



## RESEARCH AND EVALUATION REPORT

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# Institutionalizing Quality Improvement in Uganda: Facilitators and Barriers

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**JANUARY 2019**

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This research report examining the facilitators and barriers to institutionalizing quality improvement in Uganda was prepared by University Research Co., LLC (URC) for review by the United States Agency for International Development (USAID) and authored by Sarah Smith Lunsford of EnCompass LLC and Esther Karamagi and Juliana Nabwire of URC through the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project. The USAID ASSIST Project is made possible by the generous support of the American people through USAID.

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### DISCLAIMER

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For more information on the work of the USAID ASSIST Project, please visit [www.usaidassist.org](http://www.usaidassist.org) or write [assist-info@urc-chs.com](mailto:assist-info@urc-chs.com).

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## ABBREVIATIONS

ART	Antiretroviral therapy
ASSIST	USAID Applying Science to Strengthen and Improve Systems
DMS	Daily management systems
HIV	Human Immuno-Deficiency Virus
IHI	Institute for Healthcare Improvement
KM	Knowledge management
MOH	Ministry of Health
QA	Quality assurance
QI	Quality improvement
PHFS	Partnership for HIV-Free Survival
SMGL	Saving Mothers Giving Lives
URC	University Research Co., LLC
USAID	United States Agency for International Development
WHO	World Health Organization

# EXECUTIVE SUMMARY

## Introduction

When improvement methods are institutionalized a healthcare system can be more agile in achieving improved service delivery. Understanding both expressions of institutionalization and pathways for moving toward institutionalized improvement methods can provide guideposts for low- and middle-income countries in their improvement journey. In this report we provide findings from a scoping review of the literature on institutionalization of improvement. We then present a case study from Uganda, drawing on the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project's experience. Finally, we outline possible next steps for continuing to institutionalize improvement in Uganda.

## Methodology

A literature search was conducted to identify English language publications from 2010-2018. Results were screened for relevance. Insights based on key informant interviews were extracted from a USAID cross-bureau report "Uganda's Quality Improvement Journey" and assessed against the characteristics identified in the literature search.

## Results

A total of 3,169 publications were identified. After removing duplicates and screening for content and relevance, 16 papers were included; 4 focused on a single health facility, 5 were not data driven. Most (13) focused on high income settings, while only one was from a low- and middle-income setting. No papers specifically referenced "institutionalization" of QI, instead referring to creating a culture of continuous improvement or a culture of safety.

Key characteristics of institutionalization were extracted from the published documents:

- leadership and governance at all levels of the health system;
- perspectives of and approaches to improvement, both from leadership and relating to the systems put into place to support improvement activities;
- communications and teamwork within improvement teams, across teams and functions, and between management and staff; and
- professional development and human resources around improvement.

Over the past several decades, extensive QI work has been carried out in Uganda across clinical areas. Activities conducted during the life of the ASSIST Project have facilitated movement toward institutionalization of improvement across Uganda's health system. For example, building leadership capabilities at the district level allows for ongoing coaching and support to facilities after the termination of external technical assistance resources.

## Conclusion

The lack of a clear gold standard in the literature of institutionalized improvement presents a challenge when tracking a country's progress toward institutionalization. Additionally, the evidence reviewed in this paper focuses on creating a culture of improvement or safety within facilities, which can be difficult to extrapolate to a larger health system like that of Uganda. Based on our review of the literature and the experience in Uganda, we present the following recommendations to move Uganda further on the path of institutionalization of improvement:

- The government of Uganda should increase financial investment in efforts to improve quality of care, which will facilitate country ownership over the improvement work.

- Efforts need to continue to move beyond capacitating individuals in QI and setting up systems and building QI into the fabric of the health system.
- At all levels of the health system, small scale efforts to apply QI methods to other clinical areas without external technical assistance should be attempted.
- Future investment in QI and institutionalization should move beyond single technical areas or slices of the system, instead taking a more macro-systems approach as a means of integrating improvement across technical areas.



## I. INTRODUCTION

Extensive research has been conducted examining the factors that facilitate the success of individual healthcare improvement activities (see, for example, Kaplan et al, 2011; Kaplan et al, 2013; Kash et al, 2014). It has been suggested that when organizational change takes root in a health system, improvements as a result of QI activities are more likely to be sustained (Weaver et al, 2015). Less exploration has been done on institutionalization of improvement methods within health systems.

The USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project defines institutionalization of improvement methods as “establishing and maintaining continuous improvement activities as an integral and sustainable part of a health system or organization’s daily activities” (Smith et al, 2012). This is distinct from sustaining gains achieved through an improvement activity. A key aspect of institutionalizing improvement methods is the demonstrated application of the methods to clinical or other service areas for which no direct technical assistance was received, termed “transfer”. By institutionalizing improvement methods, organizations avoid having to “reinvent the wheel” and can be more agile in achieving improvement (Lavoie-Tremblay et al, 2018).

Understanding both expressions of institutionalization and pathways for moving toward institutionalized improvement methods can provide guideposts for low- and middle-income countries in their improvement journey. In this report we provide findings from a scoping review of the literature on institutionalization of improvement. We then present a case study from Uganda, drawing on USAID ASSIST Project’s experience. Finally, we outline possible next steps for continuing to institutionalize improvement in Uganda.

## II. METHODOLOGY

### A. Search Strategy

A search string was generated using key concepts and terms (see text box). Defined search terms were used to search PubMed and Google Scholar. The following sites were search for relevant grey literature: World Health Organization (WHO), USAID, and Institute for Healthcare Improvement (IHI). Only publications in English were included; publication period was limited to 2010 - 2018. No limits were put on study country, clinical content area, publication type or, if relevant, research design given the wide range of possible publications related to institutionalization. After reviewing initial search results, additional targeted searches were conducted in PubMed and by reviewing references listed in each included publication. Additionally, publications previously known to the authors were included.

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#### SEARCH STRING

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(institutionalization OR sustainability OR "culture of improvement") and ("quality improvement" OR QI) and (hospital OR health facility)

### B. Selection

The primary search results were screened by title and abstract/executive summary for relevance. Publications that contained some search terms but did not explicitly address issues around institutionalization of QI in the healthcare space were excluded. In the second screening, a detailed reading of the remaining publications was conducted; studies that did not explicitly address quality improvement, institutionalization, sustainability, or a culture of quality were excluded. Publications that addressed only the quality of care without attention given to the institutionalization of improvement methods or approaches were also excluded.

## C. Categorization and Evidence Review

The review of the included publications included in the final review were grouped into overarching topic areas. Publications from Uganda were separated from others to function as a case study.

## D. Uganda Case

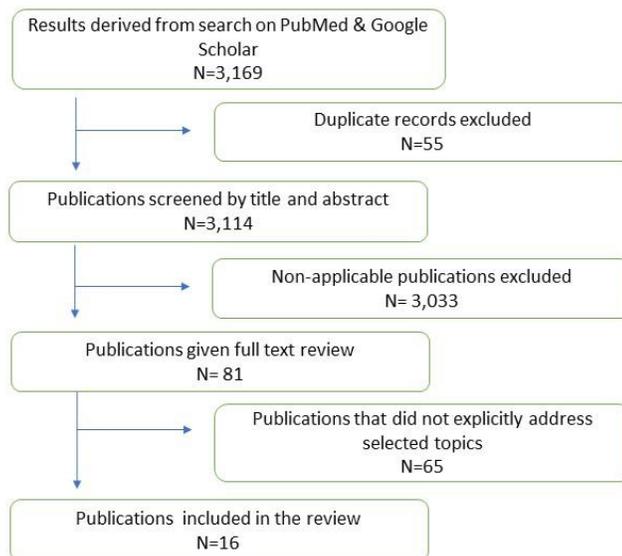
Findings generated from key informant interviews under a cross-bureau activity “Uganda’s Quality Improvement Journey” were extracted from the activity’s report and compared to the characteristics identified in the literature search.

# III. RESULTS

## A. Sample Characteristics

A total of 3,169 publications were identified using the process described above; 55 were duplicates. We screened the titles and abstracts of 3,114, excluding 3,033 based on content. The remaining 81 publications were given a full text review and 65 were excluded for not specifically addressing the topic at hand. Of the 16 number of papers included in this review, 4 focused on a single health facility, 5 were not data driven. Most (13) focused on high income settings, while only one was from a low- and middle-income setting.

**Figure 1: Review process**



## B. Defining Institutionalization

No papers specifically referenced “institutionalization” of QI, instead referring to creating a culture of continuous improvement or a culture of safety.

## C. Characteristics of Institutionalized QI

Key characteristics of institutionalization were extracted from the published documents included in this review (**Table 1**): leadership and governance at all levels of the health system; perspectives of and approaches to improvement, both from leadership and relating to the systems put into place to support

improvement activities; communications and teamwork within improvement teams, across teams and functions, and between management and staff; and professional development and human resources around improvement.

## **1. Leadership and Governance**

Senior leadership focused on a culture of improvement create an environment in which all employees contribute ideas to improve care via multiple formal and informal communications modalities. Seeing their ideas acted upon made staff feel valued (Adleman, 2012). Related was the importance of listening to and addressing staff resource needs (Birckhead, 2015). Leadership must also hold teams and staff accountable for improving the quality of care (Birckhead, 2015).

It should be recognized that other systems may need to be strengthened to facilitate frontline providers in delivering quality care. Efforts at the facility level must take into account larger health system functions (Joseph et al, 2015), and efforts at the district, regional, or national level should coordinate with other governance structures.

## **2. Approaches to Improvement**

Viewing improvement as a series of individual projects as opposed to an organizational management approach limits the organization's ability to continuously improve (Birckhead, 2015). In a US-based hospital, leadership established a daily management system (DMS) to change the culture in which competing priorities hindered improvement by establishing protected time for improvement to occur and empowering staff to engage in and have ownership over improvement (Maurer et al, 2018).

Building processes for measuring change and then using those data to inform decision-making is a cornerstone of a health system that continuously improves. In Haiti, integrating monitoring and evaluation and QI functions at the facility level enhanced the use of data to implement changes in response to identified gaps (Joseph et al, 2015).

## **3. Communication and Team Work**

Clear and transparent lines of communication both between leadership and frontline staff are key for ensuring that management and staff are well informed about the goals of improvement activities, progress being made, and challenges faced. Communication can also facilitate accountability, moving efforts forward toward the provision of better quality care.

## **4. Professional Development and Human Resources**

In a Canadian hospital, building capacity across the organization was achieved by cross-appointing staff to the core improvement team to work on specific improvement projects as well as cross-appointing core improvement team members to hospital departments (e.g. surgery) to build department-wide capacity (Chattergoon et al, 2014).

Building capacity of frontline workers requires senior leaders and mid-level managers who can train, mentor and coach improvement teams. These leaders and managers also need to be trained both in improvement and how to guide others through the process which needs to be built into their job descriptions and workday (Dainty and Sinclair, 2017).

**Table 1: Characteristics of Institutionalization Identified from the Literature**

<b>Leadership</b>	<b>Communication</b>	<b>Team Effectiveness</b>	<b>Management Systems</b>	<b>Professional Development/HR</b>
Improvement viewed as organizational management approach and institutional guiding principle rather than series of individual activities (Birckhead, 2015; Hochman et al, 2016)	Formal and informal channels (Adleman, 2012)	Trust, cooperation and co-creation of processes (Birckhead, 2015; Grant, 2011)	Data-driven decision making using appropriate measures (Birckhead, 2015; Chattergoon et al, 2014; Clark et al, 2013; Hochman et al, 2016; Joseph et al 2015)	Build improvement capacity across functions and departments with short, engaging and clear materials (Chattergoon et al, 2014; Joseph et al 2015; Weaver et al, 2015)
Long-term commitment of leadership to coach and foster a new culture of continuous improvement (Clark et al, 2013)	Bottom-up and top-down communication in which leaders listen (Birckhead, 2015; Donnelly, 2017) and communication across QI teams, if multiple within an organization (Weaver et al, 2015)	Respectful relationships across cadres and roles and reduced barriers between cadres for collaboration on QI work (Chassin, 2013; Eriksson and Mullern, 2017)	Publically visible reporting of measures encourages ongoing improvement (Chattergoon et al, 2014)	Need to develop senior leaders and mid-level managers who can coach staff in improvement (Clark et al, 2013; Dainty and Sinclair, 2017; Hochman et al, 2016)
Model team-based improvement approaches (Chattergoon et al, 2014) and demonstrate energy investment in and optimism for improvement (Donnelly, 2017)	Leaders effectively communicate around accountability cycles (Birckhead, 2015; Donnelly, 2017)	Empowered junior doctors to effect change (Grant, 2011)	All staff, including leaders, should have confidence in the validity, importance, and fairness of quality measures (Goff et al, 2015)	Job descriptions include QI as part of manager responsibilities (Dainty and Sinclair, 2017)
View failure as an opportunity for growth and improvement (Donnelly, 2017)		Collaborative relationships between mid-level managers and frontline staff (Morath, 2011)	A daily management system facilitates creating time for improvement work (Maurer et al, 2018)	Strategies to engage and involve staff in improvement work are cadre-specific (Eriksson et al, 2016)

## D. Uganda Case Study

Over the past several decades, extensive QI work has been carried out in Uganda across clinical areas including maternal and newborn health (Waiswa et al, 2017; Tancred et al, 2018), reproductive health (Agha, 2010); voluntary medical male circumcision (Byabagambi et al, 2015); primary healthcare (Omaswa et al, 1996); surgery (Lilaonitkul et al, 2015); data management (Kyeyagalire et al, 2011); and tuberculosis testing.

A recent USAID ASSIST report exploring the history of QI in Uganda identified barriers and facilitators to building a culture of improvement across the country over the last 20 years (Gutierrez et al 2018). The insights from this report focus on institutionalization of improvement methods from the perspective of the larger health system, rather than the individual facility perspective, likely a result of who was interviewed during data collection (see report for more detail). At the national level, strides have been made in building governance and leadership structures that will encourage ongoing improvement activities after the cessation of external technical assistance, but the government's financial investments have not kept pace (**Table 2**).

**Table 2: Historical Perspective on the Facilitators and Barriers to Institutionalization of QI in Uganda**

	<b>Facilitators</b>	<b>Barriers</b>
Governance & Leadership	Leadership trained in and became champions for QA from the start	Weak governance structures cannot sustain prolonged efforts needed to institutionalize QI
	National level Quality Assurance Department established in central Ministry of Health (MOH) with clear mandate and objectives	No accreditation system
	Recognition that multiple donor-sponsored QI initiatives needed to be coordinated and harmonized resulted in a National Health Quality Improvement Framework and Strategic Plan (2010/11-2014/15)	Difficulties managing partner organizations
	Participatory process in developing second National Health Quality Improvement Framework and Strategic Plan (2015/16-2019/20)	
	Uganda National Minimal Health Care Package details service the government of Uganda will pay for	Insufficient resources to pay for all the services listed in the Uganda National Minimal Health Care Package
	QI activities integrated into existing health plans to build sustainability and efficiency	QI activities managed within vertical programs rather than across existing public health services
	HMIS facilitates using data for decision-making	
Financial Investment	Donor support to build QA/QI capacity at district level	Inadequate investment in health sector that remained at the central MOH rather than moving to regions/districts

Human Resources	Training manuals, monitoring tools, and other job aids developed and updated	High staff turnover impairs institutional memory of QI
	Developed cadre of national level trainers in QA	Weak lines of reporting and supervision

Activities conducted during the life of the ASSIST Project have facilitated movement toward institutionalization of improvement across Uganda’s health system (**Table 3**). Building leadership capabilities at the district level allows for ongoing coaching and support to facilities after the termination of external technical assistance resources. Under the Saving Mothers Giving Lives (SMGL) activities, efforts were made to build skills in both data capture and management as well as supportive supervision to maintain collection and use of data.

**Table 3: Illustrative USAID ASSIST Activities in Uganda to Support Institutionalization**

Leadership	Communication	Team Effectiveness	Management Systems	Professional Development/HR
<p>Launched the 2<sup>nd</sup> Health Sector QI Framework and Strategic plan 2015/16-2019/20</p> <p>Supported and conducted National QI Conferences to increase awareness and advocate for QI</p> <p>Developed QI Curriculum and a Methods manual for health care workers</p> <p>Created and functionalized QI coordination structures</p>	<p>Supported the development of a knowledge management portal for sharing QI reports and KM products</p> <p>Conducted cross-country learning through exchange visits and technical assistance. For example, under the Partnership for HIV-Free Survival (PHFS), Uganda shared lessons with other participating countries through exchange visits and webinars. Uganda hosted learning meetings attended by Kenya, Lesotho, and Tanzania</p> <p>Uganda supported Ministry of Health Lesotho to develop</p>	<p>Adapted tools to support QI teams at the frontline such as the documentation journal</p>	<p>Institutionalization of National QI reporting for implementing partners and districts</p>	<p>Trained national and regional coaches to support QI activities at the different levels</p>

	and finalized their first ever Lesotho Quality Assurance and Improvement Strategic Plan 2017/2018 – 2022/23			
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As described above, a key indicator of institutionalization is the ability for the system to transfer the QI learnings and experiences from one technical area to another. At the facility level, transfer of QI approaches from one clinical area to other clinical areas was observed. In 2013, the USAID ASSIST Project supported three facilities in Mityana District to implement the chronic care model to improve retention, adherence, clinical outcomes, provider knowledge, and documentation, and reduce patient wait times. After a year, external support was reduced. Facilities in Mityana District independently elected to apply improvement approaches to other clinical areas, such as diabetes and hypertension management; interviewed providers from these facilities viewed this as a logical next step in improving care. Improvement approaches were also applied to address infection rates in voluntary medical male circumcision and reducing waiting time in antenatal care. Facility leadership was key in supporting these additional improvement efforts by offering logistical support and feedback. Beyond the facility, districts took their own action to institutionalize improvement by allocating budget resources for QI coaching and mentorship, though the district did express a hope that external QI support would be continued. Little evidence indicates that similar transfer is happening at other levels of the health system.

**IV. CONCLUSION & RECOMMENDATIONS**

This report aimed to both examine what the literature says about institutionalization of QI methods and where Uganda falls in the pathway toward institutionalized improvement. The literature included in this review did not refer to institutionalization, making it difficult to establish a “gold standard” against which Ugandan progress could be tracked. Additionally, all but one of the publications included in this report originated from high-income settings where the learning may not be transferable to more resource-constrained health systems.

Much of the literature presented in the first half of this paper either addresses building a culture of continuous improvement in a single health facility or is more theoretical in nature. While it is important to understand how facilities institutionalize QI, it is difficult to extrapolate these learnings to national health systems, like that in Uganda. Therefore, it is possible to see different manifestations of institutionalization at different levels of the health system, especially in the context of decentralize systems where there is local ownership of and leadership over health activities. The ASSIST experience in Uganda reveals that efforts have been made at all levels of the health system, but we see less evidence of how these levels are interacting with each other to reinforce the quality agenda set at the national level.

In Haiti and Tanzania, the national HIV QI program experience was leveraged to extend improvement approaches to other clinical areas (Joseph et al, 2011; Mwidunda and Eliakimu, 2015), what the USAID HCI and ASSIST Projects have termed “transfer”. This transfer was achieved with external support. In Uganda, transfer was observed in selected facilities in which the chronic care model was applied, but has not been observed at other levels of the system.

As Grant (2011) notes, changing organizational culture to one in which quality is embedded into its very fabric is a long process but one that depends on people, not policies. Improvement infrastructure needs to be in place for the people within the organization to succeed in improvement. The infrastructure elements include a QI department, quality officers who lead QI efforts and report to senior leadership, staff

representing diverse roles and functions engaged in QI, and ongoing monitoring and evaluation efforts (Hochman et al, 2016). A study of the 20-year long QI program in Jönköping County, Sweden, identified five key elements of programmatic success: a clear succession plan following the departure of the Chief Medical Officer and QI champion, agile management approaches responsive to changing contextual factors, clear strategy, a broad view of quality which included clinical effectiveness, patient, safety, and patient experience, an ongoing investment in education and research around QI (Staines et al, 2015).

Based on our review of the literature and the experience in Uganda, we present the following recommendations to move Uganda further on the path of institutionalization of improvement:

- The government of Uganda should increase financial investment in efforts to improve quality of care, which will facilitate country ownership over the improvement work.
- Efforts need to continue to move beyond capacitating individuals in QI and setting up systems, and building QI into the fabric of the health system.
- At all levels of the health system, small scale efforts to apply QI methods to other clinical areas without external technical assistance should be attempted.
- Future investment in QI and institutionalization should move beyond single technical areas or slices of the system, instead taking a more macro-systems approach as a means of integrating improvement across technical areas.

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