East Africa Core Competency Framework for Quality Improvement

OCTOBER 2015

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Acronyms

ASSIST	USAID Applying Science to Strengthen and Improve Systems Project
CF	Competency Framework
EA RHH	East Africa Regional Health and HIV/AIDS Office
HCI	USAID Health Care Improvement Project
MEPI	Medical Education Partnership Initiative
MoH	Ministry of Health
NEPI	Nursing Education Partnership Initiative
PIA	Performance Improvement Approach
QI	Quality Improvement
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
RCQHC	Regional Centre for Quality of Health Care
TQM	Total Quality Management
URC	University Research Co., LLC
USAID	United States Agency for International Development
WHO	World Health Organisation

Definitions

Attitude	A state of mind, feelings, or beliefs about a particular matter (affective abilities).
Competency	The ability to perform a defined task in a specific context. Competencies are the integrated set of knowledge, skills, attitudes and behaviours required to perform a given task effectively or to the standards expected.
Competency requirements	Specific statements of knowledge, skills, attitudes and observable/measurable behaviours necessary to mastering each competency. Competency requirements suggest how students' knowledge, skills and attitudes will be different because of the learning experience.
Domain	An interacting grouping of competencies into a set subject area.
Knowledge	The complex process of remembering, relating or judging an idea or abstract phenomenon; mental operations (cognitive abilities)
Skill	The ability to conduct a specified task usually as a result of one's training, knowledge, attitude and experience.
Specific activities	Sub-components into which tasks are broken into.
Tasks	Critical work functions performed in any given work setting.

SECTION I: INTRODUCTION AND BACKGROUND

Introduction to Improvement Science and Core Competencies

Improvement science refers to an evidence-based field that is focused on how systems can consistently and increasingly deliver better results (Rocco, Lloyd and Gareth, 2013). In the context of health care improvement, it encompasses key principles foundational to improving health care outcomes. The goal of improvement science is to ensure that efforts are as evidence-based as the best practices they seek to implement (Shojania and Grimshaw, 2005). Integration of core improvement competencies into pre-service education and in-service training not only supports the development of a health workforce capable of applying improvement approaches but also fosters a quality culture, application of improvement and thus strengthens the ability to continuously improve throughout the health system.

Core competencies have been used to redefine curricula to develop a workforce that is fit-for-purpose across the major health professions in recent decades (Calhoun, Ramiah, Weist and Shortell 2008**).** Many existing in-service training program providers have focused on "things you need to learn" (or topic driven training) rather than "things you need to learn in order to perform a task" (or competency based approach). An assessment conducted by the Regional Centre for Quality of Health Care (RCQHC) in 2011 found competency-based health worker education and training on quality improvement at the pre-service and in-service levels to be largely absent in many African countries. Almost all newly trained health workers enter the health system without the requisite set of knowledge, skills, attitudes and behaviours (or competencies) to apply the science of improvement.

A **competency framework** gathers a collection of competencies that are thought to be essential to perform a core set of tasks. Competency frameworks have been demonstrated in the education literature to enable more effective education and training that is needs-based. They have also been documented to facilitate improvements in curriculum design, evaluation of education and training, learner assessments, professional development and capacity building. Increased attention is being placed on the use of competency-based education for optimising the preparation of health professionals and developing desired performance characteristics so as to realize improvements in global health (Gruppen, Mangrulkar and Kolars 2012). Defining, developing and integrating core competencies for improvement into health worker pre-service and in-service education and training is thus an essential strategy in transforming education in ways that allow health worker teams to gain a holistic set of competencies for health care improvement.

Rationale and Background to the Core Competency Framework Development

improvement efforts in health facilities due to staff turnover when new staff that may not have the necessary improvement competencies.

In a bid to reposition quality of care on the African health agenda, a Regional Consultative Workshop for Health Care Improvement was held at the Lake Victoria Serena Resort, in Kampala Uganda, from 17-21 October 2011. The overall workshop goal embedded in its core theme was to deliberate on catalysing and institutionalising quality improvement efforts in the region[1]. The workshop brought together 189 participants from 15 African countries. Participants represented medical and nursing schools, Ministries of Health (MoH), national teaching hospitals, implementing partners, donors supporting quality improvement activities and members of the Medical Education Partnership Initiative (MEPI) and Nursing Education Partnership Initiative (NEPI). At the workshop, a session focusing on integrating core competencies for quality improvement into the pre-service curriculum and in-service training programs for health workers was held.

Against this background, stakeholders from 15 African countries took formative steps at the workshop towards the development of a draft quality improvement (QI) competency framework. Through rounds of brainstorming, development, peer review and revision, the forum reached consensus on the core elements of the competency framework. Before this could be utilized as a tool in regional and national approaches that build capability for health care improvement in Africa, there was a need to further develop, refine and validate the competency framework through a structured methodology described below. This validated competency framework defines core competencies that can be integrated into pre-service and relevant in-service training programs for health workers to offer the strongest foundation for the ongoing development of competencies to transform and improve health systems and health care outcomes.

Purpose of the Quality Improvement Competency Framework

Quality improvement core competencies have been defined here as an integrated set of applied knowledge, skills, attitudes and behaviours required to perform a given role or responsibility effectively. The purpose of this competency framework is thus to define the competency requirements – i.e., the knowledge, skills, attitudes and behaviours required to perform specific tasks in improvement. The competency framework can be used by instructors and trainers to design and develop training courses/packages and curricula as well as improve and standardise quality improvement training and curricula for health workers to address health care quality issues. This framework was developed for quality improvement teams at the frontline of health service delivery. The framework can also be used by managers, supervisors, evaluators, learners and health workers to identify and address competency development needs for in-service training and continuing education.

[1] The Regional Consultative Workshop for Health Care Improvement was convened by the United States Agency for International Development (USAID) East Africa Health Office and Office of HIV/AIDS and RCQHC, with assistance from the USAID Health Care Improvement Project (HCI), managed by University Research Co., LLC (URC). The consultative workshop was funded by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR).

The competencies provided in this framework are not intended to be an exhaustive list. They focus mainly on the most common tasks in improvement. The competencies are intended to be specific to the tasks an individual undertakes, and thus does necessarily mean that an individual needs all the competencies described in this framework. This framework does not comprehensively cover all advanced competencies for specialist roles, particularly applicable to multi-site improvement. Other competencies may also be required for quality improvement and these may also change over time. Each set can be used individually or collectively in any configuration to meet the needs of varied target groups and the specific tasks they need to perform. Further guidance on the application of this competency framework is described in Section III.

Framework Development Process

Core elements of the Quality Improvement (QI) Competency Framework (CF) were drafted by stakeholders from 15 African countries in October 2011. A technical working group comprised of QI experts from RCQHC and the USAID Applying Science to Strengthen and Improve Systems (ASSIST) began to refine the competency requirements into competency statements for each task in March 2013. The technical working group also conducted a review of other health care improvement competency frameworks and literature.

A structured and iterative process was employed between April 2013 and August 2015 to further develop and validate the competency framework. A modified two-round Delphi process to engage improvement experts (i.e., QI advisors, trainers and practitioners) to develop, refine and reach consensus on the CF content. The first round of expert review was followed by revisions to the document in 2013. At this point, the competency framework underwent significant revision to clarify competencies and reduce duplication. While many of the same competencies remain from the original 2011 CF, the competencies were reorganized into different categories and the technical working group decided to focus on the team level competencies. The competency framework was sent to the same set of reviewers (three were unable to participate) for final comments and suggestions. Consensus was defined as agreement amongst 90% or more of the expert consensus panel. In December 2013, regional stakeholders were involved in a face validity (clarity of language for non-experts) review during a meeting in Nairobi. The second round of review took place in May 2015 followed the incorporation of the reviewers' comments to create this final CF.

Organization and Format of the Quality Improvement Competency Framework

From the initial review and refinement of the framework developed at the October 2011 workshop, competencies specific to the quality improvement process as well as cross-cutting competencies related to knowledge management and organisational aspects were identified. Whilst these competencies are interrelated, for ease of use they have been structured into the following three domains:

1. Basic principles and concepts of improvement science

Domain descriptions are provided in order to explain the related competencies that are gathered into a category or set. Each of the three domains is broken down into main tasks and then into specific activities.

To ease the interpretation and use of this competency framework, it has been organised into broad domains and structured around tasks. Tasks are broken down into specific sub-components or activities.

The domains, tasks and specific activities are summarised in Table 1.

Table 1: Quality Improvement Core Competency Framework

Domains	Tasks	Specific activities
1. Basic principles and concepts of improvement science	1.1 Explain the fundamental concepts and principles of quality of health care	1.1.1 Demonstrate knowledge of definition and dimensions of health care quality
		1.1.2 Describe stakeholders perspectives of health care quality
		1.1.3 Explain quality improvement principles, approaches and techniques
2. Designing, planning and managing the quality improvement process	2.1 Design improvement activity to address priority quality gaps	2.1.1 Analyse the health care system and identify priority areas for improvement
		2.1.2 Identify priorities and appropriate strategies to address needs
	2.2 Identify and engage key stakeholders to support, plan, implement and manage quality improvement	2.2.1 Identify and assign roles to key stakeholders in quality improvement
	2.3 Determine appropriate content	2.3.1 Work with content experts to determine appropriate content for improvement
	2.4 Set the improvement aim to clarify what is to be achieved and how it will be measured	2.4.1 Define the improvement aim
		2.4.2 Set indicators to demonstrate whether improvement efforts lead to change
	2.5 Manage the improvement team	2.5.1 Organise and run the improvement team
	2.6 Identify information and develop tools to gather required data and information needed for quality improvement	2.6.1 Develop and test tools to rapidly assess the system and identify quality of care gaps
	2.7 Conduct situational analysis of quality gaps	2.7.1 Use baseline data to plan improvement work
		2.7.2 Disseminate baseline findings to stakeholders

Domains	Tasks	Specific activities
	2.8 Conduct a root cause analysis to understand why the quality gap exists in the process or systems	2.8.1 Identify the root cause(s) of the gap(s)
		2.8.2 Prioritise root causes for action
	2.9 Identify, test and implement prioritised actions (changes) to address gaps identified	2.9.1 Identify and prioritise changes to address priority root causes of gaps
		2.9.2 Plan to test/ implement the prioritised change idea
		2.9.3 Test/implement the change as planned
	2.10 Manage, analyse and use data for improvement process	2.10.1 Collect and validate data at the site level
		2.10.2 Document changes and external factors to QI at the site level
		2.10.3 Plot, analyse and interpret measurement data
		2.10.4 Identify what was learned from an improvement activity
3. Leadership and support for the quality improvement process	3.1 Institutionalise quality improvement into health care systems	3.1.1 Facilitate an enabling environment for quality improvement
	3.2 Build improvement competencies	3.2.1 Assess and identify competency development needs
		3.2.2 Facilitate development of improvement competencies
	3.3 Provide support to quality improvement teams to conduct and manage the improvement process and initiatives	3.3.1 Apply coaching strategies to support the implementation of improvement activities
		3.3.2 Support team members to undertake, manage and sustain QI activities into routine work

SECTION II: QUALITY IMPROVEMENT COMPETENCY REQUIREMENTS

This section details the competency requirements for each of the specific activities encompassed in the three domains of quality improvement described in Section I.

A **competency** is the ability to perform a defined task in a specific context. Competencies are the integrated set of knowledge, skills, attitudes and behaviours required to perform a given task effectively. **Competency requirements** are more specific statements of knowledge, skills, attitudes and observable behaviours necessary to mastering each competency. Competency statements/requirements were developed for each of the specific activities to outline what the learners are expected to do under each of the identified competency

Domain 1. Basic Principles and Concepts of Improvement Science

Description:

According to WHO 2006, every initiative taken to improve quality and outcomes in health systems has as its starting point an understanding of what is meant by 'quality'. An understanding of and an ability to explain the basic principles and concepts of improvement science are vital for their practical application to address health care problems through the design of interventions used to improve results. Understanding the basic concepts of improvement science therefore serves as a starting point for further competency development described in Domains 2-3 and beyond.

The one task encompassed in Domain 1 is:

1.1: Explain the fundamental concepts and principles of quality of health care

The specific activities and competency requirements for this task are detailed in the table below.

1.1 Explain the fundamental concepts and principles of quality of health care	
Specific activities	**Competency requirements: knowledge, skills, attitudes and behaviours**
1.1.1 Demonstrate knowledge of definition and dimensions of health care quality	1.1.1.1 Explain the evolution of quality management (e.g., Shewart, Deming, Donabedian, Juran, Crosby)
	1.1.1.2 Outline commonly cited definitions of quality, their source and critical components (e.g., Deming, Juran, Crosby, WHO, Institute of Medicine, Joint Commission on Accreditation of Healthcare Organizations)
	1.1.1.3 Explain the U. S. Institute of Medicine dimensions of health care quality (effectiveness, efficiency, timeliness, patient-centeredness, equity, and safety), the rationale for their importance and variations on these dimensions.
	1.1.1.4 Explain common health care quality aims cited by other stakeholders (e.g., coordination of care across system levels and phases of care)
	1.1.1.5 Recognise that continuously improving health care quality is a way of strengthening health systems

1.1 Explain the fundamental concepts and principles of quality of health care	
Specific activities	**Competency requirements: knowledge, skills, attitudes and behaviours**
1.1.2 Describe stakeholders perspectives of health care quality	1.1.2.1 Appreciate health care workers (providers, managers, staff, etc.) needs, expectations, perceptions and preferences related to health care quality, e.g., infrastructure, logistics, work environment, continued medical education
	1.1.2.2 Appreciate how client/patients' needs, expectations, perceptions, involvement in self-management and preferences relate to health care quality and how patients perspectives should guide and inform improvement efforts (can be utilised to improve health care quality)
	1.1.2.3 Demonstrate respect and empathy for stakeholders' perceptions, culture, religion, tradition and beliefs
1.1.3 Explain quality improvement principles, approaches and techniques	1.1.3.1 Explain what improvement science is
	1.1.3.2 Appreciate the key principles of quality improvement (e.g., know your stakeholders/customers and what they need improved; focus on processes and systems; continuous measurement and using data for making decisions; use teamwork to improve work; developing effective ideas for changes that will result in improvement; testing and adapting changes before attempting to implement; make quality improvement continuous; demonstrate leadership commitment to make changes sustainable through effective implementation to integrate the changes in the system of interest)
	1.1.3.3 Outline the fundamental steps used in applying improvement science and their rationale (e.g., articulating improvement aims based on important client outcomes and associated quality of care gaps, determining quality gaps and gaps in essential supportive systems functions, root cause analysis to understand why key gaps occur, taking action, continuously testing and assessing effect of the changes and measuring the effect with frequent data collection and analysis)
	1.1.3.4 Appreciate similarities, differences and appropriate applications of approaches and techniques commonly applied to improve health care quality (e.g., Performance Improvement Approach [PIA]; The model for improvement [PDSA]; Sort, Set, Shine, Standardise, Sustain [5S], etc.)

Domain 2. Designing, Planning and Managing the Quality Improvement Process

Description:

Quality improvement is a systematic, continuous and ongoing effort to increase efficiency, effectiveness and performance of processes and systems so as to achieve measurable improvements that provide added benefits to both the organization and its customers (Bani-Hani and Al-Omari, 2012). Careful designing and planning of quality improvement initiatives is essential to ensure that the efforts will contribute towards addressing an identified health care gap that is important to health outcomes.

For a particular improvement initiative focused on improving a particular outcome (e.g., reducing neonatal mortality), planning begins with understanding the epidemiology of mortality and morbidity in the priority health area and the clinical and non-clinical interventions demonstrated to reduce leading causes of mortality/morbidity. The aim of planning is to define clear improvement aims based on the priority health area and demonstrated quality gaps and to highlight promising change ideas and define measurable, feasible indicators that can be used to guide the improvement work. Preparation for improving health care requires the identification and engagement of key stakeholders. This is followed by development and use of assessment tools to rapidly gather reliable data on the current situation (current practice, processes and systems). Analysis and assessment of the gathered data is critical so as to identify gaps, generate information and putting it in a format that it can be used and eventually shared/disseminated to facilitate wider application.

Management of the quality improvement process begins with an analysis of the root causes for the performance gaps (problems) identified from situational analysis. Once identified, the root causes that can be influenced are prioritised for the testing of specific actions or changes to processes hypothesised to bring about an improvement. Whilst change is necessary to improvement, not all changes result in improvement. These changes are tested and incrementally modified and assessed against established indicators. Implementation of corrective action as well as continuous testing of changes and implementation of rapid cycles of improvement and use of data are imperative.

The improvement process may be conducted at small scale in a single aspect of the health service in one site, or may be applied in more complex and multi-level systems at scale to involve multiple improvement areas in multiple sites at different levels of the health system. This domain focuses on designing, planning and managing the improvement process within a site and does not comprehensively cover the advanced competencies required of designing and planning for large scale, multi-site improvement.

The 10 tasks encompassed in Domain 2 are:

2.1 Design improvement activity to address priority quality gaps
2.2 Identify and engage key stakeholders to support, plan, implement and manage quality improvement
2.3 Determine appropriate content
2.4 Set the improvement aim to clarify what is to be achieved and how it will be measured
2.5 Manage the improvement team
2.6 Identify information and develop tools to gather required data and information needed for quality improvement
2.7 Conduct situational analysis of quality gaps
2.8 Conduct a root cause analysis to understand why the quality gap exists in the process or systems
2.9 Identify, test and implement prioritised actions (changes) to address gaps identified
2.10 Manage, analyse and use data for improvement process

The specific activities and competency requirements for these tasks are detailed in the following tables.

2.1 Design improvement activity to address priority quality gaps	
Specific activities	**Competency requirements: knowledge, skills, attitudes and behaviours**
2.1.1 Analyse the health care system and identify priority areas for improvement	2.1.1.1 Demonstrate understanding of the cause of the priority health problem(s) in the context in which the improvement is planned
	2.1.1.2 Explain the existing organization of the health care structure, systems and data relevant to the area for improvement
	2.1.1.3 Identify why quality improvement is necessary in the organisation, e.g., poor health outcomes/indicators
	2.1.1.4 Identify the priority areas for improvement using health policy and data
	2.1.1.5 Identify relevant national or local improvement programs and strategies and content-related policies and standards
	2.1.1.6 Identify existing structures for institutionalisation and sustainability
2.1.2 Identify priorities and appropriate strategies to address needs	2.1.2.1 Identify strategies and structures to provide support for improvement activities at all levels of the system (district, facility, community), drawing on existing supervision structures
	2.1.2.2 Identify and design appropriate interactions, connections, referrals and back-referrals, information flow between levels of care as part of the improvement approach
	2.1.2.3 Design an appropriate improvement strategy around the needs of a given country or situation

2.2 Identify and engage key stakeholders to support, plan, implement and manage quality improvement	
Specific activities	**Competency requirements: knowledge, skills, attitudes and behaviours**
2.2.1 Identify and assign roles to key stakeholders in quality improvement	2.2.1.1 Identify key stakeholders relevant to the improvement aim: providers (e.g., physicians' organisation/facility administration); customers (e.g., clients/patients, carers and end-users); society (e.g., community, policy makers/government)
	2.2.1.2 Assign roles and responsibilities to key stakeholders (e.g., provide feedback/input on service delivery, research, policies; provide guidance on program design and implementation)
	2.2.1.3 Explain possible strategies to maintain stakeholder engagement in quality improvement process

2.3 Determine appropriate content	
Specific activities	**Competency requirements: knowledge, skills, attitudes and behaviours**
2.3.1 Work with content experts to determine appropriate	2.3.1.1 Identify evidence-based practice for the content area
	2.3.1.2 Utilise existing change packages to identify changes which will address root causes of gaps between state of the art/evidence based practice and current practice

2.3 Determine appropriate content	
Specific activities	**Competency requirements: knowledge, skills, attitudes and behaviours**
content for improvement	2.3.1.3 Assemble a team with the necessary expertise (improvement and content) to develop improvement aims and targets based on priority health problems, available epidemiologic evidence (for clinical improvement aims), demonstrated content (best practices) to address problem area, available data and assessments related to leading quality gaps/system weaknesses and appropriate policies

2.4 Set the improvement aim to clarify what is to be achieved and how it will be measured	
Specific activities	**Competency requirements: knowledge, skills, attitudes and behaviours**
2.4.1 Define the improvement aim	2.4.1.1 Explain current/actual status of the performance gap and its importance for patient outcomes and country priorities
	2.4.1.2 Describe relevant international / regional/national / organisational standards and targets related to the performance gap
	2.4.1.3 Explain what is meant by clear SMART improvement aim and give examples
	2.4.1.4 Analyse available epidemiologic, country and baseline assessment information (if available) and work with stakeholders, team members and clients to develop and set appropriate improvement aims
	2.4.1.5 Appreciate the rationale of setting an improvement aim and obtaining internal and external stakeholder buy-in and involvement during selection of aims and implementation of improvement work
2.4.2 Set indicators to demonstrate whether improvement efforts lead to change	2.4.2.1 Demonstrate familiarity with relevant country and global quality of care measures (especially if validated) and ability to define a minimum set of input, process, output, outcome and balancing indicators that can be measured to track progress (or lack of progress)
	2.4.2.2 Develop specific, measurable, attainable, relevant and timely indicators for the aim
	2.4.2.3 Clearly define indicators including numerator, denominator, data source, sampling method, frequency of data collection and indicator calculation and potential problems with calculation of indicator

2.5 Manage the improvement team	
Specific activities	**Competency requirements: knowledge, skills, attitudes and behaviours**
2.5.1 Organize and run the improvement team	2.5.1.1 Appreciate the importance of an improvement team in QI projects
	2.5.1.2 Describe guiding principles for the selection of QI team members and factors underlying effective team-work (democratic, etc.)
	2.5.1.3 Demonstrate desired attributes/characteristics of functional QI teams: team leaders, team players, respected individuals, good listeners, communicators and problem solvers, creative, flexible, proficient in the areas and systems focused for improvement, etc.
	2.5.1.4 Determine appropriate roles and responsibilities of team members, including rotating roles (including chair function) among team members when appropriate
	2.5.1.5 Demonstrate ability in facilitating an improvement team meeting, including develop an agenda, timekeeping, note-taking, prompting discussion and facilitating consensus building
	2.5.1.6 Appreciate stages of team growth and development

2.6 Identify information and develop tools to gather required data and information needed for quality improvement	
Specific activities	**Competency requirements: knowledge, skills, attitudes and behaviours**
2.6.1 Develop and test tools to rapidly assess the system and identify quality of care gaps	2.6.1.1 Demonstrate understanding of the subject matter and target population
	2.6.1.2 Develop baseline tools based on priority measures (input, process and outcome) related to area for improvement, drawing on validated indicators when feasible and ensuring they are adapted to the local context, culture and target population
	2.6.1.3 Effectively communicate with team members and target population on the purpose of the baseline
	2.6.1.4 Demonstrate ability to pre-test and finalise baseline tools
	2.6.1.5 Demonstrate understanding of different data sources and measurement methods that can be used to assess baseline quality of care and essential system functions (e.g., record/register review, observation, simulation, etc.)

2.7 Conduct situational analysis to identify quality gaps	
Specific activities	**Competency requirements: knowledge, skills, attitudes and behaviours**
2.7.1 Use baseline data to plan improvement work	2.7.1.1 Appreciate importance of baselines to inform the design and planning of quality improvement initiatives
	2.7.1.2 Define the target performance for each indicator
	2.7.1.3 Analyse baseline data to identify areas performing above or below the defined standard

2.7 Conduct situational analysis to identify quality gaps	
Specific activities	**Competency requirements: knowledge, skills, attitudes and behaviours**
	2.7.1.4 Prioritise areas performing below the defined standard and decide on how to phase improvement efforts
	2.7.1.5 Develop an implementation plan for the improvement work
2.7.2 Disseminate baseline findings to stakeholders	2.7.2.1 Describe various methods and approaches to disseminate information and provide examples of their appropriate applications
	2.7.2.2 Design appropriate objectives and expected outcomes of the dissemination
	2.7.2.3 Demonstrate ability to design dissemination activities to be interactive and maximise learning between individuals (e.g., knowledge café, liberating structures, open agenda)

2.8 Conduct a root cause analysis to understand why the quality gap exists in the process or system	
Specific activities	**Competency requirements: knowledge, skills, attitudes and behaviours**
2.8.1 Identify the root cause(s) of the gap(s)	2.8.1.1 Appreciate the need of identifying the root cause of a performance gap as a multidisciplinary team
	2.8.1.2 Identify root causes for the quality gap using appropriate tools and methods: brainstorming, cause-and-effect diagrams, fishbone charts, flowcharts, 5 whys
	2.8.1.3 Describe common factors that can affect human performance e.g., clear roles and task expectations, performance feedback, environment, organisational support, incentives/disincentives, competencies
	2.8.1.4 Routinely undertake root cause analysis before developing and taking actions
2.8.2 Prioritise root causes for action	2.8.2.1 Describe commonly used tools, methods and procedures for prioritisation and their appropriate applications, e.g., prioritisation matrix, Pareto charts
	2.8.2.2 Appreciate the importance of prioritisation of root causes that one has influence over in the improvement process

2.9 Identify, test and implement prioritised actions (changes) to address gaps identified	
Specific activities	**Competency requirements: knowledge, skills, attitudes and behaviours**
2.9.1 Identify and prioritise changes to address priority root causes of gaps	2.9.1.1 Describe tools and methods of generating, categorising and prioritising change ideas and their appropriate applications in a group setting, e.g., brainstorming, affinity diagramming, prioritisation matrix
	2.9.1.2 Appreciate the importance and rationale of prioritising a change for testing

2.9 Identify, test and implement prioritised actions (changes) to address gaps identified	
Specific activities	**Competency requirements: knowledge, skills, attitudes and behaviours**
	2.9.1.3 Recognise the relevance of engaging relevant team members in the brainstorming and prioritisation process
	2.9.1.4 Describe how to work with stakeholders to utilise change packages
2.9.2 Plan to test/ implement the prioritised change idea	2.9.2.1 Describe the relevant indicators and information to be gathered from the test/implementation
	2.9.2.2 Demonstrate ability to work with team members to test/implement the prioritised actions
	2.9.2.3 Explain the rationale of testing one change at a time and communicating the change.
2.9.3 Test/implement the change as planned	2.9.3.1 Demonstrate understanding of how to carry out the change to be tested/implemented and decide whether to abandon, modify or maintain the change tested
	2.9.3.2 Gather and analyse relevant data and information to assess the effect of tested changes
	2.9.3.3 Document and communicate the change tested and its results
	2.9.3.4 Implement multiple quality improvement learning cycles until the desired learning is achieved
	2.9.3.5 Cooperate with team members to test changes
	2.9.3.6 Willingness to be a change agent, learn from failure as well as successes and try new ways of working

2.10 Manage, analyse and use data for the improvement process	
Specific activities	**Competency requirements: knowledge, skills, attitudes and behaviours**
2.10.1 Collect and validate data at the site level	2.10.1.1 Describe tools and methods of generating, categorising and prioritising change ideas and their appropriate applications in a group setting e.g., brainstorming, affinity diagramming, prioritisation matrix
	2.10.1.2 Explain the structure and purpose of existing data collection forms (including MoH, project, etc.) and how these forms should be used by data collectors, including how forms can be adapted to capture essential data that is missing in the facility information system
	2.10.1.3 Clarify roles and responsibilities for each person and step in the process of data collection
	2.10.1.4 Appreciate the value of credible sources for gathering information as well as types of threats to validity of data, including transcription errors and bias
	2.10.1.5 Explain sampling frameworks for a given activity, when applicable

2.10 Manage, analyse and use data for the improvement process	
Specific activities	**Competency requirements: knowledge, skills, attitudes and behaviours**
	2.10.1.6 Use and strengthen existing data collection formats (patient records, report formats) and processes to support the improvement work
	2.10.1.7 Recognise data collection and data entry errors/ problems and clean/correct data
	2.10.1.8 Identify and explain appropriate methods for validating data and be able to validate data on a regular basis.
2.10.2 Document changes and external factors to QI at the site level	2.10.2.1 Understand and explain the purpose of documentation of changes and external factors
	2.10.2.2 Gather and maintain a record of changes tested (date and description), external factors/changes and results (time series chart with annotations or other record of data)
2.10.3 Plot, analyse and interpret measurement data	2.10.3.1 Interpret information from a test or multiple tests of changes, derive insights on the effectiveness (or lack thereof) of tested changes and plan next steps
	2.10.3.2 Understand and explain purpose, definitions, sources and calculation of project indicators
	2.10.3.3 Relate changes made in care processes to data plotted on time series chart at the site level and annotate charts appropriately
	2.10.3.4 Interpret data, including how to identify shifts and trends on time series charts (e.g., calculate and plot mean and median, identify shifts, trends, runs and astronomical points)
	2.10.3.5 Explain relevant indicators, how they should be calculated and what appropriate data sources and data collection tools should be used, their rationale and interpretation
2.10.4 Identify what was learned from an improvement activity	2.10.4.1 Interpret information from a test or multiple tests of changes, derive insights on the effectiveness (or lack thereof) of tested changes and plan next steps
	2.10.4.2 Summarise key learnings for uptake by other teams

Domain 3. Leadership and Support for the Quality Improvement Process

Description:

A leader refers to a person who influences a group of people towards the achievement of a goal. This domain primarily considers two categories of leaders, namely a) senior leadership and management who integrate quality improvement into the organization strategic planning processes and the entire health system and b) those that lead and manage quality improvement initiatives in an effort to promote quality values and quality improvement techniques in work practices. These roles may be undertaken by one or more individuals in any given health system and considerable variation exists in how these roles are organised and who they are held by. This domain does not specify who should do what but rather recognises that different leadership roles exist and that within these, certain tasks and activities are critical to overall leadership and support for improvement – even if they are done by different people.

Leaders of the health system play a pivotal role in the quality improvement process by creating and sustaining personal and organisational vision, focus as well as continuous commitment to quality service delivery and performance. As such, through the health system leaders, quality improvement processes should be integrated into organisational policies, strategic and operational plans using available existing resources or including a budget for quality improvement activities as well as supporting an infrastructure that builds competencies for quality improvement.

Leaders of quality improvement initiatives are instrumental in integrating quality into routine work practices through mainstreaming systematic cycles of planning, execution and evaluation. They identify opportunities for improvement as well as inspire, motivate and support teams to ensure they work and openly discuss both successes and failures. In addition, they set the direction for improvement by being knowledgeable about the work and environment; creating and setting goals and priorities; removing barriers; creating opportunities and time for staff to interact; and supporting the quality improvement work and facilitating the spread of learning through the system. Quality improvement initiative leaders should ensure staff, community and patients are involved in understanding data and making decisions based on it and play a key role in strengthening quality improvement activities.

The three tasks encompassed in Domain 3 are:

3.1 Institutionalise quality improvement into health care systems
3.2 Build improvement competencies
3.3 Provide support to quality improvement teams to conduct and manage the improvement process and initiatives

The specific activities and competency requirements for these three tasks are detailed in the following tables.

3.1 Institutionalise quality improvement into health care systems	
Specific activities	**Competency requirements: knowledge, skills, attitudes and behaviours**
3.1.1 Facilitate an enabling environment for quality improvement	3.1.1.1 Appreciate the need and importance of quality in health care delivery
	3.1.1.2 Define and communicate organisational vision for improving quality of care and patient outcomes, including a commitment to continuous learning
	3.1.1.3 Provide stewardship for improvement work at all system levels and support implementation and coordination of quality improvement initiatives
	3.1.1.4 Describe potential strategies that can be used to create an enabling environment for integration of quality improvement - utilisation of national policies and plans, organisational policies, structures and plans; staff roles and responsibilities; professional development; planning and supervision processes as well as performance monitoring and reporting
	3.1.1.5 Demonstrate ability to negotiate, allocate and manage budget/ resources for quality improvement

3.1 Institutionalise quality improvement into health care systems	
Specific activities	**Competency requirements: knowledge, skills, attitudes and behaviours**
	3.1.1.6 Explain key principles and strategies towards ownership, institutionalisation and sustainability of QI initiatives among leaders, managers, health care workers and clients/patients

3.2 Build improvement competencies	
Specific activities	**Competency requirements: knowledge, skills, attitudes and behaviours**
3.2.1 Assess and identify competency development needs	3.2.1.1 Routinely support health workers to identify their competency development needs before undertaking any activities
	3.2.1.2 Demonstrate ability to use appropriate competency assessment tools to identify competency development needs
3.2.2 Facilitate development of improvement competencies	3.2.2.1 Explain improvement concepts and principles in simple language
	3.2.2.2 Demonstrate appropriate use of adult-learning methodologies in the design and delivery of training, including familiarity with specific QI skill-building learning materials (electronic and facilitated) appropriate for local context and clinical content area
	3.2.2.3 Provide feedback and on-the-job training to develop the improvement, reporting and presentation competencies of the teams
	3.2.2.4 Identify and mobilise support to develop competency needs

3.3 Provide support to quality improvement teams to conduct and manage the improvement process and initiatives	
Specific activities	**Competency requirements: knowledge, skills, attitudes and behaviours**
3.3.1 Apply coaching strategies to support the implementation of improvement activities	3.3.1.1 Explain how coaching, mentoring, support supervision or other support techniques and strategies can be applied
	3.3.1.2 Define coaching, mentoring and support supervision roles and responsibilities
	3.3.1.3 Set coaching, mentoring and support supervision goals, appropriate to the aims, audience and situation
3.3.2 Support team members to undertake, manage and sustain QI activities in routine work	3.3.2.1 Demonstrate basic competencies in QI and an understanding of its application (refer to Domain 1)
	3.3.2.2 Appreciate team dynamics and demonstrate team-building skills
	3.3.2.3 Enable QI team members to gain the decision-making authority to manage and implement the improvement process
	3.3.2.4 Appreciate the various motivational needs of team members and demonstrate ability to apply appropriate strategies that can motivate, engage, recognise and reward team members
	3.3.2.5 Interpret findings from improvement initiatives and relay their relevance to key internal and external stakeholders

3.3 Provide support to quality improvement teams to conduct and manage the improvement process and initiatives	
Specific activities	**Competency requirements: knowledge, skills, attitudes and behaviours**
	3.3.2.6 Monitor performance and functionality and provides supportive feedback to QI team at required intervals
	3.3.2.7 Identify and mobilise financial support for implementation of improvement activities stipulated in the work plans
	3.3.2.8 Connect team members with stakeholders and fora at higher levels to present results, learning and challenges
	3.3.2.9 Promote shared learning between teams and opportunities for structured exchange

SECTION III: GUIDANCE FOR THE USE OF THE COMPETENCY FRAMEWORK

A competent workforce is an essential pre-requisite for all health care professions. The quality improvement competency framework describes the basic set of behaviours which individuals should demonstrate upon building competencies in improvement science – either through training or self-directed learning. The framework does not cover all the complex and advanced tasks in quality improvement nor does it imply that individuals need to have all the competencies described.

Adapting the Competency Framework to Your Needs

Competencies are only necessary for the tasks that someone needs to be able to do. Before using this framework for any of the purposes mentioned here, it is important to adapt it to focus on the relevant tasks for the specific target group (e.g., improvement advisors, coaches, improvement team members, etc.). The competency framework should be adapted on a case-by-case basis so that only tasks that an individual or group are required to perform be selected. This ensures that any use of this framework is directly relevant to a particular context that the individual or group are required to provide services and thus best meets their needs. The document has been prepared to be as flexible as possible for potential users who practice in a variety of work situations, with differing levels of responsibility and/or expertise.

Adaptation is relatively simple in that the specific tasks that specific target groups are expected to do along with their requisite competencies for each selected task can be pulled out into an adapted version of the competency framework. Adaptation may also involve adding other core tasks given a particular context. Any additional tasks included in adaptations should also be clearly defined and include clear, observable descriptions of the requisite competencies to perform each task.

Using the Competency Framework

The competency framework can be used to build or strengthen quality improvement competencies of individuals providing health care services in varied ways:

1. **Assessments of competencies and identification of competency gaps**. The framework could be used by health workers, supervisors and improvement advisors to assess competencies and identify specific gaps that need to be addressed. Health care managers can also use it to set standards and monitor performance and to identify and address performance gaps. This can help any competency development efforts to be more targeted to specific needs. You can also track someone's progress in developing their competencies and help them to set their own professional development goals.

   An objective process should be utilised to identify individual or group gaps and competency development needs. This typically includes reviewing the competency requirements and assessing the proficiency in specific competencies using a ranking or scoring system such as low, moderate, high. Areas in which competencies are established to be low can then be prioritised to be addressed through varied training or feedback modalities.

2. **Development of education and training programs**. The competency framework is instrumental for the planning of quality improvement education and training programs.

   Training programs can be developed to target specific competency gaps and assessed to see if they are effective in building defined competencies and actually help someone to perform the tasks they need. To achieve this, identification of the tasks which the individual will be required to perform and thus what competencies need to be developed is critical to enable targeted and comprehensive learner objectives to be developed. The identification of focus competencies and learning objectives will dictate the appropriate instructional strategies to be utilized and ultimately the learning activities and resources to be developed. We can also use assessments to help make the training programs better at helping learners develop defined competencies.

3. Help guide **self-directed learning**. Developing competencies may involve training but we know many competencies are developed and refined on the job through practice, seeking feedback and other ways of learning that someone can do on their own.

4. Help guide **mentoring and coaching support**. By identifying where the competency gaps are, coaches and mentors can better know where to target their efforts to support staff and counterparts develop competencies they need.

REFERENCES

1. Bani-Hani JS, Al-Omari Z. 2012. The Role of Quality Improvement Factors in Improving Quality Based Operational Performance: Applied Study in Private Hospitals in Jordan. *International Journal of Business and Social Science* 3(18) (Special Issue – September 2012).

2. Calhoun JG, Ramiah K, Weist EM, Shortell SM. 2008. Development of a core competency model for the master of public health degree. *Am J Public Health* 98(9):1598-607. doi: 10.2105/AJPH.2007.117978. Epub 2008 Jul 16.

3. Gruppen LD, Mangrulkar RS, Kolars JC. 2012. The promise of competency-based education in the health professions for improving global health. *Human Resources for Health* **10**:43 doi:10.1186/1478-4491-10-43.

4. Shojania KG, Grimshaw JM. Evidence-based quality improvement: the state of the science. *Health Affairs* (Millwood) 2005; 24(1):138-50.

5. Rocco JP, Lloyd PP, Gareth JP. 2013. Seven Propositions of the Science of Improvement: Exploring Foundations. *Quality Management in Health Care* 22(3):170–186.

6. WHO. 2006. Quality of Care: A process of making strategic choices in health systems. World Health Organization, Geneva.

7. Workshop Proceedings Report: *Africa Regional Consultative Workshop on Healthcare Improvement: Catalyzing and Institutionalizing Quality Improvement*. Kampala, Uganda. October 17 – 21, 2011.

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