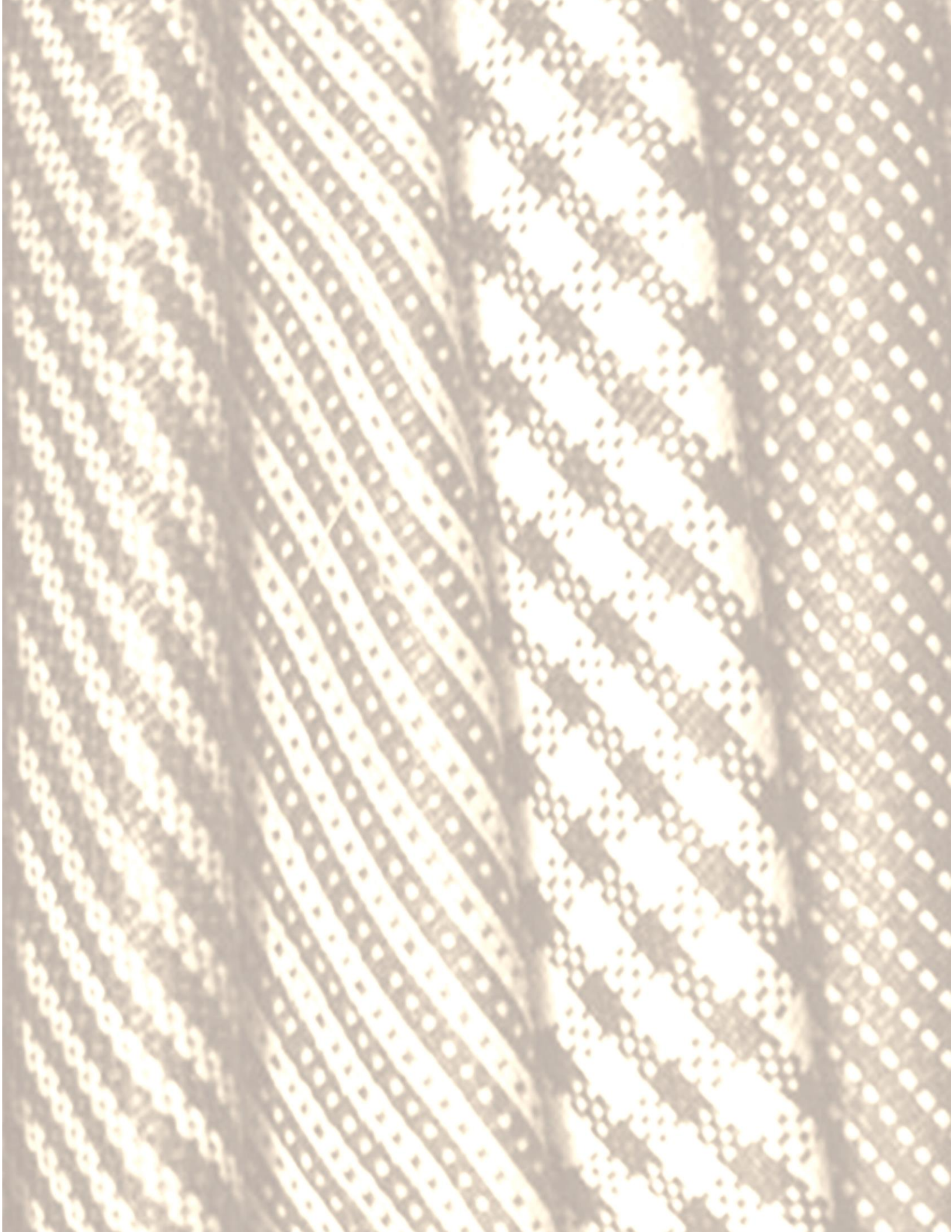
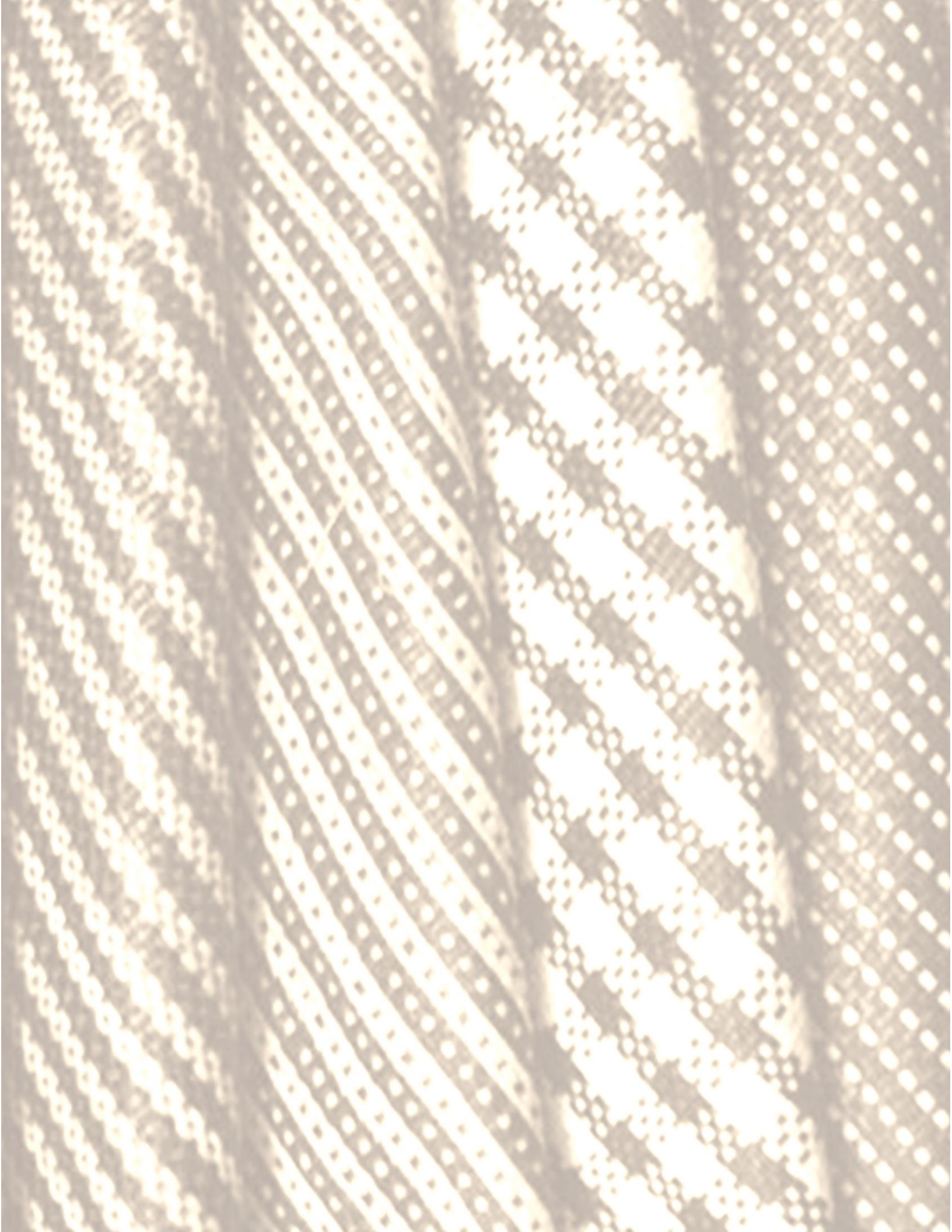




Foreword

It is in the interest of the VIII Constitutional Government that quality improvement in public health be attained through the use of a deliberate and defined improvement process, such as Plan-Do-Check-Act, which is focused on activities that are responsive to community needs and improving population health.

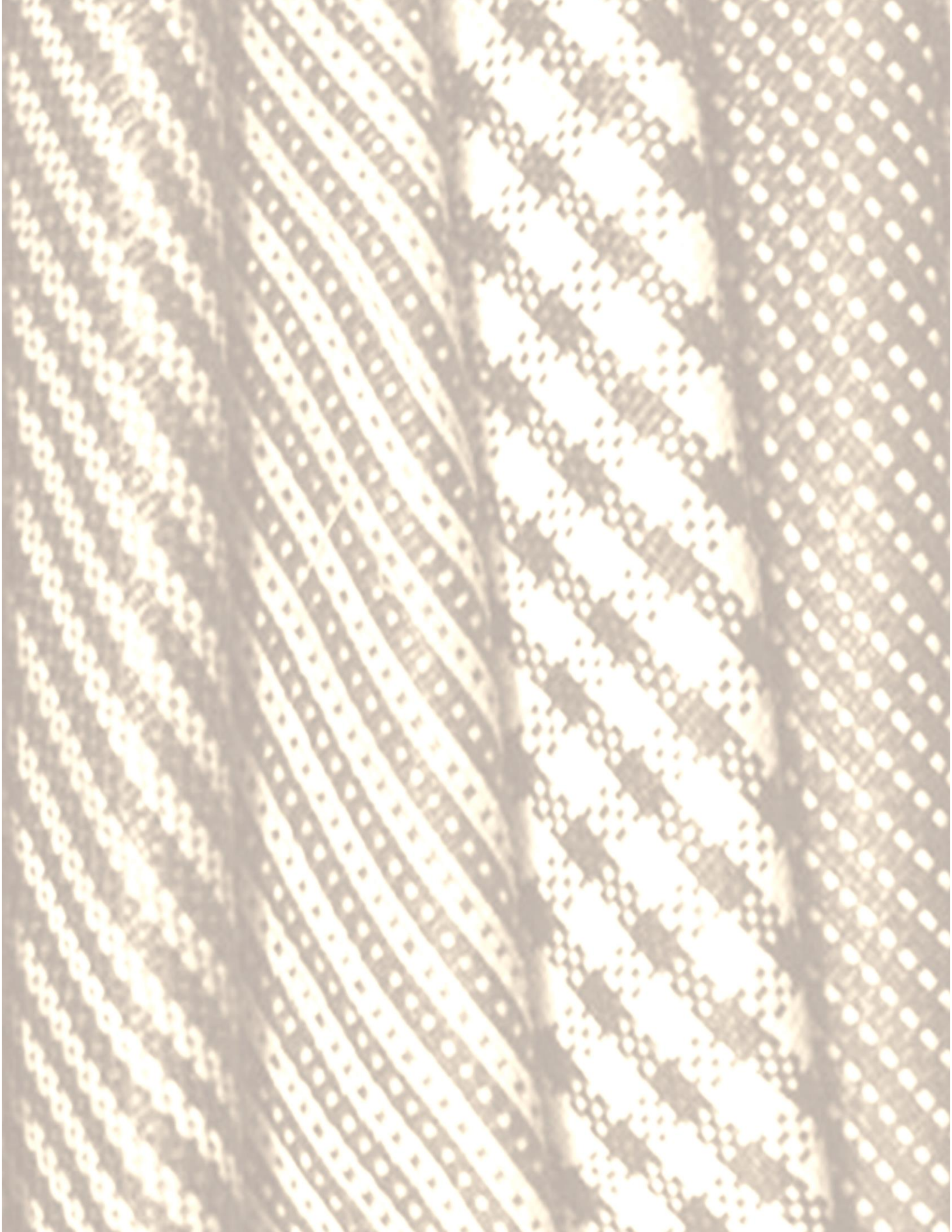
Therefore, I am delighted to introduce Timor-Leste Healthcare Quality Improvement Strategy 2020-2024, as a part of a continous and ongoing effort to acheive measurable improvements in the efficiency, effectiveness, performance, accountability, outcomes and other indicators of quality in services or processes which achieve equity and improve the health of the population.

I solemnly appreciate the timely initiative of developing this quality improvement strategy which is useful for healh professionals, managers and senior health officials leading the decision making process, to improve their performance, efficiency and effectiveness. I truly believe that this strategic document will guide health teams use resources more effecively to improve service delivery and customer service, and help meet national health standards, such as those for public health department accreditation.

This strategy complements the important tasks undertaken by the Cabinet of Quality Assurance in Health and, thus, I would like to congratulate the team of dedicated professionals for their vital role in making this strategy a reality.

By implementing this strategy, aligining levels of policy, regulation and operational procedures will most definitely accelrate progressive change and transform the approach towards a *"Healthier Timorese People in a Healthy Tmor-Leste"*.

dr. Odete Maria Freitas Belo, MPH
Minister of Health



Acknowledgement

The National quality strategy has been developed in consensus with wider stakeholders' levels. Important contribution and guidance came from the core committee, established by the Ministry of Health that comprised of key personnel from different departments. Furthermore, the draft was shared further with stakeholders from national, municipal levels including municipal directors, Directors of hospitals, Head of CHC and service providers in different health facilities thereby enriching the document with experience from the ground.

Development of this document was a complex process that included in-depth interviewing of expert stakeholders from diverse sectors. Inputs from them is the essence of this document considering Timor-Leste is just at the verge of developing a concrete plan on quality improvement initiatives in health sector. The strategy formulation was further enriched by health facility visits, consulting with managers, providers at the ground level, patients at the health centres. We specially acknowledge the stakeholder's invaluable input from different tiers including development partners who shared us their implementing experience.

This document will provide the guiding pathway towards achieving improved health care to the Timorese nationals and will continue to add on further progression. We sincerely hope that importance of having this document will be realized at all levels and this will be implemented in Timor-Leste health sector thus ensuring to reach towards the quality improvement milestones.

Dr. Feliciano da C. A. Pinto, SKp, MPH.
Director, Cabinet of Quality Assurance in Health (CQAH)

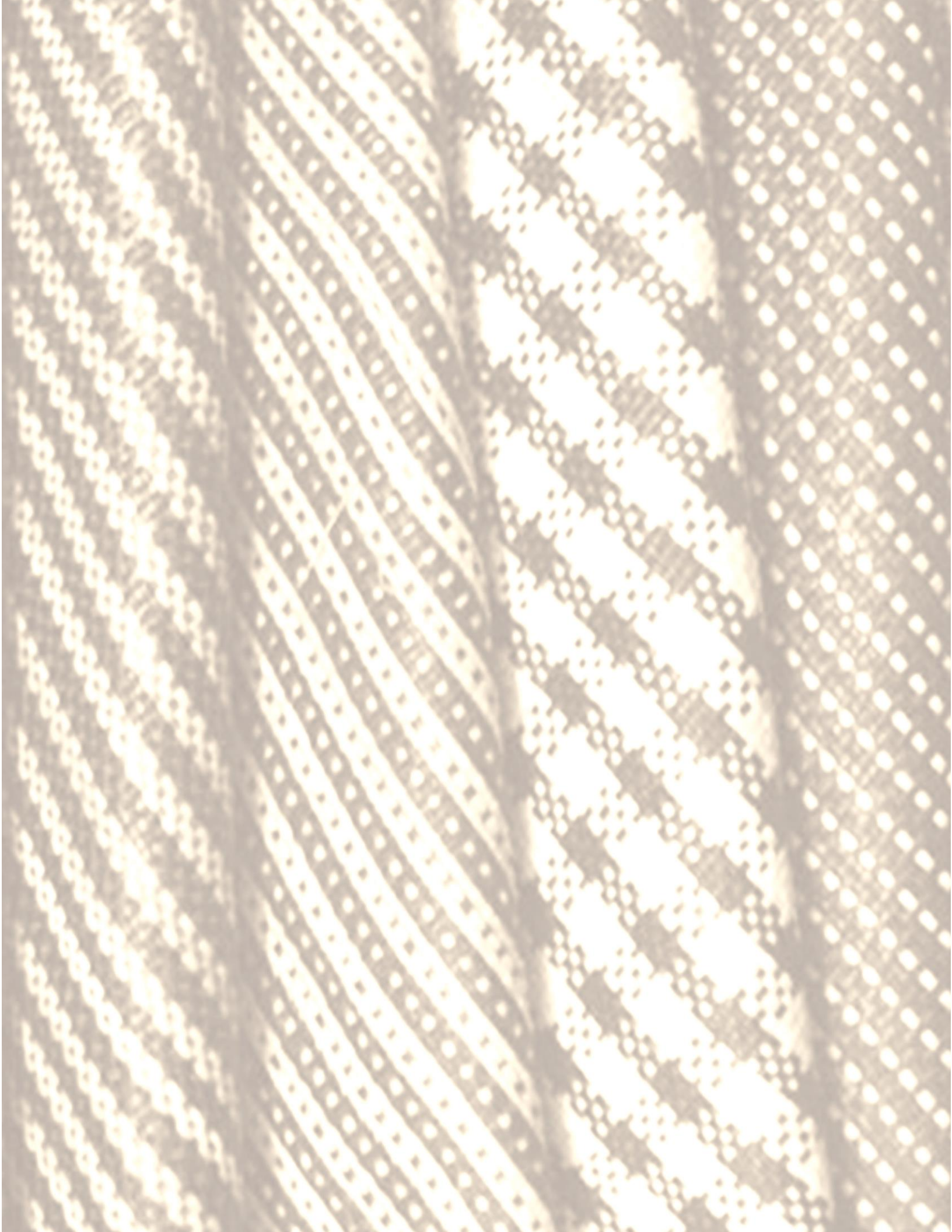


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Photo courtesy

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Abbreviation

MOH	Ministry of Health
PDCA	Plan-Do-Check-Act
WHO	World Health Organization
OECD	Organization for Economic Cooperation and Development
IOM	Institute of Medicine
DHS	Demographic Health Survey
TL	Timor-Leste
IPC	Infection prevention and control
MWM	Medical waste management
SDG	Sustainable Development Goal
UHC	Universal Health Coverage
QI	Quality Improvement
NHSSP	National Health Sector Strategic Plan
NQIC	National Quality Improvement Committee
FLI	Facility level indicator

Executive summary

The quality improvement strategy aims for continued improvement in health service delivery resulting in improved patient outcome and ensuring service recipient's satisfaction. The strategy focuses to bring together all fragmented QI approaches under one leadership umbrella leading to safe, effective, accessible and equitable care to every Timorese national. This living document will be regularly visited and be revised for any improvement. As a next step, implementation plan will be closely followed up.

Being a relatively new nation, Timor-Leste faced a lot of challenges in progressing towards the quality goals. Some challenges still remain, for example, provider's availability with necessary competence; perception on quality improvement practices. The strategy will focus on guiding quality of care processes across all tiers of health care system. Having not much prior exposure and not enough baseline information makes it even harder to identify and plan for quality improvement implementation.

In this context, the strategy development process included a situation analysis that identified priority key themes. The learning from the analysis guided to formulate the strategies. It is obvious that the local challenges and opportunities needed to be learnt before any planning. To begin with, policy priority areas across key quality domains were identified around which key strategic areas were designed.

A 5 year implementation plan outlined in this strategy will guide the QI implementation in Timor-Leste. This will serve as initial base for quality improvement implementation for learning experience around QI areas. Implementing the plan will require functional quality structures in place with effective leadership. The strategy pointed on composition and working modality of different QI committees that can take forward the implementation. However, the learning is crucial and hence a strong quality improvement measuring process needs to be developed. The commitment and motivation from national leaders will guide the process.

In Timor-Leste, quality improvement areas created a lot of interest amongst stakeholders, but how to proceed has been a question always. Formulation of this strategy is a timely approach in this regards and will pave way for QI implementation in Timor-Leste. The strategy contains practical guidance on nest 5 years QI implementation in Timor-Leste focusing to critical areas such as patient safety, audit, and accreditation and so on. This will be the beginning of the QI journey in Timor-Leste in a formal way.

The document is divided into 6 major chapters: Chapter 1 describes an outline of healthcare quality improvement of global and the Timor-Leste contexts. It highlights on the meticulous leadership of Ministry of Health, Timor-Leste in formulating the strategy. The Ministry-led team underwent a thorough process to complete a vigorous drilling in finding needful

constituents matching in country context. It includes objectives of the strategy formulation and the detailed steps of its formulation.

Chapter 2 provides details on priority components of QI in Timor-Leste previously identified as key domains for quality improvement in healthcare. This section also highlights importance of leadership and management aspect of QI for better understanding of the implementation.

Chapter 3 identifies the vision, mission and goal for QI planning in healthcare and also justifies the rationale for choosing those. A set of intermediary goals are also being outlined in this section.

Chapter 4 highlights the QI organizational structures and details out accurate steps of QI implementation by quality improvement teams. Moreover, specific guidance is also provided on the modalities of QI implementation by these teams.

Chapter 5 spells out the 5 year implementation approach of QI in Timor-Leste by different levels and clearly outline the responsibilities by each tier.

Chapter 6 focuses on approaches on measuring QI progress nationwide in line with the National M& E plan. Current process of M&E and quality improvement measurement plans are stated in this chapter. However, developing finer QI measurement plans or QI will be an additional task for QI committees.

Vision and mission and goals

Vision: Accelerate progress towards Universal Health Coverage through focused activities in quality improvement including providing best consumer experience though safe, effective, accessible, equitable and sustainable service package

Mission: Create an enabling environment for better service delivery focusing on quality improvement through enhanced leadership and improved health system capacity aiming to best healthcare experience to the consumer.

Four major strategic goals have been identified in line with the SDP plan 2011-2030 where human resources, health service delivery and health infrastructure were identified as crucial components. Specific objectives are explained under each goal as follows:

Strategic goal 1: Focused on leadership component and developing the QI management structures

To strengthen leadership, management for QI and organizational capacity within the health sector

Specific objectives

1.1 Blend QI approach at all levels though necessary guidance
1.2 Institutionalize and functionalize QI structure at all levels
1.3 Strengthen leadership and enhance QI practice within organization
1.4 Strengthen QI planning and coordination at all platforms

Strategic goal 2: Focused on competent and expert health providers role in quality improvement

To ensure the health service is provided by competent and expert healthcare providers at health facilities

Specific objectives

2.1 Health system is equipped with necessary directives to guide providers on required competency
2.2 Health providers are skilled in clinical and quality related areas for service delivery
2.3 Health providers are motivated to provide quality service delivery

Strategic goal 3: Focused on implementing platform of critical quality improvement interventions

To ensure quality service delivery standards available and implemented in health facilities at all levels

Specific objectives

3.1 Ensure standard clinical practice by health providers
3.2 Establish an ongoing system of measurement for quality improvement implementation
3.3 Strengthen referral system for ensuing quality care of services
3.4 Establish a system of audit in health facilities
3.5 Strengthen support system in health facility for quality clinical service delivery
3.6 Improve patient safety care
3.7 Establish IPC mechanism
3.8 Establish MWM system
3.9 Institutionalize hospital accreditation system

Strategic goal 4: Focused on service recipient's perspective

To establish a health system that ensures patient's access and patient-centered care

Specific objectives

4.1 Establish patient-centered care mechanism in health facilities

4.2 Ensure accountability and transparency in providing care within health facilities

4.3 Create awareness amongst patients, community on rights and responsibilities

Opportunities and challenges for QI implementation

While developing this document, perspective from stakeholders identified important opportunities and challenges.

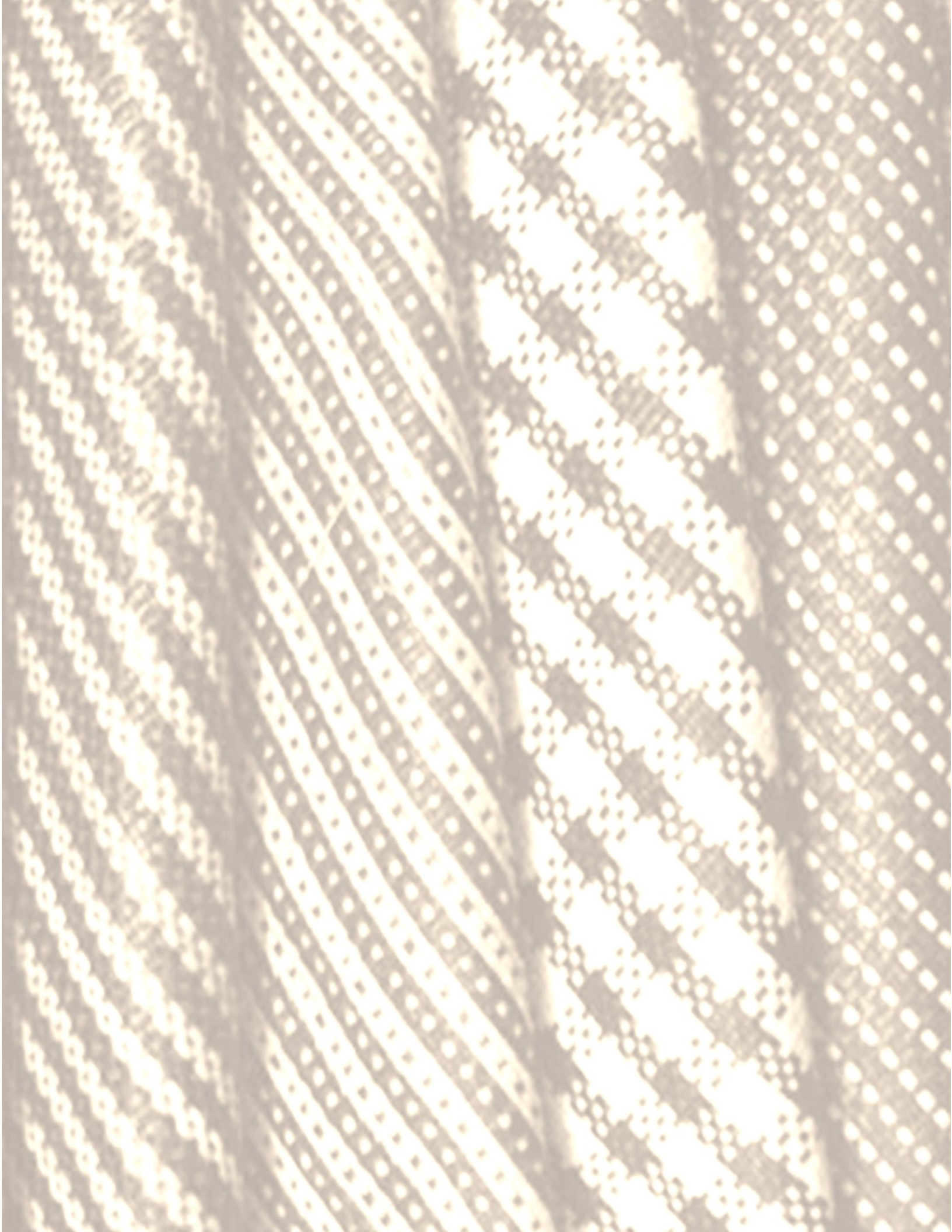
The followings are the opportunities:

- QI identified as a priority component for all health relevant sectors
- Existing interest and support from stakeholders
- Have a designated department (CQAH) Ministry of Health working on QI
- Available learning from ongoing piloting on QI
- Available technical experts for supporting QI implementation
- Small country, easy to scale up
- Funding opportunities

However, the challenges still remain. Political stability and commitment is required at all times for an uninterrupted QI implementation. Human resources and adequate funding requires to be ensured for smooth implementing. A solid monitoring framework will further strengthen the implementation. Ministry of health will further work on supporting and coordinating with relevant bodies to implement this document.

CHAPTER 1

Quality Improvement context in Timor-Leste



Chapter 1: Quality Improvement contect in Timor-Leste

Chapter Summary

Chapter 1 provides an overview on the context of formulating the National Healthcare Quality Improvement Strategy and emphasizes on the linkage of the strategy development for achieving the SDG. It also highlights the exclusive ministry-led process of developing the national strategic document on Quality Improvement and outlined the major findings summarized from the situation analysis conducted from Cabinet of Quality Assurance, Ministry of Health, Timor-Leste. The enriched strategy encompasses the in-depth discussion findings with key stakeholders and points towards unique situation of TL which served as pillars of this strategy.

Community Health Centre Wailili- Baucau

Chapter 1 Quality Improvement context in Timor-Leste

1.1 QI in global perspective

Understanding quality improvement has been a globally accepted priority in different settings and countries which is further facilitated by recent global documents focusing quality improvement initiatives. Quality improvement for essential health services have been incorporated within SDG 3: "ensure healthy lives and promote well-being for all at all ages". Within that goal, target 3.8 reinforces on importance of essential healthcare services. WHO defined quality care to be effective, efficient, accessible, acceptable, patient-centered, equitable and safe[1].The concept of quality improvement was further refined focusing 2 broad areas: provision of care and experience of care[2]. Furthermore, Institute of medicine (IOM) defined quality dimensions as safe, effective, patient-centered, timely, and efficient and equitable[3]. OECD also summarized dimensions of quality as: effectiveness, safety and patient-centeredness[4].Institute of Medicine (IOM) also defined quality in healthcare as a direct linkage between improved healthcare and desired health outcome of an individual or population. Based on this perspective, any organization may plan improving organizational efficiency and patient outcome leading to an end result of improved satisfaction level of service recipients. Four guiding principles are important in thisregards: QI work as systems and processes, focus on patients, focus on being part of the team and focus on use of the data[5].WHO publications further provided practical guidance to national policy and strategy formulation process and highlighted governance structure, policy and strategy as success factors. The traditional linear model (policy, strategy and implementation) of policy and strategy formulation has been modified to a triangular process in which the implementing experiences may as well as guide the strategy development process. In the handbook, there has been clear recommendation to integrate policy and strategy in either possible ways: as one document or co-dependent documents. Any of these approaches require being in line with broader planning of health system in the country.

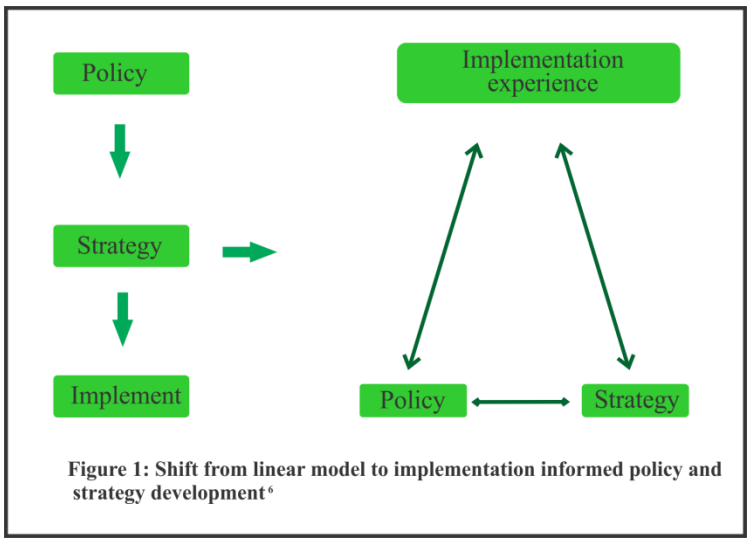


Figure 1: Shift from linear model to implementation informed policy and strategy development[6]

1.2 Context of developing QI strategic document in Timor-Leste

Quality Improvement has been an important focus of Timor-Leste government from right after the independence and several initiatives were launched focusing key programmatic areas.

Adequate system focusing on quality improvement was not in place and restructuring was done throughout the health service delivery points. Initially, the Ministry of Health (MOH) focused to strengthen the quality improvement initiatives through establishing the GCQ (quality control unit) in 2004, but in 2013, a full-fledged department for quality improvement GGQS or *Cabinet of Quality Assurance in Health (CQAH)* was formed. Since then, the cabinet has achieved some important goals to initiate the process of quality improvement in Timor-Leste including piloting on plan-do-check-act QI intervention. Development of quality improvement key domains through stakeholder's consultation during 2018 has been a landmark that initiated QI interventions at a broader scale. In the same year, Ministry of Health (MOH) developed the design of Quality Improvement Committees for National and municipality levels. On top of these core initiatives, MOH also conducted several programs with key partners that led to learning and insight on quality improvement. A national strategy on quality improvement was identified as a core need since then. Ministry of Health planned to take initiative on developing National Quality Improvement Strategy for healthcare so that a common guidance is in place for all implementing bodies. The plan turned into reality when MOH included a technical support for strategy development in 2019.

Timor-Leste National QI Strategic document was developed as a stand-alone document that will guide the process of implementation, following WHO recent recommendation. The document was developed based on extensive review of available health literature on Timor-Leste [7,8,9] . The national strategy was preliminary planned with increasing focus on key service delivery areas that would support the overall improvement in healthcare quality in Timor-Leste linking with the National Health Sector Strategic Plan 2011–2030 [10] in formulating its goals. The strategic document has been developed with a proposed matrix of actions to ensure a quality healthy life for Timorese population. The strategy will also help developing a strengthened coordination mechanism for quality improvement initiatives amongst different directorates, both health and health related. Furthermore, The National Strategic Document for QI was formulated in line with the national guideline[11] for guiding the policy and strategy formulation process is meant to be followed as a roadmap for QI pathways in next 5 years.

1.3 Objectives of national QI strategy formulation

- Develop an integrated package for quality of care for healthcare and its relevant areas based on national vision and interest
- Create and strengthen formal and functional quality improvement units at all tiers within the Ministry of Health to oversee quality improvement initiative planning, monitoring and coordination
- Bring together fragmented implementation approaches under a single leadership umbrella
- Formulate the best possible plan for understanding the pathways to institutionalize the quality improvement for healthcare at different level
- Guide the healthcare providers working uniformly within a QI practicing culture

The goal of this strategy formulation is to create an enabling environment for providing quality healthcare services for Timorese nationals. This will accelerate progress towards UHC through focused activities on quality improvement which will ensure best consumer experience though safe, effective, accessible, equitable and sustainable service package. The *Cabinet of Quality Assurance in Health (CQAH)*will act as a coordinating body to strengthen activities related to quality improvement for smooth implementing in Timor-Leste using this strategic document.

1.4 Strategy formulation steps

Being a new country, there was not enough understanding on QI practices and obvious scarcity of data on QI. The process thus started with reviewing what was available and what was needful for QI implementation in Timor-Leste. Preparatory ground works were done through reviewing existing national strategies in different countries. Available related national documents from Timor-Leste were reviewed for better understanding of the context and the initial planning was shared with the broader MOH department in a consultation workshop held in August, 2019 and it was agreed that a collaborative process will be the key for the success of this strategy. The plan was finalized in October, 2019 though consulting with the council of Director. Successively, it was realized that a core committee will be required for providing technical input to the strategy. MOH led the entire process of development of the strategic document through engaging a core committee for strategy development with due approval from Council of Director. The list of the core committee is attached as annex 1. The core committee was formed by directors from different departments with relevant expertise. The committee reviewed the process, reviewed the technical content of the strategy, and provided guidance as required till through finalization of the document. The core committee worked through 3 major steps; examine, retreat and develop to finalize the document.

In the 'Examine phase', a situation analysis was planned to assess the current context and need for quality improvement in Timor-Leste. *The Cabinet of Quality Assurance and Health* initiated this QI situation analysis though the below steps:

1. Desk reviewing on global and national relevant documents
2. Interviewing key stakeholders with relevant expertise on relevant areas to understand the QI needs and priorities in Timor-Leste
3. Visits to health facilities for understanding the real context

Relevant tool (Annex 2) was developed for interviewing focusing on key areas to understand how QI can be best fitted in Timor-Leste context. For in-depth interviewing, the key stakeholders with mixed expertise were selected including the Vice Ministers, Directors of selected departments and other relevant personnel. The list of the stakeholders who were interviewed is attached as annex 2. The interviews were focused to explore issues related to quality improvement in Timor-Leste including its opportunities and barriers. Few major areas that were revealed were: perception on QI, local definition for quality improvement in Timor-Leste, modalities for exceling quality improvement initiatives and so on. The collected data was

recorded, transcribed and transcript was developed. In 'Retreat phase', preliminary analysis findings were consulted with the core committee. Though a series of consultation exercises, findings were further adjusted and refined with the input from the core committee. Any complicated issues were further consulted for clarification. In the 'Develop phase', the draft was developed based on the result of the consultation exercise.

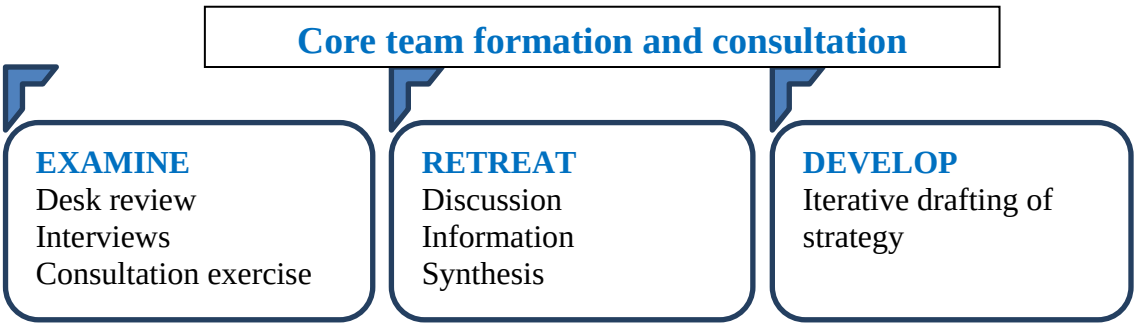


Figure 2: National Health care Quality Improvement Strategy formulation steps

1.5 Situation Analysis finding

Being a new country that very recently got independence, Timor-Leste is at the verge of building its health system from the scratch. The invaluable insight gathered from stakeholder's interviewing provided a concrete base to identify priority areas to be addressed. Current DHS report in Timor-Leste also served for getting an overview on TL recent health situation[12].

General findings on situation analysis

During the interview, the prime areas on quality improvement in Timor-Leste context were well-explained by the stakeholders. Provider's best practice to ensure user's satisfaction was identified as an important area that came up during the interviewing. Stakeholders talked about giving increased importance on ongoing, smooth communication between providers and the users. They also remarked that standard logistic support for the service delivery and good capacity of providers are important factors to maintain the best practices in reality. Availability and access to clinical guidelines has not been an issue in Timor-Leste, but provider's clear understanding and continued good practices remained as a big challenge. The quality of training, before or during the job is crucial to maintain the competency of the health providers and thus ensuring the service recipient's satisfaction. Only having a basic training is not enough to ensure necessary competency for service quality. In fact, pre-service training needs to have a robust component on quality improvement. The quality service in health facilities can be maintained through strengthened supervision and accountability with periodic feedback thus ensuring a standard clinical practice. Timor-Leste has a clear need of practicing professional standards, which are yet to be developed. Moreover, there is huge influx of professionals from diverse background who are keen on practicing in Timor-Leste. Hence, for ensuring the service quality and harmonizing the service standards, the competencies of providers require being in place.

The monitoring and accountability framework requires strengthening in line with what's currently available here. The key people who have the potential to perform monitoring required to be given a clear outline on the process including necessary resources for periodic monitoring.

During the situation analysis, it was revealed that there is no national system in place for monitoring of facilities against minimum safety standards, and no national set of standards has been developed yet. Also there is a lack of standardized safety protocols and checklists. Current status suggests that several development partners in conjunction with the Timor-Leste Government are supporting to implement initiatives for the improvement of health care practices including patient safety. The Hospital Nacional Guido Valadares (HNGV) is the only national referral hospital in Timor-Leste where several quality improvement initiatives have been implemented with support from key partners. There has been a strong focus on establishing the nursing standards in this hospital, including critical areas such as clinical skills, infection prevention and control, hand hygiene, medication safety. The patient safety intervention is being facilitated by the quality focal point in this hospital and critical areas such as hand hygiene training, adverse event reporting system are also supported. Recent surveys in the facility also found some improvements in patient safety as a good number of staffs received IPC and hand hygiene related training practices.

There has not been enough data in place to understand patient safety practices and stakeholder's highlighted that issues related to patient safety have a continual adverse impact on quality care for Timorese patients. The limited number of staffs having necessary expertise and skills is an important barrier for patient safety implementation. The training focus is often limited to nurses; other cadres of providers are seldom included. Lack of supplies and equipment, monitoring of essential IPC practices often pose major challenges. There are important initiatives such as Grand Rounds, M&M audit and death reviews are great steps towards improving accountability. Lessons learned from the HNGV, and from other health facilities require to be captured and scaled up in Timor-Leste. Leadership and management competencies should also be a primary focus.

Stakeholders guided that the motivation of provider is a key component needing focus. In this regards, performance-based incentive can be explored. There should as well be enough supervisory support and resources. From the recipient's side, right-based approach is appropriate to create better understanding of individual rights for the users. Furthermore, community intervention may contribute to better perception and access for health services.

Providing guidance to manage the financial aspect for quality improvement initiative is of utmost importance. This guidance is required to be provided from the MOH team specifically on their roles in important areas so that effective utilization of resource happens in reality. Resource distribution is to be done with continued monitoring support in place. Quality instruments are needed to be in place with special emphasis on required support system for health service delivery i.e. health infrastructure, human resources and heath service delivery related.

Overall, capacity building on quality improvement is essential for the MOH team. Despite having huge support, the practice for minimally required quality standards are not in place. Moreover, to minimize provider-patient gaps, a well-planned communication strategy requires to be developed.

The interview finding was again summarized focusing issues relevant to key levels: National, municipal and health facility levels. Again, health facility level issues were further divided into supply (service delivery context) and demand related (patient's experience of care).

Summarized from the current QI atmosphere findings, a possible improved QI mechanism has been defined as below:

Issues identified in situation analysis	**Current situation in TL**	**Mechanism to address the issue**
National: These are system issues, when addressed; the structure for ground level QI implementation is built. The QI planning, improvement and control forms the basis of this level.		
National	*1.* An intelligible guidance and plan on quality improvement is missing *2.* Program focused guidelines and tools are in place *3.* No QI structure in place *4.* No definitive policy direction on legislation related to health provider's competency *5.* Absence of a health professional association to drive the relevant initiatives *6.* Unclear vision and understanding on leadership *7.* Coordination for QI is inadequate *8.* No selective QI intervention has been introduced and scaled up	*1.* Develop National QI policy and strategy *2.* Develop of QI focused guidelines, standard and tools *3.* Institutionalize and functionalize QI structure at all levels *4.* Develop and implement health provider's competency guidelines, tools and implement *5.* Requirement of a health professional association to support the quality improvement process *6.* Strengthen leadership and enhance QI practice within organization

	9. Absence of minimal QI standards, guidelines, tools, indicators for strengthening the quality improvement implementation 10. No focused activity on QI monitoring & accountability	7. Strengthen QI planning and coordination at all platforms 8. Select QI interventions to scale up nationwide 9. Develop QI standards, guidelines, tools, indicators 10. Strengthened QI monitoring and supervision through effective leadershi
Municipal level: This level will be built following national /system guidance. When the national system is ready, guidance from municipality level will strengthen the actual QI implementation in health facilities. This level built on quality planning from national, but support for QI improvement and control.		
Municipal level	1. No QI structure in place to support QI process 2. Resource not adequately utilized for QI implementation 3. No capacity building activity was initiated on QI 4. Supervision and monitoring on QI is inadequate 5. Limited coordination across health facilities within municipalities	1. Establish QI structure to support QI process 2. Develop and implement resource management plan for QI implementation across municipality 3. Build capacity on QI for providing QI directions across health facilities within municipality 4. Strengthen QI supervision and monitoring 5. Strengthen QI coordination across health facilities within municipalities

Health facility level: This level is the actual implementation platform. Activities at this level are built on guidance from national and municipality level. This level is built on quality planning from national and municipal; but actually engaged in QI improvement and control		
Health facility level (supply side related)	1. No functional QI teams in place 2. Human resource with clear job description is missing 3. Inputs like health infrastructure and supplies are not adequate 4. No actual guidance on QI implementation 5. Skill and competency of providers is a question 6. QI financing for implementation is not well-designed 7. Referral system is not standardized 8. Weak reporting system, no QI indicators	1. Functional QI teams with effective leadership are to be in place 2. Job description for providers are needed to be in place 3. Available resource with appropriate distribution for QI implementation is needed 4. Health facility to be equipped with necessary QI standards, guidelines and tools 5. Develop mechanism to ensure skilled and competent providers 6. Develop functional financing mechanism for QI implementation 7. Strengthen referral implementation 8. Facility data to be gathered and used for tracking progress of quality, QI indicators to be developed
Health facility (Demand side related)	1. No guidance on patients experience of care 2. Poor understanding of patients on	1. Develop and implement a patient-centered care approach 2. Strengthen patient's

	their rights 3. Respect and dignity to patient not well perceived 4. Inadequate access to drinking water, sanitation facility 5. Service experience to be acceptable and tolerable to the patient: shorter waiting time, waiting space condition, cleanliness etc 6. Unclear understanding on patient's expectation and requirements	counseling and improve communication 3. Provider's orientation on patient's respect and dignity 4. Establish basic need and comfort for service recipients including drinking water, sanitation facility 5. Mitigate risk issues related to patient's service experience 6. Introduce a patient feedback mechanism, conduct regular patient satisfaction surveys

Table 1: Summary pathway of QI scale up from existing situation in TL

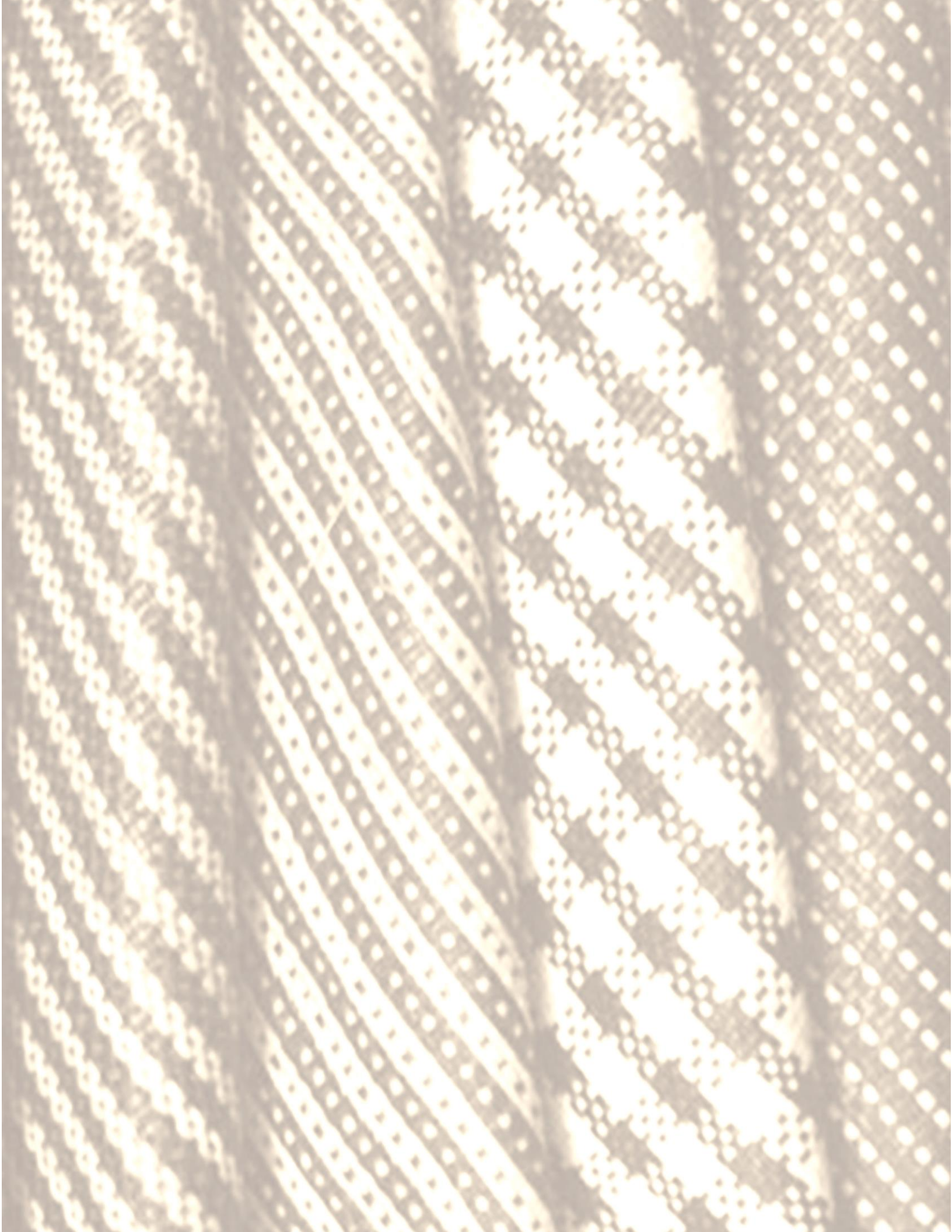
1.6 Identify a QI road map for Timor-Leste

Several steps for introducing quality improvement in Timor-Leste have been identified from the situation analysis findings. Essentially the roadmap for achieving quality improvement for health service delivery will look like as follows:

Figure 3: Approach to introduce quality of health care services in Timor-Leste

CHAPTER 2

Introducing QI domains within Quality Management



Chapter Summary

This section will provide a detailed picture and needful link between Quality management and key priority domains. The QI structure is the prime need of an organization before initiating any formal process of implementation.

QI management will encompass the key domain implementation to improve broader quality improvement health services in Timor-Leste and thereby contributing progress to move through the Universal Health Coverage (UHC).

In course of time, the key domains will guide the QI implementation process within

QI policy platform. Defined key domains for Timor-Leste are: leadership and governance, human resources for health, evidence based clinical care, patient centered care, patient safety, improved clinical practices, provider's engagement, use of improvement methods, measurement for quality, ensure system inputs for the quality improvement, establish public health partnership and preventive services.

Regional Hospital Eduardo Ximenes Baucau

Chapter 2 Introducing QI domains within Quality Management

2.1 Quality Improvement domains in Timor-Leste

Ministry of health through a consultation finalized the following key domains for Quality Improvement in Timor-Leste, which will act as a basis for quality initiative planning. The importance of establishing a QI management structure with an effective leadership is unquestionable to sustain progress and confront obstacles. Leadership and management are equally important and have own key roles to perform for organizational progress[13].

Domain 1: Leadership & governance for quality

Leadership is a prime domain that focuses to lead a group of people towards quality goals through effective governance through quality planning, quality management, quality control. Leadership promotes structures, processes, standards availability for delivering a quality health. Also, leadership facilitates necessary coordination through good understanding, practice of discipline amongst team members including managers, all cadres of providers in a shared learning platform.

Ministry of Health, Timor-Leste will orient the managers, relevant providers who in turn will support the institutionalization of the QI initiative nationwide. This group of providers will act as QI leaders having basic understanding on QI interventions for implementation and will support establishing the organizational culture for QI practices. These leaders will subsequently guide and be involved in capacity building of the national and subnational QI teams.

The leaders will ensure monitoring and mentoring the QI processes through strengthening clinical supervision and monitoring. They will be capacitated on quality assessment tools and be engaged in the process of supervision and mentoring. They will establish the culture of continuous quality improvement; create working conditions for QI scale up in Timor-Leste.

Domain 2: Patient-centered care

Patient's experience of care is the most important area while building culture of quality improvement within the health service delivery package. Designing a health facility based patient-centered care approach will fulfill patient's need and hence resulting in better health outcome. The patients should be able to participate in the QI processes happening in the facility and can actively play a role in providing their feedback on their experiences of care. This empowers the community as well as the patients to get involved in the health care delivery process and develop a mutual understanding with the providers' thus enhancing positive outcome for quality of care.

Till date, several scattered approaches have been undertaken towards the patient-centered care. Important approaches like dissemination of patient and provider rights and responsibilities, the

establishment of health facility ombudsmen, introduction of suggestion boxes, inclusion of community representatives within the QI teams of the health facility, feedback on patient's experience of care are few of the examples. The health facility QI teams will also be engaged in patient satisfaction survey for improving their services according to patient's feedback.

Domain 3: Patient safety

Patient safety is an important component of the quality of care frameworkthat ensures safer health service delivery to the patients and minimizes risk. Creating a patient safety culture practice within the health settings is a prime need for each health care set ups. Leaders are to guide and develop such culture in accordance with the patient's comfort. It's crucial to develop national patient safety standards, trace happenings on unsafe care practices or adverse events and develop interventions that reduce these events.

Patient safety is an integral part of quality of care and includes initiatives designed to reduce medical errors thus making healthcare safer. Patient safety is also an important indicator of quality of services. Furthermore good patient safety will enable management to avoid preventable deaths, unnecessary injuries. The objective is to raise awareness on patient safety, establish national patient safety standards, system of monitoring and documenting unsafe events and introducing interventions to continuously reduce the incidence of such events during the plan period.

Domain 4: Improved clinical practices

Improved clinical practices involve a set of criteria including appropriate diagnosis through accurate clinical examination by skilled staffs and laboratory investigations. Moreover, management of the patients appropriately following the guidelines including their referrals is crucial. Guidelines availability for the clinical practices is the prime prerequisite for ensuring good clinical practices in health facilities. Capacity building on the key processes following the guideline is a must for ensuring standard clinical services.

Clinical/Death audit: The quality improvement priority activities require regular auditing for continued improvement of patient care and outcomes using standards. Obvious unexpected clinical outcomes need investigating the underlying reasons. Regular conduction of clinical and death audits will ensure the unexpected cases not being repeated. A well conducted audit will enable insight to the existing situation and helps to develop and adapt appropriate policies for future improvement. It is worthwhile to involve staffs in the audit process to have a common understanding instead of symbolizing it as a fault finding workout. Management requires to be committed to solve the emerged issues from the audit findings.

Domain 5: Providers engagement

Providers are the critical resource for ensuring quality of care in health services. Motivated providers with high morale may contribute to improved outcome and better patient experiences. More often, the providers face a lot of challenges at workplace.

Skilled providers when appreciated and valued contribute to the highest level of care to the patients.

Healthcare professional are obliged to follow code of ethics or else would continually face ethical and legal issues while practicing. Providers following the code of ethics within clinical practices add up to service value furthermore. Code of ethics and standards of practice within healthcare profession directly relate to professional license and certification. In regards to improving the health outcome, the healthcare professionals follow code of ethics and standard practices to judge a given situation and take correct steps.

Domain 6: Use of Improvement Methods

Practical implementation of Quality Improvement requires crossing beyond theory. Choosing simple quality improvement interventions with proven result for the beneficiaries are required to be adopted for the health facilities. But the providers require having appropriate skills for quality improvement interventions. 5s-CQI-TQM and PDCA QI intervention showed proven result in improving quality of healthcare in minimally resourced settings. MoH will adopt the 5s-CQI-TQM approach and PDCA and will scale it up in all health facilities. The QI teams in the health facility will be involved in the processes and be able to regularly review and improve their own activities.

Domain 7: Measurement for Quality

QI initiatives require routine measurement to track progress and improvement for providing assistance as needed. Through gathering good quality data on QI practices, the under- performed areas for health services can be identified. Therefore, it is crucial to develop measurement processes and tools on QI interventions and practices with a solid technique for intelligent use of the information. It is also important to not to overburden the staffs with additional loads of data collection. Therefore, careful planning will influence on positive changes within critical areas for improvement. Having a system for measuring key performance indicators for quality improvement is a crucial need.

MoH will incorporate QI indicators within the supportive supervision tool and will develop a system of monitoring and mentoring on a regular basis. They will also guide the facility QI teams and develop their skills on the self-assessment tools to periodically monitor their own activities. There will be some key performance QI indicators at the national level that will be tracked.

Domain 8: Ensure system inputs for the quality improvement

Health facilities require different inputs (infrastructure, manpower, logistics, and medicines) for providing uninterrupted health care services for quality of care practices. There is a gross need of available SOPs, logistic management system for quality improvement.

MoH will coordinate with the relevant directorates for developing a plan for implementation focusing quality of care. There will also be dissemination of the plan to the health facility to engage the relevant personnel in the process.

Domain 9: Establish public health partnership and preventive services

Health care service quality requires active collaboration between health facilities, health care organizations and the community. This is to bring together all relevant organizations for promoting, protecting the health in a manner to reduce health inequalities and improve accessibility.

MoH will develop plans for effective partnership and coordination. The link with the field support activities will also be analyzed within this plan. For preventive health services, there will be management plans to combat outbreaks, epidemics and disaster

2.2 Quality management in healthcare

The QI domain implementation will require strengthened leadership and QI organizational and management approach. The Quality Management in Timor-Leste will follow generic principle defined by ISO[14] and it is important for the key managers to understand these principles. These are as follows:

Customer focus

This is a critical principle of healthcare quality management owing to complex process of quality improvement. A lot of this depends on customer expectations and customer satisfaction. Thus it is important to measure activities that prevents or aids the customer's expectations or satisfactions.

The below steps are important to identify the key steps to customer focus:

- Identify all customers who receive care from organization, direct or indirect
- Evaluate customers' expectations, values and needs during receiving healthcare
- Plan, design required services within organizational capacity based on customer needs and expectations
- Follow up continued process of customer satisfaction and take appropriate actions
- Develop good understanding and relationships with customers to reduce any gap.

Leadership

Leadership is about influencing a people/team for accomplishing a goal. Leaders provide direction and create enabling environment conditions to engage team members achieving the organization's quality objectives. Leadership qualities include having communication skill, capacity building skill, ability to work in a team towards enhancing team growth, having technical knowledge and experience, being flexible and open to new ideas. Leadership is crucial for any organization as leadership and the Quality Improvement Process is interlinked. Through the continual process of Quality Improvement, effective leadership can play a key role to upgrade the services from the actual practice to the desired level

The term 'leadership' is often used interchangeably, with 'management'. Management functions can provide leadership while leadership activities can contribute to managing. In QOC, leadership has been implemented in various models: TQM, ISO, Kaizen etc. However, managers and leaders are often conducting interrelated functions and it's sometimes difficult to differentiate in between these concepts. The below table gives an overview on these concepts:

Leaders	**Managers**
1. Do the right things	1. Do things right
2. See people as great assets	2. See people as liabilities
3. Seek commitment	3. Seek control, create and follow the rules
4. Focus on outcomes	4. Focus on how things should be done
5. See what and why things could be done	5. Seek compliance
6. Share information	6. Value secrecy
7. Promote network	7. Use formal authority (hierarchy)

Table 2: Summary comparison amongst leaders and managers[15]

There are a few organizational approaches to build on leadership

- Identify potential leaders at all levels as standout examples within an organization.
- Disseminate the goal, share ethical values and encourage to create motivation at all levels within organization
- Establish an accountability mechanism guided by the leaders and ensure people resources, training and motivation

Engagement of people: Quality management is an active process; it's about engaging the workforce in a continuous improvement atmosphere. When everyone in an organization is involved in the improvement process, the quality mission will be sustainable. Team members when provided with respect and recognition, the organization's quality initiatives progress

smoothly. The following are the organizational approaches to build on engagement of people: Collaborate with different people to engage and contribute for strengthening organizational values

- Create a sharing platform for exchange of learning
- Measure people's satisfaction, provide appropriate feedback for taking further actions

Process approach: The quality management system comprised of several interrelated processes which is required to function as an integrated and coherent system. Identification of the linkage between the activities will lead to produce a better result for the organization. Below are the organizational approaches for process approaching.

- Define individual processes within organization and identify steps necessary to achieve them.
- Review organizational resource context to match with the individual processes
- Manage processes through leadership skill and accountability to reach the organizational quality objectives

Improvement: Any successful organization will focus on quality objectives for ongoing improvement in healthcare. This categorically focuses on root-cause analysis, followed by correction. Improved performance will enhance organizational success leading to customer satisfaction. There are few Organizational approaches to Improvement:

- Define improvement aims at all levels of organization
- Build capacity of organizational staffs on tools and methods to achieve improvement goals
- Evaluate the improvement process and develop plan for new goals
- Celebrate success with team

Evidence-based decision making: Decision making is a complicated process and requires facts and evidences. Decision making relies on practical situation and depends on real time information on how a particular activity is being carried out. Understanding cause-and-effect relationships is crucial to build the confidence for decision making. Evidence-based decision making could be achieved through several organizational approaches:

- Identify key indicators to reflect organization's performance.
- Ensure good quality data from reliable sources are available for analysis
- Capacity building to analyze data and take decision

Relationship management: Organizational success relies on level relationships with relevant parties such as service users. When all relevant parties are bonded with a common values and goals, the quality related risks will be reduced. The following approaches can be adapted:

- Identify all relevant parties important to the organizational goals
- Share organizational information, resource availability with the relevant parties
- Develop a collaborative platform for organizational improvement activities

2.3 Team building approach

Team building is crucial for creating a QI culture within an organization. Leaders can play a meaningful role in this regard.

There are 4 steps of team building[16]

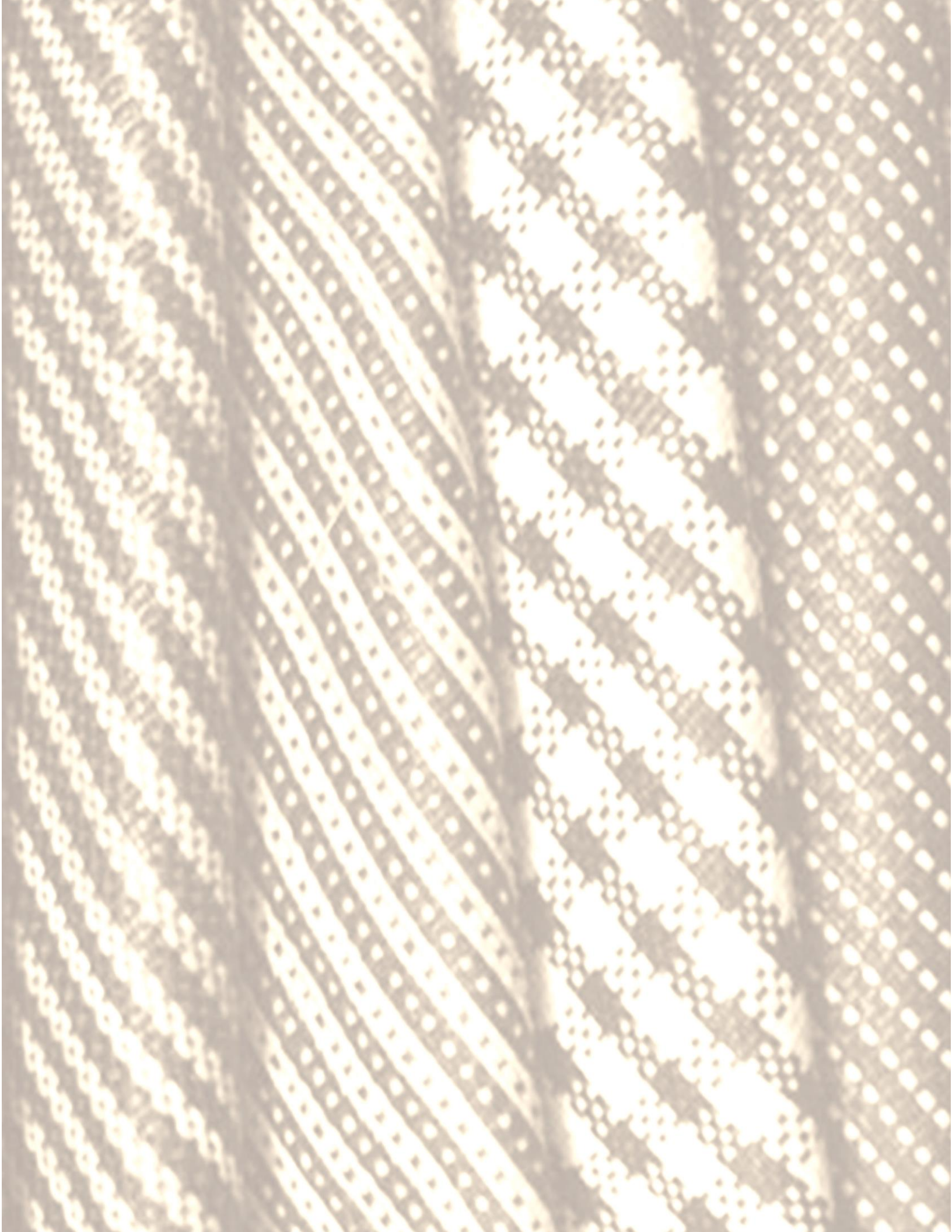
1. **Forming team:** There would be initial interest and questioning when forming a new team. Leaders at this stage may guide the team on necessary directives. At this stage, there will be little agreement within the team members.
2. **Brain-storming:** At this stage, there will be a lot of differences in opinion and an obvious lack in progress; decisions don't come easily within group. The team members discuss and brain storm on the overall planning. The leader requires to guide the process
3. **Norming:** At this stage, the team begins to trust one another and work effectively together. Agreement and consensus largely formed among the team members. Here, leader's facilitation will have a huge impact in the process.
4. **Performing:** Once the team members are all agreed and have a shared vision together, they can work independently without much interference from the leader.

2.4 Key steps towards QI in Timor-Leste

Once organization structures for QI are in place, and the leadership and management is functional, the health facilities are ready to implement QI. This process will be led by leaders with essential competencies to lead the team. All health facilities will start QI intervention with 5s-CQI-TQM. Introducing this intervention will create the working environment and develop interest amongst the providers on QI practices. 5s-CQI-TQM is an easily applicable and proven intervention in low resource settings that will fit into Timor-Leste context. Once the health facility implemented 5s-CQI-TQM will be introduced so that the QI teams will learn to solve gaps in QI implementation through small projects. MOH's CQI piloting in selected municipalities will add on further values. The team at this stage will be more organized and ready for taking these QI projects. In the final phase, the management and providers in health facilities will be prepared to initiate a continuous improvement cycle.

CHAPTER 3

Introducing QI in Timor-Leste



Chapter summary

This section identifies vision, mission and goal for institutionalizing Ql in Timor-Leste. The strategic goals are explained here that will guide to achieve the goals. The findings of situation analysis especially the stakeholder's interviewing part served as a basis for formulating these.

The strategic goals are also divided into intermediary objectives to further elaborate the QI process implementation.

The strategic goals are:

Strategic goal l: To strengthen leadership, management for QI and organizational capacity within the health sector.

Strategic goal 2: To ensure the health service is provided by competent and expert healthcare providers at health facilities.

Strategic goal 3: To ensure quality service delivery standards available and implemented in health facilities at all levels.

Strategic goal 4: To establish a health system that ensures patient's access and patient-centered care.

Comunity Health Centre Nitibe- RAEOA- Oecusse

Chapter 3 Introducing QI in Timor-Leste

3.1 Building on National Health Sector Strategic Development Plan (SDP)

The National Health Sector Strategic development plan (NHSSDP)[10] visualizes Timor-Leste having a healthier Timorese population by 2030 through providing high quality and accessible health services. Besides ensure education, establish infrastructure, important focus of this plan is to confirm a quality universal health care mechanism for Timor-Leste. The goal of this plan for health sector is: "*By 2030, Timor-Leste will have a healthier population as a result of comprehensive, high quality health services accessible to all Timorese people."* Three important areas were identified to achieve this goal: health services delivery, human resources for health and health infrastructure.

Again, the National strategic plan on quality improvement has been formulated against the priority 9 domains which are: leadership, provider's engagement, improved clinical practices, use of improvement methods, patient safety, patient centered care, improved preventive service, measurement for quality, ensure system input. These domains are clearly in line with the three major strategic priority areas of NHSSDP goals for health (Figure 4). In line with the same document, QI implementation plan for health facilities (described in chapter 5) was developed against the proposed Health sector delivery pyramid by 2030 as below: Level 1 care focused from health posts, sub district and district community health centres. Level 2 care comprised district hospitals and regional referral hospital and level 3 on National hospital.

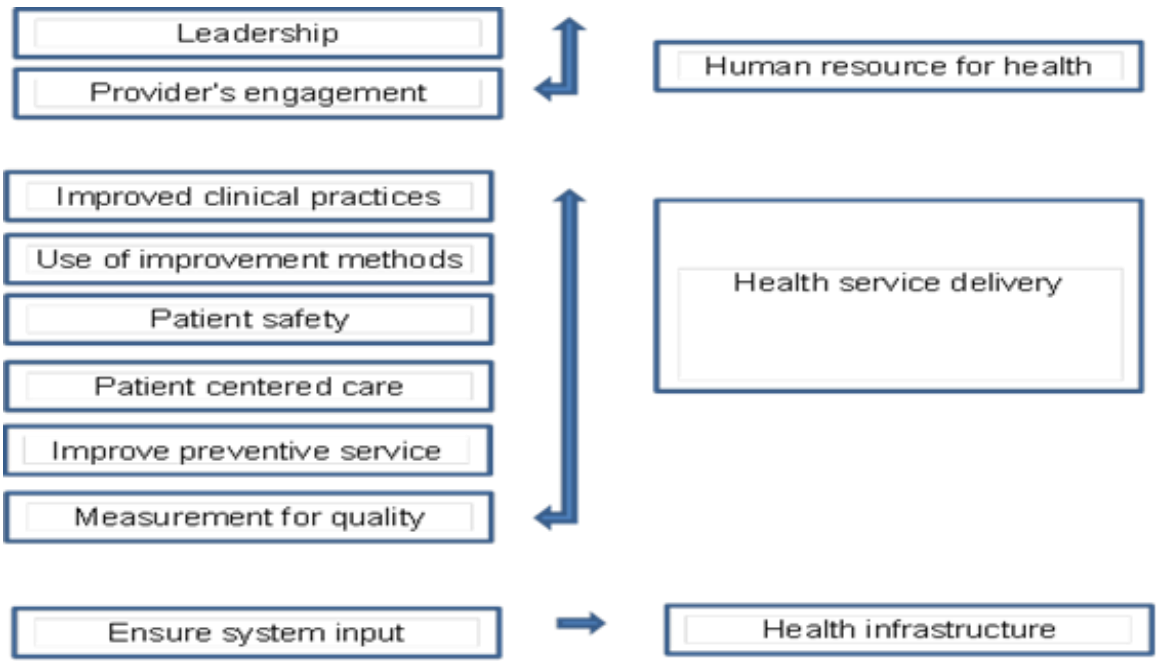


Figure 4: Quality domain linkage with major strategic priority of NHSSDP

3.2 Vision, Mission of quality improvement in Timor-Leste

This document is a 5 year planning for QI, but it has the focus on achieving the Universal health coverage success.

Vision: Accelerate progress towards Universal Health Coverage through focused activities in quality improvement including providing best consumer experience though safe, effective, accessible, equitable and sustainable service package

Mission: Create an enabling environment for better service delivery focusing on quality improvement through enhanced leadership and improved health system capacity aiming to best healthcare experience to the consumer. Related to achieving above vision and mission, 4 major strategic goals have been designed with focus on human resources, health service delivery and health infrastructure as linked and defined in the SDP plan 2011-2030, thus to accelerate the progress towards progress in priority domains. Moreover, these goals are developed to strengthen the quality domains in a way that would focus to create a strong base to initiate the journey towards the quality improvement.

Strategic goals: Within each strategic goal, specific objectives are spelled out further for further linking with implementation. Indicators are defined under each specific objective for connecting through smooth implementation at service delivery points. At each level, the activities and the responsible units are defined for a clearer picture of the implementation. An effective coordination mechanism is also described in the strategy for ensuring a coordinated quality improvement approach. The overall guidance for implementation will be given from national level, but the actual implementation happens at health facility levels. Monitoring will be coordinated and supported from both national and municipal level.

Strategic goal 1: To strengthen leadership, management for QI and organizational capacity within the health sector

Goal details: The goal will focus to create a platform for the onset of quality improvement journey through guidance from expert leaders. Under this goal implementation, the QI structures will be developed and made functional for continuing practices of QI. The goal will encompass creating QI structures at different levels to begin the quality improvement process in a structured way. Several important activities in this regards are forming quality improvement teams, initiating quality improvement culture and practice within organization/facility, coordinating QI practices amongst different departments or organizations. Most of these activities will be led by national level coordination.

Specific objectives

1.1 Blend QI approach at all levels though necessary guidance
1.2 Institutionalize and functionalize QI structure at all levels
1.3 Strengthen leadership and enhance QI practice within organization
1.4 Strengthen QI planning and coordination at all platforms

Strategic goal 2: To ensure the health service is provided by competent and expert healthcare providers at health facilities

Goal details: The goal has an important focus on health providers who play critical role in providing quality services and covers topics such as competency and expertise related. Best quality service can be ensured by practicing available guidelines and protocols with organizational support. Provider's role is of utmost importance when it's about achieving clinical excellence.

Specific objectives

2.1 Health system is equipped with necessary directives to guide providers on required competency
2.2 Health providers are skilled in clinical and quality related areas for service delivery
2.3 Health providers are motivated to provide quality service delivery

Strategic goal 3: To ensure quality service delivery standards available and implemented in health facilities at all levels

Goal details: This goal embraces critical quality improvement interventions including patient safety, clinical and death audits, data management for quality implementation tracking, accreditation and so on. Improved quality care would embrace service delivery standards are in place and being implemented.

Specific objectives

3.1 Ensure standard clinical practice by health providers
3.2 Establish an ongoing system of measurement for quality improvement implementation
3.3 Strengthen referral system for ensuing quality care of services
3.4 Establish a system of audit in health facilities
3.5 Strengthen support system in health facility for quality clinical service delivery
3.6 Improve patient safety care
3.7 Establish IPC mechanism
3.8 Establish MWM system
3.9 Institutionalize hospital accreditation system

Strategic goal 4: To establish a health system that ensures patient's access and patient-centered care

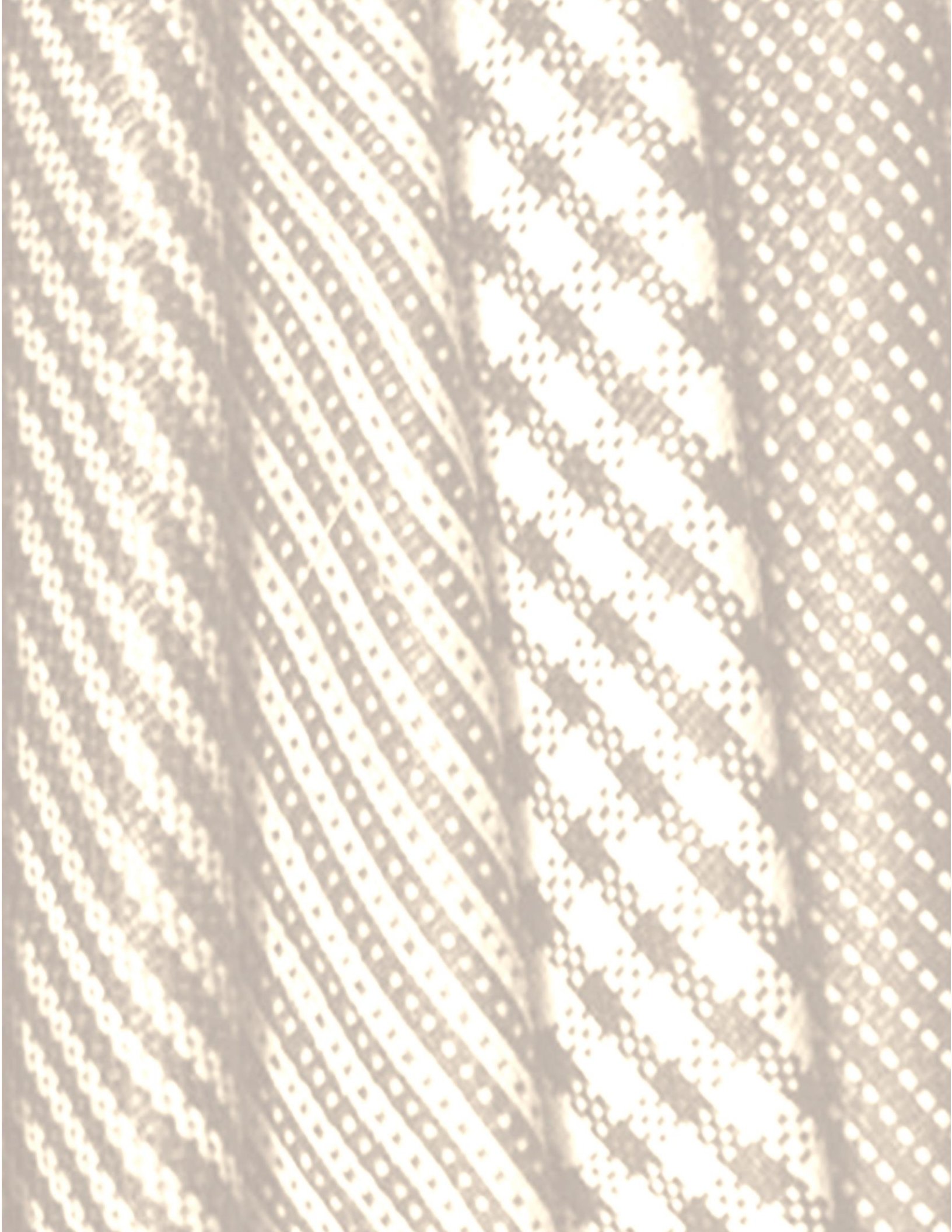
Goal details: This goal relates to patients experience of care from healthcare providers. Important components related to this goal are rights and dignity of patients, patient satisfaction, patient feedback mechanism and so forth.

Specific objectives

4.1 Establish patient-centered care mechanism in health facilities
4.2 Ensure accountability and transparency in providing care within health facilities
4.3 Create awareness amongst patients, community on rights and responsibilities

CHAPTER 4

QI Organizational Structure in Timor-Leste



Chapter 4: QI Organizational Structure in Timor-Leste

Chapter summary

This section explains QI institutionalization at national, municipal and health facility level. QI committees are to be formed at different tiers to create a culture of QI practices.

For effective QI implementation, these QI committees are to be functional through regular brain-storming on QI agendas. The detailed composition and modalities of work for QI committees at all levels are mentioned in this section.

The national QI strategic plan will define outline of establishing the QI committees at all levels. The Cabinet of Quality Assurance in Health will guide and lead the process of forming the committee structures with definitive terms of references.

Health Post Tumin- RAEOA Oecusse

Chapter 4 QI organizational structure in Timor-Leste

4.1 Overall layout of QI committees

The national QI strategic plan will be implemented through establishing the QI committees at all levels. The *Cabinet of Quality Assurance in Health* will guide and lead the process of developing committee structures with definitive terms of references. The below table (3) suggest QI committees by level.

Levels	Administrative QI committees	Health Facility QI committees
National	• Quality Improvement steering committee (QISC) • National Quality Improvement committee (NQIC)	**National Health Facility QI Committees** • HNGV • Any other health facility at national level including private ones
Sub-national	Municipal QI committee	**Municipal Health Facility QI committees** • Referral/Regional Hospital committee • Community Health Centres • Health posts • Any other health facility at national level including private ones

Table 3: QI committee structures by administrative and health facility level

4.2 QI committee details

Administrative QI committees: National

QI steering committee and National Quality Improvement committee (NQIC) will be formed as the major committees at national level. The *Cabinet of Quality Assurance in* Health (CQAH) will serve as a secretariat to support these committees. Each directorate will identify a focal person or a small team to oversee the quality improvement initiatives within the organization. Overall, these national committees will be responsible for policy and planning for quality improvement implementation.

The following figure summarizes the national quality improvement bodies:

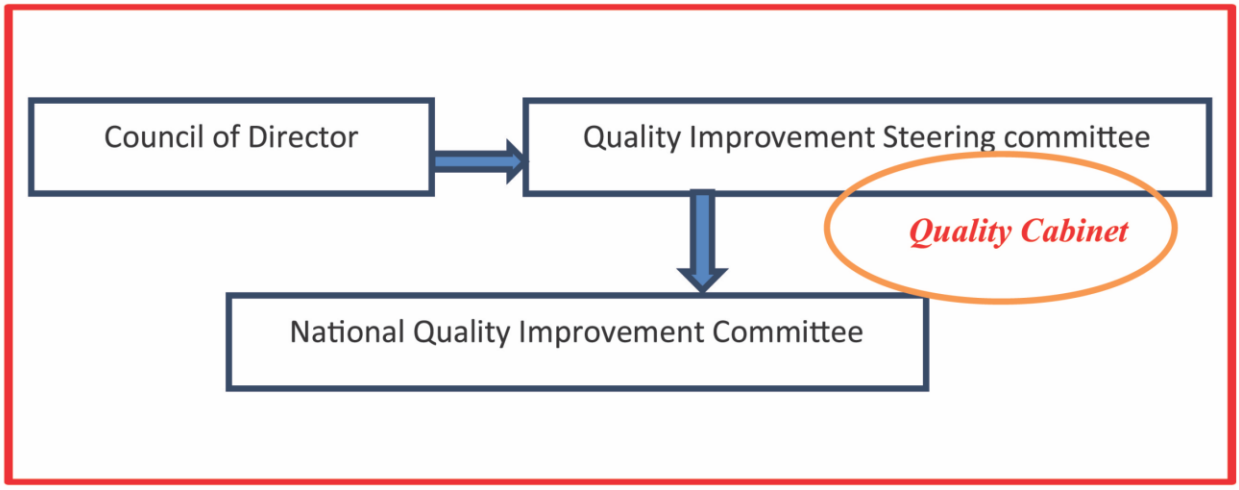


Figure 5: National level QI committee structure

Quality Improvement Steering committee (QISC)

QISC is the advisory body that provides strategic guidance for quality improvement initiatives. The steering committee will select major quality issues for approval from the Council of Director Board. The committee will be responsible for providing major policy directives on quality improvement implementation.

Composition of Quality Improvement Steering committee (QISC)

Chairperson: Director, Cabinet of Quality Assurance in Health (CQAH)

Member Secretary: Head of Standardization and Accreditation Services, CQAH

Members (not according to order of precedence):

- Health Inspector of Cabinet of Inspection and Health Auditory
- General Director of Health Services
- General Director of Cooperation Services
- Director of Unit of Juridic Support
- Director of Cabinet of Policy, Planning and Corporation
- Head of Ethics and Professional Affair Services, CQAH
- Executive Director of National Institute of Health
- Executive Director of Autonomous Service for Medicines and Health Equipment
- Executive Director of Guido Valadares National Hospital
- Executive Director of National Laboratory

Responsibilities of Quality Improvement Steering committee (QISC)

- Provide support as higher advisory body to guide the QI implementation
- Strengthen top management commitment to QI implementation
- Direct the QI committees for appropriate actions in order to QI scaling up

- Identify and take forward major QI agendas to Council of Director for approval
- Provide key decisions on QI implementation
- Support the QI implementation through necessary guidance
- Review QI implementation 6 monthly

National Quality Improvement Committee (NQIC)

NQIC will be developed to oversee and coordinate QI initiatives nationwide. The primary role of the committee is to bring about necessary coordination for implementing the quality improvement initiatives. The committee will be composed of national directors from different departments. They will have regular co-ordination meeting every quarterly for discussing QI relevant issues. They will develop QI work plan along with defined roles of different directorates for implementation, periodic review of the plan, manage co-ordination amongst different directorates, map out and track ongoing quality initiatives, monitor and supervise and so on.

Chairperson: Director, Cabinet of Quality Assurance in Health (CQAH)

Member Secretary: Head of Standardization and Accreditation Services, CQAH

Composition of National Quality Improvement Committee (NQIC)

Members (not according to order of precedence):

- General Director of Health Services
- General Director of Cooperation Services
- Health Inspector of Cabinet of Inspection and Health Auditory
- Director of Unit of Juridic Support
- Director of Cabinet of Policy, Planning and Corporation
- Director of Licensing and Health Activities Registration
- Executive Director of National Institute of Health
- Executive Director of Autonomous Service for Medicines and Health Equipment
- Executive Director of Guido Valadares National Hospital
- Executive Director of National Laboratory
- National Director of Public Health
- National Director of Disease Control
- National Director of Hospital Services and Emergency
- National Director of Pharmacy and Medication
- National Director of Budgeting and Financial Management
- National Director of Procurement
- National Director of Human Resources
- National Director of Logistics, Administration and Patrimony
- Head of Ethics and Professional Affair Services, CQAH

The respective members may nominate relevant experts to join the committee from their departments.

Responsibilities of National Quality Improvement Committee (NQIC)

The National QI committee as required will form task-based technical sub-groups involving wider stakeholders including professional bodies, development partners, academia etc. The main activities of the technical sub-group will be to develop technical guidelines, standards and tools; support the QI implementing teams as guided by the National QI committee.

- Provide detailed support on QI implementation
- Coordinate with different directorates on QI initiatives
- Identify QI agendas to be taken to the QI steering committees and Council of Directors
- Review QI implementation progress in coordination with national and municipal QI committees
- Form technical sub groups to implement QI activities (develop guidelines, monitor QI activities etc) and guides them for QI implementation
- Delegates QI implementation activities to technical sub-groups as required, such as developing and updating QI policy, strategy, guideline and tools
- Develop QI work plan and follow up the progress of implementation
- Review periodically the QI plans and take necessary actions as required
- Review QI implementation progress quarterly in meeting

Technical sub-group formation

Essentially this group will be formed under the guidance of NQIC in line with relevant directorates, organizations including development partners. NQIC will select QI priority tasks and identify relevant technical groups based on capacity and expertise of them. The CQAH will act as a secretariat for the detailed process.

QI guidelines, tools and other document development process

NQIC will determine QI documents to be developed and will identify technical subgroups to lead the process. This subgroup will be composed of relevant directorates and stakeholders who have the necessary expertise and capacity for providing input to this document developing process. CQAH, as the secretariat body, will guide the technical sub-group and organize several technical sub-group meetings to complete the task till the end including dissemination and make available the documents at health care delivery points.

QI monitoring and supervision implementation

One of the important tasks is to monitor and supervise the QI implementation which requires planning, support and necessary skills. Technical subgroups will be formed based on the tasks defined on monitoring and supervision on QI. The team will be composed of members including implementing partners related to the site of implementation, having necessary expertise and capacity so as to be able to contribute meaningfully to the tasks.

Cabinet of Quality Assurance in Health (CQAH)

The CQAH functions as a formal management body for supporting to accomplish the QI activities within the health sector, both public and private. The CQAH is responsible for ensuring the functional aspects of both NQIC as well as the QI steering committee. The main tasks of CQAH are to:

- Serve as functional management body for the QISC and NQIC
- Support for necessary coordination with relevant bodies on QI initiatives
- Organize national level QI review meetings according to the strategic planning
- Provide guidance to the QI committees for QI implementation
- Track progress on QI implementation and support as required
- Develop a supervisory and monitoring plan to be implemented by the QI committees
- Monitor and supervise QI implementation in coordination with the M&E department
- Provide technical directions for quality improvement initiatives including development of guidelines, standards, tools
- Develop standards to ensure the quality of survey or research conducted nationwide
- Review QI implementation and share important findings on leanings QI implementation
- Engage as required different stakeholders in the QI implementation process
- Arrange periodic surveys for tracking the QI implementation progress

Health Facility QI committees: National

National level has public and private hospital/ clinics where QI initiatives are in demand. Therefore, the committees at the national level will be developed following a QI committee structure. This is again subject to available staffing and organizational context. Ideally, the number of staffs to be included in the QI committees will depend on the local situation. But representation from all departments is required as the quality culture should be practiced in every area simultaneously. The number of the QI committee is not a rigid one and can vary or be added on as required.

Responsibilities of National Health facility QI committees

Chair-person: Head of Health Facility
Member secretary: QI focal person (e.g, Senior administrator/Senior consultant)
Members: will be included from different departments

- Consultants/ Medical doctors
- Midwives
- Nurse
- Statistician
- Pharmacist
- Pathologist
- Administrative staff
- Statistician

- Any other member as required

Responsibilities of National Health facility QI committees

- Ensure adherence to national QI strategic guidelines, protocols and tools
- Guide standard implementation ensuring quality of care at different departments
- Ensure regular reporting to higher authority and discuss for any feedback
- Regulation of QI activities through monitoring and mentoring of health facility teams
- Arrange orientation and necessary training of health facility staffs on QI and clinical practices
- Review progress on QI activities through routine QI meetings
- Encourage quality champions in health facility and share best practices amongst teams
- Track progress of quality improvement activities in line with the national and health facility level indicators
- Ensure necessary coordination amongst different departments for QI implementation
- Create a culture of quality improvement practices within organization
- Review QI implementation progress quarterly in meeting

Administrative QI committees: Municipal

The administrative QI committee will be based in municipal director office. The main task of this committee is to co-ordinate overall QI activities within that municipality. The number and composition of members for this committee may vary based on available staffing. The major activity of this committee is to guide and support all QI activities within that municipality, public or private.

Health facility QI committees: Municipal

Health facility QI committees are formed within health facilities to support QI initiatives. Each tier of health facility including public and private will have its own QI committee. Regional hospitals will also form facility QI committees following same structure. The numbers may vary depending on the facility structure and available staffing.

The following table summarizes the composition of committees at municipal level

Municipal Administrative QI Committee	Municipal Health Facility QI Committee
Chair-person: Municipal Director Member Secretary: QI focal person Members: o Program officer o Logistic officer o Administrative staff o Statistician o Coordinator KSP Additional members may be included	Chair-person: Head of Health Facility Member secretary: QI focal person Members: o Consultants/ Medical doctors o Midwives o Nurse o Statistician o Pharmacist o Administrative staff o Statistician Additional members may be included

Table 4: Municipal level QI committee structure

Responsibilities of Municipal Administrative QI committees

Municipal Administrative QI committees are responsible for the following tasks:

- Provide support for attainment of quality standards for all health facilities within municipality
- Assess and identify QI intervention areas for smooth implementation
- Organize QI trainings for all health facilities within municipality
- Organize QI coordination amongst all health facilities within municipality
- Monitor and supervise QI implementation across municipality
- Provide support to health facilities should they need input requirement for QI implementation
- Oversee the QI implementation happenings at municipality level
- Review QI implementation progress quarterly in meeting

Responsibilities of Municipal Health facility QI committees

- Ensure adherence to national QI strategic guidelines, protocols and tools
- Guide standard implementation ensuring quality of care at different departments
- Ensure regular reporting to higher authority and discuss for any feedback
- Regulation of QI activities through monitoring and mentoring of health facility teams
- Arrange orientation and necessary training of health facility staffs on QI and clinical practices
- Review progress on QI activities through routine QI meetings
- Encourage quality champions in health facility and share best practices amongst teams
- Track progress of quality improvement activities in line with the national and health facility level indicators
- Ensure necessary coordination amongst different departments for QI implementation
- Create a culture of quality improvement practices within organization
- Review QI implementation progress quarterly in meeting

4.3 QI Coordination mechanism

National level:

The NQIC will conduct internal quarterly review meeting to analyze the QI progress nationwide. They will update and report to the steering committee at every 6 months in a broader co-ordination meeting. In special circumstance, extra meeting will be organized to update steering committee on urgent priorities. The steering committee in turn will approve important agendas and will also identify topics to be presented to the Council of Director for higher level approval. CQAH will organize these meetings in coordination with other directorates. Apart from routine meetings, there will be yearly QI review workshops at national level where best performing health facility will be awarded.

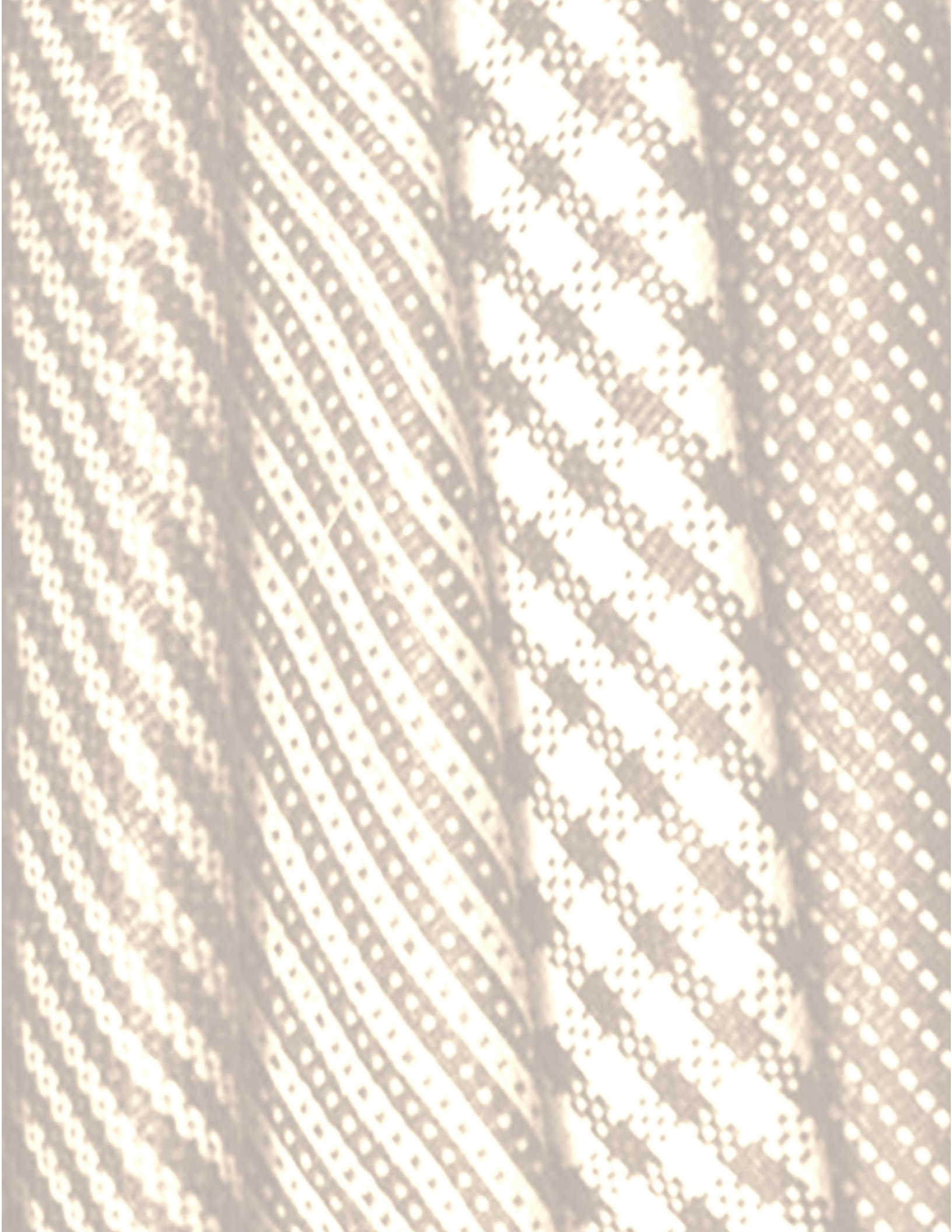
Health facility QI committees at national level will conduct quarterly internal review meetings and follow up their progress on QI. Apart from that they will participate in any national QI review meetings, as required.

Municipal level:

The municipal QI committees will conduct quarterly coordination review meeting with participation from QI committees from all health facilities within that municipality. In this coordination meeting, QI issues will be discussed. Along with some important decision-making QI priority issues, this platform will also be regarded as a QI learning platform. Leadership and necessary guidance are of utmost importance for the success of these QI committees. All municipal health facilities will conduct quarterly review meetings.

CHAPTER 5

Operational Matrix for QI Implementation



Chapter 5: Operational matrix for QI implementation

Chapter summary

This section is designed to provide a 5 year plan for implementing QI at national, municipal and health facility level. There are overlapping activities by levels, but the implementation will focus having effective coordination between levels for better spelling out the QI process. Engaging quality improvement teams/personnel at heath facilities mentioned herewith is a fundamental approach for success of this plan.

At the national level, the development of strategy, policy will ensure national direction for implementation. Municipal activities will cover monitoring QI implementation across all health facilities within that municipality in line with the national guidance. The municipal level also supports the process by planning individual QI activities in line with allocated resources.

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Chapter 5 Operational matrix for QI implementation

5.1 Context of developing the QI implementation matrix

This is crucial to begin the quality implementation in Timor-Leste. At the national level, the development of strategy, policy will ensure national direction for implementation. Municipal activities will cover institutionalization and monitoring QI implementation across all health facilities within that municipality in line with the national guidance. The municipal level also supports the process by planning individual QI activities in line with allocated resource. Overall, the municipal planning process will be developed in line with the national system of planning for QI. On the other hand, health facilities are divided into 3 levels based on the NHSSP 2011-2030. As the strategic plan is focused to QI implementation in health facilities, the levels by facilities will be customized for ease of implementation as follows:

Levels of health facility	*QI implementation approach*
Mainly QI implementation in line with national planning supported by municipal administration	
Level 1 Care: Health posts, Sub district Community Health Centres, District Community Health Centre • In the matrix, the activities are framed only up to CHC	Health posts, owing to less number of staff will comprise a focal person for QI to oversee the necessary implementation. Other facilities will have QI team/teams based on the available staffing. Depending on the number of staff and work load, these activities will be guided by the broader facility QI team.
Level 2 Care: District Hospitals, Regional Referral Hospital	Facilities at this level will have a bigger QI team based on the available staffing. There will be individual work improvement teams for each department to manage the detail QI processes. These activities will be guided by the broader facility QI team.
Level 3 Care: National Hospital	National hospital will have department wise QI work improvement teams and a broader facility QI teams to support and oversee the activities.

Table 5: Levels of health facilities by QI implementation approach

In general, all level of implementation for quality improvement requires a quality improvement team or focal to be engaged in the initiatives. Timor-Leste's Strategic Development Plan 2011-2030 is a composite design to guide towards a quality universal health care package. The implementation framework covers national, municipal; and health facility level activities for quality improvement and will include quality planning focusing to policy, strategy, and guidelines, standards and tools development.

However, the generic activities for quality implementation at health facilities will be more or less similar like implementation level. The major difference between health facility levels will be the number of QI team members. Depending on the number of providers in the facility, the team can be smaller or larger and in case of facility like health post, instead of a team, there can be a focal person who would be responsible for QI implementation. In this matrix, the QI committees at different levels are mentioned upto the CHC, not further below as there is scarcity of human resources in the heath posts.

The implementation plan for QI is detailed out below by year and levels. The following matrix will provide the detailed implementation plan for the 5 year QI implementation strategy. This in a nutshell covered all required areas for QI implementation related to 9 domains. Under each strategic goal, specific activities are chalked out by year including the responsible departments or bodies. The table also summarizes and provides output indicators for each specific activity and its means of verification.

5.2 QI implementation matrix

	Activities	Responsible bodies	Year					Output indicators	Means of verification
			Y 1	Y 2	Y 3	Y 4	Y 5		
Strategic goal 1: To strengthen leadership, management for QI and organizational capacity within the health sector									
1.1 Blend QI approach at all levels though necessary	Develop and update National QI policy & strategic document on QI implementation	CQAH, NQIC	X	X			X	National QI policy & strategic document	Documents available
	Disseminate National QI strategic document on QI implementation applicable for all levels	CQAH, NQIC	X	X	X			Dissemination workshop held	Workshop report

guidance	Print and supply of the strategic document for use at municipalities	CQAH, NQIC, Municipal Administrative committee	X	X	X	X	X	Number of printed document	Documents available
	Establish QI committees in health facilities and institutions based on National QI strategic document	CQAH, NQIC, Municipal Administrative committee , Facility QI committees (level 1 excluding health posts, level 2 and level 3)	X	X	X			# of health facilities and institutions having QI	Administrative report
1.2 Institutionalize and functionalize QI structure at all levels	Ensure functionality of QI committees at national level according to national strategic plan	CQAH, NQIC	X	X	X	X	X	Number of QI meetings held	Meeting minutes
	Ensure functionality of QI committees at municipal (administrative) level according to national strategic plan	Municipal Administrative committee	X	X	X	X	X	Number of QI meetings held	Meeting minutes
	Ensure functionality of QI committees at health facility level according to national strategic plan	Facility QI committees (level 1 excluding health posts, level 2 and level 3)	X	X	X	X	X	Number of QI meetings held	Meeting minutes
	Develop a QI management manual for guiding the QI implementation	CQAH, NQIC		X				Manual developed	Documents available
	Disseminate QI management manual on QI implementation applicable for all levels	CQAH, NQIC			X			Dissemination workshop held	Workshop report
	Print and supply of QI management manual for use at municipalities	CQAH, NQIC, Municipal Administrative committee		X	X	X	X	Number of printed document	Documents available

1.3 Strengthen leadership and enhance QI practice within organization	Develop 5s-CQI-TQM and PDCA guidelines, training manuals and training plan for TL with a focus on leadership component	CQAH, NQIC	X					5s guideline and tools developed	Documents available
	Establish capacity building on 5s-CQI-TQM and PDCA guidelines.	CQAH, NQIC		X	X	X	X	Number of training workshop held	Work shop report
	Develop QI advocacy planning guideline for all tiers	CQAH, NQIC			X			QI planning guideline developed	Documents available
	Conduct QI advocacy meeting at municipal level according to QI advocacy planning guideline	Municipal Administrative committee, level 2 facilities			X	X	X	Number of meetings held	Meeting minutes
	Conduct QI advocacy meeting at national level according to QI advocacy planning guideline	CQAH, NQIC			X	X	X	Number of meetings held	Meeting minutes
	Establish and implement a QI monitoring and supervision mechanism from national level	CQAH, NQIC	X	X	X	X	X	% health facilities monitored and supervised atleast 4 times a year	Visit report
	Establish and implement a QI monitoring and supervision mechanism from municipal level	Municipal Administrative committee	X	X	X	X	X	% health facilities monitored and supervised atleast 4 times a year	Visit report
	Establish and implement a QI monitoring and supervision mechanism from CHCs and below	Municipal Administrative committee, Facility QI committees (level 1 excluding health posts, level 2 and	X	X	X	X	X	% health facilities monitored and supervised atleast 4 times a year	Visit report

		level 3)							
	Monitor and supervise on QI in individual health facility level	Facility QI committees (level 1, 2 and 3)	X	X	X	X	X	Number of self-assessment conducted	Self-assessment report
1.4 Strengthen QI planning and coordination at all platforms	Incorporate QI implementation activities within the operational plan and budget	CQAH, NQIC		X				Operation plans and budget includes QI implementation details	Updated operational plan
	Conduct QI mapping and identify stakeholders and develop engagement plan for QI implementation	CQAH, NQIC	X					QI mapping conducted	Mapping report
	Conduct QI external assessment to assess regularly and support effective planning	CQAH, NQIC	X		X		X	Assessment done	Assessment report
	Conduct intervention and operational QI research	CQAH, NQIC			X	X	X	Number of QI research conducted	Research report
	Disseminate QI assessment findings at national level	CQAH, NQIC		X		X		Workshop conducted	Workshop report
Strategic goal 2: To ensure the health service is provided by competent and expert healthcare providers at health facilities									
2.1 Health system is equipped with necessar	Develop guidelines on health professional's code of conduct and standards for competency and practice	CQAH, NQIC	X	X				Health professional's code of conduct and standards developed	Documents available

y directives to guide providers on required competency	Translate and print documents on health professional's code of conduct, standards for competency and practice	CQAH, NQIC		X	X	X	X	Number of documents translated and printed	Documents available
	Disseminate on health professional's code of conduct and standards	CQAH, NQIC			X			Dissemination workshop held	Work shop report
	Establish health professional council with clear terms of reference	CQAH, NQIC			X	X		Health professional council developed	Administrative report
	Prepare the decree of law for the health professionals practice	CQAH, NQIC			X	X		Decree of law developed	Decree of law
	Conduct learning visits on competency examination and related areas for health professionals	CQAH, NQIC		X	X			Number of learning visits done	Visit report
	Develop a competency exam guidelines for the Health Professionals	CQAH, NQIC		X				Competency guideline developed	Documents available
	Develop a supervision and monitoring plan including checklist for implementation of competency based services, skill assessment of providers	CQAH, NQIC			X	X		Supervision and monitoring plan and checklists developed	Documents available
	Establish capacity building on health professional's code of conduct and standards	Municipal Administrative committee, Facility QI committees (level 2)		X	X	X	X	% of identified staffs oriented on health professional's code of conduct and standards	Work shop report
2.2 Health providers are skilled	Develop and implement QI orientation plan for managers and health providers on available	CQAH, NQIC		X	X	X	X	QI orientation plan in place	QI plan in place

in quality related areas for service delivery	guidelines, standards and tools								
	Build capacity of providers on QI guidelines, standards and tools according to plan	CQAH, NQIC		X	X	X	X	% of QI orientation done according to plan	Administrative report
	Develop facility specific QI training plan for health providers on available guidelines, standards and tools	Municipal Administrative committee , Facility QI committees Level II ,Level 1 (excluding HP)	X	X	X	X	X	Number of workshop held	Work shop report
2.3 Health providers are motivated to provide quality service delivery	Conduct provider's survey to assess provider's satisfaction related issues	CQAH, NQIC		X		X		Survey done	Survey report
	Develop Providers incentive guideline for providers to define performance based incentives, recognition criteria	CQAH, NQIC			X			Guideline developed	Documents available
	Establish capacity building on Provider's Incentive Guideline	CQAH, NQIC			X	X	X	% of identified staffs oriented on Provider	Work shop report
	Conduct periodic performance assessment of the health providers on QI according to Providers incentive guideline	CQAH, NQIC, Municipal Administrative committee				X	X	Assessment done	Assessment report
	Hold annual review workshop on performance reviewing of health facilities	CQAH, NQIC				X	X	Number of orientation workshop held	Work shop report
Strategic goal 3: To ensure quality service delivery standards available and implemented in health facilities at all levels									
3.1 Ensure standard	Conduct stocktaking of available SOPs , guidelines for clinical	CQAH, NQIC	X					Stock taking done	Stock taking

clinical practice by health providers	practices								report
	Consult and develop a list of needful guidelines, standards, SOPs and prepare a plan for developing QI relevant guidelines	CQAH, NQIC	X					Number of meetings held	List and plan
	Develop new or update (as required), SOPs, guidelines and tools for clinical practice according to defined timeline	CQAH, NQIC	X	X	X	X	X	Guidelines developed	Documents available
	Print quality specific service delivery standards, tools and guidelines	CQAH, NQIC, Municipal Administrative committee	X	X	X	X	X	Number of printed document	Documents available
	Build capacity of providers on developed standards, guidelines, SOPs, tools	CQAH, NQIC, Municipal Administrative committee		X	X	X	X	Number of workshop held	Work shop report
	Orient facility team on QI standards, tools, guidelines at a regular interval	Facility QI committees level 1,2,3	X	X	X	X	X	Number of meeting happens on QI topics(standards, tools, guidelines) in health facilities	Meeting minutes
3.2 Establish an ongoing system of measurement for quality improvement implementation	Conduct consultation on developing a QI monitoring framework including guidelines, checklist with quality focused indicators for priority areas	CQAH, NQIC	X					Number of orientation workshop held	Work shop report
	Disseminate QI monitoring framework including guidelines, checklist on QI implementation applicable for all levels	CQAH, NQIC, Municipal Administrative committee		X				Dissemination workshop held	Work shop report

	Print national QI monitoring framework including guidelines, checklist	CQAH, NQIC, Municipal Administrative committee	X	X	X	X	X	Number of printed document	Documents available
	Establish capacity building on QI monitoring framework	CQAH, NQIC,	X	X	X			% of identified staffs oriented on QI monitoring framework	Work shop report
	Conduct orientation at municipal level for health providers on QI indicators, M&E plan	Municipal Administrative committee , Facility QI committees level 2	X	X	X	X	X	Number of orientation workshop held	Work shop report
	Orient QI teams in health facilities on QI indicators, M&E plan	Facility QI committees level 1,2,3	X	X	X	X	X	Number of meeting happens on QI topics in health facilities	Meeting minutes
3.3 Strengthen referral system for ensuing quality care of services	Develop national referral guideline for health facilities	CQAH, NQIC		X				Guideline in place	Documents available
	Printing and disseminate the referral guidelines for use in health facilities	CQAH, NQIC, Municipal Administrative committee		X	X	X	X	Number of printed document	Documents available
	Disseminate on national referral guidelines and related tools	CQAH, NQIC		X				Dissemination workshop held	Work shop report
	Establish capacity building on national referral guideline	CQAH, NQIC, INS		X	X	X	X	% of identified staffs oriented on referral guideline	Work shop report
	Conduct orientation at municipal level on referral guidelines for use in health facilities	Municipal Administrative committee , Facility QI committees level 2		X	X	X	X	% of identified staffs oriented on referral guideline	Work shop report

	Orient QI teams on referral guidelines for use in health facilities	Facility QI committees level 1,2,3		X	X	X	X	% of identified staffs oriented on referral guideline	Meeting minutes
3.4 Establish a system of audit in health facilities	Develop clinical and death audit guidelines	CQAH, NQIC		X				Guidelines in place	Documents available
	Print and distribute clinical and death audit guidelines and tools	CQAH, NQIC, Municipal Administrative committee		X	X	X	X	Number of printed document	Documents available
	Establish capacity building on clinical and death audit guidelines	CQAH, NQIC, INS		X	X	X	X	% of identified staffs oriented on clinical and death audit guidelines	Work shop report
	Conduct audit visits periodically	CQAH, NQIC, M&E, Municipal Administrative committee		X	X	X	X	Number of audits took place	Audit report
	Review audit findings and organize sharing workshop at regular intervals	CQAH, NQIC, M&E		X	X	X	X	Number of workshop held	Work shop report
	Disseminate on national clinical audit guidelines and related tools	CQAH, NQIC		X				Dissemination workshop held	Work shop report
	Conduct orientation at municipal level on clinical audit guidelines for use in health facilities	Municipal Administrative committee , Facility QI committees level level II		X	X	X	X	Number of orientation workshops held	Work shop report
	Orient QI teams on clinical audit guidelines for use in health facilities	Facility QI committees level 1,2,3		X	X	X	X	% of identified staffs oriented on clinical and death audit guidelines	Meeting minutes

3.5 Strengthen support system in health facility for quality clinical service delivery	Develop a guideline on support system for QI including supply chain management in health facilities	CQAH, NQIC			X			Guideline on support system for QI developed	Documents available
	Print and distribute guidelines on support system for QI	CQAH, NQIC, Municipal Administrative committee			X	X	X	Number of printed document	Documents available
	Establish capacity building on support system for QI	CQAH, NQIC, INS			X	X	X	% of identified staffs oriented on support system	Work shop report
	Orient team on guideline on support system for QI at a regular interval	Facility QI committees level 1,2,3			X	X	X	Number of meeting happens on guideline on support system for QI in health facilities	Meeting minutes
	Develop QI guidelines, standards and SOP on laboratory, imaging and related services	CQAH, NQIC			X			Guideline in place	Documents available
	Print and distribute of QI guidelines, standards and SOP on laboratory and imaging services	CQAH, NQIC, Municipal Administrative committee			X	X	X	Number of printed document	Documents available
	Build capacity of health providers on guidelines, standards and SOP on laboratory and imaging services	CQAH, NQIC, INS			X	X	X	% of identified staffs oriented on guidelines, standards and SOP on laboratory and imaging services	Work shop report
	Orient QI teams on guideline guidelines, standards and SOP on laboratory and	Facility QI committees level 1,2,3			X	X	X	% of identified staffs oriented on	Meeting minutes

	imaging services							guidelines, standards and SOP on laboratory and imaging services	
	Develop guidelines, standards and SOP on pharmacy regulation	CQAH, NQIC			X			Guidelines, standards and SOP on pharmacy regulation developed	Documents available
	Print and distribute of guidelines, standards and SOP on pharmacy regulation	CQAH, NQIC			X	X	X	Number of printed document	Documents available
	Build capacity of health providers on pharmacy regulation	CQAH, NQIC			X	X	X	% of identified staffs oriented on pharmacy regulation	Work shop report
	Conduct orientation at municipal level on guidelines, standards and SOP on pharmacy regulation	Municipal Administrative committee			X	X	X	% of identified staffs oriented on pharmacy regulation	Work shop report
	Orient QI teams on guidelines, standards and SOP on pharmacy regulation atregular interval	Facility QI committees level 1,2,3			X	X	X	% of identified staffs oriented on pharmacy regulation	Meeting minutes
	Disseminate guidelines on support system for QI, guidelines on laboratory and imaging and pharmacy related	CQAH, NQIC			X			Dissemination workshop held	Work shop report
3.6 Improve patient safety care	Develop patient safety guidelines and SOPs	CQAH, NQIC	X					Guideline in place	Documents available
	Disseminate patient safety guidelines and SOPs	CQAH, NQIC		X				Dissemination workshop held	Work shop report

	Print and distribute of guidelines, standards and SOP on patient safety	CQAH, NQIC, Municipal Administrative committee		X	X	X	X	Number of printed document	Documents available
	Establish capacity building on patient safety guidelines and SOPs	CQAH, NQIC, INS		X	X	X	X	% of identified staffs oriented on patient safety guidelines and SOPs	Work shop report
	Conduct orientation at municipal level on patient safety guidelines , SOP and tools	Municipal Administrative committee , Facility QI committees level level 2		X	X	X	X	Number of workshop held	Work shop report
	Orient QI teams on patient safety guidelines and relevant documents	Facility QI committees level level 1,2,3		X	X	X	X	Number of meeting happened on patient safety guidelines and relevant documents	Meeting minutes
3.7 Establish IPC mechanism	Develop national IPC guidelines, SOP and tools	CQAH, NQIC	X					Guideline in place	Documents available
	Print and distribute of guidelines, standards and SOP on IPC	CQAH, NQIC, municipal director office	X	X	X	X	X	Number of printed document	Documents available
	Establish capacity building on IPC guidelines, SOP and tools	CQAH, NQIC, INS	X	X	X	X	X	% of identified staffs oriented on IPC guidelines, SOP and tools	Work shop report
	Conduct orientation at municipal level on IPC guidelines, standards and tools	Municipal Administrative committee , Facility QI committees level 2	X	X	X	X	X	% of identified staffs oriented on IPC guidelines, SOP and tools	Work shop report

	Orient team at health facilities on national IPC guidelines, standards and tools at regular interval	Facility QI committees level 1,2,3	X	X	X	X	X	% of identified staffs oriented on IPC guidelines, SOP and tools	Meeting minutes
	Disseminate national IPC guidelines	CQAH, NQIC	X					Dissemination workshop held	Workshop report
	Develop IPC monitoring guideline, SOP and tools on priority infectious diseases such as COVID-19	CQAH, NQIC	X					SOP and/or guideline, SOP and tools developed on IPC monitoring of high priority infectious diseases	Guideline, SOP and tools
	Establish capacity building on IPC guidelines, SOP and tools focusing on priority infectious diseases such as COVID-19	CQAH, NQIC	X	X	X	X	X	% health facilities monitored and supervised atleast 4 times a year on IPC	Monitoring Visit report
	Establish and implement IPC monitoring and supervision mechanism from national level	CQAH, NQIC	X	X	X	X	X	% health facilities monitored and supervised atleast 4 times a year	Visit report
	Establish and implement a IPC monitoring and supervision mechanism from municipal level	Municipal Administrative committee	X	X	X	X	X	% health facilities monitored and supervised atleast 4 times a year	Visit report
	Establish and implement a IPC monitoring and supervision	Municipal Administrative committee, Facility QI	X	X	X	X	X	% health facilities monitored and	Visit report

	mechanism from CHCs and below	committees (level 1 excluding health posts, level 2 and level 3)						supervised atleast 4 times a year	
	Conduct IPC self-assessment in health facility level	Facility QI committees (level 1, 2 and 3)	X	X	X	X	X	Number of self-assessment	Self-assessment report
3.8 Establish MWM system	Develop national Medical Waste Management guidelines and tools	CQAH, NQIC	X					Guideline in place	Documents available
	Print and distribute of guidelines, standards and SOP on MWM	CQAH, NQIC, Municipal Administrative committee	X	X	X	X	X	Number of printed document	Documents available
	Establish capacity building on national Medical Waste Management guidelines and tools	CQAH, NQIC, INS		X	X	X	X	% of identified staffs oriented on national Medical Waste Management	Work shop report
	Ensure adequate availability and supply provision of MWM logistics and commodities	CQAH, NQIC, Municipal Administrative committee , Facility QI committees level 1,2,3	X	X	X	X	X	% health facilities having adequate stocks of MWM logistis and commodities	Stock analysis report
	Disseminate Medical Waste Management guidelines and tools	CQAH, NQIC		X				Dissemination workshop held	Work shop report
3.9 Institutionalize hospital accreditation system	Establish National accreditation board	CQAH, NQIC		X				Accreditation board developed	Administrative report
	Develop criteria, process, standards, tools for health facility accreditation	CQAH, NQIC		X				accreditation process, tools , standards developed	Documents available
	Orient health providers and managers on	CQAH, NQIC		X	X	X	X	Number of orientation workshop	Documents availa

	accreditation							held	ble
	Conduct accreditation of health facilities	CQAH, NQIC			X	X	X	Number of facilities accredited	Report
	Conduct accreditation of laboratories	CQAH, NQIC			X	X	X	Number of laboratories accredited	Report
	Conduct orientation at municipal level on accreditation process, tools and guidelines	Municipal Administrative committee , Facility QI committees level 1,2,3				X	X	Number of orientation workshop held	Report
	Orient QI teams on accreditation process, tools and guidelines	Facility QI committees level 1,2,3			X	X	X	% of identified staffs oriented on accreditation process, tools and guidelines	Meeting minutes
Strategic goal 4: To establish a health system that ensures patient's access and patient-centered care									
4.1 Establish patient-centered care mechanism in health facilities	Develop patient-centered care guidelines and tools	CQAH, NQIC	X					Guideline in place	Documents available
	Print and distribute patient-centered care guidelines and tools	CQAH, NQIC, Municipal Administrative committee		X	X	X	X	Number of printed document	Documents available
	Establish capacity building on patient-centered care guidelines and tools	CQAH, NQIC		X	X	X	X	% of identified staffs oriented on patient-centered care guidelines and tools	Work shop report

	Conduct orientation at municipal level on patient-centered care guidelines and tool	Municipal Administrative committee		X	X	X	X	% of identified staffs oriented on patient-centered care guidelines and tools	Work shop report
	Orient team on patient-centered care guidelines and tool at regular interval	Facility QI committees level 1,2,3		X	X	X	X	% of identified staffs oriented on patient-centered care guidelines and tools	Meeting minutes
	Develop a national communication strategy for QI implementation	CQAH, NQIC			X			strategy in place	Documents available
	Print and distribute national communication strategy for QI	CQAH, NQIC, Municipal Administrative committee			X	X	X	Number of printed document	Documents available
	Disseminate n national communication strategy for QI and related tools	CQAH, NQIC			X			Dissemination workshop held	Work shop report
	Establish capacity building on	CQAH, NQIC			X	X	X	% of identified staffs oriented on National	Work shop report

	National Communication Strategy on QI							Communication Strategy on QI	
	Establish patient-focused IPC practice mechanism in health centres with specific prevention focus on high infectious priority diseases such as COVID-19	Facility QI committees level 1,2,3	X					Guiding document developed on available facilities of patient-focused IPC practices	Patient-focused IPC practices guideline
4.2 Ensure accountability and transparency in providing care within health facilities	Develop community engagement model	CQAH, NQIC			X	X	X	Community engagement model developed	Documents available
	Establish capacity building on Community Engagement Model	CQAH, NQIC			X	X	X	% of identified staffs oriented on Community Engagement Model	Workshop report
4.3 Create awareness amongst patients, community on rights and responsi	Develop/review patient charter	CQAH, NQIC	X					Charter developed	Charter in place
	Conduct meeting with community, patients, providers on rights	CQAH, NQIC, Municipal Administrative committee	X	X	X	X	X	Number of meetings held	Meeting minutes

bilities	and responsibilities of patients								
	Conduct meeting with community, patients, providers on importance of IPC especially from high infectious priority diseases such as COVID-19	CQAH, NQIC, Municipal Administrative committee	X	X	X	X	X	Number of meetings held	Meeting minutes

Table 6: QI implementation matrix by strategic goals

5.3 Costing of the strategic plan

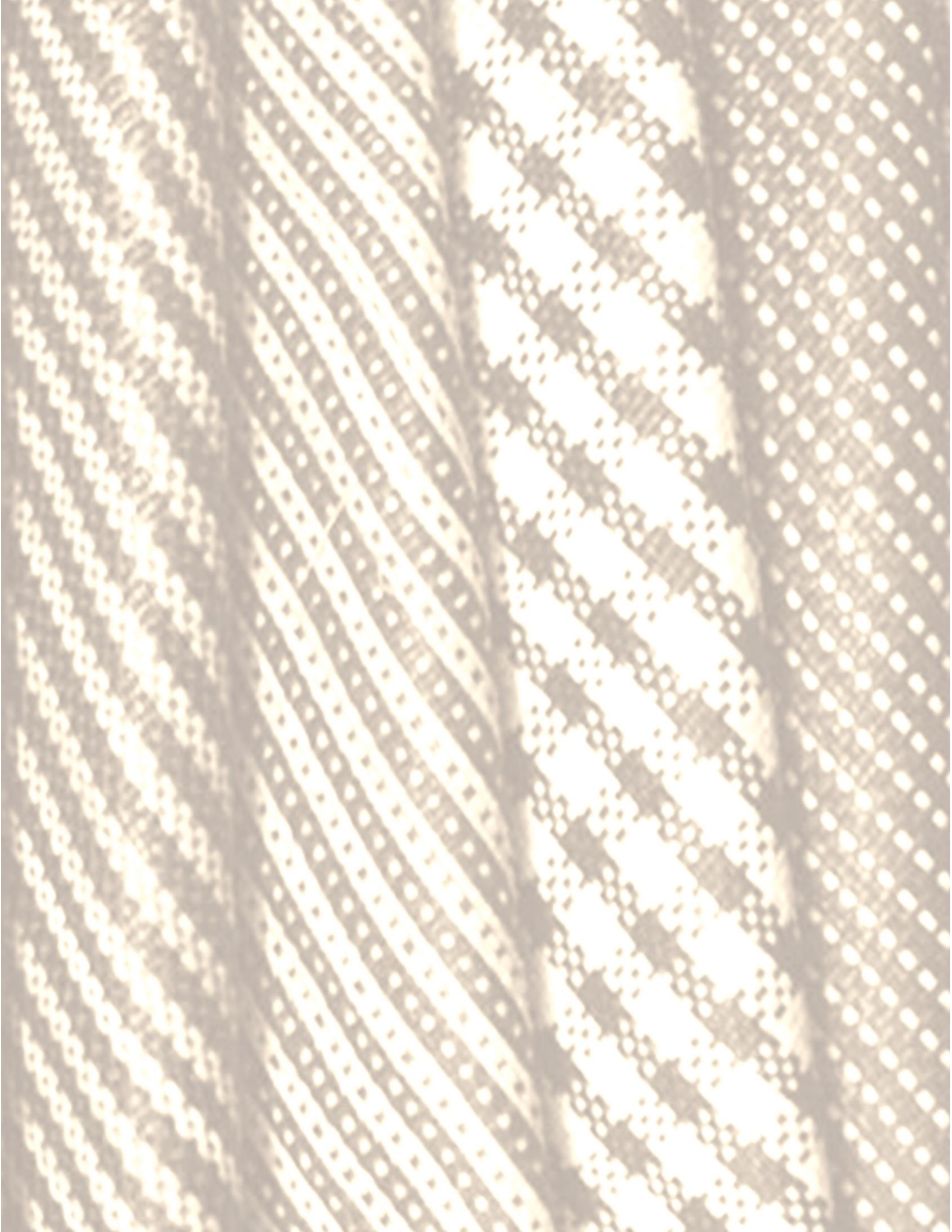
Summary costing by goals

Specific Goals	***Cost per Goal***	***Percent***
Strategic goal 1	1,437,610	34.0
Strategic goal 2	476,020	11.2
Strategic goal 3	1,871,105	44.2
Strategic goal 4	443,375	10.4
Total cost for QI budget 5 years	**4,228,110**	**100.0**

Table 7: Summary QI implementation cost by strategic goals

CHAPTER 6

Measuring Quality Improvement



Chapter 6: Measuring Quality improvement

Chapter summary

This chapter outlines the plan for incorporating the quality indicators within national framework to track the progress of quality implementation. A monitoring logic model further highlights the QI measurement approach.

The QI strategic goals within national strategic plan on quality improvement gives a hint on processs of developing QI indicators. There will be 3 types of indicators: key performance indicator, facility QI indicators and program level QI indicators. All these quality indicators will be developed for overseeing the QI process all over the country.

Key performance indicators for QI has been spelled out in this section, however, the program focused indicators will be sequentially developed. The overall measurement plan and methods are adjusted with the broader national M&E plan.

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Chapter 6 Measuring Quality Improvement

6.1 Importance for QI measurement

QI measurement is important as it provides guidance to monitor progress towards QI implementation. Without measurement, the progress towards the goal cannot be estimated. Having regular documentation on progress of quality improvement for healthcare will enable the system to work more efficient and thereby evidence-based decision making will turn easier. Hence, a transparent system will be developed for ensuring accountability at all tiers.

6.2 QI indicators and priority areas for M&E

The QI strategic goals within national strategic plan for quality improvement give a hint on developing QI indicators. There will be 3 types of indicators: key performance indicator, facility QI indicators and program level QI indicators. All these quality indicators will be developed for overseeing the QI process nationwide. Furthermore, a monitoring logic model will guide to establish link between the strategic goals and the ultimate goals of improving quality of care.

Key performance indicators will set the scenes for developing a QI platform from where further progression on different programs can be achieved. Facility QI indicators will define QI implementation by levels of health facility. In this document, some facility QI indicators have been proposed in the annex developed in line with the domains of QI. The programmatic QI indicators will be developed based on key priorities outlined in National Health Sector Strategic plan 2011-2030. The program areas are: maternal and newborn health, child health, nutrition, control of communicable disease (malaria, TB, HIV/Aids, Leprosy, Lymphatic Filariasis, other acute and viral infections), control of NCD (Mental health, Epilepsy, Oral health, eye health). However, the indicators mentioned in this strategic document will be regarded as basic ones and will be used to imitate and validate subsequent indicators for tracking progress of QI in Timor-Leste. This will be the next step for additional work with the relevant departments.

Monitoring logic model This logic model was developed in line with the working document on monitoring framework by Quality, Equity, and Dignity which is a network for Improving Quality of Care for Maternal, Newborn and Child Health[17]. Four central elements have been chosen for developing the monitoring logic model, (1) Management; (2) Access to care; (3) Provision of care; and (4) Experience of care

The monitoring logic model will serve as a base to develop quality indicators, guided by domains: impact, outcome, output/processes, input. The impact would be ensuring access to quality healthcare services by Timorese people. Outcome indicators focused to improved QI governance and leadership, ensure QI inputs, improved health outcomes, improved patient's satisfaction. Output or process indicators will be developed in line with 4 key domains: Provision of care, experience of care, access to care, management and organization. Provision of care encompass practice of evidence based care, availability and use of standards and guidelines, risk and harm reduction to service providers and users, patient safety, competent and skilled health

workforce, available medicine, supply and logistic, data use for QI. Experience of care comprise of communication, respect and dignity, patient satisfaction, continuity of care. Access to care includes timeliness of care, provider's availability. Management and organization covers leadership, capacity building, performance appraisal, QI coordination, competent and motivated staff, supportive supervision, monitoring of QI, physical resources, organizational management for implementing QI. Input indicators focuses on 3 major areas human resource, health service delivery, health infrastructure.

Figure 7: Monitoring logic model

6.3 Methods and tools for M&E

The method for QI monitoring will not be a separate process, rather just integration to existing M&E model. In Timor-Leste, there are several layers of health facilities starting from Community Health Centres (CHCs), Health Posts (HPs), and outreach clinics within district health structure. From lowest health unit level, the routine information is gathered and subsequently transferred to health sub districts, municipalities and national level. To assess QI progress, routine QI data on selected indicators will be collected using the same path. This means, HMIS platform will be utilized to monitor on progress on quality improvement activities and will be forwarded to Directorate of Policy, Planning and Cooperation. M&E working group at national level will include a quality focal point (from CQAH) in team to ensure progress in quality improvement areas. Additionally, CQAH in coordination with M&E will identify further mechanism to coordinate and monitor detailed QI progression in Timor-Leste using various platforms and processes.

Data will be gathered from different sources such as: HMIS, facility registers, death audits, clinical audits, questionnaire on user's response. Routine data will come from facility records and reports using HMIS. Periodic survey data will be gathered from health care facility assessment, client exit interview, provider's interview, record review etc.

The logical framework of NHSSP[10] already identified "Improved availability of quality healthcare services" as a health system output. The National M& E framework, district progress card and hospital progress card were developed to monitor progress towards attaining goals and targets of NHSPP. A total of 320 health indicators have already been incorporated in the NHSPP 2011-2030. In M& E guidelines for health sector in TL, it was guided to prioritize not all, but few core indicators for ease of monitoring and progress tracking of health system as a whole.

Hence, there was strong recommendation to use by each department their respective M& E framework. However, the key performance indicators for quality improvement monitoring will be developed in this regards to fit as core indicators within the National M& E framework. There will be additional indicators (facility and program based indicators) to be incorporated within the district and hospital progress card. The following methods and schedule will be used for QI data collection which is similar to the existing process of M&E.

	Frequency report	Frequency & feedback	Reports from	Feedback to
National M& E framework	*6 months and annually*	*6 monthly and annually*	*HMIS*	*National*
District progress card	*3 months and annually*	*3 months and annually*	*HMIS*	*District*
Hospital progress card	*3 months and annually*	*3 months and annually*	*HMIS*	*Hospitals*

Table 8: Flow of QI reporting in line with routine M& E

Parallel to it, QI progress will be tracked through review workshops outlined in the M&E framework. This will help identifying any obvious difficulty in implementation or recommendation. Joint annual health sector reviews each year will also be used as a useful platform to assess the quality implementation progress. District and hospital quarterly reviews will also be done with similar aims.

6.4 Introducing the quality indicators

Timor-Leste, being a new country, currently do not have as many QI indicators and yet to gather experience through use of those in real field. The proposed indicators in the strategy will guide the process of QI implementation. Regular testing and refining of these indicators will reduce any existing gap and strengthen the QI progress tracking.

Key performance indicators (KPIs)

KPIs form the basis of performance matrix for quality improvement initiatives. These KPIs are developed to pick realistic goals on quality improvement performance in healthcare and would help to monitor the regular progress fitting in line with the strategic goal of the healthcare system in Timor-Leste. To formulate these KPIS, the critical success factors (CSF) were used as a laid foundation as CSFs are the reasons of achieving success and KPIs are the effect of the intervention. The formulation of KPI was planned in line with the target based on strategic goals defined in the strategic document and was viewed within the light of critical success factors. Here the critical success factors were identified as what are most important elements for achieving each strategic objective KPIs were developed to track and understand whether critical success factors are functional or not for each objective, Targets were developed based on each defined strategic objective. The following proposed framework summarize management related KPIS for QI measurement in TL

Strategic goals	*Critical success factor*	*KPIs*
Strategic Goal 1: Strengthen leadership, management for QI and organizational capacity within the health sector	Functional QI committees	% QI committees conduct quarterly review meetings 1. National 2. Municipal 3. Health facility
	Strengthened monitoring and mentoring mechanism	% of health facilities where regular monitoring visits are conducted
Strategic Goal 2: Ensure the health service provided by competent and expert healthcare providers at health facilities	Competent health providers	% of health providers who are competent and skilled for providing healthcare services
	Skilled health providers	% of health providers who are skilled for providing healthcare services
Strategic Goal 3: Ensure quality service delivery standards available and implemented in health facilities at all levels	Well-equipped health facility having required service standards	% of health facilities having adequate resources including logistic, supplies, medicine, guidelines and tools
	Quality service delivery implementation	% of patients receiving treatment and care from health facilities according to quality standards, protocol, guidelines
Strategic Objective 4: Establish a health system that ensures patient's access and patient-centered care	Service recipient's satisfaction	% of patients satisfied on the care received from health facilities

Table 9: KPI management indicators based in strategic goals

It is well understood that many of these KPIs cannot be implemented straightaway, because the health system is not ready still. Before gathering KPI information, there has been no as such baseline information in place. However, learning through implementation will further modify or guide the process.

Annex 5 includes some proposed facility level indicators that may as well have potential to be included in the district progress card or the hospital progress card. Furthermore, annex 6 has

some proposed program-based indicators that will be developed in consultation with relevant departments.

6.5 Monitoring plan for QI

Internal and external monitoring for QI will take place with necessary guidance from NQIC, CQAH and M&E department. The external monitoring will be done in accordance with the M&E team visits, however in addition to these visits; NQIC/CQAH will plan to have monitoring visits as required. These additional visits will include the municipal administrative team sometimes to oversee QI implementation at the root level.

Internal monitoring will be done by each organizational committee who will collect information quarterly to assess their progress for QI. This kind of self-assessment will guide them to reach to a quality improvement implementation platform on which they can build on for further progress.

Indicator type	**Method of monitoring**	**Who will do**	**Frequency**	**Whom to report**
Key Performance Indicator	Observation, exit interview, record review	Internal	Quarterly	Facility QI team
		External	Quarterly (Routine M&E visit and also additional visits)	Joint visit by CQAH and M&E team/ CQAH &Municipal Administrative Team
Facility based Indicators	Observation, exit interview and record review	Internal	Monthly	Facility QI team
	Observation, exit interview and record review	External	Quarterly (Routine M&E visit and also additional visits)	Joint visit by CQAH and M&E team/ CQAH &Municipal Administrative Team
Program level indicators	Observation, exit interview and record review	Internal	Monthly	Facility QI team
	Observation, exit interview and record review	External	Quarterly (Routine M&E visit and also additional visits)	Joint visit by CQAH and M&E team/ CQAH &Municipal Administrative Team

Table 10: Proposed monitoring plan for QI indicators

Next step: The National QI strategic document provides the lay-out plan from where the detailed monitoring system can be adjusted through step by step implementation experiences. CQAH in consultation with the M&E will initiate the next step to further reviewing the proposed indicators; plan and process outlined in this strategy and will develop new indicators as required for detailing out QI monitoring plan for Timor-Leste.

Annex

Annex 1: Glossary of terms

Quality: The degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge

Operational definition of quality
Safe: Delivering health care that minimizes risks and harm to service users
Effective: Providing services based on scientific knowledge and evidence-based guidelines
Timely: Reducing delays in providing and receiving health care
Efficient: Delivering health care in a manner that maximizes resource use and avoids waste
Equitable: Delivering health care that does not differ in quality according to personal characteristics such as gender, race, ethnicity, geographical location or socioeconomic status
People-centered: Providing care that takes into account the preferences and aspirations of individual service users and the culture of their community

ISO standards: A set of international standards on quality management and quality assurance developed to effectively document the quality system elements needed to maintain an efficient quality system

Quality management principles (QMP): are a set of fundamental beliefs, norms, rules and values that are accepted as true and can be used as a basis for quality management.
QMP 1 – Customer focus
QMP 2 – Leadership
QMP 3 – Engagement of people
QMP 4 – Process approach
QMP 5 – Improvement
QMP 6 – Evidence-based decision making
QMP 7 – Relationship management

Continuous Quality Improvement (CQI): Systematic process of identifying, describing, & analyzing strengths and problems and then testing, implementing, learning from, and revising solutions

Patient centered care: An innovative approach to the planning, delivery, and evaluation of health care that is grounded in mutually beneficial partnerships among health care providers, patients, and families

Patient safety: Absence of preventable harm to a patient during the process of health care and reduction of risk of unnecessary harm associated with health care to an acceptable minimum based on current knowledge, resources available and the context

Annex 2: Key stakeholder's interview guideline

Introduction to the interviewee:
Good morning. Thanks so much for your time. We come from the CQAH, Ministry of Health TL. We are trying to expedite the quality improvement initiative in TL. In this regards, we want to conduct an interview with you to learn from your experiences on quality improvement. We would request 20 min from your end to discuss on the topic.
Interview questionnaire

1. Which organizations have you worked previously or currently working?
2. Was there any quality improvement component learnt/practiced in that/those organization/organizations?
3. How the quality of care influences or impacts your organization's activities (please tell from your present or past experience)
4. What do you understand about the 'quality of health care' in the Timor-Leste context?
5. What elements of quality do you think the most important to address quality improvement activities in TL?
6. What do you think about the roles of the recipients or the patients in improving the quality of care?
7. How do you perceive the quality improvement status in TL?
8. What are the barriers to improve quality of healthcare in TL?
9. How would you like to see an ideal status of quality improvement in TL? Please give an example
10. How we can reach the "ideal" state for quality improvement in TL?
11. What do you know about the quality improvement policy, planning and implementation in TL?
12. What are your ideas and experiences about quality improvement implementation in TL(from national to municipality)?
13. What are the major influencing factors for quality improvement implementation process?
14. Can you suggest how the implementation on quality might be improved?
15. What do you think about the quality improvement aspect of the private sector in TL?
16. Is there any accountability systems for QI implementation in TL ?
17. How can we improve better collaboration for QI?
18. Were you involved in any QI initiatives or you at least know about some of those in TL?
19. Can you describe detailed on these initiatives?
20. What was the outcome or result of these initiatives?
21. How ownership, collaboration and harmonization of quality initiatives might be improved?
22. What would be the major challenges to address while developing the policy and strategy documents?
23. What do you suggest as major health burden or issues in TL requiring quality intervention?
24. Do we have any quality improvement related indicators in place that you know of?
25. Please comment your suggestions on quality improvement planning and future for TL

Annex 3: Proposed Facility QI Indicators

Domains	Indicators	Health Facility level
Leadership	Health facility having a QI team with documented terms of references	Level 1(excluding HP), 2, 3
	Health facility having QI strategic document	Level 1, 2, 3
	Health facility QI teams conduct QI meeting following the national guidelines	Level 1(excluding HP), 2, 3
	Health facility QI teams/focal person review QI action plans and update for following a continuing progress	Level 1, 2, 3
	QI leaders/management collaborates to the appropriate authority for required support	Level 1, 2, 3
	QI team leader/management responded to any identified need placed by the QI committee	Level 1(excluding HP), 2, 3
	Regular assessment done by QI teams on QI performance	Level 1(excluding HP), 2, 3
	Maternal, perinatal, neonatal death review done and necessary actions taken by quality team/focal person	Level 1(excluding HP), 2, 3
Patient centered care	Patient satisfaction rate	Level 1, 2, 3
	Patient's privacy maintained	Level 1, 2, 3
	Average waiting time for being registered in a health facility	Level 1, 2, 3
	Average waiting time to be seen by the provider	Level 1, 2, 3
Patient safety	Facility having uninterrupted supplies of hand-washing materials (soap bars, soap racks, soap dispensers, waterless alcohol-based hand rubs, and disposable towels or clean towels etc)	Level 1, 2, 3
	Facilities having an infection control policy for visitors	Level 1, 2, 3
	Proportion of patients whose ID was checked with medication prescribed	Level 1, 2, 3
	Proportion of patients whose identity is confirmed prior to interventions (e.g., blood test, therapy, surgical procedure, etc.)	Level 1, 2, 3 (where applicable)
	Adequate logistics for final waste management (incinerator, pit) available in health facility	Level 1, 2, 3
	Waste bins are colour-coded and (or) labeled and put in the health services areas	Level 1, 2, 3

	in appropriate place	
	Sharps are collected in safe sharps containers (plastic or metal box), lid closed, marked with appropriate label	Level 1, 2, 3
	Proportion of providers practice hand washing according to guideline	Level 1, 2, 3
Improved clinical practices	Number of SOP/guidelines available in health facilities	Level 1, 2, 3
	Proportion of providers use SOP/guidelines	Level 1, 2, 3
Provider's engagement	Proportion of provider having formal training for clinical practices	Level 1, 2, 3
	Number of provider rewarded for good performance	Level 1(excluding HP), 2, 3
	Proportion e of providers having formal training for clinical practices	Level 1, 2, 3
Use of improvement methods	Proportion of health facility staffs having formal training on 5s-CQI-TQM	Level 1, 2, 3
	Proportion of health facility staffs having formal training on CQI	Level 1, 2, 3
Measurement for quality	Registered are filled by providers with accuracy and completeness	Level 1, 2, 3
	Number of meetings in which routine data has been reviewed for assessing quality improvement	Level 1, 2, 3
Ensure system's inputs for quality improvement tool	Adverse events reported for anesthesia	Level 2, 3 (where applicable)
	FEFO (first expired/first out) rule followed for managing medicine and drugs	Level 1, 2, 3
	Reported stock-out event of emergency medicines within the last 3 months	Level 1, 2, 3
	Proportion of test reports re-validated to ensure safety and quality of diagnostic procedures	Level 1, 2, 3
Ensure continuity of services and improve preventive services for health care quality tool	Standardized handover process followed as required following high-risk patients, (e.g. changing of shift, and transfer) between internal departments or other facilities	Level 1, 2, 3
	Proportion of referred patients for which referral protocols are followed	Level 1, 2, 3

Table 11: Proposed Facility indicators by health facility level

Annex 4: Proposed quality indicators (program focused)

Maternal and newborn health

1. % of pregnant women who are due for 4th ANC visit and complete the visit
2. % of pregnant women delivered at a facility where AMSTL was applied following guidelines
3. % of pregnant women in labor for whom a partograph was used
4. % of pregnant women having obstetric complications were referred to higher health facilities
5. % of women that die at the time of child birth
6. % of maternal death reviews conducted followed by appropriate actions in a month
7. % of mother who return for postnatal check-up?
8. % of newborn deaths that occur during birth or immediately after birth
9. % of perinatal death reviews conducted in a month conducted followed by appropriate actions in a month
10. % of new born babies receiving essential new born care (Cord care; thermal care; initiate breast feeding) within 30min of birth
11. # of new born babies who had complications after birth e.g. asphyxia, failure to breast feed etc.
12. % of under 5 children who were assessed using IMCI guidelines
13. % of under 5 children assessed for nutritional status during each visit

Nutrition

1. Number of staff with nutrition skills at each level of service delivery
2. Proportion of pregnant women receiving iron and folic acid supplements for atleast 90 days
3. Proportion of infants under 6 months of age who are exclusively breastfed
4. Proportion of non-pregnant women, aged 15-49 years having haemoglobin <12gm/dl
5. Proportion of pregnant women having hemoglobin < 11 mg/dL
6. The proportion of children aged 6–59 months who received two high doses of vitamin A supplements within the last year
7. The proportion of children aged 6–59 months who received one high dose of vitamin A supplements within the last year
8. Proportion of underweight children below five years of age
9. Proportion of wasted children below five years of age
10. Proportion of stunted children below five years of age

TB Quality Indicators

1. % of eligible cases for which sputum follow up tests were done
2. % of identified TB patients who are on correct treatment regimen and drug doses
3. % of identified TB patients who completed TB treatment
4. % of TB diagnosed patients who were cured after treatment
5. % of TB diagnosed patients who are defaulters for continuing treatment
6. % of TB diagnosed patients who died

Malaria Quality Indicators

1. % of health providers trained in malaria case management during the past 12 months
2. % of malaria cases confirmed by laboratory diagnostic tests
3. % of confirmed malaria cases using laboratory tests receiving recommended antimalarial drugs during the past one month
4. % of severe malaria cases receiving the recommended antimalarial treatment during the past one month

HIV indicators

1. % of patients who were counseled, tested for HIV
2. % of HIV positive individuals who were provided standard care and treatment services
3. % of HIV positive clients who are tested for active TB
4. % of newly identified HIV positive clients whose CD4 testing is done
5. % of pregnant women who were counseled, tested for HIV

Annex 5: Proposed budget for QI strategy implementation

	Activities	Responsible bodies	Year					Total (USD)
			Y 1	Y 2	Y 3	Y 4	Y 5	
1.1 Blend QI approach at all levels though necessary guidance	Develop and update National QI policy & strategic document on QI implementation	CQAH, NQIC	X	X			X	11,280
	Disseminate National QI strategic document on QI implementation applicable for all levels	CQAH, NQIC	X	X	X			15,630
	Print and supply of the strategic document for use at municipalities	CQAH, NQIC, Municipal Administrative committee	X	X	X	X	X	12,500

	Establish QI committees in health facilities and institutions based on National QI strategic document	CQAH, NQIC, Municipal Administrative committee , Facility QI committees (level 1 excluding health posts, level 2 and level 3)	X	X	X			66,000
1.2 Institutionalize and functionalize QI structure at all levels	Ensure functionality of QI committees at national level according to national strategic plan	CQAH, NQIC	X	X	X	X	X	37,600
	Ensure functionality of QI committees at municipal (administrative) level according to national strategic plan	Municipal Administrative committee	X	X	X	X	X	78,000
	Ensure functionality of QI committees at health facility level according to national strategic plan	Facility QI committees (level 1 excluding health posts, level 2 and level 3)	X	X	X	X	X	690,000
	Develop a QI management manual for guiding the QI implementation	CQAH, NQIC		X				2,820
	Disseminate QI management manual on QI implementation applicable for all levels	CQAH, NQIC			X			15,630
	Print and supply of QI management manual for use at municipalities	CQAH, NQIC, Municipal Administrative committee		X	X	X	X	6,250

1.3 Strengthen leadership and enhance QI practice within organization	Develop 5s-CQI-TQM guidelines, training manuals and training plan for TL with a focus on leadership component	CQAH, NQIC	X					9,400
	Establish capacity building on 5s-CQI-TQM guidelines and tools	CQAH, NQIC		X	X	X	X	78,600
	Develop QI advocacy planning guideline for all tiers	CQAH, NQIC			X			2,820
	Conduct QI advocacy meeting at municipal level according to QI advocacy planning guideline	Municipal Administrative committee , level 2 facilities			X	X	X	6,540
	Conduct QI advocacy meeting at national level according to QI advocacy planning guideline	CQAH, NQIC			X	X	X	9,400
	Establish and implement a QI monitoring and supervision mechanism from national level	CQAH, NQIC	X	X	X	X	X	215,250
	Establish and implement a QI monitoring and supervision mechanism from municipal level	Municipal Administrative committee	X	X	X	X	X	48,000
	Establish and implement a QI monitoring and supervision mechanism from CHCs and below	Municipal Administrative committee, Facility QI committees (level 1 excluding health posts, level 2 and level 3)	X	X	X	X	X	9,000
	Monitor and supervise on QI in individual health facility level	Facility QI committees (level 1, 2 and 3)	X	X	X	X	X	75,000
1.4 Strengthen QI	Incorporate QI implementation activities within the operational plan and budget	CQAH, NQIC		X				1,880

planning and coordination at all platforms	Conduct QI mapping and identify stakeholders and develop engagement plan for QI implementation	CQAH, NQIC	X					1,880
	Conduct QI external assessment to assess regularly and support effective planning	CQAH, NQIC	X		X		X	18,450
	Conduct intervention and operational QI research	CQAH, NQIC			X	X	X	16,890
	Disseminate QI assessment findings at national level	CQAH, NQIC		X		X		8,790
2.1 Health system is equipped with necessary directives to guide providers on required competency	Develop guidelines on health professional's code of conduct and standards for competency and practice	CQAH, NQIC	X	X				9,400
	Translate and print documents on health professional's code of conduct, standards for competency and practice	CQAH, NQIC		X	X	X	X	12,500
	Disseminate on health professional's code of conduct and standards	CQAH, NQIC			X			15,630
	Establish health professional council with clear terms of reference	CQAH, NQIC			X	X		5,640
	Prepare the decree of law for the health professionals practice	CQAH, NQIC			X	X		5,640
	Conduct learning visits on competency examination and related areas for health professionals	CQAH, NQIC		X	X			100,000
	Develop a competency exam guidelines for the Health Professionals	CQAH, NQIC		X				5,640
	Develop a supervision and monitoring plan including checklist for implementation of competency based services, skill assessment of providers	CQAH, NQIC			X	X		2,820
	Establish capacity building on health professional's code of conduct and standards	Municipal Administrative		X	X	X	X	14,760

		committee, Facility QI committees (level 2)						
2.2 Health providers are skilled in quality related areas for service delivery	Develop and implement QI orientation plan for managers and health providers on available guidelines, standards and tools	CQAH, NQIC		X	X	X	X	7,520
	Build capacity of providers on QI guidelines, standards and tools according to plan	CQAH, NQIC		X	X	X	X	65,500
	Develop facility specific QI training plan for health providers on available guidelines, standards and tools	Municipal Administrative committee, Facility QI committees Level 2, Level 1 (Excluding HP)	X	X	X	X	X	10,350
2.3 Health providers are motivated to provide quality service delivery	Conduct provider's survey to assess provider's satisfaction related issues	CQAH, NQIC		X		X		11,260
	Develop Providers incentive guideline for providers to define performance based incentives, recognition criteria	CQAH, NQIC			X			2,820
	Establish capacity building on Provider's Incentive Guideline	CQAH, NQIC			X	X	X	8,790
	Conduct periodic performance assessment of the health providers on QI according to Providers incentive guideline	CQAH, NQIC, Municipal Administrative committee				X	X	30,750
	Hold annual review workshop on performance reviewing of health facilities	CQAH, NQIC				X	X	167,000
3.1 Ensure standard clinical	Conduct stocktaking of available SOPs , guidelines for clinical practices	CQAH, NQIC	X					1,410

practice by health providers	Consult and develop a list of needful guidelines, standards, SOPs and prepare a plan for developing QI relevant guidelines	CQAH, NQIC	X					1,410
	Develop new or update (as required), SOPs, guidelines and tools for clinical practice according to defined timeline	CQAH, NQIC	X	X	X	X	X	5,640
	Print quality specific service delivery standards, tools and guidelines	CQAH, NQIC, Municipal Administrative committee	X	X	X	X	X	12,500
	Build capacity of providers on developed standards, guidelines, SOPs, tools	CQAH, NQIC, Municipal Administrative committee		X	X	X	X	65,500
	Orient facility team on QI standards, tools, guidelines at a regular interval	Facility QI committees level 1,2,3	X	X	X	X	X	37,500
3.2 Establish an ongoing system of measurement for quality improvement implementation	Conduct consultation on developing a QI monitoring framework including guidelines, checklist with quality focused indicators for priority areas	CQAH, NQIC	X					8,460
	Disseminate QI monitoring framework including guidelines, checklist on QI implementation applicable for all levels	CQAH, NQIC, Municipal Administrative committee		X				15,630
	Print national QI monitoring framework including guidelines, checklist	CQAH, NQIC, Municipal Administrative committee	X	X	X	X	X	125,00
	Establish capacity building on QI monitoring framework	CQAH, NQIC,	X	X	X			56,200
	Conduct orientation at municipal level for health providers on QI	Municipal Administra	X	X	X	X	X	35,425

	indicators, M&E plan	tive committee , Facility QI committees level 2						
	Orient QI teams in health facilities on QI indicators, M&E plan	Facility QI committees level 1,2,3	X	X	X	X	X	75,000
3.3 Strengthen referral system for ensuing quality care of services	Develop national referral guideline for health facilities	CQAH, NQIC		X				2,820
	Printing and disseminate the referral guidelines for use in health facilities	CQAH, NQIC, Municipal Administrative committee		X	X	X	X	6,250
	Disseminate on national referral guidelines and related tools	CQAH, NQIC		X				15,630
	Establish capacity building on national referral guideline	CQAH, NQIC, INS		X	X	X	X	50,580
	Conduct orientation at municipal level on referral guidelines for use in health facilities	Municipal Administrative committee , Facility QI committees level 2		X	X	X	X	35,425
	Orient QI teams on referral guidelines for use in health facilities	Facility QI committees level 1,2,3		X	X	X	X	37,500
3.4 Establish a system of audit in health facilities	Develop clinical and death audit guidelines	CQAH, NQIC		X				2,820
	Print and distribute clinical and death audit guidelines and tools	CQAH, NQIC, Municipal Administrative committee		X	X	X	X	6,250
	Establish capacity building on clinical and death audit guidelines	CQAH, NQIC, INS		X	X	X	X	50,580

	Conduct audit visits periodically	CQAH, NQIC, M&E, Municipal Administrative committee		X	X	X	X	24,600
	Review audit findings and organize sharing workshop at regular intervals	CQAH, NQIC, M&E		X	X	X	X	14,650
	Disseminate on national clinical audit guidelines and related tools	CQAH, NQIC		X				15,630
	Conduct orientation at municipal level on clinical audit guidelines for use in health facilities	Municipal Administrative committee , Facility QI committees level level II		X	X	X	X	35,425
	Orient QI teams on clinical audit guidelines for use in health facilities	Facility QI committees level 1,2,3		X	X	X	X	37500
3.5 Strengthen support system in health facility for quality clinical service delivery	Develop a guideline on support system for QI including supply chain management in health facilities	CQAH, NQIC			X			2,820
	Print and distribute guidelines on support system for QI	CQAH, NQIC, Municipal Administrative committee			X	X	X	6,250
	Establish capacity building on support system for QI	CQAH, NQIC, INS			X	X	X	44,960
	Orient team on guideline on support system for QI at a regular interval	Facility QI committees level 1,2,3			X	X	X	37,500
	Develop QI guidelines, standards and SOP on laboratory, imaging and related services	CQAH, NQIC			X			2,820

	Print and distribute of QI guidelines, standards and SOP on laboratory and imaging services	CQAH, NQIC, Municipal Administrative committee			X	X	X	6,250
	Build capacity of health providers on guidelines, standards and SOP on laboratory and imaging services	CQAH, NQIC, INS			X	X	X	50,580
	Orient QI teams on guideline guidelines, standards and SOP on laboratory and imaging services	Facility QI committees level 1,2,3			X	X	X	37,500
	Develop guidelines, standards and SOP on pharmacy regulation	CQAH, NQIC			X			2,820
	Print and distribute of guidelines, standards and SOP on pharmacy regulation	CQAH, NQIC			X	X	X	6,250
	Build capacity of health providers on pharmacy regulation	CQAH, NQIC			X	X	X	44,960
	Conduct orientation at municipal level on guidelines, standards and SOP on pharmacy regulation	Municipal Administrative committee			X	X	X	35,425
	Orient QI teams on guidelines, standards and SOP on pharmacy regulation at regular interval	Facility QI committees level 1,2,3			X	X	X	37,500
	Disseminate guidelines on support system for QI, guidelines on laboratory and imaging and pharmacy related	CQAH, NQIC			X			2,930
3.6 Improve patient safety care	Develop patient safety guidelines and SOPs	CQAH, NQIC	X					2,820
	Disseminate patient safety guidelines and SOPs	CQAH, NQIC		X				2,930
	Print and distribute of guidelines, standards and SOP on patient safety	CQAH, NQIC, Municipal Administrative committee		X	X	X	X	6,250

	Establish capacity building on patient safety guidelines and SOPs	CQAH, NQIC, INS		X	X	X	X	50,580
	Conduct orientation at municipal level on patient safety guidelines , SOP and tools	Municipal Administrative committee , Facility QI committees level level 2		X	X	X	X	35,425
	Orient QI teams on patient safety guidelines and relevant documents	Facility QI committees level level 1,2,3		X	X	X	X	37,500
3.7 Establish IPC mechanism	Develop national IPC guidelines, SOP and tools	CQAH, NQIC	X					2,820
	Print and distribute of guidelines, standards and SOP on IPC	CQAH, NQIC, municipal director office	X	X	X	X	X	6,250
	Establish capacity building on IPC guidelines, SOP and tools	CQAH, NQIC, INS	X	X	X	X	X	50,580
	Conduct orientation at municipal level on IPC guidelines, standards and tools	Municipal Administrative committee , Facility QI committees level 2	X	X	X	X	X	35,425
	Orient team at health facilities on national IPC guidelines, standards and tools at regular interval	Facility QI committees level 1,2,3	X	X	X	X	X	37,500
	Disseminate national IPC guidelines	CQAH, NQIC	X					2,930
	Develop IPC monitoring guideline, SOPand tools on priority infectious diseases such as COVID-19	CQAH, NQIC	X					2,820
	Establish capacity building on IPC guidelines, SOP and tools focusing on priority infectious	CQAH, NQIC	X	X	X	X	X	50,580

	diseases such as COVID-19							
	Establish and implement IPC monitoring and supervision mechanism from national level	CQAH, NQIC	X	X	X	X	X	215,250
	Establish and implement a IPC monitoring and supervision mechanism from municipal level	Municipal Administrative committee	X	X	X	X	X	48,000
	Establish and implement a IPC monitoring and supervision mechanism from CHCs and below	Municipal Administrative committee, Facility QI committees (level 1 excluding health posts, level 2 and level 3)	X	X	X	X	X	9,000
	Conduct IPC self-assessment in health facility level	Facility QI committees (level 1, 2 and 3)	X	X	X	X	X	37,500
3.8 Establish MWM system	Develop national Medical Waste Management guidelines and tools	CQAH, NQIC	X					2,820
	Print and distribute of guidelines, standards and SOP on MWM	CQAH, NQIC, Municipal Administrative committee	X	X	X	X	X	6,250
	Establish capacity building on national Medical Waste Management guidelines and tools	CQAH, NQIC, INS		X	X	X	X	50,580
	Ensure adequate availability and supply provision of MWM logistics and commodities	CQAH, NQIC, Municipal	X	X	X	X	X	60,750

		Administrative committee , Facility QI committees level 1,2,3						
	Disseminate Medical Waste Management guidelines and tools	CQAH, NQIC		X				2,930
3.9 Institutionalize hospital accreditation system	Establish National accreditation board	CQAH, NQIC		X				2,820
	Develop criteria, process, standards, tools for health facility accreditation	CQAH, NQIC		X				2,820
	Orient health providers and managers on accreditation	CQAH, NQIC		X	X	X	X	14,650
	Conduct accreditation of health facilities	CQAH, NQIC			X	X	X	26,000
	Conduct accreditation of laboratories	CQAH, NQIC			X	X	X	13,000
	Conduct orientation at municipal level on accreditation process, tools and guidelines	Municipal Administrative committee , Facility QI committees level 1,2,3				X	X	35,425
	Orient QI teams on accreditation process, tools and guidelines	Facility QI committees level 1,2,3			X	X	X	37,500
4.1 Establish patient-centered care mechanism in health facilities	Develop patient-centered care guidelines and tools	CQAH, NQIC	X					2,820
	Print and distribute patient-centered care guidelines and tools	CQAH, NQIC, Municipal Administrative committee		X	X	X	X	6,250
	Establish capacity building on patient-centered care guidelines and tools	CQAH, NQIC		X	X	X	X	50,580
	Conduct orientation at municipal level on patient-centered care guidelines and tool	Municipal Administrative committee		X	X	X	X	35,425
	Orient team on patient-centered care guidelines and tool at	Facility QI committees		X	X	X	X	37,500

	regular interval	level 1,2,3						
	Develop a national communication strategy for QI implementation	CQAH, NQIC			X			2,820
	Print and distribute national communication strategy for QI	CQAH, NQIC, Municipal Administrative committee			X	X	X	6,250
	Disseminate n national communication strategy for QI and related tools	CQAH, NQIC			X			2,930
	Establish capacity building on National Communication Strategy on QI	CQAH, NQIC			X	X	X	50,580
	Establish patient-focused IPC practice mechanism in health centres with specific prevention focus on high infectious priority diseases such as COVID-19	Facility QI committees level 1,2,3	X					75,000
4.2 Ensure accountability and transparency in providing care within health facilities	Develop community engagement model	CQAH, NQIC			X	X	X	2,820
	Establish capacity building on Community Engagement Model	CQAH, NQIC			X	X	X	50,580
4.3 Create awareness amongst patients, community on rights and responsibil	Develop/review patient charter	CQAH, NQIC	X					2,820
	Conduct meeting with community, patients, providers on rights and responsibilities of patients	CQAH, NQIC, Municipal Administrative committee	X	X	X	X	X	39,000

ities	Conduct meeting with community, patients, providers on importance of IPC especially from high infectious priority diseases such as COVID-19	CQAH, NQIC, Municipal Administrative committee	X	X	X	X	X	78,000
								4,228,110

Table 12: Proposed year specific budget by QI implementation plan

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