure maintenance: Health workers taking responsibility for keeping workplace clean and tidy can take ownership for highlighting potential problems before they have an impact on performance.

3. Improved Health & Safety: Clear pathways between workbenches and storage racks can minimize accidents, as can properly-swept floors. An environment in which the workforce has pride in their workplace can contribute to a considerable extent in a number of ways including customer service. Improving the layout of the facility merges with the concept of visual management; if health workers can see the status of unit and of work in the facility, thus removing the need for complex tracking and communication systems, then benefits will accrue. 5S can also be a valuable marketing tool when potential customers visit; a well-organized, clean and tidy facility sends a message of a professional and well-organized service provider.

3.2.1.2. Implementation Modalities
1. 5S activities will be used as tools to prepare the obtainable best stage for health personnel to make maximal use of their knowledge and skills.

2. The 5S principles will be implemented starting with a few targeted areas and use the results from these areas to win support from the remaining areas to implement them.

3. The following steps will be followed in the implementation of 5S:

Sorting
- Elimination of all unnecessary stuff from venue of work and reduce clutter.
- Go through all tools, materials, and so forth in the work area.
- Keep only essential items and eliminate what is not required, prioritizing things as per requirements and keeping them in easily-accessible places.
- Everything else is stored or discarded.

Setting in order or Straightening / Stabilize
- Organize everything needed in proper order for ease of operation.
- There should be a place for everything and everything should be in its place.
- The place for each item should be clearly labeled or demarcated.
- Items should be arranged in a manner that promotes efficient work flow, with
equipment used most often being the most easily accessible.

- Workers should not have to bend repetitively to access materials.
- Each tool, part, supply, or piece of equipment should be kept close to where it will be used – in other words, straightening the flow path.

**Shining or Cleanliness / Systematic Cleaning**

- Maintain high standard of cleanliness.
- Clean the workspace and all equipment, and keep it clean, tidy and organized.
- At the end of each shift, clean the work area and be sure everything is restored to its place.

**Standardizing**

- Set up the above three S’s as norms in every section of the workplace.
- Work practices should be consistent and standardized.
- All work stations for a particular job should be identical.
- All employees doing the same job should be able to work in any station with the same tools that are in the same location in every station.
- Everyone should know exactly what his or her responsibilities are for adhering to the first 3 S’s.

**Sustaining the discipline or self-discipline**

- Train and maintain discipline of the personnel engaged.
- Once the previous 4 S’s have been established, they become the new way to operate.
- Maintain focus on this new way and do not allow a gradual decline back to the old ways.
- While thinking about the new way, also be thinking about yet better ways.
- When an issue arises such as a suggested improvement, a new way of working, a new tool or a new output requirement, review the first 4 S’s and make changes as appropriate.

On improvement of the work environment/infrastructure from 5S implementation; then other QI initiatives can now come in to improve various aspects of quality in health services including technical issues.

All QI initiatives shall be implemented based on the “Improvement Collaborative” Model ensuring application of the principle of an iterative cycle of improvement (PDSA cycle).

**3.2.2. Improvement Collaborative**

An “improvement collaborative” is shared learning system that brings together a large number of teams to work together to rapidly achieve significant improvements in processes, quality, and efficiency of a specific area of care, with intention of spreading these methods to other sites. Improvement collaboratives seek to adapt and spread existing knowledge to multiple sites. This existing knowledge may consist of clinical practices based on scientific evidence, 12

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proven practices that are widely considered as “good” or even “best” or any other changes to the existing way of doing things that have been shown to result in better health care (Figure 3). Such knowledge is the collaborative’s “implementation package”\(^\text{13}\) - the changes in processes and organization of care that the collaborative seeks to introduce, refine, and spread (Figure 3).

**Figure 5: HCI Improvement Collaborative Model**

- Initiatives should conduct assessments of the current situation (current quality standards) to identify critical gaps and trace their root causes. By this process, it becomes easier to determine and plan for what is to be done to improve the current quality situation (desired quality standards). Depending on what has been identified as of critical need by the MoH or states, partnering shall determine what to prioritize on supporting and initiate programs that contribute to providing solutions at any level.
- A collaborative will focus on a single technical area (for example prevention of mother-to-child transmission of HIV, ART, family planning, immunization, neonatal-newborn care, etc) and seek to rapidly spread existing knowledge or best practices related to that technical topic to multiple settings, through systematic improvement efforts of a large numbers of teams. Also, interventions may decide on their priorities on any health-related problem (e.g. Performance Improvement for Health Workforce, QoC in HIV/AIDS, Systems Strengthening, Occupational safety, etc). By implementing their interventions, programs or agencies shall be creating solutions to quality issues within the health sector, as long as their priorities lie within the national health goals and framework.
- The teams shall work together for a 10 – 12month period to achieve significant improvements in a specific area of care and then focus on another technical area.
- Teams of health care providers will work independently to test out changes in how they deliver care that seek to implement best practices and accepted standards for the collaborative’s priority area.

• Teams shall use a common set of indicators to measure the quality of the care processes the collaborative is trying to improve and, where possible, the desired health outcomes.

• The teams will organize regular sharing of results among teams through learning sessions in which teams learn from each other about which changes have been successful and which were not. This results in a dynamic improvement strategy in which many teams working on related problem areas can learn from each other in a way that facilitates rapid dissemination of successful practices.

• Learning and improvements to new sites will be spread through a spread collaborative. A spread collaborative uses the collaborative structure of a network of sites, a common (enhanced) implementation package and indicators, and learning sessions and other mechanisms for shared learning to spread proven improvements to a significantly larger number of facilities and/or practitioners.

• Spread collaboratives will rely on QI-experienced staff and “quality champions” from the demonstration collaborative to provide support based on their own experiences and who can motivate new facilities as living proof that improvement can happen.

• Dissemination of improvements will be in the form of:
  - guidelines or policy decrees focusing on increasing the perceived legitimacy of the improved intervention and alignment with the institutional values;
  - cascade training, supervision and endorsement by training institutions, development partners, or individuals, alone and in combination focusing in developing technical competency; and
  - extension agents and campaigns focusing on building commitment and political will.
  - A change package of best practices that have been demonstrated to be successful and can be adapted by other implementing agencies.

• Sustainability of the achievements of the collaboratives will be demonstrated when the gains in the quality of care are maintained and the health system has incorporated an ongoing process to continually improve quality of care. Evidence of achievements should be generated through performance reports and reviews, documentation and sharing of best practices during learning sessions, evaluations and research. Sustainability should be ensured through deliberate strategies including:
  - incorporation of aspects of the collaborative’s refined implementation package into the national service delivery policies and standards
  - advocating for changes in pre-service curriculum and bringing training institutions up to date
  - incorporating quality indicators into routine monitoring and reporting systems and performance based management agreements
  - adding quality monitoring to supervisory functions

This approach’s central innovation is the structured, shared learning among many teams working on the same problem area, a feature that promotes rapid dissemination of successful practices.

State Learning sessions
Each state is encouraged to hold an inter-facility learning session whereby each site QI team presents what improvement they made and how they approached it. This kind of exchange or sharing is meant to sell ideas to other teams who may not have tested that particular change. We recommend that learning sessions are organized by the State QI Committees and held bi-annually for at least 2 days. It should be attended by all implementing health facilities in the state with 2 health workers per facility. In attendance, should be some members of the
County QI Committees. The county political and technical leadership could attend the last day when action plans are made and for sharing resolutions.

Exchange Visits
Another valuable way of learning is by having exchange visits of poor performing health workers visiting good performing health facilities to learn from them.

3.2.3. Standard Based Management and Recognition Process (SBM-R)
SBM-R is a methodology designed to assist providers to improve their performance and thus, strengthen the overall quality of health services. It is a proactive approach, focusing not on problems but rather on the standardized level of performance and quality to be attained. SBM-R capitalizes on observing trends in quality of services/education starting with baseline followed by periodic assessments internally to recognize and address performance gaps. It also develops change management skills with multi-sector collaboration from facility to national levels empowering providers, clients and communities.

SBM-R promotes the systematic, consistent and effective utilization of operational, observable performance standards as the basis for the organization and functioning of health services. Furthermore, it rewards compliance to standards through recognition mechanisms. The purpose of SBM-R is to provide a step-by-step process, with practical tools and ways to identify resources, for improving provider performance and the quality of health services while promoting compliance to evidence-based best practices through the nationally set health care service standards.

The purpose of SBM-R is to provide a step-by-step process, with practical tools and ways to identify resources, for improving provider performance and the quality of health services while promoting compliance to evidence-based best practices. The approach involves the following steps:

- Setting performance standards that are constructed around clearly defined service delivery processes or a specific content area
- Implementing the standards in a streamlined, systematic way
- Measuring progress to guide the improvement process toward these standards
- Rewarding achievement of standards through recognition mechanisms

3.2.4. The Health Partners International Quality Improvement Programme
In 2009, the Health Partners International (HPI) with technical support from staff of the Maternal and Newborn Health (MNH) Unit of the Liverpool School of Tropical Medicine (LSTM) initiated QI interventions in three Northern Nigeria states. The aim of the QI programme was to build the capacity of in-country team, health staff, hospital management and supervisors from the Primary Health Care offices of target LGAs as well as from the State Ministries of Health (SMOH), State Primary Health Care Management Boards (SPHCMB) and State Health Services to improve the delivery of MNCH services (including Routine Immunisation) via the strengthened PHC system. The QI programme was implemented as part of the Partnership for
Reviving Routine Immunisation in Northern Nigeria-Maternal, Newborn and Child Health (PRRINN-MNCH) Programme\textsuperscript{14, 15}.

QI processes were implemented in a total of 120 PRRINN-MNCH supported Emergency Obstetric and Newborn Care (EmONC) facilities in the 3 target states. It utilised a series of QI workshops for representatives from these health facilities. The purpose of these QI workshops was, to build capacity to improve quality of care of MNCH services in an ongoing manner by establishment of QI teams and introduction of QI methods. Different approaches and methods for QI were introduced and the EmONC facilities formed QI teams, which were leading the QI processes in the health facilities\textsuperscript{16}.

To facilitate institutionalisation of QI in the three states a QI orientation package for senior policy makers was developed and implemented in 2014 for senior policy makers from the three target states, as well as from the Federal Ministry of Health (FMOH) and the National Primary Health Care Development Agency (NPHCDA). To ensure sustainability, health staff from the Primary Health Care offices of target LGAs as well as from the State Ministries of Health (SMOH), State Primary Health Care Management Boards (SPHCMB) and State Health Services Management Boards (SHSMB) also attended the QI workshops and teams of QI master trainers have been trained and mentored in each of the PRRINN-MNCH supported states.

**HPI QI approach and methodology**

Health facilities were supported to identify QoC problems, analyse the root causes and come up with interventions to address these problems and improve QoC with the ultimate aim to reduce maternal, peri-natal and child mortality and morbidity and increase client, patient and staff satisfaction\textsuperscript{17}. This was achieved by establishing HF QI teams, multidisciplinary teams which are responsible for QoC in their health facilities. They usually meet monthly to discuss QoC issues. Members of these QI teams have been trained in QI, for which a training manual has been developed. The QI training consists of a series of 4 workshops, each of which lasts between 2 and 4 days, which are conducted at intervals of three months. In this way participants gradually build up their knowledge and skills for QI. Moreover, each subsequent workshop starts with a recap of the key issues covered during the previous workshop, reinforcing the earlier acquired knowledge. In between these workshops participants apply the knowledge and skills developed during the workshops within their own health facilities, assessing QoC, identifying QoC problems and their root causes, and initiating QI activities. Criterion based clinical audit was also introduced as a means to assess health workers’ performance, while exit interviews with clients and focus group discussions in the community identified concerns of clients and patients. Clinical protocols for EmOC and Essential Newborn


\textsuperscript{15} Hofman JJ. 2012. Knowledge Summary: Improving Quality of MNCH Services in Northern Nigeria. PRRINN-MNCH.


Care (ENC) as well as minimum standards for MNCH service provision were developed and revised, which provided benchmarks for expected quality of care.

3.2.5. Other QI Methodologies
The MoH of South Sudan will continue exploring and adopting different methods based on the Science of Improvement.

It is important to have continuous education about maintaining standards. When there are changes that affect the QI programme such as new equipment, new products or new work rules, it is essential to make changes in the standards and provide training. Organizations embracing QI should use posters, signs and Standard Operating Procedures as a way of educating employees and maintaining standards.

3.3. Planning and Implementation of QI Initiatives
Planning and implementation of QI initiatives will be done utilizing the inherent organizational knowledge of the facility team as well as factual data. Implementation and results will be measured to ensure success.

Team leaders should aim at ensuring that their organizations:
- Focus on a shared goal
- Communicate that goal to all leaders
- Involve all leaders in planning to achieve the goal
- Hold participants accountable for achieving their part of the plan

Organizations must understand and use structured rapid problem solving tools which include histograms, pareto charts, cause-and-effect diagrams, check sheets, scatter diagrams, flowcharts and control charts, affinity diagram, relations diagram, tree diagram, matrix diagram, prioritization matrix, arrow diagram, and process decision program chart, etc.

The planning process should involve everyone and include the following steps;
1. Creating a vision or goal of the future.
2. Developing innovative ideas about the steps taken to achieve the goal.
3. Grouping ideas into specific strategies.
4. Analyzing the strategies using structured problem solving tools.
5. Formation of cross-functional teams to further investigate the viability of each strategy and to flesh out an action plan if appropriate.
6. Reviewing and approving the final strategies and action plans.
7. Identifying Action Teams members
8. Implementation of strategies.

The full planning team meet should meet regularly to review and measure progress on each initiative, and to make any adjustments in the plan that are needed. Management and the employees must work together by reporting and providing feedback to one another. This is then followed by a Plan-Do-Study-Act cycle. The cycle of PDSA involves measuring the progress to the goal that was set in the beginning of the year, to record the actual results-to-date, to take note of all the problems between the results and the plan, and lastly state the impact on the strategy for the coming year.
4. Implementation Arrangements

This section presents the implementation arrangements for the QI activities. The implementation arrangements will provide institutional and structural systems that will contribute to the attainment of the second National Health Policy 2015 - 2025 objective of accelerating quality and safety improvements. It is important that the implementation of QI programs and interventions utilizes the existing structures and systems of MoH. This will minimize utilization of resources and ensure that QI issues are mainstreamed and integrated within the health system. QI activities will be implemented at national, state, county, health facility and community levels and incorporated into activities of Private Health Providers and CSOs.

4.1. Political and Administrative Environment

Administratively, South Sudan is divided into states which are further sub-divided into lower administrative units namely counties, Payams and Bomas. The country has 10 States, 79 Counties, 545 Payams and 2,540 Bomas. Overtime, the numbers of states, counties and lower level administrative units have increased in number with the aim of making administration and delivery of social services easier and closer to the people.

4.2. Governance and Health Service Delivery in South Sudan

Health care organisation in South Sudan matches the levels of decentralisation. The county health system provides primary health care, state ministry of health manages secondary health care, in addition to governing the County health system\(^\text{18}\). The core functions of the MoH includes: stewardship and governance, policy formulation, standards, and guidelines, human resources capacity building, decentralisation and effective delegation, regulation, legislation and strong partnership, research, planning and quality assurance, supervision, monitoring and evaluation, health financing and management\(^\text{19}\).

The delivery of health services in South Sudan is by both public and private sectors with the Government of the Republic of South Sudan being the owner of most facilities. Table 2, shows the distribution of health facilities by administrative and health system levels.

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4.3. Organisation and Management of Health Services

The Government possesses both service delivery, and stewardship functions in health. The stewardship function is exercised by the management, while the service delivery function is exercised by the facilities, and coordinated by the counties. The management structure of the MoH lays emphasis on responsiveness to the requirements of the National Health Policy and the health sector strategic plan. The organization is such that

\(^{18}\) MoH 2011; The Basic Package of Health and Nutrition Services

\(^{19}\) MoH 2012; Health Sector Development Plan
there is a clear communication linkage among the national, state and county level for ease of planning, operations, monitoring and evaluation. The Health Unit Management Committee (HUMC) brings together selected community representatives who are responsible for fostering improved communication with the public, thereby encouraging community participation in health activities within and outside the unit. The HUMC reports to the health facility any plans and decision to improve the quality of care within the health facility.

4.4. Contextual considerations for existing structures and systems

Decentralization: QI initiatives shall be delivered within the framework of decentralization and any future reforms therein. This is because the counties have the mandate to ensure delivery of quality health services and currently serve as the most appropriate level for coordinating top-down and bottom-up planning for organizing community involvement in planning and implementation; and for improving the coordination between government and private health care. Many key development sectors and partners are represented at this level.

Public Private Partnerships: The private sector shall be seen as complementary to the public sector in terms of increasing geographical access to quality health services, the scope and scale of QI initiatives implemented. In order to ensure standardized quality of services the public sector shall implement QI initiatives as guided by the HSQIF.

Integrated health care delivery: QI initiatives shall be scaled up from disease specific interventions to an integrated approach aimed at health systems strengthening.

Harmonization of QI Initiatives: All QI implementers shall be guided by the HSQIF. One of the gaps in QI efforts in the country has been that QI initiatives were fragmented and not coordinated. There were uncoordinated multiple initiatives, gaps in reporting and feedback, lack of clarity on roles and responsibilities of the different stakeholders as well as inadequate implementation of supervision and mentoring activities for quality.

Client-oriented: The client-oriented principle requires the MoH to design strategies focusing on both the internal and external clients. Most of the QI initiatives in the country have been disease specific. The current drive is for a health systems strengthening approach which builds on the integrated service delivery approach spelt out in the Second National Health Policy.

Leadership: The MoH will provide overall leadership for QI in health care. The MoH will work closely with partners in mapping and defining, on a continuous basis, the roles of different institutions, desired quality outcomes of health care and the values that will guide actions. Leadership needs to empower staff, be actively involved, and continuously drive QI. All partners are to apply the QA principles of focusing on the client, use of data focusing on evidence based outcomes, systems thinking and effective communication with all stakeholders. Without the commitment and support of senior-level leadership, even the best intended projects are at great risk of not being successful. Champions of the quality initiative and QI need to be throughout the organization, but especially in leadership positions and on the team.

Multidisciplinary Teams: Due to the complexity of health care, multidisciplinary teams and strategies are essential. Multidisciplinary teams from participating centers/units need to work closely together, taking advantage of communication strategies such as face-to-face meetings, conference calls, and dedicated e-mail list servers. They need to also utilize the guidance of trained facilitators and expert faculty throughout the process of implementing change initiatives when possible.

Country-led monitoring and evaluation plan: The National Health Sector Strategic Plan (NHSSP) core and program specific indicators shall provide a basis for the development of indicators for various QI initiatives. M&E activities will be guided by the NHSSP M&E Plan.
Human Resources: The capabilities for implementing QI shall be addressed through a) in-service training, as well as b) pre-service education for all health professions, including physicians, nurses, pharmacists, laboratory personnel, health managers, etc. c) The possibility of embedding QI into job descriptions will be explored so that it is understood that everyone participates. The MoH will spearhead development of a national in-service QI training manual and liaise with training institutions in the development of pre-service QI training curriculum. The expectations for facilities should be made clear at all levels of training so that the expectation of minimum QI standards for organizations is well understood and disseminated throughout the entire health sector.

4.5. Relationship Structure

Quality improvement requires active and continuing support from top leadership. At the Ministry level it means the Minister himself/herself, the Permanent Secretary, and the Director Generals (Top Management) give their full support. At State level, the State Ministers of Health and Directors, and at health facilities, the Hospital Director / Medical Superintendent are involved in efforts to improve the quality of health services by supporting application of quality improvement initiatives. Equally at County, Payam and Boma level, the health, political and administrative leaders play an important role in sustaining the culture of quality.

The main responsibilities of decision-makers and managers will be to keep the performance of the whole system under review, and to develop strategies for improving quality outcomes and equity across the whole system. Decision-makers will engage health-service providers, communities, and service users in developing and implementing new strategies for quality using evidence based data.

Providers may be seen as whole organizations, teams, or individual health workers. The core responsibilities of health-service providers for QI will be to ensure that the services they provide are of the highest possible standard and meet the needs of individual service users, their families, and communities. Health service providers also need to operate within an appropriate policy environment for quality, and should have proper understanding of the needs and expectations of those they serve so as to deliver the best results.

Improved quality outcomes are not, however, delivered by health-service providers alone. Communities and service users are the co-producers of health. They have critical roles and responsibilities in identifying their own needs and preferences, and in managing their own health with appropriate support from health-service providers. Communities and service users need to influence both quality policy and the way in which health services are provided to them, if they are to improve their own health outcomes. This should be achieved through established mechanisms to address responsiveness like client satisfaction surveys, suggestion boxes, complaints desk, community meetings/dialogues, etc. Findings related to inequalities and vulnerabilities should be prioritized in subsequent plans.

The MoH relationships in improving quality involve a number of stakeholders responsible for; policy and strategy development; health service provision; communities and service users (Figure 6).
The MoH will ensure collaboration between the various stakeholders using the following QI implementation relationship structure.

### 4.6. Organizational Structure for Health Care Quality Improvement

The aim of QI is to identify, implement and maintain best clinical and organizational practices that ensure better care for clients in order to achieve positive health outcomes. Sustaining these better care practices and corresponding results requires continuous implementation of QI activities at the point of service delivery and QI support activities from higher levels of the health system. Experience shows that while QI is everybody’s responsibility, it is essential to define clearly the roles and responsibilities of all those involved at various levels, from national to community level. The South Sudan HSQIF identifies levels, actors and roles as shown in Table 3.

**Table 3: Levels involved in QI, actors, roles and responsibilities**

<table>
<thead>
<tr>
<th>Level</th>
<th>Actor</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>MoH Top management</td>
<td>• Review and approve QI policies and strategies guided by the QID with input from the National QI Coordination Committee.</td>
</tr>
<tr>
<td></td>
<td>Comprising of the Minister, Under Secretary and DGs</td>
<td></td>
</tr>
</tbody>
</table>
|           | ?Office of the Undersecretary*- Quality Improvement Department/Unit | • Develop strategies and guidelines for implementing at state and county health authorities and health institutions  
• Organise training of trainers on QI initiatives in collaboration with partners  
• Coordinate supportive supervision to all levels regarding QI  
• Collect and disseminate national and international experience, techniques, data and references on QoC  
• Lead the development of relevant MoH guidelines and publications to ensure adequacy of standards and compliance with policies  
• Manage QI experts, national facilitators/trainers information |
| National QI committee | • Develop IEC materials on QoC  
• Coordinate establishment of certification towards health facility accreditation system and oversee implementation |
| The Professional Councils | • Formulate and update periodically a national Quality Framework and enhance its implementation.  
• Conduct QI activities at MoH Headquarters  
• Formulate national standards of services and processes and enhance compliance.  
• Ensure that appropriate QI mechanisms are established at different levels.  
• Supportive supervision and monitoring of QI activities at National level including tertiary hospitals  
• Establishment of technical sub-committee  
• Coordinate sub-committee activities |
| Development Partners | • Regulate professional standards, ethics and code of conduct.  
• Recognize and reward good performance and sanction or institute disciplinary measures for poor performance.  
• Support the implementation of the QAF for this |
| Implementing partners | • Offer 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 supervision, monitoring and evaluation activities. |
| State Health Management Team | • Training of state referral hospital and County |

State

State Health Management Team
<table>
<thead>
<tr>
<th>Role</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Management Team (CHMT)</td>
<td>• Provide technical support to state referral hospital management team and CHMTs&lt;br&gt;• Dissemination of QI guidelines and information&lt;br&gt;• Supportive supervision and monitoring of QI activities at state referral hospitals and county levels&lt;br&gt;• Evaluation of QI activities at state referral hospitals and county levels</td>
</tr>
<tr>
<td>County Health Management Team (CHMT)</td>
<td>• Training of health care providers on QI within the county.&lt;br&gt;• Provide technical support to health facility management and Quality Improvement Team (QIT) of health facilities&lt;br&gt;• Dissemination of QI guidelines and information&lt;br&gt;• Supportive supervision and monitoring of QI activities at County hospitals, PHCC and PHUs&lt;br&gt;• Evaluation of QI activities at hospitals, PHCC and PHUs</td>
</tr>
<tr>
<td>Hospital Management Team (HMT)</td>
<td>• Development of organization's vision and mission statement on QI&lt;br&gt;• Dissemination of health facilities vision and mission statement on QI&lt;br&gt;• Develop functional QI structure&lt;br&gt;• Oversee QI process and QIT function&lt;br&gt;• Ensure effective top-bottom, bottom-top communication&lt;br&gt;• Ensure proper allocation of resources for QI</td>
</tr>
<tr>
<td>Quality Improvement Team (QIT)</td>
<td>• Oversee QI activities on daily basis in the hospital&lt;br&gt;• Conduct periodic QI performance assessments&lt;br&gt;• Liaise with the management on improvement strategies and activities.&lt;br&gt;• Closely work with HMT and regularly reporting to HMT</td>
</tr>
<tr>
<td>Health facility management</td>
<td>• Incorporate QI activities in the health facility plan&lt;br&gt;• Development of organization's vision and mission statement on QI&lt;br&gt;• Develop functional QI structure&lt;br&gt;• Oversee QI process and QIT function&lt;br&gt;• Ensure effective top-bottom, bottom-top communication&lt;br&gt;• Ensure proper allocation of resources for QI</td>
</tr>
<tr>
<td>Quality Improvement Team (QIT)</td>
<td>• Oversee QI activities on daily basis in the health center or dispensary&lt;br&gt;• Conduct periodic QI performance assessments&lt;br&gt;• Liaise with the management on improvement strategies and activities.</td>
</tr>
</tbody>
</table>
strategies and activities.

- Closely working with facility management and regularly reporting to facility management

Community

| Frontline health workers | Educate communities on their rights and responsibilities for quality health care
- Empower them to demand for quality health services
- Involve community in assessing quality of health care and developing community health action |

Community members

| Manage resources of health facilities
- Demand for quality health services
- Respond to actions by health workers
- Assess quality of health services |

*Establish a new unit or department for QI

**The Quality Improvement Department/Unit**

The mandate of the **Quality Improvement Department** (QID) is to ensure that the quality of services provided is within acceptable standards for the entire sector, both public and private health services. This is to be achieved through the departmental strategic objective of *Facilitating the establishment of internal quality assurance capacity at all levels*.

The responsibilities of the QID will include overall operational oversight and coordination. Specifically, the QID will help build a sound quality program that establishes performance measures and data collection systems; develop written QM plans and annual goals; and oversee the progress of QI activities in the health sector. At the provider level, steps include building capacity and capability for QI among providers through training and technical assistance.

The QID will coordinate the planning, resource mobilization, monitoring and evaluation of QM/QI interventions within the various MoH departments, programs, projects, health institutions and the entire health care delivery system. Implementation of the various QM interventions including QI initiative will be the responsibility of specific programs/projects, departments and institutions which shall have designated QM/QI officers.

The QID will be the secretariat of the National QI Coordination Committee. QID will receive, synthesize and present any strategic plans and decisions, to maintain and improve the quality of care within the sector and will discuss and present relevant QI strategies and policy recommendations to the MoH Top Management for action.

The specific responsibilities for QID are:

- Developing national standards and guidelines for QI.
- Ensuring the dissemination of the guidelines to the regions, districts and stakeholders.
- Coordinating and supporting training at all levels (national, regional, district, health centers and community); including pre-service and in-service health training institutions in new technological and QI issues.
- Overseeing execution of the national QI plan
- Facilitating implementation of regional and local QI activities
- Coordinating support supervision at all levels in regard to QI issues.
- Working with UNHRO to determine the quality improvement research agenda
- Working with training institutions to develop and implement the national QI training curriculum and training manual.
- Documenting quality of care best practices and share information with other interested stakeholders for adaptation.
4.7. QI Coordination Structure

The following QI coordination structure has been created to enhance the QI policy, strategy development, communication and capacity building activities in a coordinated manner (Figure 7).

Figure 7: National Quality Improvement Coordination Structure

4.7.1. Roles and Responsibilities

The National Quality Improvement Coordination Committee

The National QI Coordination Committee brings together major stakeholders such as the priority programs, Development Partners, PNFPs, CSOs and health consumers. The key responsibility of the National QI Coordination Committee is to identify opportunities and potential strategies to coordinate the QI initiatives in South Sudan.

The Coordination Committee will report to the Quality Improvement Department any plans and decisions, to maintain and improve the quality of care within the sector.

Responsibilities for the National QI Committee

1. Participating in developing strategies for improving quality outcomes which apply across the whole system.
2. Supporting and participating in the formulation of national QI guidelines and standards.
3. Identifying key priority areas for QI and make recommendations to the MoH and relevant stakeholders.
4. Facilitating networking with partners in identifying problems and solutions at National, State, County and Sub-County levels.
5. Receiving and reviewing QI implementation reports.
6. Discuss recommendations and lessons learnt during implementation of QI initiatives.
7. Participating in building capacity of national, state, county, sub county and facility personnel in the implementation of QI activities in health services.
8. Monitoring and evaluating performance of the State QI Committees.
9. Attending National QI Coordination Committee meetings.

**Composition**
The National QI Coordination Committee shall have a membership which shall include:

- DG Policy Planning and Research as Chairperson
- DG Medical Services
- DG Preventive services
- DG PHC
- DG Reproductive Health
- Technical staff from the QID
- Representatives from MoH departments and programmes implementing QI activities
- Representatives from Public and Private Institutions implementing QI activities
- Representatives from Health Development Partners supporting implementation of QI
- Representatives from CSOs supporting implementation of QI activities
- Representatives from health consumers’ organizations
- Representatives from tertiary training institutions

The National QI Coordination Committee shall meet quarterly.

**State QI Committee**
The State QI Committee brings together major stakeholders such as the PNFPs, priority programmes and Development Partners supporting QI in the state. The State QI Committee will report to the National QI Coordination Committee any plans and decisions, to maintain and improve the quality of care within the catchment area.

**Responsibilities for the State QI Committee**
1. Guiding implementation of QI activities in the region
2. Developing State QI plan and budget
3. Participating in building capacity of district personnel in implementation of QI activities.
4. Organizing State learning networks
5. Identifying training needs within the State
6. Supervising, coaching and mentoring at district and health facility level
7. Monitoring and evaluating data results to determine regional priorities and presenting data at regional learning networks
8. Monitoring and Evaluating performance of the County QI Committees
9. Convening regional QI stakeholders’ meetings
10. Recognizing and rewarding top performers.
**Composition**

The State QI Committee shall have a membership which shall include:

- The Hospital Director of a State Referral Hospital as Chairperson.
- State QI Focal Person as Secretary
- Heads of Departments
- Head of Nursing in the State Hospital
- County Health Officers in the State
- Representatives from Health Development Partners supporting implementation of QI in the State
- Representatives from CSOs implementing QI in the State
- Community/Patient Representatives (one male, one female)

The State QI Committee shall select a State QI Focal Person from its members and the committee shall meet quarterly.

**Roles and Responsibilities of the State QI Focal Person**

1. Identifying key priority areas for QI and make recommendations to the State QI committee.
2. Preparing regional QI plans and presenting them to the State QI committee.
3. Facilitating networking with partners in identifying problems and solutions at State level.
4. Participating in building capacity of regional, county, sub county and facility personnel in the implementation of QI activities in health services.
5. Participating in supervision/coaching/mentorship within the state.
7. Preparing regional QI reports for submission to the MoH.
8. Organizing State QI Committee meetings in consultation with the Chairperson.

**County QI Committee**

The County QI Committee brings together major stakeholders such as the sub counties I/Cs, PNFPs, priority programme managers / Focal Persons and Development Partners implementing QI in the County. The County QI Committee will report to the State QI Committee any plans and decisions, to maintain and improve the quality of care within the county.

**Responsibilities for the County QI Committee**

1. Overseeing all QI activities in district
2. Developing district QI plan and budget
3. Participating in building capacity of HSDV / health facility personnel in implementation of QI activities.
4. Supervising, coaching and mentoring general hospitals and HC IV and reporting findings (Integrated).
5. Overseeing data collection process at hospital and sub county level and submitting facility level data to national level.
6. Overseeing data analysis using control or run charts, synthesis and interpreting variation from patterns.
7. Monitoring and evaluating QI implementation in the district.
8. Communicating with regional and national level through specified reporting structure, forms, etc.
9. Convening County QI stakeholder meetings.
10. Recognizing and rewarding top performers.

**Composition**
The County QI Committee shall have a membership which shall include:
- The County Health Officer as Chairperson
- County QI Focal Person as Secretary
- Selected DHT members including the County HMIS Officer
- In-Charges of PHCCs
- Representatives from Health Development Partners supporting implementation of QI in the County
- Representatives from CSOs implementing QI in the County
- Community/Patient Representatives (one male, one female)

The County QI Committee shall select a County QI Focal Person from its members and the committee shall meet quarterly.

**Roles and Responsibilities of the County QI Focal Person**
1. Identifying key priority areas for QI and make recommendations to the County QI committee.
2. Preparing regional QI plans and presenting them to the County QI committee
3. Facilitating networking with partners in identifying problems and solutions at district level.
4. Participating in building capacity of County, PHCC and PHUs and facility personnel in the implementation of QI activities in health services
5. Participating in supervision/coaching/mentorship within the district.
7. Preparing County QI reports for submission to the State QI Coordinator.
8. Organizing County QI Committee meetings in consultation with the Chairperson.

**Hospital QI Committee**
Hospital QI Committee brings together various departments to participate in QI activities. The Hospital QI Committee shall bring together Hospital Managers, Departmental QI focal persons, service providers and consumer representatives in the hospitals. The Hospital QI Committee will report to the Hospital Director / Medical Superintendent any plans and decisions, to maintain and improve the quality of care within the hospital.

**Responsibilities for the Hospital QI Committee**
1. Developing hospital QI plan and budget
2. Leadership support for QI
3. Developing team-based QI projects
4. Supervising, coaching and mentoring QI activities in the hospital
5. Staff involvement in QI
6. Collecting and reporting facility data and submitting to district level
7. Use of data for QI
8. Organizing QI Committee meetings
9. Patient involvement in QI
**Composition**
The Hospital QI Committee shall have a membership which shall include:
- The Hospital Manager as Chairperson
- Hospital QI Focal Person as Secretary
- Hospital Administrator
- Heads of Departments
- Head of Nursing
- In-Charges of the various wards
- Medical Records Officer
- Representatives from Health Development Partners supporting implementation of QI in the hospital
- Representatives from CSOs implementing QI in the hospital
- Community/Patient Representatives (one male, one female)

The Hospital QI Committee shall select a Hospital QI Focal Person from its members and the committee shall meet monthly.

**Roles and Responsibilities of the Hospital QI Focal Person**
1. The Hospital QI Focal person will report to the Hospital Director / Medical Superintendent and the Hospital QI Committee any plans and decisions, to maintain and improve the quality of care within the hospital.
2. Ensuring availability and adherence to the national QI guidelines and standards.
3. Facilitating networking with Departmental QI teams in identifying problems and solutions/testing changes at facility/departmental levels.
4. Participating in building capacity of hospital personnel in the implementation of QI activities.
5. Participating in internal supervision/coaching/mentorship within the hospital.
6. Preparing hospital QI work plans.
7. Organizing Hospital QI committee meetings in consultation with the Chairperson.

**Departmental QI Teams**
Departmental QI Teams should be established in major departments (Surgery, Medical, Pediatrics, Obstetrics and Gynaecology, Outpatient Department (Casualty, Pharmacy & Stores, Laboratory), Community, etc. Department QI Team will report to the Hospital QI Focal Person activities and plans executed in departments. The Departmental QI teams will be about 3 - 5 in number per given hospital.

Specific responsibilities of Departmental QI Teams include:
- Testing and introducing improvement changes in departments
- Monitoring and evaluating QI results in the departments
- Identifying quality issues at department level
- Developing improvement objectives that are priority to the department and facility

**Composition**
The Departmental QI team shall have a membership which shall include:
- The Head of Department will serve as a Chairperson
- The Departmental QI Focal Person will be the Secretary
- Members of the department involved in QI activities
• Representatives from other departments closely linked/closely related to the department

**Lower Level Facility QI Teams**
The lower level facility QI Teams bring together player to participate in specific QI interventions at the various levels. This can be at national, sub-national and health facility or institutional level. The lower level Facility QI Teams shall bring together managers, QI focal persons, service providers and consumer representatives at a specific facility. The lower level Facility QI Team will report to the relevant QI Committee (national level QI Team reports to the National QI Coordination Committee, State QI team to the State Committee, County based team to the County QI Committee, general hospital QI team to Hospital Committee and Lower Level health facility teams to the County Committee) any plans and decisions regarding implementation of specific QI interventions within the health facility/institution.

**Responsibilities for the Lower Health Facility QI Team**
1. Developing health facility QI intervention plan and budget
2. Leadership support for specific QI interventions
3. Developing team-based QI projects
4. Supervising, coaching and mentoring specific QI activities
5. Staff involvement in QI interventions
6. Collecting and reporting and submitting facility data
7. Use of data for QI
8. Organizing QI team meetings
9. Patient involvement in QI

**Composition**
The Lower level Facility QI Team shall have a membership which shall include:

- The Facility Manager as Chairperson
- QI Focal Person as Secretary
- Representatives of service delivery areas
- Records Assistant
- Representative from Health Development Partners supporting implementation of a specific QI intervention in the facility
- Representatives from CSOs implementing the specific QI in the area
- Community/Patient Representatives (one male, one female)

The Health Facility Team shall select a Health Facility Focal Person from its members and the committee shall meet monthly.

**Roles and Responsibilities of the Health Facility QI Focal Person**
1. The Health Facility QI Focal person will report to the Health Facility Manager and the Health facility QI Committee any plans and decisions, to maintain and improve the quality of care within the facility.
2. Ensuring availability and adherence to the national QI guidelines and standards.
3. Facilitating networking with Facility QI team in identifying problems and solutions/testing changes at facility/departmental levels.
4. Participating in building capacity of the Health Facility personnel in the implementation of QI activities.
5. Participating in internal supervision/coaching/mentorship within the health facility.
6. Preparing health facility QI work plans.
7. Organizing Health Facility QI team meetings in consultation with the Chairperson.

5. Quality Assessment / Measurement

The rationale for measuring QI is the belief that good performance reflects good-quality practice, and that comparing performance among providers and organizations will encourage better performance. It is the only way of really knowing whether care is being provided at the population or group level. Performance measurement separates what we “think” is happening from what we “know”, avoids putting ineffective solutions into place.

Efforts to improve quality need to be measured to demonstrate whether improvement efforts;

1. lead to change in the primary end point in the desired direction;
2. contribute to unintended results in different parts of the system;
3. require additional efforts to bring a process back into acceptable ranges.

The measurement of quality of care shall be based on indicators that are linked to optimal clinical care and support service inputs, processes and outcomes. Specific aspects of clinical care will be selected by clinical leadership within the Ministry departments in conjunction with key stakeholders, patients and the community. From these designated priorities indicators that are relevant, measureable and improvable will be developed. Some indicators may apply to all patients entering the health care system and others will only apply to selected groups based on gender, disease and age. Inputs shall be all those activities and processes at various levels while outputs shall be determined according to the inputs.

The portfolio of quality measures will be enhanced to include other strategic and externally required measures to ensure integration with donor requirements and other external requirements. These indicators will be reviewed and approved by the National QI Coordination Committee annually to assure continued relevance to current policy guidelines and current available care.

5.1. Quality Assessment Indicators

Performance standards shall be established for most dimensions of quality, such as technical competence, effectiveness, efficiency, safety, and coverage. Where standards are explicit for example coverage, quality assessment will measure the level of performance according to those standards. For dimensions of quality where standards are more difficult to identify, such as continuity of care or accessibility, quality assessment will describe the current level of performance with the objective of improving it.

The MoH – QID shall facilitate the review of existing QI standards and indicators for various service areas for harmonization. The review and development of the quality assessment indicators in all service delivery areas will based on the following:

**Structural Indicators**

Accessibility to health care services taking consideration of geographical coverage and location, distance to the health facility, continuity of services, etc;

- Availability of trained health workers
Availability of medicines and supplies
- Work environment organization
- Logistics management
- Data management, use and dissemination

**Process Indicators**
- Availability and use of standards and guidelines
- Organizational management for implementing QI
- Risk and harm reduction to service providers and users
- Infection prevention and control practices
- Testing and documentation of changes
- Client participation
- Staff attitude to work

**Outcome Indicators**
- Balanced and equitable health care to reduce variations across different social characteristics
- Waiting time and crowding at service points
- Responsiveness in the institution health care system
- Community participation
- Level of utilization of services in priority area
- Extent to which health care is delivered in a manner which maximizes resource use and avoids waste
- Indicators for standardization
- Indicators for sustainability
- Client satisfaction

### 5.2 Sources of Data
Data for monitoring quality may be from the routine or periodic data that we collect in the facilities and in the communities. The data needs for QI intervention assessment shall be based on agreed performance indicators (QI framework and programme specific) to facilitate monitoring, evaluation, reporting and decision-making for specific interventions.

1. **The main routine data sources will include:**
   - **Facility generated data.** This will be collected by all public and private health service delivery facilities and community. This data will be collected routinely using established data collection methods and tools and aggregated at health facility, county, state and national level. In addition, different programs and projects managed at the MoH/national level shall provide reports to the QID on programme/project specific activities. Health projects managed by implementing partners (DPs and CSOs) at county or community level shall provide reports through the county health system.
   - **Administrative data sources** will provide information on health inventories, supervision, management meetings, logistics management, human resource, financial resource flows and expenditures at national and sub-national levels.
   - **Civil registration and vital statistics system** is essential for providing quality data on births, death and causes of death. Efforts will be made to link this system to the Health Management Information System (HMIS).
   - **Population and Household Census** is carried out every ten years and will be the
primary source of data on size of the population, its geographic distribution, and the social, demographic and economic characteristics.

2. Other sources of data for QI intervention assessment
Other data needs for QI intervention assessment will be generated during improvement projects and PDSA cycles. These may be collected but not be synthesized under the routine HMIS. Partners supporting the QI intervention projects will be required to facilitate development and supply of additional data synthesis and analysis tools and logistics.

Overall, the sources of data will be guided by different information needs, particularly the Government, Parliament, Development Partners, private sector and the community.

5.3 Quality Assessment Methods and Tools
Quality assessment is often an initial step in a larger QI process which may include providing feedback to health workers on performance, training and motivating staff to undertake quality improvements, and designing solutions to bridge quality gaps.

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 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 (HRIS) for staffing levels;
- Logistics Management Information System (LMIS);
- Output Budgeting Tool (OBT) under the Integrated Financial Management System (IFMS);
- Specific questionnaires will be designed for evaluation surveys (baseline, mid and end term), client satisfaction and relevant household 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;
- Geographical Information System (GIS) shall be used to enhance documentation and accountability where applicable.
- Other proven tools and methodologies

5.4 Data Analysis and Synthesis
Data analysis and synthesis will be done at various levels of service delivery (National, sub-national to health facility) to enhance evidence based decision making. The results obtained will be summarized into a consistent assessment of the quality improvement and trends, using selected QI indicators and targets. The focus of analysis will be on comparing planned results with actual ones, understand the reasons for divergences and compare the performance at different levels.
Measures of quality and safety can track the progress of quality improvement initiatives using external benchmarks. Benchmarking in health care is defined as the continual and collaborative discipline of measuring and comparing the results of key work processes with those of the best performers in evaluating organizational performance.

Two types of benchmarking will be used to evaluate patient safety and quality performance.

- Internal benchmarking will be used to identify best practices within an organization / health facility, to compare best practices within the organization / health facility, and to compare current practice over time. The information and data may be plotted on a control or run chart with statistically derived upper and lower control limits.

- Competitive / External benchmarking will also be used to represent best practices elsewhere. Competitive / external benchmarking involves using comparative data between organizations / health facilities to judge performance and identify improvements that have proven to be successful in other organizations / health facilities.

5.5 Data Communication and Feedback

The MoH houses the central database for reporting on progress of the sector National Strategic Plan. The MoH Resource Center will serve as a repository and source for all service delivery data and information at national level. This implies that all health service delivery data and information should be routed through the MoH Resource Center (RC) for validation, analysis & synthesis, and dissemination.

At county level, the county database where established will service as a repository and source for all service delivery data and information at district level.

Programs and projects with specific data bases shall access service delivery data and information for the MoH Resource Centre. Systems shall be developed to link project, state county and MoH databases for efficient flow of information.

In order to ensure routine data reporting and feedback on performance to sub-national and private providers, it is crucial that all service delivery and administrative structures adhere to the following data flow mechanism.

5.6 Data Dissemination

Data need to 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. Service delivery data shall be packaged and displayed at the various health facilities using the HMIS formats already provided. The timing of information dissemination should fit in the planning cycles and needs of the users.

The MoH will use various communication channels in order to ensure general access to data and reports. Quantitative and qualitative data will be made publicly accessible through the MoH database under the Resource Center.

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

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20 This should be established if not available
6. Monitoring and Evaluation of the HSQIF and Strategic Plan

The monitoring and evaluation process will measure the extent to which the HSQIF goal and strategic objectives have been attained. This will be complemented by a stepwise analysis to assess which interventions and projects were successful; from inputs such as finances and policy/standards, to service access and quality, utilization, coverage of interventions, and health outcomes, and responsiveness to needs.

The QID shall ensure that M&E of implementation of the HSQIF and Strategic Plan is aligned with the M&E Plan of the National Health Policy 2015 - 2025. The core National Health Policy indicators related to coverage, availability, accessibility and quality of services will be used to monitor performance of this HSQIF and Strategic Plan. Programme/project specific quality indicators will be used to monitor implementation of the various QI initiatives.

Individual programmes and institutions including counties and health facilities shall conduct their routine M&E, and among other issues pay attention to how each of the processes contributes to the achievement of core NHSSP indicators and national health care goals while providing evidence through routine reporting and updates.

Existing health sector M&E structures will be used for monitoring implementation of the HSQIF. While the MoH spearheads the overall monitoring of various QI initiatives, local leadership (at various levels) and community (health consumers) will also be involved in action and monitoring of QI interventions to ensure acceptance, ownership and sustainability.

6.1. Monitoring Mechanisms

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

**Monitoring at national Level:**

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

- Monthly QID meeting will receive and address pertinent QI issues.
- Quarterly National QI Coordination Committee meetings will be conducted to track progress.
- Quarterly QI supervision visits to institutions, Referral Hospitals, counties and implementing partners.
- Quarterly QI progress reports compiled by programme and project managers and submitted to QID.
- Quarterly QI performance review at the sector review meetings.
- National QI stakeholders’ meetings

**Monitoring at State Level:**

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

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

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

1. Monthly County QI Committee meetings to track progress.
2. Quarterly supervision visits to Health Sub-counties.
3. Quarterly QI progress reports compiled and submitted to the State QI Coordination Committee / Project Managers.
4. Quarterly QI performance review at the county performance review meetings.

**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.

### 6.2. Meetings
Chairpersons will be responsible for holding planned meetings.

1. **Setting Objectives for the Meeting.** Before planning the agenda, the team should determine the objective(s) of the meeting.
2. **Provide an Agenda Beforehand.** The agenda needs to include a one-sentence description of the meeting objectives, a list of the topics to be covered and a list stating who will address each topic for how long. Follow the agenda closely during the meeting.
3. **Assign Meeting Preparation.** Give participants something to prepare and report for the meeting.
4. **Assign Action Items.** Don't finish any discussion in the meeting without deciding how and who to act on it.
5. **Examine Your Meeting Process.** Don't leave the meeting without assessing what took place and making a plan to improve the next meeting.

A format for writing minutes will be developed by the QAD for standardized documentation of meetings which will be filed and used as a measure of performance.

### 6.3. Supervision
Supervision is a process of guiding, helping and teaching health workers at their workplace to perform better. It involves a two-way communication between the one supervising (supervisor) and the one being supervised (supervisee). Adequate preparation should be made in terms of planning and budgeting before the visits.

At the end of the visit, the supervisor should make time to discuss with staff their findings and agree on what actions to take to improve on performance. A report must be written by the supervisor and feedback sent to the staff.

The MoH supervision system uses different approaches of supervision described below:
1. **Facilitative Supervision:** It is also called supportive supervision because the supervisor does not see himself as an inspector looking over the shoulders of his subordinates for faults. Instead, he sees himself as part of the quality team guiding the staff to identify their weaknesses and gaps in quality of service delivery. Together with the supervisee, they develop appropriate solutions to improve on their performance. This approach is applied in integrated, vertical and emergency types of supervision.

2. **Inspectorate approach:** The supervision here focuses on finding faults with punitive actions and has minimal interaction. It therefore leaves little or no learning experience to the one being supervised. This is mainly applied by the Health Professional Councils and inspectorate bodies like the National Drug Authority.

3. **Self-assessment or peer-based supervision:** This is where the supervisor's role is indirect. It is the type of supervision where staff belonging to the same team or professional group sets up a system whereby they meet regularly to discuss their own performance with little or no external role. The assessment is based on pre-determined performance targets.

The existing MoH supervision mechanism will be used whereby the national level carries out integrated supportive supervision to the county and hospitals. Various aspects of QI will be incorporated in the quarterly supervision visits by the county. Under this supervision mechanism specific programmes and projects also carry out technical (vertical) supervision. Relevant programmes and projects will adopt this mechanism for specific QI interventions. The regional structures will be strengthened to ensure more efficient and effective supervision in the sector.

The MoH will spearhead development of the national QI supervision guidelines as part of the comprehensive supervision guidelines. The MoH will also be responsible for developing capacity building plans for supervision.

### 6.4. Performance Reports

To monitor the compliance to the national standards and guidelines for QI, programmes / projects shall regularly share performance reports with the QID, MoH. These reports shall be shared and reviewed by the National QI Coordination Committee to identify gaps in consistence and alignment with national QI guidelines and goals.

Reporting requirements shall be based on ongoing country processes of data generation, compilation, analysis and synthesis, communication and use for decision making.

Reporting on performance will follow the parameters and indicators that will be developed by the MoH. This is to ensure that QI activities and programs remain in consistence with national QI standards and priorities. Performance monitoring and feedback shall follow the QI implementation structure. The timing of reporting should follow the health sector M&E plan calendar and needs of the users.

A standardized reporting format will be developed by QID for submission of periodic QI reports. QI intervention data shall be packaged and displayed at the various health facilities using standardized formats.

### 6.5. QI Performance Review

The QI approach utilized by the MoH emphasizes systems of care rather than individual practitioners, a multidisciplinary team approach, and a continuing cycle of improvement activities and performance measurement. Providers are encouraged to analyze data and assess the internal factors that contribute to organizational performance which offers an opportunity to identify areas for improvement. Results generated through the review
process will be shared with the national QI Technical Committee for benchmarking to provide national, state and county reports. The results will also be used by MoH, programme managers, QI Committees and other stakeholders to target providers for assistance and on-site coaching and mentoring.

6.6. Client Satisfaction Surveys
It is essential that Service Providers periodically review their performance to ensure they are effectively meeting the needs of their clients.

Client satisfaction surveys will be carried out at all levels of service delivery to determine the quality of services offered in the client perspective. A client satisfaction survey tool shall be developed by the QID for incorporation into the HMIS. Facility client satisfaction surveys will be carried out biannually (December and June every year) and findings utilized for quality improvement.

6.7. Evaluation
Evaluation shall be carried out as part of monitoring and systematic investigation to provide baseline information, assess progress and impact of QI interventions. The results of the evaluation studies are supposed to inform decision making hence contribute to improving delivery of and access to health care.

All QI initiatives will be subjected to evaluation to follow up on whether the intended clinical outcomes are achieved. The type of evaluation to be planned for and conducted should reflect the nature and scope of the public investment. For example, pilot projects that are being conducted amongst a random group of participants shall be selected for impact evaluation to determine whether or not the investment should be scaled up.

As a minimum requirement, project based QI initiatives will be required to conduct the following:
- baseline study during the preparatory design phase of the project;
- mid-term review at the mid-point in the project to assess progress against objectives and provide recommendations for corrective measures;
- final evaluation or value-for-money (VFM) audit at the end of the project.

The MoH – QID in collaboration with the specific programme / project managers will be responsible for the design, management and follow-up of the programme and project evaluations (including baseline and mid-term reviews). All projects are required to budget for periodic project evaluations. All project evaluations will be conducted by external evaluators to ensure independence. QI project evaluation reports shall be disseminated during the health sector quarterly and annual review meetings.

Findings will be disseminated in form of workshops and reports which will be circulated to relevant stakeholders.

6.8. Recognition and Reward
Consideration should be given to providing incentives to facilities that meet goals and hold their gains. For example, modest financial incentives for successful teams have been used with success in other settings.

The recognition and reward criteria should be defined and established by all organizations / facilities clearly stating what performance or contribution constitutes rewardable behaviour.
or actions. The criteria should ensure that:

- all employees / facilities must be eligible for the recognition;
- the recognition must supply the employer and employee/institution with specific information about what behaviours or actions are being rewarded and recognized;
- anyone / facility that then performs at the level or standard stated in the criteria receives the reward;
- the recognition should occur as close to the performance of the actions as possible, so the recognition reinforces behavior the employer wants to encourage;
- managers are not the ones to "select" the people / facilities to receive recognition.
7. Research

Research shall be carried out as part of systematic investigation to establish facts, solve new or existing problems in quality improvement, prove new interventions and initiatives, or develop new theories, using a scientific method, at all levels or by independent institutions or partners. The results of these studies are supposed to inform decision making hence contribute to improving delivery of and access to health care.

The MoH – QID in collaboration with research institutions, programme / project managers will oversee the implementation of national level research activities. Institutional heads and CHO’s will be responsible for follow-up of institutional and county based research activities respectively.

To ensure better understanding and use of research, the results shall be widely disseminated at different planning levels. Findings will be disseminated in form of workshops and reports which will be circulated to relevant stakeholders.
8. Annexes

Annex 1: List of documents reviewed