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Situation Analysis of Quality Improvement in Health Care, Tanzania

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List of Acronyms

ACC	Access and Continuity of Care
ACT	Artemisinin Combination Therapy
AIDS	Acquired Immune Deficiency Syndrome
AMO	Assistant Medical Officer
AOP	Assessment of Patients
APHTA	Association of Private Health Facilities in Tanzania
ARV	Anti Retro Viral
ART	Anti Retroviral Therapy
BEmONC	Basic Emergency Obstetric and Newborn Care
BMAF	Benjamin Mkapa AIDS Fellows
CBHC	Community Based Health Care
CCHP	Comprehensive Council Health Plan
CDC	Centers for Disease Control
CHAI	Clinton Health Access Initiative
CHMT	Council Health Management Team
CHWs	Community Health Workers
COP	Care of Patients
COPE	'Client Oriented Provider Efficient' services
CQI	Continuous Quality Improvement
CSSC	Christian Social Services Commission
CSSD	Central Sterile Supplies Department
CTC	Care and Treatment Clinic
DDH	Designated District Hospital
DMO	District Medical Officer
DPs	Development Partners
EGPAF	Elizabeth Glazer Pediatric Aids Foundation
EMS	Estate Management and Safety
EN	Enrolled Nurse
EQUIP	Expanded Quality management Using Information Power
FBO	Faith Based Organization
FEFO	First to Expire First Out
GTZ	German Technical Cooperation agency (now called GIZ)
HBC	Home Based Care
HCI	Health Care Improvement project
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HMT	Hospital Management Team
HRBA	Human Rights Based Approach
HRH	Human Resources for Health
HSIU	Health Services Inspectorate Unit
HSIQAS	Health Services Inspectorate and Quality Assurance Section
HSSP III	Health Sector Strategic Plan III (2009-2015)
ICD	International Classification of Diseases
ILS	Integrated Logistics System
IMA-World Health	Interchurch Medical Assistance – World Health
IPC	Infection Prevention and Control
JCI	Joint Commission International
JICA	Japanese International Cooperation Agency
KNCU	Kilimanjaro Native Cooperative Union

MKUKUTA	Kiswahili abbreviation for National Strategy for Growth and Reduction of Poverty
MMAM	Kiswahili abbreviation for the Primary Health Development Program
MNH	Muhimbili National Hospital
MOI	Management of Information
MOHSW	Ministry of Health and Social Welfare – Mainland
MSD	Medical Stores Department
NCDs	Non Communicable Diseases
NHIF	National Health Insurance Fund
NMW	Nurse Midwife
NQI	National Quality Improvement
NTDs	Neglected Tropical Diseases
OPD	Out-Patient Department
OVC	Orphans and Vulnerable Children
PDSA	Plan Do Study Act
PICT	Provider Initiated Counseling and Testing
PMTCT	Prevention of Mother To Child Transmission
PMTCT-IF	PMTCT - Infant Feeding
PQI	Partnership for Quality Improvement
PEP	Post Exposure Prophylaxis
PPE	Personal Protective Equipment
PPP	Public Private Partnership
QA	Quality Assurance
QI	Quality Improvement
QIRI	Quality Improvement and Recognition Initiative
QIT	Quality Improvement Team
QPS	Quality improvement and Patient Safety
RCH	Reproductive and Child Health
RDT	Rapid Diagnostic Test
RH	Reproductive Health
RHMT	Regional Health Management Team
SBM-R	Standard Based Management and Recognition
SOPs	Standard Operating Procedures
SQE	Staff Qualifications and Education
SWOC	Strengths Weaknesses Opportunities and Challenges
TA	Technical Assistance
TB	Tuberculosis
TFDA	Tanzania Food and Drugs Authority
TNA	Training Needs Assessment
TOR	Terms of Reference
TOT	Training of Trainers
TQIF	Tanzania Quality Improvement Framework
TQM	Total Quality Management
URC	University Research Company
URT	United Republic of Tanzania
USAID	United States Agency for International Development
VCT	Voluntary Counseling and Testing
WIT	Work Improvement Team
ZHRCs	Zonal Health Resource Centers
5S-CQI (KAIZEN) TQM	Sort, Set, Shine, Standardize, Sustain - Continuous Quality Improvement - Total Quality Management

EXECUTIVE SUMMARY

The purpose of this situation analysis is to inform Strategic Planning for QI in health care for the years 2012 to 2017. The analysis has covered the current status of QI work, standards and their assessment, indicators for QI, methods and approaches in use, progress made, a SWOC analysis, discussion, and areas and recommendations to be considered in the strategy.

The health sector has managed to establish a Health Services Inspectorate Unit with capacity to articulate and advocate for quality improvement in health care. The unit produced the key guide for Quality reviewed in 2011 and titled "Tanzania Quality Improvement Framework 2011- 2016". An organization structure for QI has been outlined and is subject to review shortly. Training of trainers for RHMTs and some CHMTs has enabled capacity building on IPC and assessments of hospitals standards to be conducted. Codes of conduct for professional councils and supportive supervision guidelines have been produced. Development Partners funding of QI initiatives was secured and Stakeholders coordination forum was actualized at the first National Quality Improvement Forum in 2011. National IPC standards for hospitals and Laboratory standards are in place. Standards for QI assessment at District hospitals, Health Centers and Dispensaries are on test, while programmatic guidelines (HIV/AIDS, TB, Malaria, RCH etc) and Nursing care provide standard operating procedures. Training manuals relevant to QI are available among various partners' initiatives. Beyond IPC for hospitals assessments have been done at pilot sites and beyond for HIV/AIDS CTC and PMTCT.

QI monitoring is intended to be based on assessment against agreed set of standards using a set of indicators to measure improvements in quality of services which have yet to be defined. Indicators to measure progress in attaining the strategy objectives shall be defined as part and parcel of the Strategic Plan. Methods or approaches that have been in use include Standards Based Management and Recognition (SBM-R), 5S-CQI (KAIZEN)-TQM, Improvement Collaborative and to some extent COPE (Client Oriented Provider Efficient services in RCH). A common thread within these approaches is the PDSA cycle. Strength of taking QI forward seems to lie in the self-sustaining approach of self assessments and internal assessments facilitated through mentoring and coaching, elements that should change the landscape of supportive supervision.

With partners in agreement with the reviewed TQIF guidance, the QI Forum is valued for the promise it offers for coordination and sharing. Applications of QI in Care and Treatment, PMTCT, PITC have yielded valuable lessons (ARVs compliance, stigma reduction, women involvement, condoms shyness getting away, reduced waiting time and improved turn-around time, confidence on provider safety), and IPC practices increasingly showing up at health facilities with registered improvements and 5S national acceptance as a foundation to QI.

More gains could have been registered in QI if supportive supervision was optimized. Further weaknesses in QI work have been sloth with regard to client focus, poorly motivated staff, low effectiveness of teamwork, poor coordination, insufficient focus on safety and productivity, health systems shortfalls such as financing constraints, erratic supplies and equipment shortcomings, incomplete and unreliable health information and poor functionality of governance mechanisms. Key challenges include human resource availability and stability, supply chain management, unsustainable QI projects versus integration and harmonization, piecemeal capacity development reproducing gaps in knowledge and skills and a lack of clients focus.

This analysis proposes to focus on leadership teamwork (in terms of internal assessments, problems analysis and action planning), client oriented services, clinical and diagnostic services including quality of drugs, supplies equipment, safety issues and IPC sustenance, integrated manual for quality standards,

integrated tools and working guides. It also proposes strong collaboration with Health Systems in addressing Human Resources issues, supply chain management, computerized records and HMIS rationalization.

Value is seen in tracking the delivery modes of sustained on site mentoring and coaching, motivation through recognition and awards, linking career advancements and promotions to earned credits in QI work, pre-service curricula adjustments infusing QI modules and conducting Teaching staff orientation, capacity building of National Hospital Management Team, Consultant Hospitals Management Teams, ZHRCs, RHMTs, CHMTs, HMTs and their QITs, and managing a pooled fund with innovations for efficiency gains. It is suggested to consider nurture of 'Scientific Centers of excellence in QI' and later commissioning them on QI research, external assessments best practices documentation and other specific tasks.

Recommendations for the immediate, intermediate and longer term have been elaborated.

I. INTRODUCTION AND BACKGROUND

This analysis is meant to inform formulation of a five year Strategic Plan on Quality Improvement of health care services in Tanzania. It considers the policies mandating and guiding QI in health care services, national guidelines including core values and principles, identified challenges and priorities to meet standards, approaches of QI been implemented, their successes and shortcomings, and how QI is managed overall within the country. Thematic priorities and domains to be considered in the strategic plan are synthesized from the analysis of current situation and mapping of stakeholders' consensus.

The Tanzania National QI Framework (2011) second edition was launched in November 2011 at the occasion of the First National QI Forum which brought together practitioners in QI across a majority of health programs. In the course of the Forum, it transpired that there existed significant levels of effort in building QI capacities in the health sector but the implementation is thinly spread with various uncoordinated approaches and sometimes duplicative. The National QI Framework was seen as appropriate response to the challenge as it provides a roadmap to maximize outcomes from these QI efforts. However, given the magnitude of the QI gap in health care, the MOHSW wished to select priorities for the First Five Years of implementation. In this context, the USAID Health Care Improvement Project (HCI) was requested to support the development of the 2012 – 2017 National QI Strategic Plan, drawing from its experiences in supporting QI in HIVAIDS in Tanzania and 28 other countries across the globe. HCI therefore contracted a Short Term Consultant to work with a Task Force appointed by MOHSW to facilitate the task.

2. METHODOLOGY

A desk review of documents related to Quality Improvement available at the Health Services Inspectorate and Quality Assurance Section (HSIQAS) of the MOHSW, at DPs' Project Offices, and targeted priority programs was complemented by limited field visits to observe QI work at a limited number of health facilities selected by convenience sampling but ensuring all levels of care (tertiary, secondary, level I hospitals, regional and Council health managers, as well as frontline health facilities) were represented. Semi structured interviews of key officials and a small sample of health managers in respective programs and DP Projects were conducted using tools with discussion guiding topics. The observations and responses were summarized (as annexed) and content analysis was carried out to interpret as well as triangulate the information from respondents with documented assessments/supervision reports.

Internet search for quality improvement in health care reference materials including standards, policies and strategies from other countries informed the positions and discussion in the analysis. A subsequent discussion of findings at a stakeholders' workshop assisted to attain consensus on priorities for the five year plan period.

2.1 Limitations

This analysis is supported by limited field visit observations and interviews of QIT members at 12 service delivery facilities in 3 Regions (6 districts). The field visits should be taken as a snapshot to provide insight: The visits and interviews were neither a representative picture of the state of QI work in the country nor at the visited health facilities. Comprehensiveness of the reviewed QI documents assisted in getting a fair picture on the state of QI work in the country.

3. FINDINGS

3.1 State of QI in Tanzania

3.1.1 Policy

Within Vision 2025 the health service goals of access to **quality** primary health care for all and access to quality reproductive health service for all individuals of appropriate ages have been clearly pronounced. The NSGRP (MKUKUTA) defines improved quality of life and social well being as its second major outcome. The Primary Health Development Program (MMAM) has set a clear policy target of a Health Centre for every Ward and a Dispensary for every village in Tanzania functional and sustained by 2017. The Tanzania Five Year Development Plan 2011/2012-2015/2016 has **recognized quality improvement** as an integral component of the Health Sector goals. Using the yardstick of MDGs policy implementation had a mixture of positives and negatives. For example while Infant and under fives mortality have decreased significantly, neonatal mortality has not while maternal mortality decrease needs careful interpretation (see annex 1). The proportion of deliveries assisted by health professionals is 51%¹. Male involvement in RCH care is still at infancy stages: Getting male involvement in order to attain client numbers coming for counseling testing and care that are comparable to females has been another challenge noted during field visits.

Moving from goal component to planned interventions that shall attract resources is a challenge to be tackled when putting into operation the Tanzania Quality Improvement Framework (TQIF), the key policy guideline for QI in Tanzania. The nature of QI as a cross cutting concept (acknowledged in HSSP III) implies planning for it has to be a multi-focal and multi-level responsibility that calls for clear guidance and support at a strategic level. The desired planning is not yet happening due to structural and procedural gaps in operating systems (refer to weaknesses summary in box 1 below). The various Focal Points and levels need policy level guidance and an integrated national strategic plan to help them to take forward the intentions of the TQIF. At their respective operational points the various levels and Focal Points need to adapt the national guidelines, translate operating manuals to their situation and develop annual QI action plans to internalize and sustain the QI process as a policy implementation imperative.

In the National Health Policy (2007) it is clearly stated that the government aims to reduce morbidity and mortality in order to increase the lifespan of all Tanzanians by providing quality health care. In this policy (section 5.8.2 Kiswahili version) government intent to ensure health services adhere to quality in accordance to agreed standards is elaborated. “The Tanzania Quality Improvement Strategic Plan”, is seen as a sister document to the TQIF² but this is a misnomer: The strategy is the operational document for TQIF. The strategy will stipulate clearly, the objectives and activities that are to be implemented, so as to achieve QI at health care facilities. It is noteworthy that the TQIF has pronounced some principles, vision, core values, objectives and dimensions of QI. Safety of care is seen as one of the dimensions. Challenges encountered in QI work have been listed capturing a few health systems aspects: the critical challenge of drugs, supplies and equipment was not prominent when reviewing the TQIF.

¹ URT, Macro USA 2011. Tanzania Demographic and Health Survey 2010. Page 136.

² MOHSW 2011. The Tanzania Quality Improvement Framework foreword. Pg V.

Box I: Summarized strengths and weaknesses on policy aspects of QI

- Strengths here are the presence of QI supportive policies, and contribution to attainment of child survival goals

Weaknesses are sloth in attaining maternal mortality reduction goal, sloth in attaining male involvement in some areas, and lack of QI operational plans.

3.1.2 Standards and tools in QI

Since 2011 the country has been trying to develop health facility requirements for various levels of health care from the household, community and district level (primary health care level) to secondary, tertiary and national hospital level. Whether what was been developed was actual requirements for health facilities or indeed standards to use as a basis for Quality Improvement assessments still needs to be clarified. In May 2012 National IPC standards for Hospitals were produced with support of Development Partners; the document covers 60 standards³. This work on standards needs to be completed with other domains of quality and other levels of care so that baselines of existing performance against standards can be actualized. The assessment tool (in standards document – op cit) is based on SBM-R approach. Specific care domains it should cover in addition to IPC are ‘Assessment of Patients’ (AOP), ‘Care of Patients’ (COP), ‘Access to Care and Continuity of Care’ (ACC), ‘Patient and Family Rights’ (PFR), ‘Patient and Family Education’ (PFE) as well as organizational aspects such as patient records, and Management of Information (MOI), staff qualifications and education (SQE). AOP would include clinical assessment and diagnostics (laboratory SOPs etc); Nurses SOPs are covered under COP. Steering the work on standards through the stepwise approach under the Safe Care initiative is novel but currently limited in scale. For purposes of certification and future accreditation, the work on standards merits more attention as current pragmatic steps towards QI continue. The scheme being tested briefly described under research below.

Some hospitals departments, nurses, laboratory services and programs have defined SOPs. Guidelines for management of priority programs including standard treatment, prevention and promotion measures for HIV and AIDS, TB, Malaria and guidelines for RCH are available. Training manuals and participants procedure manuals are available for the RCH thematic areas (family planning, safe motherhood, adolescent health, gender, PMTCT, RH cancer, neonatal and child health) and HIV/AIDS interventions including comprehensive supportive supervision and mentorship.

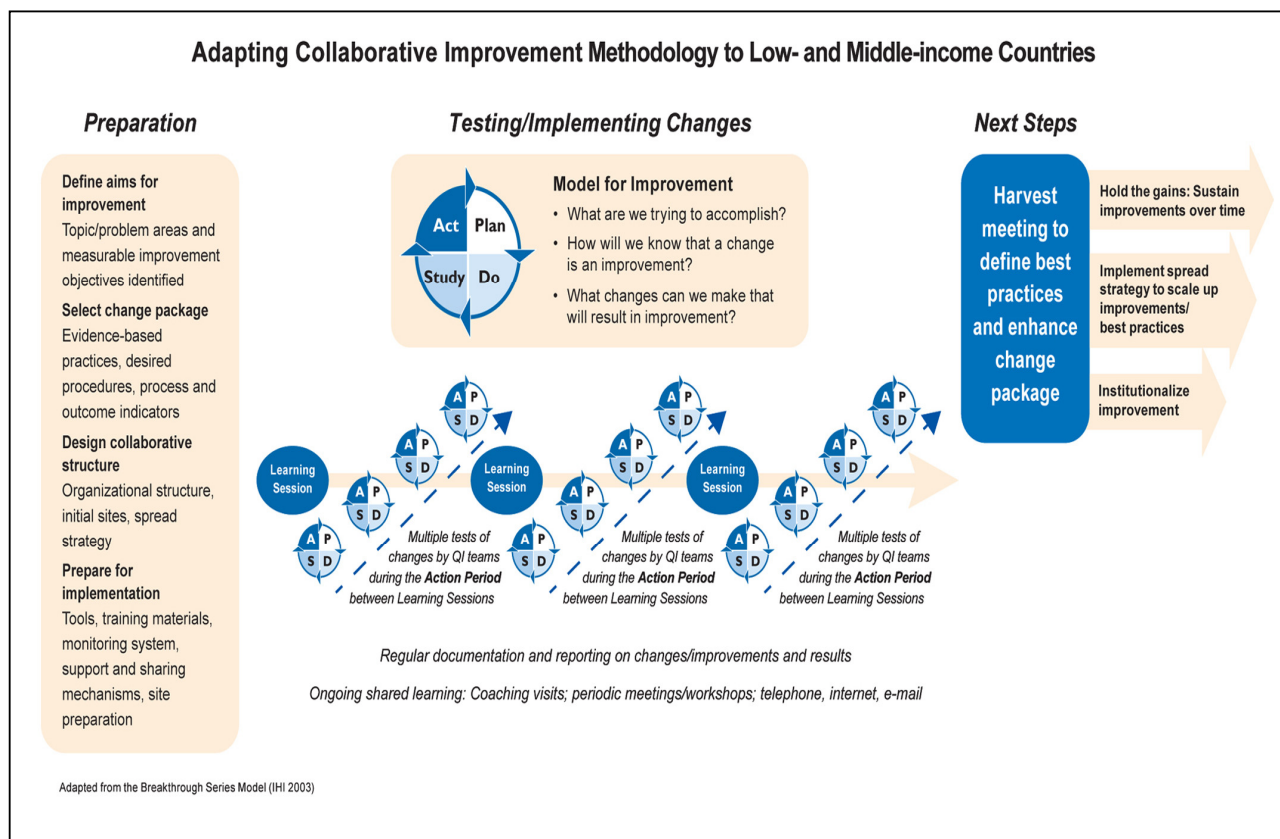
While it is important to focus on standards and guidelines the catch lies in clouding attention to inputs, processes, outputs analysis to uncover service delivery implementation impediments and gaps: solutions to these impediments or gaps represent practical quality improvement measures or changes, which is the essence of model in figure 1 below. A continuous monitoring and analysis of service delivery to identify gaps and plan actions that resolve encountered problems begets continuous quality improvement. A method used to facilitate this process is inherent in the PDSA cycle commonly applied in most QI approaches (as shown in model - figure 1). The tool used – participants manual⁴- elaborates

³ URT, MOHSW, 2012. National Infection Prevention and Control Standards for Hospitals in Tanzania: Standards-Based Management and Recognition for improving Infection Prevention and Control Practices – An Assessment Tool

⁴ URT, MOHSW 2011. Training on Comprehensive Supportive Supervision and Mentoring of HIV and AIDS health services. Participant’s Manual.

this cycle and other problem solving techniques. In fact guidelines and training manuals that specifically focus on quality improvement are available for HIV/AIDS: The structure and content in these can easily be adapted and applied to other diseases and themes⁵. The critical area of supportive supervision is endowed with a training manual and participants manual already in reference above, that give due attention to coaching and mentoring of HIV/AIDS services⁶ in detail. The training materials follow the competency-based learning approach.

Figure 1: Problem Solving Model Capable of Generating Evidence Based Solutions



The four steps of the foregoing model are:-

1. **Identify** what needs to be improved by asking “What are we trying to accomplish?”
2. **Analyze** the problem and answer the question “How will we know that change is an improvement?”
3. **Develop** a hypothesis about solutions by asking “What changes will result in improvement?”
4. **Implement** the hypothesized solutions by applying PDSA to see if they result in improvement.

The fourth step: (PDSA) is a systematic way of implementing identified changes, measuring effects of the changes and decide whether to abandon, modify or implement the change.

⁵ URT, MOHSW 2010. National Guidelines for Quality Improvement of HIV and AIDS Services. Sections 4, 5 and 7.

⁶ URT, MOHSW 2011. Training on Comprehensive Supportive Supervision and mentoring of HIV and AIDS health services. Facilitator’s Guide.

The importance of data to understanding and measuring quality improvement is well known. Patient records therefore have to be complete and easily retrievable for continuity of care and capture of reporting data. In HIV and AIDS a system for patient records and computerized data capture are in place and functioning. Ideally the HMIS should be a tool to capture data that can be analyzed to generate information on quality of health services in addition to providing routine health data. Completeness of data due to the load of registers to be filled is difficult to attain at heavy workload clinics; the problem is compounded by poorly organized patient records. With careful analysis of working processes it is possible to identify corrective interventions locally. Box 2 provides summary of strengths and weaknesses on the area of QI tools and standards.

Box 2: Summarized strengths and weaknesses on standards and tools in QI

- Strengths include initiated work on hospital standards; organized CTC, PMTCT records and QI supervision in HIV and AIDS: Tested problem solving model capable of generating evidence based solutions.
- Weaknesses include poorly organized patient records and limited functionality of HMIS

3.1.3 Indicators

Among the national Health Sector strategy indicators elaborated in HSSP III, reference is made to compliance to TQIF standards in terms of: proportion of health facilities accredited; hospitals with QA Units; blood safety; quality, safety, and efficacy of medicines.⁷ The first NQI Forum held in November 2011 confirmed a variety of QI initiatives in the country with some showing elements of best practice, but a general concern expressed was the lack of standardized integration of services and lack of appropriate indicators to measure agreed benchmarks on quality improvement. From a fully elaborated set of standards and their assessment criteria, it would be possible to choose a few sensitive indicators for each agreed domain of quality to be used in facilitating certification towards future accreditation. In the current situation where a fully elaborated set of standards is not in place, it is pragmatic to start with available complement of standards and technical guidelines, as well as to make reference to current challenges and issues parading QI work as pointers to construction of QI indicators. For the strategic plan however, each QI strategic objective shall have defined performance indicators.

At health facility level, QITs are facilitated to undertake gaps, analyze and determine local actions to resolve existing problems. They monitor achievement of indicators for established performance standards relevant to their level.

⁷ URT, MOHSW.2009. Health Sector Strategic Plan III 2009-2015

3.1.4 Programming

The Health Sector Strategic Plan III states, in strategy 1, 2 and 7 (chapter 4)⁸, that the Tanzania National Quality Improvement Framework will be implemented in a comprehensive context across the sector. In the same document (chapter 5 pp 45-46) the issue of quality is captured as a cross cutting and approach elaborated as applied to various levels and aspects of health work. The case for developing a strategic plan for QI is mentioned in the foreword for the TQIF but strong advocacy and lobby for it is yet to be determined. Accreditation of health services is clearly mentioned as one of the ways to influence adherence to set standards: but judging from the period of time it has taken since this idea was captured on paper⁹, more effort is needed to sensitize the house on benefits of such a move to the health sector, and to establish a clear road map and organizational structure for accreditation across private and public health care services. The health system cannot defer this indefinitely: A clearly thought through determination of legal requirements for putting in place and applying certification and accreditation measures shall be needed in due course.

Probably owing to its cross cutting nature, it appears there has been no attempt to develop a program on QI apart from having a number of advocacy initiatives and specific thematic projects some with scale up after pilots [IPC, SBM-R, 5S-CQI (KAIZEN)-TQM, PDSA and COPE in SRH, QIC facilitation and support of HIV and AIDS, CDC Laboratory support]. The fragmented scenario that may be created, if these initiatives are not facilitated to integrate, clearly underlines the importance and urgency to come up with a cohesive harmonized QI program for the health sector, but not in the vertical sense (box 3 summarizes their effects on health system). The proposed structure of HSIQAS may convey the notion of a vertical QI but prevailing understanding is in favor of a generic and horizontal approach built on knowledge and skills transfer to enable the decentralized health system to undertake QI on an effective footing. The various initiatives/ projects provide an opportune scenario and basic concepts and skills to utilize as background in building the harmonized program. This program would provide leadership and guidance on generic QI elements to implementing agencies and health care facilities.

Box 3: Summarized strengths and weaknesses on QI programming

- Strengths include the experience and lessons that can be learnt from a number of QI projects; initial efforts to integrate and harmonize approaches and methods constitute the first steps towards developing consensus and actualizing a national QI program run directly by the government.
- The tendency for projects to protect their brands, their specific reporting requirements running parallel with MOHSW reporting, and their un-coordinated implementation schedules weaken instead of strengthening the health system.

⁸ URT MOHSW. Health Sector Strategic Plan III. July 2009 to June 2015

⁹ Towards Health Services Accreditation Framework in Tanzania: A Workshop Report; Morogoro Hotel-Morogoro-17th - 22nd October 2005.

3.1.5 Governance

A National Quality Improvement Committee has been proposed but not yet put in place. This tardiness is difficult to explain considering the clear policy and strategy pronouncements on quality, as well as launch of the TQIF. Setting up an accreditation body has been proposed but consensus has yet to emerge in the MOHSW on how this will be handled. To remain impartial and objective, it is vital that an organ governing certification and accreditation be independent: In some situations it may be considered prudent to confer semi-autonomous status for budget access convenience and for maintenance of checks and balances. In future it could be considered to have a government operating agency to deal with this covered by an adequate legal framework. A draft bill for National Health Services¹⁰ covers aspects and organization of Quality work but this has to be revisited in light of recent changes in MOHSW structure; part XIV of the draft Bill is on quality improvement of health services and needs recasting.

Quality Improvement Teams (QITs) and Work Improvement Teams (WITs) are reported to be in place at health facilities where QI has been introduced (see box 3). While the QIT would serve as overall team for the Hospital, the WITs serve at work stations (say Wards or Blocks) below the QIT. At some facilities interacted with during field visits some teams were functioning well while others not so well. At Health Centers and Dispensaries the size and scope of their operations may not call for strict application of the QIT/WIT structure, given the fact that one may be asking the same persons to sit in either body. The link between these structures and Health Facility Governing Committees has not been clarified; it may be assumed they are linked through facility managers. The importance of the link draws from the client focus perspective of QI work.

The QITs and WITs have to be well supervised in order to enable them to make a difference in attaining change in work processes for improved quality. Apart from exemplary work improving the quality and regularity of supportive supervision in HIV and AIDS, other work stations are still hung up with the old un-supportive supervision. The need to conceptualize supervision as an exercise of leadership that facilitates staff to analyze work processes and find workable solutions on a continuous basis has been clearly demonstrated by applications in HIV and AIDS.

Box 4: Summarized strengths and weaknesses on Governance aspects

- Presence of QITs and WITs in hospitals is a strength whose leadership potential needs to be optimized.

Traditional supervision without mentoring and coaching is a source of weakness since it does not facilitate problem solving and actually it wastes resources and time.

3.1.6 Resources for QI

Human resources are insufficient due to deployment anomalies and poor retention strategy. Facilities run by Ward Attendants cannot be trusted to deliver quality technical services unless specific training is given to build their capacity within the framework of task shifting. The use of QI methodologies to address performance management of human resource through tasks re-design are some of the efforts that are ongoing to use QI techniques to re-distribute tasks for more efficiency within work-place

¹⁰ URT, MOHSW 2009. Draft Bill for the National Health Services Act, 2009

settings that have reduced numbers and quality of health care workers. This has been started in Tandahimba district and currently being scaled to all the other districts of Mtwara region.

Even though it is possible to attain some degree of QI within the available resource envelope there are key requisites that make it necessary to have funds to spend for quality. Laboratory reagents, sterile supplies, drugs, disinfectants and decontamination materials, protective gear, disposable syringes and needles, etc., have been in short supply now and then (see summary box 5). One has to have access to sufficient funds to ensure availability of these essentials, but the experience has been a blank first quarter, and late releases of less than budgeted amounts in subsequent quarters. Sometimes defective equipment and nearly expired drugs were supplied, as highlighted in reports and also confirmed at field visits (see section 3.7 and annex 2 below).

An evaluation of HIV Training¹¹ found gaps in training counselors how to order replacement materials, opening up the need to examine a wider issue of ensuring quality and availability of materials.

Box 5: Summarized strengths and weaknesses on Resources for QI

- Undertaking QI by optimizing use of available resources is a strength emanating from utilizing pragmatic QI approaches.
- Resource constraints (Human, financial, materials, supplies and equipment) present a weakness and threat to QI work if deliberate steps are not taken at planning and resource allocation.

3.1.7 Management

With recent upgrading of the Health Services Inspectorate Unit (HSIU) to the status of a section (HSIQAS), a clear division of labor should influence internal efficiency and expansion into a larger collaborative venture driving short, medium and long term QI agendas. The diversity of issues to be addressed ranges from monitoring quality of care provision and quality audit (strengthening supportive supervision, self assessments capacity, internal assessments, external assessments commissioning), to safety monitoring and enforcement (IPC, managing and preventing injuries, malpractice handling, etc.), to systems strengthening collaboration (HRH, Financing, supply chain management, data and information generation, leadership development), and to program evaluation and research related to Quality of Care.

Due to the cross cutting nature of QI work, staff assigned to undertake specified tasks on QI need to link effectively with health managers multilevel to ensure QI issues are taken up in planning, resource allocation and performance tracking. To strengthen this link there is a need to ensure QI work is planned by QI Teams at every health facility – this happens not to be the case at the moment (see box 6). For example one FBO hospital strategic plan mentions quality of care, highlighting the usual routine of seminars and training events, the need to address deteriorated ethics, and morale of staff. It concludes by suggesting that creative solutions are needed. Admittedly these are important elements calling for management attention; but what clearly comes through is the limited understanding of the wider set of QI issues to bring up in a strategic plan for the hospital. For example, self-assessments to

¹¹ Luseno, Winnie. Nyambo, Margaret et al. HIV Training Evaluation: The Scale up of the PMTCT Infant Feeding Counselling Training Program in Tanzania. USAID HCI September 2010

generate analyzed information that would lead to a better understanding of determinants of post-operative sepsis and causes of maternal deaths in that hospital should have come up in annual plans or the strategy itself, but this was not the case. Commendable though is the fact that in the FBO hospital in reference, a strategic plan and an annual plan exist that appreciates the place of health information, and sensitivity to quality work has been long standing. Concern of the institution on resources availability (Human, Financial, Drugs, supplies, functional equipment) as a cornerstone for assuring quality was echoed at other health facilities as well (refer to field visit findings annex 3). Planning and management of resources therefore assumes critical overriding importance in supporting QI work.

Initial efforts to ensure uptake and sustainability of QI work have been started in Lindi region whereby through QI collaborative work with RHMT and CHMTs it has been possible to include QI activities within CCHP of the 6 districts within the region. Best practice from this QI initiative can be scaled up to other regions in Tanzania. Once districts own the QI agenda, then trickle down to health facilities will be ensured.

Box 6: Summarized strengths and weaknesses on management for QI

- The upgraded status of the HSIU to become a section indicates a higher value attached to quality improvement in the MOHSW. This presents an opportunity for organizing QI work on a more effective coordinated footing.
- Limited or non inclusion of QI plans in annual plans of work at various levels of care is still a point of weakness despite availability of the TQIF.

3.1.8 Research

The comprehensive supportive supervision and mentoring of HIV and AIDS sponsored and technically supported by the USAID – HCI project offers a unique operational research opportunity. The tool can be adapted to other aspects of service delivery (RCH, Malaria, NCDs, etc.) in the quest to improve quality. Under the Quality Improvement Collaborative focused on HIV/AIDS, URC has been supporting and providing technical assistance to implementing partners. Within this support, exemplary QI work has been ongoing covering Care and Treatment Clinics, PMTCT, OVC and HBC, with innovation in improving work processes and procedures such that problem solving occurs. Attention to quality aspects through gaps analyses have benefitted proper assessment of clients, confidentiality, reducing waiting time by appointing patients in blocks of time to be seen, extension of refilling centers, and follow up to reduce loss to follow up patients. These examples illustrate the process enhancements that have improved compliance to treatment and gave better care to patients. Good attention to patient records and computerization assist in retrieval of patient information, thus contributing positively to access and continuity of care (ACC). From a QI angle, one may view these HIV/AIDS initiatives as operational research entities from which to learn what works and what does not in QI work (PDSA cycle). The approach has strength in mentoring and coaching technique transferred to health management teams at regions and Councils who subsequently are coached and observed applying the same to respective QITs; in other words conducting supportive supervision in a more profound manner. How this extension unfolds to a total systems processes influence and change is a worthwhile operational or systems research agenda.

Ifakara Health Institute (see box 7) has been undertaking research activities that are in one way or the other related to quality. For example implementation of RDT has been studied and confirmed its

increased use and reduced overtreatment with ACTs during high transmission season for Malaria¹². Specifically an innovative intervention in Tanzania and Uganda to improve maternal and new-born health with an expanded health system quality management approach that links communities and facilities using locally generated data is been implemented under the short title 'EQUIP' (Expanded Quality Management Using Information Power). The initiative also uses the Plan-Do-Study-Act cycles at community, health facility and district level powered by information from continuous multipurpose community and health facility surveys, with results presented in audience-specific report cards. Literature survey reveals 'improvements in care quality, safety, efficiency, cost and access will occur only when clinicians can make timely, accurate, evidence-based decisions at the point of care'¹³: These are interesting variables for research in the Tanzanian context.

The Safe Care initiative 'introduces innovative tools, instruments and training modules to assist facilities on a journey that begins with the achievement of minimal safety principles. It includes manageable steps of quality improvement along the way and if executed appropriately will lead to substantial compliance with safety and quality standards and accreditation'¹⁴. This stepwise improvement process is currently being tried in Moshi (in facilities under the KNCU) and Dar es Salaam (in facilities under the APHTA) by implementing performance-based financing incentives. Facilities are rewarded on the basis of adherence to the pre-defined improvement steps. It is aimed that these incentives improve the financial situation of healthcare facilities; also argued that the approach allows more efficient use of available resources, since progress can be planned, tracked and rewarded. The process follows a constantly reinforced learning and step by step certification of improvement. To attain countrywide coverage with the stepwise certification leading to accreditation, it involves a process that needs investment in time to build up – at least a medium term up to a longer term program. Best practices documentation and capture of lessons from this initiative shall be worthwhile evidence for taking scale up decisions. It is still early days to look for results and evaluate strengths, weaknesses and opportunities of the safe care initiative from a Tanzanian perspective.

Box 7: Summarized strengths and weaknesses regarding research on QI

- Presence of reputable research institution and Development Partners interested in tracking and studying quality improvement development modes is both strength as well as an opportunity to study certain aspects at greater depth.
- Weakness in documentation and sharing of best practices limits learning from lessons and experiences of the initiatives; compared to availability of progress and evaluation reports, it is quite evident not enough attention is given to documenting best practices.

¹² Irene Masanja et al. 2012. Increased use of malaria rapid diagnostic tests improves targeting of anti-malarial treatment in rural Tanzania: implications for nationwide rollout of malaria rapid diagnostic tests *Malaria Journal* 2012, 11:221

¹³ <http://www.clinicaldecisionsupport.com/fullpanel/uploads/files/elsevier-clinical-decision-support-impacting-the-cost-and-quality-wp-4web-00001-00001.pdf>. Elsevier Clinical Decision Support: Impacting the Cost and Quality of Healthcare.

¹⁴ Safe Care. Basic Healthcare Standards. Introducing standards to improve healthcare delivery in resource-restricted countries.

3.2 Progress and Challenges of HSI&QAS QI Work

Various QI initiatives have been put to test with varying claims of success but most of these began with external stimulus. Thus far, an MOHSW owned venture was mainly the development of the TQIF. Competing priorities of partners and MOHSW in QI tend to work in favor of partners' QI brands. Current initiatives have tested their concepts and transferred knowledge and some skills at pilot sites with varying degrees of roll out. Information sharing from these initiatives tends to be driven by perceived project benefits rather than the will to bring about a commonly shared program (longer term benefits) given overriding pressure to account for projects that are usually short lived.

MOHSW has captured some details of the QI initiatives operating in the country but to attain a more comprehensive understanding and facilitate sharing the MOHSW needs to document best practices and lessons - this has been quite limited. Some initiatives operating directly with vertical programs may be known only partially to the HSIQAS Section of the ministry (for instance documentation on COPE activities) indicating a weak link between programs and primary custodians of QI work in the Ministry.

The parallel mode of QI initiatives in programs and donor dependency of QI work in the sector tends to work against the HSIQAS desire to articulate a coherent comprehensive program; unless Development Partners agree to support an MOHSW led initiative that shall be all-inclusive. Needless to say the donor dependency of QI initiatives precipitates the challenge of ownership and sustainability.

The notion that QI is cross cutting and hence should be planned for at various levels and nodes of health service delivery is novel and strategic: But one should not lose sight of limitations to secure dedicated internal funds for generic QI supportive interventions. Limited understanding of QI has led to not having specific QI activities planned or funded at various Districts and health facilities. Supply chain weakness has resulted in interruptions of drugs supply, and quality of materials and equipment, a prominent shortcoming at various health facilities visited (see field findings brief in annex 3) and reports. This factor stands second to human resources limitations as a threat to the QI efforts of the MOHSW.

3.3 Progress of Some QI Approaches

3.3.1 Quality Improvement and Infection Prevention and Control

This program started in 2004 in phases, beginning with five Consultant Hospitals followed by three Regional Hospitals, three District Hospitals and one Designated District Hospital. It is now continuing to be introduced in other hospitals (Government and Faith Based Organization facilities) also in phases. The program focus is capacity development and behavior change on IPC practices, IPC supplies and national program strengthening. On the program strengthening front, a guide that has made an attempt at integration of approaches and concepts was produced, to provide health workers with readable and user friendly basics on QI and IPC [16]. A pocket book on IPC for health care providers has also been produced and distributed.

3.3.2 5S-CQI (KAIZEN) -TQM

The 5S-CQI (KAIZEN) - TQM approach was tested as pilot in Mbeya Referral Hospital, Muhimbili National Hospital, and four District Hospitals in Southern Zone (Masasi, Newala, Tandahimba and Nachingwea). It was verified as a practical, cost-effective and efficient approach for **improvement of working environment** that supports effective implementation of quality improvement approaches. The MOHSW decided to adopt 5S-CQI concepts officially as a *foundation for all quality improvement*

approaches and scale up the approach to other hospitals in the country – it is now introduced at 48 health facilities. The 5S-CQI involves ALL staff members in establishing new disciplines so that they become the new norms of the organization, i.e., internalization of concept and development of a different culture.

Apart from imparting attitudes and skills for organization, it engenders change in mind-set and way of thinking. Furthermore; pragmatic problem solving using immediately available resources appears to be its greatest asset. This CQI process teaches individual skills for working effectively in small groups, solving problems, documenting and improving processes, collecting and analyzing data and self-managing within a peer group. Its strength appears to be in the participatory small groups becoming sensitized, and through self awareness get involved in self-assessment to identify and prioritize what they can deal with for quality improvement using the 5S (Sort, Set, Shine, Standardize and Sustain) approach as entry point to CQI (in which clinical and working environment problems are solved using a Quality Control [QC] story with seven steps spread over the PDSA cycle; and there are QC tools for use in those steps¹⁵), and in maximizing use of what is available, as a continuous process.

Challenges encountered: – Changing the attitude of all health workers where there is ‘resistance to change mind set. Experience in using the ‘5S of the mind’ and ‘5S of the brain’ should inform how resistance to change and nurture of positive attitude towards the approach is developed.

3.3.3 Improvement Collaborative (IC) Approach

In the TQIF (pages 14-15) an Improvement Collaborative is described as an organized effort of shared learning by a network of sites (or teams) to close the gap between desired and actual performance by testing and implementing changes within their local situations so as to develop a best practice model of care for a specific priority health problem. An Improvement Collaborative brings together groups of practitioners from different healthcare organizations to work in a structured way to improve one aspect of the quality of their service. It involves a series of meetings to learn about best practice in the chosen area, about quality improvement methods and exchange ideas, and to share their experiences of making changes in their own local settings.

Quality Improvement Teams (QITs) use a change testing method to plan, implement, and evaluate many small changes in quick successions also known as Plan, Do, Study and Act (PDSA) cycles as illustrated in figure 1 (page 6). The approach fosters efficient and effective peer-to-peer learning (sharing effective changes and uptake by other teams) as well as spread of better care practices (effective changes) to new areas¹⁶. Changes are accepted as being ready for wider scale sharing when demonstrate they work and easy to implement, teach and learn: Effective spread depends on these factors as well as presence of supportive leadership, non-threatening method of introduction, adaptability and presence of champions to deliver and support the new idea.¹⁷

¹⁵ URT, MOHSW, 2011. Implementation Guidelines for 5S-CQI (KAIZEN)-TQM Approaches in Tanzania. “Foundation of all Quality Improvement Programs” 2nd Edition November, 2011 (Pages 31-38).

¹⁶ Tanzania Spread Study Team. 2011. Spread of PMTCT and ART Better Care Practices through Collaborative Learning in Tanzania. Research and Evaluation Report. Published by the USAID Health Care Improvement Project. Bethesda, MD: University Research Co., LLC (URC).

¹⁷ Op cit. pg 17

In the ongoing ART/PMTCT Improvement Collaborative, remarkable improvements on performance indicators for ART and PMTCT care have been achieved and best practices have been developed. For instance, all participating (39) health facilities have managed to reduce loss to follow-up among patients on ART, more HIV positive pregnant women are enrolled in care and treatment so are the number of HIV exposed infants receiving prophylactic ARVs and Co-trimoxazole¹⁸. The IC model is also applied at community level for example for Orphans and Vulnerable Children (OVCs) and Home Based Care (HBC). A study to determine validity of QITs self-assessments¹⁹ concluded that “with few exceptions, the Mtwara collaborative provided valid data and improved as the collaborative matured”. Particularly noteworthy was the finding that the validity of abstracted data between QI teams and the gold standard was not statistically different.

Challenges of this approach have not been described but an evaluation report²⁰ has noted that the key mechanism of the collaborative which ensures shared learning is expensive and takes staff away from working areas. Emphasis on change done during coaching and mentoring visits by district and regional teams at the health facilities limits the absenteeism of staff from working areas.

3.3.4 Standard Based Management and Recognition (SBM-R) Process

Standard Based Management and Recognition (SBM-R) is a proactive approach, focusing not on problems but rather on the standardized level of performance and quality to be attained. The SBM-R capitalizes on observing trends in quality of services/education starting with baseline followed by periodic assessments internally to recognize and address performance gaps.

The approach involves a step by step process of:

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

In the TQIF it has been noted that as of June 2010, SBM-R had been applied in about 3,000 health facilities (62%) which trained Focused Ante-Natal Care (FANC) providers in all Tanzania districts. A number of facilities have been recognized for achieving high standards in antenatal care provision. In addition, 12 regional hospitals have also started the BEmONC SBM-R process, and 6 referral hospitals (MNH, KCMC, BMC, IMTU, HKMU, and Dodoma Regional Hospital) have begun implementing IPC SBM-R process.

3.3.5 COPE (“Client Oriented, Provider-Efficient” services)

Client Oriented, Provider-Efficient (COPE) is a process that helps health care staff continuously improve the quality and efficiency of services provided at their facility and make services more responsive to

¹⁸ URT, MOHSW. October 2011. Tanzania Quality Improvement Framework (TQIF) in Health Care. page 15

¹⁹ A research and Evaluation report. Nov 2010. Sequential Validity of Quality Improvement Team Self-assessments in Tanzania.

²⁰ URC Research and Evaluation report. June 2011. Spread of PMTCT and ART Better Care Practices through Collaborative Learning in Tanzania. pg 17

client's needs²¹. It is designed around a framework of seven client's rights and three staff needs (op cit, page 7).

The process consists of 4 steps as follows:-

- Information gathering and analysis (self assessments, client interviews, record review and Client Flow Assessment)
- Action plan development and prioritization
- Implementation of the action plan
- Follow up on progress made and evaluation

Arguments advanced in favor of using COPE include promoting sense of ownership among staff, providing room to use expertise of staff and clients, simplicity of tools, teamwork promotion, staff morale raiser, performance improvement, cost-effectiveness and adaptability. COPE has been utilized in RCH services with an incline of family planning.

Noting similarities between various approaches, a key informant in RCH shared that they now use Performance Improvement approach which also incorporates the PDSA cycle (probably SBM-R). Table I, depicts the usefulness of the PDSA cycle in the various QI approaches that are currently practiced in Tanzania. It is evident that PDSA is common in all of the QI approaches.

Table I: Applicability of the PDSA cycle in Various QI Approaches

QI Approaches currently practiced in Tanzania	Implement identified changes			
	P	D	S	A
SBM-R	✓	✓	✓	✓
COPE	✓	✓	✓	✓
Safe Care	✓	✓	✓	✓
Improvement Collaborative	✓	✓	✓	✓
5S KAIZEN	✓	✓	✓	✓
Performance Improvement	✓	✓	✓	✓

3.4 QI Assessments

Some hospitals have SOPs at some work stations/departments. SOPs for nursing care are used in routine practice. Programmatic guidelines such as for HIV/AIDS, HBC, MVC, STI, Malaria, Tuberculosis, Reproductive and Child Health, Laboratory SOPs, IPC contain specific SOPs relevant to the theme. These SOPs and program guides can be consulted as reference in conducting assessment work. Apart from application of the supervision tool, IPC standards for hospitals, and more recently the stepwise approach to certification towards accreditation, there has not been a deliberate comprehensive assessment of standards of care in health. A tool that enables one to assess standards beyond IPC, RCH and HIV/AIDS was not available. Some programs (RCH, NACP) have many guides and standards; compiling all these into one is not necessary since programmatic standards can be quite detailed. However, coming to a user friendly concise tool that covers how to assess selected key programmatic indicators would be worthwhile in the context of harmonization efforts.

²¹ ENGENDER HEALTH, 2006. COPE Handbook: A process for improving quality in health services. ISBN: 1-885063-46-6. Pg5.

A key informant suggested to have developed a generic document that covers general concepts, principals and key cross cutting themes such as IPC, Communication, rights based approach in health, common QI methods, mentoring and participation.

Assessment of the standards has both internal and external elements to it. The QITs and WITs are claimed to be carrying out internal assessments with varying degrees of regularity. External assessments were viewed with mixed feelings (MNH - QIT): to avoid assessors' biases there is a need to review assessor selection criteria, assessor qualifications and skill, scope of assessment and its coverage. Also it has been suggested to clearly differentiate between QI assessment, supportive supervision, and health facility inspection.

Some highlights from assessment reports show improvements in some quality standards²². In May 2012, a team comprised of National IPC Assessors visited 36 hospitals in the Tanzania Mainland, a list comprised of 4 *Consultant Hospitals*, 3 *Special Hospitals*, 23 *Regional Hospitals*, and 6 *District Hospitals*, to conduct supportive supervision and assessment of performance level with regards to IPC practices using the MoHSW developed National IPC Standards tool. The assessment revealed significant improvement in average performance scores from 34% in September 2011 to 46% in May 2012. The report highlights the following:

- Staff trained by MOHSW have basic understanding of IPC
- Most laboratories (especially at regional level) have their infrastructures able to support smooth implementation of IPC standards
- Hospital budget includes IPC supplies
- Some of the facilities are clean
- Safety boxes are available and used in various units

Major shortcomings noted include:

- Inadequate dissemination of IPC Standards to all health workers to be used as job aid and for peer assessment
- Some staff (especially newly employed) not conversant with PEP first aid steps and some others aren't aware of PEP
- Kitchen staff not regularly screened for contagious infections
- Lack of liquid soap dispensers and alcohol hand rub in most service delivery areas
- Lack of standard CSSDs

The question to ask at conclusion of an assessment is “*to what extent does the exercise help to facilitate practical QI actions that solve problems at the facilities / work stations?*”

²² HSIQAS July 2012. Summary - Assessment Report of 36 Hospitals conducted in May 2012

3.5 Supervision and Inspection Reports

A detailed guideline for supportive supervision has been in place since 2010. Its use has sometimes been supportive and sometimes leaving behind an impression of an inspection visit. Weaknesses in quality of feedback (or the lack of it), incomplete supervision (refer interaction with MNH-QIT), confusion between supervision, assessment and inspection due to variation in assessor/supervisor skill, approach or coverage of a given health facility have been aired.

One feedback scrutinized during field visit conveyed the notion it was a supportive supervision event while the objective and content conveyed it was an assessment of IPC standards. Ad hoc assignments have often disrupted planned supportive supervision schedules of RHMTs and CHMTs. As a result lower level health facilities and districts have been going with neither coaching nor mentoring on quality improvement as intended by MOHSW: The opportunity to nurture QI through supportive supervision is therefore lost. QI then tends to proceed more often as a dependent activity stimulated or initiated by DPs projects.

Highlights of supportive supervision could not be deciphered due to the lack of distinction between health facility assessments and supportive supervision. At MNH and Lindi Municipality it was encouraging when reference was made to the need to change the approach to supervision so that more time is available for coaching and mentoring at such visits. Within the Improvement Collaborative (IC) approach supportive supervision has emphasized mentoring and coaching of QITs to rigorously assess processes, identify gaps, prioritize solution options and plan actions: The results have been positive. A training manual for facilitators and a participants' training manual for comprehensive supportive supervision and mentoring for HIV and AIDS health services is used in the IC approach. As already observed these tools can be adapted for use beyond HIV and AIDS.

A new initiative of the MOHSW that may revive supervision and contribute to QI in health care is been designed under the District Health Strategy: This is the 16 Districts focused support intended to become learning districts for the rest of the country. An assessment of the selected districts is ongoing to establish baseline status. The intention is to enable the selected districts to apply the policy and strategies outlined by the MOHSW on a comprehensive scale, and later have other districts visit and learn from them. To avoid wastage of resources from ineffective supervision this new initiative shall benefit from investing in mentoring and coaching. This requires more time (at least 3-6 hours per lower health facility or 2-3 days per Hospital) and funds to assure transport, fuel, and subsistence stipends; but the rewards in terms of QI earn value for money.

3.6 QI Guidelines and Issues in Programs and Service Units

Guidelines for QI in HIV/AIDS are in place and used. Specific guides are also available ranging from CTC, PMTCT, to PMTCT-IF job aids, and comprehensive supportive supervision and mentoring training tools. The most pressing problem expressed by HIV/AIDS program management is poor quality of data. Program guidelines for TB, Malaria exist but specific tools suitable for QI monitoring in these programs do not seem to exist. A Quality Improvement and Recognition Initiative (QIRI) has been applied in RCH.

Interviews at national level revealed that there are considerable number of partners implementing HIV and AIDS projects. Working schedules of the partners are sometimes in collision with those of managers and care providers they target to work with. Partners have no uniform reporting format for their work, and hence increase the workload at health facilities trying to meet individual donor reporting requirements. Variations in support facilities such as remunerations cause distortions in operating

systems and undue expectations amongst staff. Targeting certain staff for training seminars to the exclusion of others leaves some de-motivated and demoralized. The issue here is a state of disintegration and poor coordination of the various projects. This is clearly a strong signal in favor of moving in an integrated framework if not develop a fully harmonized generic national program.

National guidelines for Home Based Care Services in HIV /AIDS (2010) spell out the content of services, roles and responsibilities of care givers, requisite inputs, working links, relationships, reporting and referral, as well as special issues. Initiatives engaged in training Community Health Workers (CHWs), some based on volunteerism and others on limited honoraria have been ongoing under the guidance of CBHC Unit of the MOHSW. The importance of CHWs and HBC givers to QI is inherent in their alleviation of attendances that need not report to health facilities and hence contribute to efficiency in utilization of facilities. Through competency based learning these community based agents are capacitated to acquire the basic knowledge and skills to undertake their assigned tasks effectively. Erratic support, supplies and lack of consistent supportive supervision has been the drawbacks to optimal functioning.

3.7 Field Observation Findings

The findings presented here have been summarized; a fuller narrative of what was observed is annexed hereto.

Quality Improvement is talked about at visited health facilities but more as a reaction to external stimuli as opposed to 'home grown' initiative. Despite training and orientations that took place particularly as pertains to IPC (since it had wider coverage), 5S, and HIV related QI activities, quality improvement is not yet a valued entity at work stations besides CTC and some laboratory work stations.

Available SOPs have been converted into user friendly and accessible loose sheets at some facilities and work stations; in some facilities they are actually not used regularly to guide working routines. Training of IPC and HIV related aspects (PMTCT, CT with ARVs, TB-HIV collaboration) has left a mark but still needs further intensification to gain a strong foothold in terms of changed behavior of providers and sharing within the entire system.

Leadership and strong teamwork tend to determine positive progress with QI activities at various facilities (Sokoine Hospital laboratory procedures, Lindi Municipal Council human resource retention, Nyakahoja Dispensary organized set up and cleanliness, block competitions at Muhimbili National Hospital). Activities stalled where the Focal Point was inactive or Team Leadership was faltering (Sengerema Health Center, Nyampande Dispensary, Sekou Toure Hospital, Nyangao Hospital, Lindi RHMT). A key attraction that always stifled the willingness to take action amongst some team members or other staff has been expectations on fringe benefits such as allowances (refer resistance to feedback discussion at Sokoine Hospital Laboratory). Performance accountability of staff was not been tracked; this calls for careful monitoring by management to ensure delivery against set targets for QI becomes a routine working reality that every staff member recognizes and plays respective role.

While the QI work within HIV/AIDS was acknowledged to be moving forward quite well with well functioning teams in CTCs, integration with other health facility QIT work was limited except for Mwananyamala and Nyakahoja. Teamwork with the rest of health facility QIT did not seem to be strong (Sengerema CHMT, Sekou Toure Hospital, RHMT Lindi, Sokoine Regional Hospital, Town Health Center – Lindi, Muhimbili National Hospital, Temeke Hospital). Could the teamwork problems

observed have to do with elaborated roles, functions and responsibilities of RHMT members²³ that has not paid attention to important functions of teamwork, capacity building and mentoring? Same persons attending seminars and training events more frequently to the exclusion of others was monitored to be a demoralizing factor (Sengerema, Lindi) that has direct effects of disrupting teamwork.

Resources limitation is faced on human, financial and material resources (drugs, reagents, gloves, screens, short lasting BP machines etc). These limitations are **a real threat to QI** at visited facilities without exception. Health agents are operating as best as they can with the limited available resources. Staffs do not report to TFDA when they receive sub-standard products from MSD.

Noteworthy is the boost to laboratory sections (well designed SOPs implementation tracking) in public hospitals, systematic management of drugs and supplies (FEFO), human resources retention innovation at Lindi (in collaboration with BMAF), utilizing cost sharing funds to address drugs and supplies shortfalls as well as staff stabilization (Sengerema DDH, Nyangao Hospital, Temeke Hospital). Quality and range of supplies from MSD came into question at every facility. Some first line health facilities have become dysfunctional for long periods of time (and hence refer patients to hospitals causing congestion and spiraling of costs at higher levels) when there is more severe shortage of drugs and supplies (Sengerema experience).

Assessment of Patients (AOP), Care of Patients (COP) and Access and Continuity of Care (ACC); despite limited time to observe these qualities attributes, it is noteworthy that patients' waiting time and turn-around time have improved as claimed by facility managers. "Niulize mimi" initiative at Sengerema DDH has resulted in improved patient flow, serving emergencies timely and reduced waiting time. QI initiatives (triage, etc.) have also enabled reduction of waiting time at Makongoro Health Center, Nyangao Hospital, Sokoine Hospital and Muhimbili National Hospital. More use of routine data (HMIS) to track performance parameters including patient load, diagnosis records, referrals, etc., is not demonstrated in most facilities. The many registers to be filled affect completeness of data (At Mwananyamala and Temeke it was acknowledged that some diagnoses are sometimes not recorded and no validation of HMIS data is done). Adaptation to ICD 10 has not yet happened, and indicators for QI are not in: Hence there is hardly any use of HMIS on QI issues. Concern at Temeke was the low value accorded to data by health staff.

Feedback of assessment reports do not show attention been given to AOP, COP and ACC. How systematic medical records are in terms of facilitating easy retrieval has been a lingering question affecting AOP, COP as well as ACC (Mwananyamala and Temeke Hospitals witness this). Particularly disturbing for AOP and COP is the attrition of clinical staff from the QIT at Muhimbili National Hospital. At Lindi Region, it was reported that 38% of health facilities (with exception of Lindi Municipality) are run by Medical Attendants - the implications of this to AOP, COP and ACC domains need careful study in the context of task shifting.

Client orientation, the closeness to Clients orientation through regular dialogue with staff at Nyakahoja dispensary was exemplary. However, none of the facilities visited had a Patients' or Clients' charter displayed or in use. Muhimbili National Hospital (MNH) claimed to have SOPs and general policy guidelines that include patient's charter. Rights and obligations of patients and care providers are assumed to be observed, which is often not the case. Sengerema DDH claimed they had this in the past

²³ URT.MOHSW 2008. Roles and Functions of Regional Health Management teams.

but now the posters are worn out and hence no longer serving the intended purpose. Sekou Toure Hospital QIT found the idea of patients' charter worth pursuing. Signage was in evidence at most facilities, and routines had patient health education scheduled. Muhimbili National Hospital QIT explained elaborately how they handle patients' complaints citing that patient satisfaction has improved since they are getting less frequent complaints nowadays. However, MNH does not have written procedures to this effect. At all visited facilities, patients' complaints processing procedures were unclear and not guided by a structured tool: Some suggestion boxes are hardly ever opened; while others are opened only to find no suggestions in them.

QI practices in evidence. The beginnings of IPC practice were demonstrable despite lapses observed between facilities and across working stations. A major shortcoming is supplies and the other is behavioral. The influence of 5S approach is there but not quite sunken into the routine work fabric. QI applications focused on HIV/AIDS care and treatment, PMTCT and PICT seem to be predominant at visited facilities. Making these applications beneficial for wider health service delivery QI aspects requires capacitating health facility managers accordingly. Institutional arrangements that encourage participation of the colleagues dealing with HIV Care and Treatment QI in institutional QITs is a step in the right direction (Mwananyamala Hospital aired this value), since it allows a system to extend experiences and lessons from the CTC, PMTCT work to the entire hospital's departments and work stations. At Temeke Hospital this did not seem to be the case as the CTC was referred to as "having their team, and own operating system".

Temeke Hospital had significant lapses in QI work (shortfalls in IPC practices and hospital waste management, un-systematic housekeeping, needles hazard in surroundings next to incinerator, red bags dumped in refuse collection shed, etc). Whether or not this is due to the high number of patients they claim to attend per day (1500 plus daily OPD attendance) is a likely explanation but it is also possible it is contributed by the high turnover of staff resulting in many untrained newcomers and shortages of supplies experienced on a weekly basis.

External assessments (from national level) are being done and in many instances feedback is given: Self-assessments and internal assessments were not evidenced. The broken cold chain at Sokoine Hospital could have been picked in time if self-assessments and internal assessments were a routine feature on the work plan of the hospital.

Spending more time (up to 6 hours) per station during supportive supervision assures the Lindi Municipality Health Management Team the time to coach and mentor staff. Such an approach does not appear to be promoted and applied more widely despite its benefits to QI over and above capacitating staff. Applications of this approach in HIV and AIDS were not examined due to time constraints.

4. SWOC (STRENGTHS, WEAKNESSES, OPPORTUNITIES, CHALLENGES) ANALYSIS

STRENGTHS

- The National policies related to development and health give importance to quality focus: HSSP III also recognizes importance of quality.
- The TQIF provides guidance and signal to bring the various QI initiatives together; the QI Forum provides room for coordination, harmonization and shared learning.
- IPC and HIV/AIDS work on QI have opened the doors for expanding and consolidating QI work experiences.
- Amongst the partners interviewed all said yes to integration, some with a caveat that they will be able to identify activities relevant to their respective mandate.

WEAKNESSES

Managerial weaknesses

- Unsustainable QI projects: In the absence of a generic QI program there is weak QI coordination, and lack of nurture and consolidation system.
- Weak supervision: Supportive supervision implementation capacity is low at regions. Supportive supervision sometimes confused/ mixed with inspections and the 'supportive' element is hardly practiced except at areas where the IC operates.
- Insufficient focus on safety and productivity.
- No district organized systems for QI: Resistance to feedback and limitations in exchange of information on QI point to insufficient internalization of QI amongst leaders.
- Sharing of lessons still lags behind in most initiatives.

Systems weaknesses

- Financing (limited government funding): Most activities are donor funded. Large pool of exempt categories accounting for a bulk of demanded care without clear compensation mechanisms for the costs incurred in service delivery (they are covered neither by CHF nor NHIF).
- Human resources (shortage of skilled staff): having right number and right skills mix; poorly motivated low morale health work force.
- Service delivery: Ethical lapses, poor attention to mental health and other NCDs, assessment of patients, care of patients and access to and continuity of care have insufficient prominence in standards.
- Logistics and supplies: shortage of drugs and essential diagnostic equipment/reagents.
- Information: Lack of comprehensive national standards and indicators for monitoring and evaluating quality of care. Poor linkage between HMIS and the Quality Improvement initiatives. Unsystematic medical records retrieval system at some health facilities.
- Governance: Poor feedback from professional bodies to policy makers. Insufficient link between professional development and licensing; slow movement to accreditation of all health facilities and specialized aspects of care; weak functionality of existing mechanisms.

Capacity related weaknesses

- Sloth in nurture of quality culture amongst providers and managers of care: Low QI skills amongst health workers
- Slow implementation of TQIF

- Capacity gaps in Zonal Centers; absence of structured modules on QI in training schools /colleges curricula may be the explanation behind health workers lack of QI knowledge and skills
- Limited capacity to carry out operational research on QI
- Clinical skills deficiencies
- Low involvement of private sector
- Client service charter not used, not enforced

Environment related weaknesses

- Infrastructure weaknesses; lack of maintenance and planned preventive maintenance
- Low hygiene and sanitation standards as a result of neglect to environmental health problems and public behavior such as hand washing, solid waste disposal - witnessed by Cholera prevalence, other diarrheal diseases, protozoa illnesses and helminthes

Low or absent innovations for QI

- No countrywide effective system for recognition and rewarding good performance at regions and districts let alone health facilities.
- Weak community focus; minimal community involvement
- Community not aware of their rights

OPPORTUNITIES

- Sector reforms avail space to articulate management for quality (leadership) in addition to strengthening quality of management, patient and providers' safety, and client focus.
- More was accomplished where there was someone playing a good leadership or champion role.
- Training materials, guidelines and tools already available in HIV and AIDS and IPC can be optimized.

CHALLENGES

- Integration/harmonization of approaches
- Reaching every District and every health facility with an integrated package of QI know-how, mentoring and coaching, skills multiplication and sustenance
- Staff motivation and effective support for institutionalization of QI
- Client education and orientation to their rights and obligations in QI and health care
- Health systems weaknesses

5. DISCUSSION

In a review of models it has been shown that “in practice quality improvement models and their tools are used in a variety of ways. They are rarely applied singly or sequentially; what is more common in health care settings is to draw on combinations or hybrids of the main approaches”²⁴.

5.1 Issues for Policy and Strategy

Sustainability is a threat to ongoing QI projects that have no clear path on institutionalization and local financing. To maximize utilization of the projects, a condition for project approval could be introduced requiring that best practices and lessons from the initiative shall be documented objectively through advancing funds for undertaking the documentation to an independent entity that meets government recognition and clearance.

A major policy issue however is putting in place an integrated approach to QI that can accommodate various partners. Various approaches to QI that have been initiated, and the scaling up that is beginning to emerge in some (HIV/AIDS for example) present useful lessons. To counter the potential negative effects of fragmented scenario when the initiatives are implemented as completely independent entities, it is prudent to consolidate the integration efforts that have already begun. For example, while the 5S-CQI foundation laying and mindset changing contribution could be used in initiation sensitization and organization phase, the comprehensive supportive supervision and mentoring training manual for HIV and AIDS has 5S as an integral part; hence these could be taken together. Within the comprehensive supervision encounter IPC aspects can be checked and coached for the sake of provider and patient safety. Using self assessments and internal assessments, a common feature of all QI approaches, gaps are analyzed and solutions generated: Lessons from implementation of prioritized plan inform peer learning and spread of effective changes.

The partnership setting in Improvement Collaborative presents an interesting lesson worth tracking in the integration effort, considering that “...the Partnership for Quality Improvement (PQI) strategy was designed to both harmonize QI approaches among implementing partners and to raise the quality of care provided for ... services throughout the country”²⁵. An assessment of results, capacity and potential for institutionalization of the PQI strategy underscored a lesson that ‘a learning or incubation period for **partners to learn to work together** and to refine the QI approach’²⁶ is critical. Some of the key recommendations of the report (op cit) include (a) Providing an ongoing forum for PQI implementing partners to share learning across regions with each other, build their capacity, and continue to harmonize approaches; (b) Increasing the QI role of RHMTs and CHMTs and providing targeted strategies to strengthen their skills; (c) IPs and RHMT/CHMTs spending more time in the field providing assistance to QI teams at health facilities.

²⁴ AE Powell et al, 2008. A systematic narrative review of quality improvement models in health care. (*in support of NHS Quality Improvement Scotland*) Social Dimensions of Health Institute at The Universities of Dundee and St Andrews.

²⁵ Tanzania Spread Study Team. 2011. Spread of PMTCT and ART Better Care Practices through Collaborative Learning in Tanzania. Research and Evaluation Report Pp15. Published by the USAID Health Care Improvement Project. Bethesda, MD: University Research Co., LLC .

²⁶ Tanzania PQI Study Team. June 2011. The Partnership for Quality Improvement to Improve PMTCT and ART Services in Tanzania: assessment of Results, Capacity, and Potential for Institutionalization. Pg 28. Published by USAID Health Care Improvement Project. Bethesda, MD: University Research Co. LLC.

Spending more time in the field is justified by the content of coaching and mentoring, the major change in supportive supervision. This implies a major change in strategic management of health services: It calls for substantial investment in supportive supervision and mentoring as radical departure from past supervision.

Depleting hospital resources when most of the attendees fall under exemption and there is no clear compensation for the costs incurred serving them: This requires revisiting the policy in terms of putting in place an exemptions compensation mechanism to counteract financial resource depletion at health facilities.

Overcoming human resource retention difficulties: Through increased application of innovative strategies some of the difficulties are resolved.

5.2 Standards and Integrated Training

A harmonized and coordinated program would facilitate interrelation between QI domains for synergistic effects. Key considerations include the continuum of care, interdependency between service delivery stations to provide quality care and client centered provider supportive systems. Within the interrelation organization (in 5S) would benefit the **safety** domain in IPC; the latter together with diagnostics (lab etc) interrelate with the AOP and COP **care** domains. Cross cutting ACC has to be considered in every aspect of service delivery (HIV/AIDS, TB, Malaria, other CDs, NCDs, etc). Harmonization and coordination efforts provide an opportunity to design an integrated QI training for pre-service modes of capacity development. A training package on integrated QI management would assist training institutions to include a module on QI in their respective syllabi to ensure their graduates qualify being QI literate and QI skilled. Hence, it is important to have a complete set of standards for benchmarking quality improvement.

5.3 In-Service Capacity Building and Nurture of “Quality Improvement” Culture

The training that has taken place thus far has sent a signal and awareness about a hitherto neglected but very important and critical area of the health system. Under HIV/AIDS initiatives, IPC and 5S there is a clear set of tools, guidelines and methods that can be brought together to determine a generic integrated training package for QI in health. The need to have a design that avoids the “workshops” and “per diems” syndrome is at hand particularly noting the negative legacy this has left behind. Taking a leaf from IMCI training that was wide in scope, “untrained health workers are sometimes unwilling to learn from others, preferring to attend the training themselves, and receive per diems...”²⁷. This attitude was also shared during the field visits. The challenge at hand is how to undertake capacity building in the midst of a government ban on training workshops and absence of the motivation that the allowances engendered.

Consideration could be given to an in-service training strategy built into a mentoring and coaching initiative but with clear linkage of career notches and promotions to actual QI practice scores a given individual accumulates on his/her staff performance sheet. Even with this, it is important to recognize and appreciate that nurture of a ‘QI culture’ will take a long time to ingrain into the fabric of health care

²⁷ [https://docs.google.com/a/ihi.or.tz/file/Sign in](https://docs.google.com/a/ihi.or.tz/file/Sign%20in) IMCI -Spotlight Vol. 4.pdf . Despite Challenges IMCI Scale Up is possible. March 2010

services and habits of practitioners, and hence require perseverance and a longer term endurance program.

5.4 Performance Measurement Issues

The fact that **safety** continues to be an issue in health service delivery long after providers' exposure to IPC requirements and procedures; this is very revealing on the seriousness accorded to QI at practice and management levels. Beyond this it calls for attention to strategies that nurture a sense and culture of quality amongst practitioners.

Client responsiveness is still limited due to deficient application of the human rights based approach in health care. Written procedures for client complaints processing are not in place; neither is the facility of suggestion boxes put to more effective use. Clients are handled as passive recipients of services and not active source of ideas for improving services. QITs and WITs should take client responsiveness performance measurement as routine feature of their work.

Consulted documents do not show sufficient attention to **patient care domains** such as assessment of patients (AOP), care of patients (COP) and access and continuity of care (ACC). At least these should feature in standards; the incomplete status on standards may explain this gap. Under such circumstances it is not difficult to understand why ethical lapses are encountered now and then.

Articulate **management of QI** is an issue. Planning for QI cannot happen without evidence on what the existing gaps are. Self-assessment and internal assessments, the basis for understanding the gaps, assume critical significance for getting health facility QI work to start on a firm footing. Monitoring progress with implementation and level of QI attained would be informed by a repeat of such assessments confirmed by external assessments. Stronger and more assertive QITs are needed at health facilities if this important function is to be taken forward into tangible activities.

5.5 Resources and Systems Issues

Virtually all health system building blocks have issues negatively affecting QI of services. The most pressing areas include:-

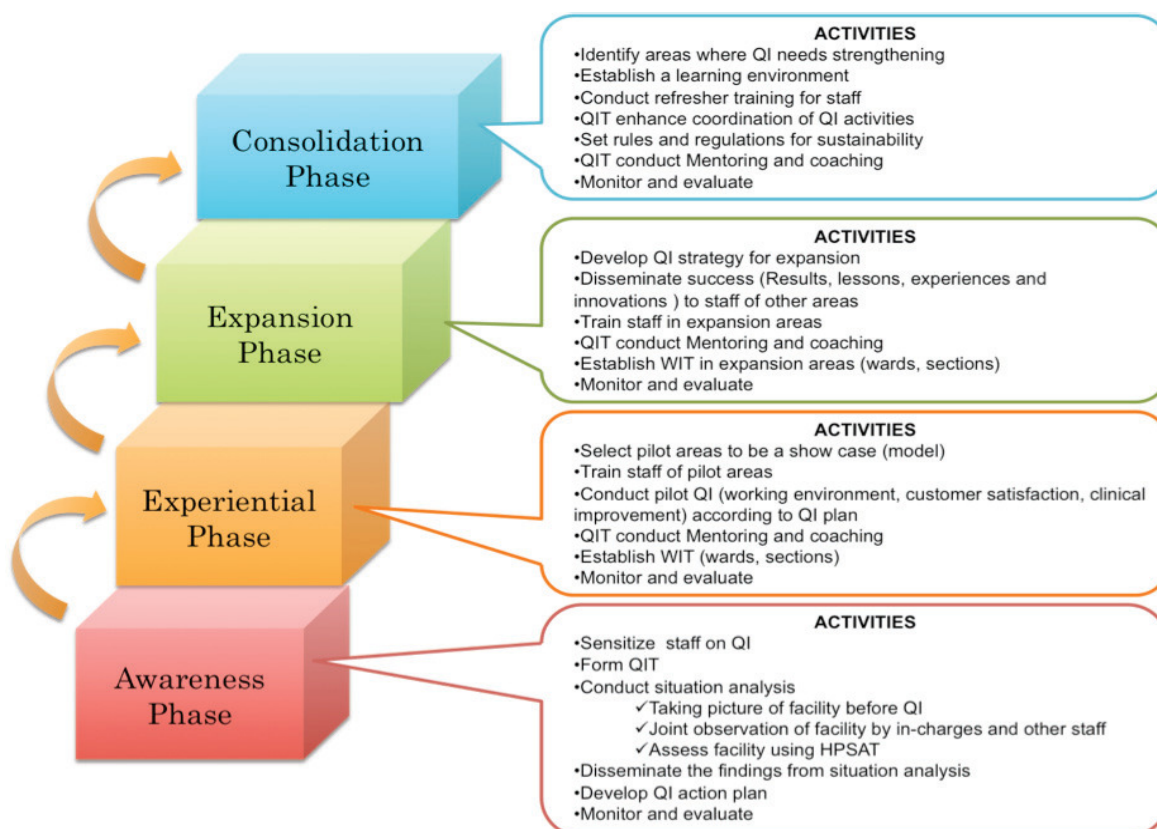
- Human resources (skills mix vs. task shifting) retention and stabilization,
- Drugs and essential supplies that need action at the level of MSD,
- Health facility management and providers' practices.
- Financial management

QI practitioners and health managers have to work collaboratively with individuals entrusted with health systems strengthening portfolio to effectively address these issues. Management of resources needs more attention to increase efficiency as well as productivity. Tracking staff performance is critical given the shortage of qualified health personnel at hand. Accountability and transparency on financial resources should be shared beyond management teams; the rest of staff and the Health Facility Governing Committee should also be reached. Regarding drugs, supplies and equipment there is no evidence that the complaints aired at health facilities regarding substandard items have been presented formally to the TFDA, who have a legal mandate to require corrective measures from MSD. For the latter, supply chain management needs attention. With sober analysis these systems issues are not insurmountable.

5.6 Institutionalizing QI

Activities at different phases of institutionalizing QI: Making reference to the figure 2 below, this analysis gauges QI work to be plying between awareness and experiential phases at the moment. Improvements of the figure could include assessment and certification in expansion phase and external assessments for accreditation in consolidation phase and beyond.

Figure 2: Phases in institutionalization of QI



Source: URT MOHSW 2009. Quality Improvement - Infection Prevention and Control Orientation Guide for Participants page 15.

With some modifications the figure above depicts the traditional approach to QI institutionalization. Notice that in each phase after awareness there are three recurrent entities:-

- Training
- Mentoring and coaching
- Monitoring and evaluation

This suggests that continuous QI needs these entities to be part and parcel of the process so that QI is attained. A pragmatic approach to institutionalization should take all the three entities from the word go to focus on solving problems encountered in routine processes as illustrated in clear steps that eventually culminate in applying the PDSA cycle (refer participants manual of comprehensive supportive supervision and mentoring²⁸ pages 39 to 42). A facilitators' guide on the same gives training content on application of the Quality Improvement Model (pages 71 to 90)²⁹. Specifically figure 1 (page 6) illustrates this very well.

5.7 Research

A prioritized research agenda for QI has not been outlined. However the potential influence of research on QI is discernible in ongoing QI initiatives. Aspects such as impact of comprehensive supportive supervision and mentoring could be followed in a prospective study. Other variables that could be tackled include policy implementation, cost-benefit analyses, efficiency and effects of resource availability, leadership, teamwork, impact of training and health systems focus. Teaching hospitals could be challenged and motivated to aspire for excellence in QI practice so that they eventually undertake research on QI along with traditional research institutes. In addition to research they may be contracted to undertake external assessments as needed, as well as offer consultancies related to QI work such as documentation of best practices. In other words having "scientific centers of excellence on QI" as a long term strategic goal shall contribute to local sustainability efforts.

²⁸ URT, MOHSW 2011. Training on Comprehensive Supportive Supervision and Mentoring of HIV and AIDS health services. Participant's Manual pp 39-42.

²⁹ URT, MOHSW 2011. Training on Comprehensive Supportive Supervision and mentoring of HIV and AIDS health services. Facilitator's Guide pp 71-90.

6. PRIORITIES FOR THE STRATEGIC PLAN

Selecting aspects to consider in setting standards may vary in context specific ways as illustrated in the tables 2-4 below:-

Table 2: The JCI³⁰ Elaborates Criteria on the Basis of 5 Focus Areas

Focus areas				
Leadership Process and Accountability	Competent and Capable Workforce	Safe Environment for Staff and Patients	Clinical Care of Patients	Improvement of Quality and Safety

Table 3: Domains Based System in National Care Standards of South Africa³¹

Domains						
Patient Rights	Patient Safety, Clinical Governance and Care	Clinical Support Services	Public Health	Leadership and Corporate Governance	Operational Management	Facilities and Infrastructure

Source: National Department of Health, 2011.19

Table 4: MCDI Constructed Domains for Lesotho³²

Patient-centred Domains					
Access to Care and Continuity to Care (ACC)	Patient and Family Rights (PFR)	Assessment of Patients (AOP)	Care of Patients (COP)	Patient and Family Education (PFE)	
Health Care Organization Management Domains					
Organizational Management (OM)	Estate Management and Safety (EMS)	Management of Information (MOI)	Staff Qualifications and Education (SQE)	Prevention and Control of Infections (PCI)	Quality Improvement and Patient Safety (QPS)

³⁰ JCI, 2010. International essentials of health care quality and patient safety, Hospital Edition. www.jointcommissioninternational.org

³¹ Stuart Whittaker et al. 2011. Quality Standards for Healthcare Establishments in South Africa.

³² MCDI, 2006. GOL-CHAL Hospital and Health Centre Certification and Accreditation Standards Indicator Guide Medical Care Development International 8401 Colesville Road, Suite 425, Silver Spring, MD 20910 USA. <http://www.mcdi.org>

6.1 Suggested Areas to Consider in the Strategy Design

Selecting the focus areas or domains is helpful in considering formulating the priorities to include in the strategy. But where these have not been selected as is the case in Tanzania, one can still arrive at priority areas using a common sense approach or borrowing areas or domains from the foregoing tables 2-4, as indicated in table 5 below.

Table 5: Suggested areas to consider in the strategy design

Standard menu	Priority domains for the strategy	Issue justifying	Priority area
Patient-centered Domains			
1. Access to Care and Continuity to Care (ACC)	Access and continuity of care	Drugs and supplies shortages. Patient records not easily retrievable	Health systems/Drugs and supplies logistics Computerized records
2. Patient and Family Rights (PFR)	Patient rights	Lack of patients' charter. No written complaints processing procedures.	Client oriented services/ Client focus
3. Assessment of Patients (AOP)	Assessment of patients	Weakness in medical records; need generic tools (Cards or sheets) to have comparable clerking standards	Clinical and diagnostic services
4. Care of Patients (COP)	Care of patients	Sub-standard materials or equipment from low cost supplier (BP machines, screens, mackintosh, gloves etc)	Quality of supplies and equipment
5. Patient and Family Education (PFE)	Clients' health education	Patients do not know their rights and responsibilities	Client orientation - Rights based approach
Health Care Organization Management Domains			
6. Organizational Management (OM)	QIT/WIT/ HMTs assessments and leadership	QI priorities not driven by self and internal assessments. Teamwork weaknesses.	Comprehensive supportive supervision and mentoring
7. Estate Management and Safety (EMS)	Infrastructure management	Absence of Planned Preventive Maintenance (PPM)	Maintenance, PPM and safety
8. Management of Information (MOI)	Information and evidence	Little value attached to data. Data completeness, reliability, validation, analysis Indicators for QI lacking	HMIS strengthening collaboration
9. Staff Qualifications and Education (SQE)	Human Resources management	Attrition, poorly motivated, shortages	HRH retention and stabilization (collaboration)
10. Prevention and Control of Infections (PCI) - Commonly referred to as IPC)	IPC	Lapses in practices; shortages of relevant supplies	IPC supplies assurance IPC refreshers
11. Quality	Patient Safety	Some work stations do not	SOPs

Standard menu	Priority domains for the strategy	Issue justifying	Priority area
Improvement and Patient Safety (QPS)		display SOPs	

6. 2 Moving Forward from Where We Are

To maximize available resources and avoid duplication of efforts, it is necessary to conceive a comprehensive program that would from time to time be updated to take on board priorities for an agreed time period. In this sense the first Strategic Plan could consider aspects such as integrated capacity development and sustenance, facilitation of QI through establishment of gap analyses and PDSA learning sessions, effective verification of self-assessments and peer assessments (internal assessments) nationwide, extending work around the rights based approach to attain client's rights and respond effectively to staff needs. Moving in parallel shall be the consolidation of IPC practices. Staff self assessment is an in-built feature in some of the already tested QI tools; teamwork in gap analysis and problem solving through implementation and follow up of a jointly constituted and agreed action plan is part and parcel. For these to move forward it is necessary to **groom QI leaders** that shall focus their efforts on expanding the pool of mentors for strengthening QITs and WITs.

Promoting the enforcement of adherence to set standards can come at a later stage as part of the certification and accreditation moves.

7. RECOMMENDATIONS (PRIORITIES FOR THE NEXT 5 YEARS)

Immediate term

- I. Integrated capacity building modules should be developed to be implemented in a phased manner according to theme being focused. Phase one could start with mindset change; organizational change for QI and comprehensive supportive supervision and mentoring. This could be followed by restoration of ethics and re-enforcing specific QI competencies in phase two (safety, IPC consolidation, assessing care domains, planning and management for QI); rigorous refresher for existing staff could be based on TNA for all cadres. The training design should preferably use distance learning mode and foster stronger team work and compassion and integrity in practice settings. The refresher training should reach every district through optimizing the use of Zonal Health Resource Centers (ZHRCs) and RHMTs as Trainers of Trainers backing up the distance learning courses.
- II. Build and manage a system that will create awareness, sensitize and motivate health facilities to apply for and engage in stepwise QI certification leading to accreditation as an approach to improving health care standards. The system should have semi-autonomous to autonomous functionality for the sake of efficiency and effectiveness. Produce a comprehensive set of standards for agreed domains of Quality in health care and use these standards for determination of a baseline assessment values against which quality improvement will be gauged at periodicity determined by stakeholders consensus.
- III. Make patients central to health service delivery; Client focused approach should be introduced through practical tools developed for the application of Human Rights Based Approach (HRBA) such as the patients charter, client complaints handling procedures guide, client's satisfaction monitoring tool, providers perceptions mapping tool, provider satisfaction survey tool. These tools should be rolled out along with the capacity building program.
- IV. Identify and nurture QI leaders from existing exemplary performers to address the QI leadership challenge using innovative means and tested experience. Through the leadership initiative address effective use of governance mechanisms (Committees, Professional Bodies) in QI work.
- V. Review current functions of the new HQA Directorate with a view to creating functional links with Health Systems focal points for the sake of collaborating and getting their cooperation/responses to health systems issues that need address to be supportive of QI in health care, and how supportive supervision can be molded to confer coaching and mentoring capabilities to QITs multilevel.

Intermediate term

- I. Work closely with HMIS and HIS focal points in their efforts to address quality, completeness, validity and reliability of health data to include QI performance indicators: Collaboratively, introduce work packages that shall enable districts as well as all other levels above districts (Region, Zones, Central) to strengthen evidence work – optimal functioning of HMIS and HIS through right sizing the levels of ambition and plethora of data registers and data collection tools. Consultatively, work on computerized template for feeding self-assessment findings and proposed solutions to be observable centrally.
- II. Selection of appropriate and cost efficient technologies in public sector for more effective patient diagnostics through close interaction with private sector (PPP)
- III. Document best practices and lessons for wider sharing: Scale up the innovative approaches that have self-sustaining potential. Organize rotating trophy awards for best performers in QI by introducing annual recognition events in every region and nationally.
- IV. Design QI monitoring tools for Community Based Health Care and Home Based Care in collaboration with NACP, TB, Malaria, RCH and CBHC and Health Education Units and determine strengthening of QI procedures for home based care.
- V. Select from among interested and qualifying higher level institutions those that shall be promoted to become 'Scientific Centers of Excellence' in QI: Stimulate QI operational research at these centers. Contract these institutions to undertake specialized tasks on QI such as capacity development, external assessments, best practices documentation, QI audit in collaboration with international experts.

Long term (5 years and beyond)

- I. Certification and accreditation system developed and fully functional on an independent semi-autonomous platform and applied to both public and private health services.
- II. Introduce vetting /filters at entry point to health schools to produce both quantity and quality practitioners in health service provision; in parallel institutionalize the QI training modules in training curricula for respective cadres including University Medical, Nursing and Pharmacy Colleges/Faculties.

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ANNEXES

Annex I: DHS 2010 Discussion of Maternal Mortality (Page 265)

“Maternal deaths represent 17 percent of all deaths to women age 15-49 (142/826), a figure that is similar to that found in the 2004-05 TDHS (18 percent). The maternal mortality rate can be converted to a maternal mortality ratio and expressed per 100,000 live births by dividing the rate by the general fertility rate of 0.179 that prevailed during the same time period. The advantage of this conversion is that it highlights the obstetric risk, which has great programmatic significance. With this procedure, the maternal mortality ratio during the ten-year period before the survey is estimated as 454 maternal deaths per 100,000 live births. In other words, for every 1,000 live births in Tanzania during this period, about four to five women died of pregnancy-related causes.

It should be kept in mind that maternal mortality is a difficult indicator to measure because of the large sample sizes required to calculate an accurate estimate. The fact that the maternal mortality ratio is expressed per 100,000 live births demonstrates that it is a relatively rare event. As a result, the maternal mortality estimates are subject to large sampling errors. The 95 percent confidence interval for the 2004-05 rates of 578 is 466-690. The 95 percent confidence intervals indicate that true maternal mortality ratio from the 2010 TDHS ranges from 353 to 556 deaths per 100,000 live births. Although the confidence intervals overlap, the upper limit of the 2010 TDHS maternal mortality ratio of 556 is lower than the 2004 TDHS estimate of 578, suggesting that the maternal mortality in Tanzania may have started to decline.”

Annex 2: Definitions (from the TQIF)

Continuous Quality Improvement (CQI) emphasizes continuity of effort and active identification of weaknesses as opportunity for improving quality.

Indicator is a measurable variable or characteristic that can be used to determine the degree of adherence to a standard or achievement of quality goals.

A Standard is a statement of the “desired achievable (rather than observed) performance or value with regard to a given parameter”.

Quality Improvement (QI) is a systematic effort to improve the quality of health system development and the delivery of health care services, including all methods of performance assessment and readjustment according to all available resources, thereby serving the health and welfare of the people.

Total Quality Management (TQM) is an approach by which management and employees can become involved in the continuous improvement of the services aimed at embedding awareness of quality in all organizational processes.

Work Improvement Team (WIT) is essential employees based small group, which aims to provide staff with opportunities for meaningful involvement and contribution in solving problems and challenges.

Annex 3: Field Visits Findings

A key informant at Muhimbili University College of Health Sciences observed that at the Muhimbili National Hospital and the satellite clinics where they conduct field extension activities, health care providers do not think “quality”. Where SOPs are available they may not be in effective use because they are not supported by data; SOP indicators not followed-through with data entry to determine respective functionality become redundant and hence uninformative to management. This hampers objective determination of adherence to set standards. Falling back to self-assessments that usually lead to locally owned decisions for problem solving has been a practical and effective venture. However, poor quality supervision is the limiting factor to exploitation of such ventures on a wider scale; the main reason is the non-functional state of the “supportive” element when referring to ‘Supportive Supervision’. Mapping of best practices in health amongst public and private health facilities may help to show the way forward when shared widely.

At Sengerema District the DMO has been in acting capacity for close to four years; this has engendered relative dysfunction of the CHMT. A CHMT member complained that some members dominate going to seminars and training events to the exclusion and demoralization of others. Quality Improvement does not appear to have been formally introduced apart from efforts of the “Tibu Homa Project”. The acting DMO’s attendance of the first National Quality Improvement Forum last year brought home posters (5S etc) hung in his office, but there has not been any formal feedback to staff regarding the content and way forward of the posters. The nearby Sengerema Health Centre has a Quality Improvement Team but records of its work could not be accessed due to absence of the Clinical Officer in charge at the time of the visit. The Health Centre reported that they get up to 100 outpatients in a day and are short staffed (running 24 hours, they would have 2 Cos covering the morning shift, 1 CO covering the afternoon and the last one covers night duty; nurses are also insufficient). They are challenged by short supply of medicines (tend to get a quarter of what they need) and other essential supplies (gloves in particular hamper ability to conduct normal deliveries), lack of HIV test kits and other laboratory reagents (RDTs). RCH staff in charge was not at base; a fellow worker running the service had neither, knowledge of their immunization coverage, nor awareness of the cold chain (temp chart for the day). To improve their performance they suggested focusing on staff motivation (even spread of attendance to seminars/trainings amongst staff), making supplies and drugs more evenly available, better division of responsibilities amongst staff. Critical issues here included poor teamwork, plethora of registers vs. staff time management, shortage of supplies.

At Nyampande dispensary the Clinical Assistant in charge absenteeism locking away medicines and reports presented the visiting mission with a demoralized Nurse Midwife having very few clients to attend despite the ease of geographical accessibility to the center. The station has water supply problems, a toilet in bad state of repair, drugs shortages and a non-functional Dispensary Committee. Delivery kit lacks essentials and even SP for antenatal attendees are lacking. Staff who attend seminars do not share information gained. The station being a little less than 30 minutes away from the District headquarters is very revealing on the quality and effectiveness of supervision to the facility.

Sengerema DDH has internalized a problem-based approach in dealing with quality at the hospital since 2004. Recent QI training came with a focus on HIV-CTC pediatric. Key achievements have been in getting maternal death audit established and reduction in patient waiting time by at least 2 hours since introduction of the triage. They face challenges of manpower, drugs and supplies. Diminishing supplies from MSD (now gets 50% of requirements from this source), mean they resort to private pharmacies (a more expensive source); with delays in receiving basket funds and low level of OC disbursements the hospital is experiencing severe financial resource limitation. Best practices at the hospital include “niulize

mimi” initiative expediting identification and care to serious patients and instant service to emergency cases. Also developed is an information gathering system (forms) on patient satisfaction put to use at OPD and IPD. A maintenance workshop for repairs exists which is not costly to run. What was referred to as ‘a messy situation with drugs and supplies’ is causing unnecessary referrals – nonfunctional FLHFs generate a work overload crisis at the DDH and the resulting escalation of costs is relieved to some extent by cost-sharing funds. Task shifting is in practice as a response to the manpower shortage.

Sengerema DDH relations with the CHMT were reported to be very good, but the prolonged period in acting position for most CHMT members creates limits to what could be achieved. The Regional Medical Officer observed that the RHMT has not yet taken up the quality improvement tasks due to shortfalls in understanding ‘quality’ and low consciousness on quality amongst health workers: the biggest problem is the low value attached to data. Another problem has to do with elaborated roles, functions and responsibilities of RHMT members without paying attention to important functions of teamwork, capacity building and mentoring, the critical movers of quality improvement.

At Sekou Toure Regional Hospital rehabilitation of infrastructure was evidently geared to improve quality parameters. The QIT is working regularly even though it is rendered ineffective by poor leadership in management of the hospital (reported that management lacks transparency on financial resources). The team has picked out sub-standard supplies from MSD such as faulty BP machines and screens, drums for sterile supplies having no handles. Maternal health staff has been trained in SBMR but not the QIT: Lapses in cleaning, storage, defects in toilets and lack of sluice rooms make it difficult to observe IPC standards in labor ward and other critical areas. An improvised room is used as minor theatre but lacks materials and equipment to observe aseptic procedures. A Central Sterile Supplies Department is not in place; sterile supplies are sourced from those intended for theatre. Planned activities for QI were not respected when the Hospital Annual plan was finalized last year. Despite challenges posed by improper final disposal of sharps, low staff motivation, sub-optimal financial management and leadership weaknesses the Hospital has (through the Quality Improvement Collaborative) managed to improve time management by screening children in need of emergency care for fast tracking at the OPD, and Nursing SOPs have been broken down innovatively into single page briefs for each work station; the one pager briefs were bound in stapled disused X-Ray films and thus avoiding costs of lamination. In this manner the SOP for Nursing has become available at every work station in a simple easy to use mode. Signage and labeling to guide clients in identifying locations of various services has been attained.

At Makongoro Health Center QI has recently (2 months) been stimulated by training offered under the support of “Tibu Homa Project”. As a result a triage Nurse is in place, emergency kits are in place, and women are forthcoming to get RDTs done and secure expedited treatment for their children; waiting time at the center has been reduced from 5 to 3 hours. They identify supplies, drugs and staff motivation as priorities for QI to move forward.

Nyakahoja RC Dispensary is impressively clean and organized. They have a QIT since April 2012 that engages in joint observation of problems; they do not do self-assessments but agree this would add value to how they work through setting up interdepartmental competitions. They have managed to reduce wastage of drugs through measures to avoid expiry of drugs on shelves even though the Pharmacy lacked awareness of FEFO. Closeness to Clients orientation through regular dialogue among staff on client handling has imparted what is described as a humane approach to handling and solving encountered problems. Now the leadership is emphasizing inculcating staff discipline through self-awareness of self-value and how this can trickle to others. They face challenges of serving destitute

people with disability who cannot afford to pay for services and yet presented in need of care and treatment in a situation where costs of drugs are increasing.

At Muhimbili National Hospital there is a solid QIT and WIT in respective blocks where they have put in place a patient satisfaction questionnaire, supportive supervision and quarterly assessments (auditing performance of quality using a combined tool).

The QIT claimed the following successes of their efforts:-

- Reduced patient/ client complaints (though not quantified)
- Cleaner hospital premises with various blocks in competition to improve quality
- Faster communication of laboratory results (except for histology)
- Reduced patient waiting time (not quantified)
- Improved IPC scores from 29% to about 70%
- QI activities included in hospital plan of action
- SOPs and general policy guidelines are in place that includes patient's charter.

Challenges encountered at Muhimbili include sustainability of supplies to protect/promote quality due to financial constraints, a mix of positive and negative staff attitudes, inclusion of QI in training syllabi, need to harmonize QI approaches and tools, readiness of Clinicians to coach, mentor and review quality issues, attrition of clinical staff from QIT, staff incentives and motivation, and negative feedback effects of rushed incomplete assessments and inspections.

The team at MNH recommended the following to be considered in the forthcoming National QI Strategic Plan:

- Establishing centers of excellence for QI would bring positive development to QI
- Establishing a comprehensive set of national Quality standards
- Investing in providing modern and functional equipment
- Establishing a national quality audit of QI approaches
- Consolidate the mentoring and coaching aspects in supportive supervision
- Review the tool for supportive supervision to match with changed times
- Selection of assessors should be guided by robust criteria
- Develop a QI generic training package for QITs
- Capacitate QITs on how to assess quality of care using national set of standards, indicators and verification /assessment criteria and methods.
- Standardize and harmonize tools used in QI

At Nyangao Mission Hospital a QIT exists and meets regularly on monthly frequency but there is no WIT. Their QI work started based on an assessment dating 3 years back. There was no feedback or record of an external assessment that was done in May 2012. The QIT has a work plan dated 2010-2011 which they claim to have implemented all activities but one. Use of SOPs is reported to be in practice at CTC, VCT, PITC, RCH and Laboratory. Visiting the Laboratory revealed the SOPs is not followed to the letter: Some Lab coats were dirty; some working spaces dust ridden, evidence of eating in restricted areas, storage of unwanted items in utility cupboards. Nursing SOPs were shown but the opportunity to observe these in practice setting was only possible to surmise from the poor practice of IPC and lack of systematic storage of various items in working rooms despite having been trained. The team also received training on 5S and QIC.

Reported successes include construction of sewage stabilization ponds for the hospital, supply of furniture and equipment, introduction of treated nets to all 238 beds and fitting of notice boards for the purpose of pinning communication notices to care providers and clients. They have also initiated a Medical Therapeutic Committee that has been effective in instituting a check on patients turn-around time, and prescriptions review for peer corrections. A Disciplinary Committee is also in place. Constraints encountered include limitations of qualified staff.

Challenges faced include leadership weaknesses as evidenced by lack of team approach in checking at least the IPC practices of various work stations.

At Sokoine Hospital in Lindi a modern laboratory was put to the mission as exemplary in QI procedures and possible best practice for sharing. Their effort is brought down by water supply problems prevalent in the region. The obsession to store items according to respective labeled compartments or shelves is not yet well established in the laboratory. Flow pattern of functions inappropriately places toilets in a relatively inaccessible area of the laboratory; also the place earmarked for tea break is inaccessible to staff otherwise they have to pass through areas where they infringe laboratory rules for safety.

The aforementioned shortcomings notwithstanding, the laboratory has SOPs they try to follow, manuals covering quality, patient specimen collection, clinician handbook and laboratory safety. Controlling the laboratory is a team comprised of Lab Manager, Quality Systems Officer and Safety Officer. The last two have deputies under them. Shortage of staff experienced in the past was alleviated when they got assistance from Benjamin Mkapa Aids Fellows (BMAF) organization that enabled them to recruit 6 qualified staff between January and March 2012. With water supply not running it is difficult to maintain hand washing practices at the optimal level. One air conditioning unit and a Fully Machine were not functional: The maintenance schedule for the fully machine was not charted since mid-July 2012. Shortages of gloves were also experienced. A new microbiology machine has been supplied since 2 years back but is not yet in use for some unclear reasons. The laboratory is in process of been established according to standards with clear working sheets and procedures to get it on the path to fulfill accreditation requirements.

There is clear evidence from the practices observed that, upon finalization of contracted jobs and major equipment supply, brush up re-orientation of staff to observe the working routines more strictly, they can reach their aspirations for eventual accreditation. The laboratory faces challenges of lack of running water, lack of eye protection, short expiry period of reagents, staff mind-set on systematic procedures, and a non-functional microbiology department. They suggested the following be considered in the forthcoming QI strategic plan:

- Capacity building through thematic seminars
- Strengthening in-service training – innovate how to counter resistance to feedback from individuals that attended some specified training event e.g. by rotating staff going for various training seminars (resistance was reported to be due to allowance payment expectations).

They were advised to support Nyangao Hospital to pull up their laboratory operating standards as a way to demonstrate their transfer of knowledge and skills.

A very quick observation of the RCH section identified lack of awareness on COPE manuals and tools, refrigerator temperature reading minus two degrees below zero and no temperature charting for more than a week. It was already past noon time and there were no more RCH clinic clients. Feedback was given to RHMT on the cold chain maintenance problem.

The labor ward was reported to be short staffed, having no ultrasound machine, delivery kits instruments affected by salty water, and poor observance of IPC practices. An improvised delivery bed was not subjected to thorough cleansing; PMTCT cupboard did not show evidence of 5S practice despite having been exposed to 5S training; a room labeled as Nurses Station was full of dusty stored items. The QI mindset was not evidenced in labor ward.

The RHMT members found at base and some Hospital Management Team members shared that QI work was in place at Sokoine Hospital and RHMT QI shall be re-established for effective QI follow up at Local Councils when a replacement of QI Focal Person who left on self-solicited transfer is addressed. Most QI members were either on leave or have travelled for one reason or the other. It was shared that DPs who had prominence supporting health services (CHAI and GTZ) had scaled down or changed their areas of focus. Currently active DPs are URC (HIV), JICA (5S) and IMA-World Health (NTDs) and GTZ (Financing, Neonatal care, Home based care and Human Resources). QI activities introduced include IPC and PMTCT that involved TOTs, inspection (last December) and recent assessment (May 2012): feedback was done. One of the members felt QI activities have not yet had a firm grip given water scarcity, defective hospital infrastructure and waste not been disaggregated leading to ineffective functioning of incinerator.

Supervision challenges shared include:

- Supervision team attrition/ staff mobility
- Staff shortage in the midst of high workload compromises ability to adhere to supervision schedules
- Skills variations between team members
- Not finding the targeted supervisees at base sometimes for personal reasons or due to partners' activities.
- Financial constraints especially during the 1st and 2nd quarter; funds arrive when some areas are inaccessible from rains and floods
- High proportion of health facilities managed by Medical Attendants (38% in the region). Among the 9 Health Centers in the region only one is better staffed (Has 1 AMO, 1 CO, 2 NMWs: The rest have a CO and NMW or EN – in other words they function like dispensaries.

QI challenges shared include:

- Frequent changes of tools
- Variations in assessments according to partners and MOHSW guides (better have one assessment instrument)
- Low ability of districts to undertake self-assessments and internal assessments
- The government ban on training workshops for three years
- Donor dependency for supportive supervision
- Lack of a clear RHMT owned strategy for conducting coaching and mentoring at health facilities due to too many ad hoc activities. (Advised to undertake a time-motion study to gain better insight on the problem)
- Non response to previous assessment findings – especially infrastructure maintenance.
- Availability of supplies - substandard items from MSD; erratic drug supplies.
- Late feedback from MSD on O/S items

Successes shared include:

- Some IPC practices started despite poor infrastructure; cleanliness observed despite water scarcity.
- Guidelines made available at working stations

The RHMT is making a new beginning of QI engagement. The presence of a number of flaws with regard to IPC practices in the Regional Hospital and malfunction of the cold chain right on their doorstep clearly demonstrated they are out of touch with quality of care issues, the recent QI assessment visit notwithstanding. The team needs fresh coaching and capacity strengthening on QI to enable them to provide effective support and transfer of capacity to the Hospitals, and Local Councils Health Management Teams.

One Health Center (Town HC) in Lindi Municipality was visited by the mission. The center runs a 24 hours service, has a QIT in place that meets regularly and do not see the relevance of having a WIT because it would be a repeat of the same members who are in the QIT. The labor ward was empty with no signs that available beds were being used (no linen, beds not dressed). Staff found at base reported they experience many losses to follow up cases in CTC as well as less deliveries and post natal follow up probably influenced by their proximity to Sokoine Regional Hospital. The center appears underutilized and was reported to be scantily supervised; they depend on Regional Hospital CD4 machine since they do not have one of their own. Progress they see is in meeting CD4 targets, attending patients timely and being able to recover patients lost to follow up. When they recently ran out of stock on ARVs it is commendable that they communicated with Masasi and restocked themselves from the overstock at Masasi.

A member of the Council Health Management Team that showed up at the Town Health Center shared that HIV/AIDS activities were first introduced with CHAI support and later in 2010 EGPAF and URC support came in. Progress made was in setting care improvement targets, addressing gaps identified through a problem-solving approach, have strategized own staff retention scheme that includes provision of staff houses, using O/Cs to pay salaries immediately upon receiving new staff and hence avoid demoralizing from delayed entry in payroll. On QI specifically they have reflected activities (Supportive supervision, staff retention measures and QI capacity building) in 2012-2013 CCHP. Due to insufficient supply of drugs through the ILS, they have been guided that their drugs budget should increase to 40% of the total CCHP ceiling; out of this they are allowed to purchase up to 20% of the drugs budget on their own when items are out of stock at MSD. He further informed that all health facilities in the Municipality have sufficient trained personnel, thanks to BMAF support. The CHMT has changed its approach to supervision: they now spend up to 6 hours per facility in order to coach and mentor staff as needed. Self-assessment capacity for QI is not yet in place at health facilities but it is the next step they have planned to undertake. His suggestions on what should be considered in the QI strategy were:

- To address how to assure continuous supply of drugs, supplies and equipment distribution
- To address how to assure supply and retention of human resources for health – promoting local retention measures
- Developing integrated reporting tools to save on staff time and avoid donor driven reports
- Train QI teams and rest of staff to be QI competent

At Mwananyamala Hospital in Dar es Salaam the QIT also includes the MO in charge and the HIV CTC. At wards they have WITs following 5S TOTs and IPC competency training. Exemplary QI activities were

claimed in HIV-CTC, which through MDH support, they try to institutionalize QI activities. Their HMIS has started to improve following ongoing training but it still has to undergo ICD 10 adaptation, data validation checks and computerization. They do not have indicators for QI included in HMIS and still need to improve data storage. In the course of the interview/ discussion the QIT was made aware of the link between HMIS and QI work. Incomplete filling of HMIS registers (e.g. some diagnoses not recorded) is an issue related to high workload of patients forcing individuals to fill them at own spare time (a source of errors and gaps). There is little if any use of HMIS at the Hospital apart from summarizing and submitting reports to MO in charge who subsequently relays these to the DMO.

The QIT shared the following achievements

- Organized QI mind set among staff in wards
- Beginning to see better IPC practices
- Hospital management taking initiative to respond to specific infrastructure problems geared to relieve congestion in wards and systematize operations (Labor Ward, OPD and Administration Offices, Theatre – Obstetric), Post natal and neonatal care, Methadone stabilization facility etc).
- Organized HIV/TB integration and CTC, PMTCT with exemplary QI activities such as missed patients follow up, organized retrieval of patient information, functional CTC services and informative data base, opened refilling sites decongesting clinic, reduced waiting time (thanks to MDH support).

Challenges faced include:-

- Staff attitudes towards unpaid training sessions; inability to ensure everyone attends scheduled training
- Cascade training dilution effect on complement of transferred skills
- About 60 to 70% of patients in exempt categories drain Hospital budget
- Availability of basic supplies
- Severe congestion in wards results in booking 2 patients per bed and inability to effectively check cross infection between patients.
- CTC inability to track patient retention – perceived as a project needing a plan and separate resources to get it done.
- Insufficient skills on planning for QI
- CTC facing male involvement challenge
- Persistence of stigma on HIV/AIDS
- An inefficiently functioning incinerator and rotting waste (inappropriately disposed seemingly unsorted solid waste) in what is supposed to be an ash pit issuing putrid odor to the surrounding environment.

Summarized one sees Mwananyamala Hospital as a congested center that started off as a dispensary and later upgraded to Urban Health Center without a clear developmental master plan to becoming a Regional Hospital – buildings are coming up in reactive mode to patient overload. In the absence of planned preventive maintenance, the new constructed structures will suffer deterioration like their predecessors. An exemplary CTC with QI initiative clearly influenced by 5S practice is in place. However CTC incarge involvement as QIT member seems to have influenced Hospital QI practices on a limited scale but at least evidence of collaboration is seen in the value hospital management and QIT members see in the CTC quality work. The MO in charge is a member of the Hospital QIT, but this does not seem to have been exploited for higher profiling and prioritization of QI at the hospital for more intensive QI actions.

Temeke Hospital situation is not very different from Mwananyamala but there are peculiarities here that need highlighting. Shared similarities include the fact that they all started off as dispensaries several decades ago and transformed into Health Centers and later Municipal Hospitals; Now to be upgraded into Regional Referral Hospitals even though their land area does not facilitate expansion except by erecting multistory structures. Temeke has planned for computerization of their medical records in budget year 2012-13 to ease management and retrieval. A candid informant shared that it is quite likely HMIS data is cooked considering the high patient load that forces staff to fill registers at their own spare time. They informed that they receive between 1,500 and 1,700 outpatients per day. So far they received IPC and 5S training. Hospital management and QIT are aware of QI activities in CTC but they seem not to be in sufficient interaction given the perception 'they have their own QIT' and none of the members in CTC QIT has presence in the Hospital QIT. Achievements claimed by Temeke Hospital QIT include following IPC practices, presence of autoclaves for producing sterile supply packs, signage at various wards and locations. Constraints faced include frequent mobility of Human Resources, weekly shortages of supplies compounded by bureaucratic processing of procurement. A few observations found no ash pit for servicing the incinerator, sharps littering the grounds around the incinerator, rotting waste, sharps mixed with other refuse indicating sorting weaknesses, no disaggregation; the refuse collection point is not screened to prevent unwanted trespass and the shed lacks a proper door. Red bags were disposed here in breach of recommended procedure.

Challenges put forward included:-

- Availability of funds to ensure regularity of supplies when resorting to tender outside the MSD system (the tender winners are more expensive than MSD)
- MSD inability to supply IPC inputs (gloves, alcohol, decontamination supply, protective boots etc)
- Excessive staff mobility calling for frequent replacement training
- Quality of MSD supplies is low (Mackintosh, BP machines, Screens, substandard chlorine tablets)

They recommended that the MOHSW should consider developing tools for computerized HMIS including introducing electronic medical records: Also the development of tools for patient care at OPD and IPD. Inclusion of QI program in curricula for pre-service personnel was suggested for sustainability sake. To reduce mortality it was recommended that casualty, emergency and trauma cases be subject to a fast track system in every hospital.