A framework for institutionalizing quality assurance

DIANA R. SILIMPERI, LYNNE MILLER FRANCO, TISNA VELDHUYZEN VAN ZANTEN AND CATHERINE MACAULAY

1Quality Assurance Project, University Research Co., LLC, Bethesda, MD, 2Martha Elliot Health Center, Boston, MA, USA

Abstract

Objective. To develop a framework to support the institutionalization of quality assurance (QA).

Design. The framework for institutionalizing QA consists of a model of eight essential elements and a 'roadmap' for the process of institutionalization. The essential elements are the building blocks required for implementing and sustaining QA activities. Core QA activities include defining, measuring and improving quality. The essential elements are grouped under three categories: the internal enabling environment (internal to the organization or system), organizing for quality, and support functions. The enabling environment contains the essential elements of leadership, policy, core values, and resources. Organizing for quality includes the structure for implementing QA. Three essential elements are primarily support functions: capacity building, communication and information, and rewarding quality. The model can be applied at the level of an organization or a system. The paper also describes the process of institutionalizing QA, starting from a state of pre-awareness, passing through four phases (awareness, experiential, expansion, and consolidation), and culminating in a state of maturity. The process is not linear; an organization may regress, vacillate between phases, or even remain stagnant. Some phases (e.g. awareness and experiential) may occur simultaneously.

Conclusion. The framework has been introduced in nearly a dozen countries in Latin America and Africa. The conceptual model has been used to support strategic planning and directing Ministry of Health work plans, and also as a resource for determining the elements necessary to strengthen and sustain QA. The next step will be the development and evaluation of an assessment tool to monitor developmental progress in the institutionalization of QA.

Keywords: framework for quality assurance, institutionalization framework, leadership for quality, organizing for quality, quality assurance, sustainability of quality assurance

During the last decade, quality of health care has received increasing political and public health attention, fueled in part by growing local autonomy and democratization, decentralization of health systems, and health sector reform. World-wide, significant efforts are underway to improve the quality of health care being offered to people, and quality assurance (QA) activities are critical to these efforts. However, experience has often shown that the key question is not so much a technical one—how to 'do' QA activities—but rather, how to establish and maintain QA as an integral, sustainable part of a health system or organization. Ministries of Health want to know in which components they should invest scarce resources in order to maintain implementation of effective QA interventions throughout their delivery systems. Health organization leaders ask about the process, or the phases they must pass en route to incorporating QA into their structures, and developing organizational cultures that support and sustain QA in their health facilities. The Institutionalization Framework presented in this paper was developed to provide practical information to health organizations (and systems) in their quest for sustainable quality. As such it is both a conceptual model and an operational tool, a roadmap to help organizations produce and sustain quality health care.

The framework

The framework represents a synthesis of more than 10 years of experience assisting developing country health systems to design and implement QA. It is derived from a combination of the organizational development and quality management literature [1–12], as well as retrospective analysis of QAactivities.

Address reprint requests to D. Silimperi, Quality Assurance Project, University Research Co., LLC/Center for Human Services, 7200 Wisconsin Avenue, Suite 600, Bethesda, MD 20814, USA. E-mail: dsilimperi@urc-chs.com

C. MacAulay was formerly with the Quality Assurance Project, University Research Co., LLC, Bethesda, MD, USA.
Project experience implementing QA activities and building QA programs in developing country health systems [13–17, and personal communication with QA Project staff]. It is this combination of conceptual model and operational process (roadmap) that makes the framework more notable, as well as its basis in developing country health systems. Furthermore, in delineating the process of institutionalizing QA, the framework introduces the possibility of ongoing assessment of developmental stages of quality systems in health care at organizational or macro system levels.

The framework depicts the components (which we call essential elements) necessary for the institutionalization of QA within an organization and provides practical information on how to facilitate the process necessary to reach this goal. The framework can be applied at any organizational level—from individual health care facilities to national level health systems—and has been developed especially for those involved in the design or improvement of quality of care, or wish to be champions for the introduction of QA into their organization.

### Core QA activities

The QA Project approach to improving health services and individual performance encompasses three core quality assurance activities (Figure 1): defining quality, measuring quality, and improving quality (when referring to these core QA activities on the QA triangle graphic on Figure 1, we reversed the letters to emphasize the activity’s contribution to quality, e.g. QD for defining quality, QM for measuring quality, and QI for improving quality). These three sets of activities work synergistically to ensure quality care as an outcome of the system, and together encompass the range of mutually supportive QA methodologies and techniques. No core activity is sufficient on its own to improve and maintain quality; it is the interaction and synergy of all three that facilitate sustainable improvements. Each core activity encompasses a group of interrelated activities, as briefly described below:

### Essential elements for institutionalizing quality

The core QA activities, represented by the QA triangle (Figure 1), are the heart of any effort to institutionalize quality care. It is the continuous and synergistic application of these activities that will ensure high quality health care over time. The institutionalization model (Figure 2) contains the QA triangle at its center and depicts eight essential elements or building blocks necessary to support and ensure sustainable implementation of these core QA activities over time. The model’s elements are similar to focal areas noted in other quality audit frameworks [6,11]. These eight essential elements can be grouped within three categories: the internal enabling environment, internal to the organization or system (comprised of leadership, policy, core values, and resources), organizing for quality (structure), and support functions (capacity building, communication and information, and rewarding quality) as listed in Figure 3.
QA institutionalization framework

Organizing for quality

Organizing for quality refers to the delineation of responsibilities and accountability for oversight, coordination, and implementation of QA in the organization or health system. Thus, in addition to the essential elements that comprise the enabling environment, sustainable QA also requires, as an essential element, some kind of ‘structure’. In this context, structure should not be equated with an organizational chart or reporting hierarchies. In our experience within middle-income and developing country health systems, there is no single best structure to implement and sustain QA activities. Furthermore, the implementing structure may change over time.

In Ecuador, QA was initially focused in a central level national quality program, not integrated within the MOH, but existing as a separate structure. However, over time, the functions of the National Program of Quality Improvement were integrated into the routine organizational structure of the MOH at central, provincial, and local levels. QA activities have now been incorporated into the responsibilities of local staff [14,17].

Support functions

Three essential elements are needed to support sustained implementation of QA and improved quality of care: capacity building, communication and information, and rewarding quality. These three elements can be grouped together under the category of support functions. ‘Capacity building’ refers to the ongoing process of ensuring that staff have the necessary technical, managerial, and leadership knowledge and skills to carry out their QA responsibilities, and that they know when and how to use these skills best. Capacity building encompasses formal QA training, coaching and mentoring, self and peer appraisals, performance improvement, and supervisory activities. The QA Project’s experiences have reinforced the importance of capacity building (training), and the need for a core of local QA coaches and trainers to keep up with the demand and expansion of QA efforts [13]. ‘Communication and information’ for sharing, learning, and advocating QA involves a two-way interaction between organizational staff, target communities, and other stakeholders. Communication and information include: (1) recording improvements and changes, and using data to demonstrate results and stories about how these results were achieved; (2) sharing what has been achieved and how it was done with the organization’s staff, the community it serves, and others who might learn from it and become motivated to improve their own services; and (3) using the results for advocating policy changes and resource allocation. Communication reinforces the notion that QA is everyone’s

Enabling environment

Continuous application of QA over time requires a facilitating enabling environment within the organization or system (internal environment), which is conducive to initiating, expanding and sustaining QA. The four essential elements that make up such an environment include: policy, leadership, core values and resources for QA. Sustainable QA requires a policy environment that explicitly recognizes the importance of quality for reaching organizational or system goals, and that provides support, guidance, and reinforcement for QA implementation. In addition, leadership is critical to help the organization see where it needs to go (vision), to provide strategies for the transition from ‘the way we work now’ to ‘the way we want to work in the future’, to promote a learning environment, and to model the desired core values that should characterize the organizational culture. Leadership may play a special role in organizational readiness to sustain quality [7,22]. Core organizational values emphasize respect, quality, and continued improvement. The creation and acculturation of these core values throughout the organization are critical to ensuring that all staff see their contributions to quality health care as important and desire to be part of these efforts.

Finally, QA cannot be sustained if there are not adequate resources allocated for QA, particularly staff time to be involved in QA efforts, but also resources for capacity building, communication, and other key support functions. Each of these four essential elements is important in its own right, but the full effect depends on the synergy created among the four, as demonstrated in the following example from Chile.

In 1991, the central MOH launched its QA Initiative. The central government first demonstrated leadership and commitment to QA by developing core values to achieve quality care. These core values were also reflected in the national policy set to develop a QA program to achieve quality health care. The policy allocated appropriate resources to drive the QA Initiative and support QA activities. The results from the QA activities set the stage for incorporating quality into the strategic goals of the national health system [14,16].

Organizing for quality

Organizing for quality refers to the delineation of responsibilities and accountability for oversight, coordination, and implementation of QA in the organization or health system. Thus, in addition to the essential elements that comprise the enabling environment, sustainable QA also requires, as an essential element, some kind of ‘structure’. In this context, structure should not be equated with an organizational chart or reporting hierarchies. In our experience within middle-income and developing country health systems, there is no single best structure to implement and sustain QA activities. Furthermore, the implementing structure may change over time.

In Ecuador, QA was initially focused in a central level national quality program, not integrated within the MOH, but existing as a separate structure. However, over time, the functions of the National Program of Quality Improvement were integrated into the routine organizational structure of the MOH at central, provincial, and local levels. QA activities have now been incorporated into the responsibilities of local staff [14,17].

Support functions

Three essential elements are needed to support sustained implementation of QA and improved quality of care: capacity building, communication and information, and rewarding quality. These three elements can be grouped together under the category of support functions. ‘Capacity building’ refers to the ongoing process of ensuring that staff have the necessary technical, managerial, and leadership knowledge and skills to carry out their QA responsibilities, and that they know when and how to use these skills best. Capacity building encompasses formal QA training, coaching and mentoring, self and peer appraisals, performance improvement, and supervisory activities. The QA Project’s experiences have reinforced the importance of capacity building (training), and the need for a core of local QA coaches and trainers to keep up with the demand and expansion of QA efforts [13]. ‘Communication and information’ for sharing, learning, and advocating QA involves a two-way interaction between organizational staff, target communities, and other stakeholders. Communication and information include: (1) recording improvements and changes, and using data to demonstrate results and stories about how these results were achieved; (2) sharing what has been achieved and how it was done with the organization’s staff, the community it serves, and others who might learn from it and become motivated to improve their own services; and (3) using the results for advocating policy changes and resource allocation. Communication reinforces the notion that QA is everyone’s

<table>
<thead>
<tr>
<th>Internal Enabling Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy</td>
</tr>
<tr>
<td>Leadership</td>
</tr>
<tr>
<td>Core values</td>
</tr>
<tr>
<td>Resources</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Organizing for Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure</td>
</tr>
<tr>
<td>Support Functions</td>
</tr>
<tr>
<td>Capacity building</td>
</tr>
<tr>
<td>Communication and information</td>
</tr>
<tr>
<td>Rewarding quality</td>
</tr>
</tbody>
</table>

Figure 3 The categories and essential elements for the institutionalization of QA.
business—that successes should be shared and that lessons can be learned (and shared), even when things do not go as well as planned.

In Ecuador, as part of a QA intervention to improve compliance with maternal and childcare standards, data on monthly performance according to standards was posted for staff and clients to see. Monthly staff discussions of the trends in compliance resulted in collective ‘self-supervision’, creating an opportunity to discuss the causes of problems and potential solutions, as well as illuminating the role of staff in quality improvement [14]. ‘Rewarding quality’ and the efforts made to improve quality foster both a commitment to quality and a motivation to strive for excellence. Providing individual, group, or even organizational recognition or rewards reinforces interest in QA endeavors and facilitates alignment of staff with organizational values. This implies examining and removing disincentives or barriers to quality that currently exist, as well as developing mechanisms to recognize and reward appropriate behaviors, efforts, and achievements. In Zambia, link facilitators (QA coaches/trainers supporting facility QA coaches) informed the central-level MOH about quality improvements at provincial and district levels. Quarterly linkage meetings promoted exchange of information and shared learning, while also serving as an incentive, since participants were funded to travel to the meetings [15].

The process of institutionalizing quality: a roadmap

The institutionalization model presents a rather static depiction of what should be in place when QA is institutionalized in an organization or health system. In reality, the institutionalization of QA is a process, in which an organization continuously evolves until QA is formally and philosophically integrated into its structure and functioning (maturity). The static model on its own does not provide guidance to help organizations get from their current state of QA implementation to a mature state.

Thus, in addition to the model, the framework includes a ‘roadmap’ that describes the process of institutionalization as a passage through four phases—awareness, experiential, expansion, and consolidation—that occur between an initial state of pre-awareness of QA and the culmination in a state of maturity (Figure 4). Interestingly, although the description of these four phases was based on an analysis of our experience in developing countries, it clearly mirrors the developmental stages that organizations have been shown to follow during implementation of innovation: orientation and awareness that change is needed; planning and preparation for change; implementation of projects; and organization-wide implementation (established innovation) [11,23].

An initial state of pre-awareness is that which exists before an organization begins to implement any formalized or deliberate QA efforts. Commonly, in this state, isolated attempts to improve quality will exist, since it is rare to find a health organization in which no one has made any attempts to improve the quality of care (e.g. a manager’s attempts to improve the quality of care by sending staff for in-service training). The pre-existing situation is characterized by activities that are sporadic, individual and informal, rather than part of a deliberate, formal QA intervention.

The awareness phase is the first step on the road to institutionalizing QA; it is characterized by individuals (especially key decision makers) becoming conscious of the need...
### Table 1: Institutionalization phase characteristics, strategies, and indications of readiness to progress

<table>
<thead>
<tr>
<th>Phase</th>
<th>Illustrative characteristics</th>
<th>Potential strategies or activities</th>
<th>Indication of readiness to progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness phase</td>
<td>Decision makers become conscious of need to systematically address improvements in quality of care</td>
<td>Demonstrate need for improvements (using comparative data, community surveys, media) Create QA awareness through formal and informal benchmarking Plant seed that all improvement is change</td>
<td>Deliberate decision by organization to explore QA as a mechanism to improve quality of care</td>
</tr>
<tr>
<td>Experiential phase</td>
<td>Organization trying approaches to learn and document results that QA leads to improved care</td>
<td>Implement small scale QA activities or experiments Develop mechanisms for diffusion of QA results and lessons learned</td>
<td>Increased leadership support and formal decision to develop an organizational strategy for QA</td>
</tr>
<tr>
<td>Expansion phase</td>
<td>Strategic expansion of QA activities in scale, scope, and implementation Increasing organizational capacity to conduct QA activities</td>
<td>Development of strategy for QA expansion (e.g. priorities, organization) Capacity building and leadership development for QA Diffusion of innovation and results</td>
<td>Existence of demonstrated improvements in quality as a result of QA activities Consensus among decision makers that QA strategy merits continuation</td>
</tr>
<tr>
<td>Consolidation phase</td>
<td>Simultaneously strengthening and anchoring existing QA activities into standard organizational operations, while addressing lagging or missing activities</td>
<td>Identify missing or lagging QA activities and essential elements, and take corrective action Enhance coordination of QA strategy and activities Continue support for learning environment</td>
<td>Full implementation of a set of balanced QA activities that are integrated into daily responsibilities throughout the organization</td>
</tr>
</tbody>
</table>

To improve quality of care and of the possibility of doing something deliberate and systematic about it. Awareness can result from data on problems with quality, discussions with someone who feels that quality needs systematic attention, or from complaints and pressure from the communities being served. During this phase, while dissatisfaction with the current state of care is increasing, senior managers, policy makers, and key stakeholders gain knowledge of and interest in QA.

The experiential phase is characterized by the organization starting to implement QA on a small scale, trying out various QA approaches to learn from the experience, and developing evidence (documented results) that QA does make a difference, i.e. that QA leads to improvements in the quality of care. At the end of this phase, sufficient momentum exists for an organization to move into the expansion phase. Indications of organizational readiness to move on include increased leadership support and a formal decision to develop an organizational strategy for QA.

The expansion phase is characterized by an increase in scope of implementation of QA activities. The expansion phase is not just a scaling up of activities or straightforward replication of positive results across the organization. Rather, it is the strategic expansion of QA implementation, based on knowledge and experiences gained in previous phases. This ‘expansion’ of QA activities may be geographic, but could also be an expansion in terms of the types of QA activities undertaken within the organization (wider range of facility types or departments included) or in the types of health problems being addressed.

The line between the expansion phase and the consolidation phase is a fine one. As expansion strategies are undertaken, they can precipitate or foster the need for ‘taking stock’ of QA activities, ushering in a period of review, refinement, balance, and coordination. During consolidation, one is simultaneously strengthening and anchoring existing QA activities and programs into standard organizational operations, while at the same time making them more ‘solid’ by addressing the lagging or missing activities.

Maturity is not a phase, but a state in which QA is formally and philosophically integrated into the structure and function of the organization or health system. With maturity, QA becomes an integral part of day-to-day operations at all levels. Organizational values, leadership, policy, and resources reinforce a philosophical and practical culture of quality.

Dividing the institutionalization process into phases reflects the recognition that there is a progression of organizational capacity and QA ability that must be developed. Each phase
has specific organizational characteristics, strategies for advancing to the next phase, level of QA activities, and indications of readiness to move to the next phase (Table 1). Although it is tempting to assume that progress towards maturity occurs steadily along a continuum, the QA Project’s experience indicates that this process is more complex: organizations may progress, regress, vacillate between two phases, or sometimes even stagnate. In some cases, organizations may be making progress in the awareness and experiential phases in a simultaneous or iterative manner.

We foresee that the utility of this ‘roadmap’ will lie in its capacity to facilitate analysis of organizational (or Ministry) progress across all elements, in order to advance the organization’s overall status of institutionalization. Because progress is not necessarily uniform across the range of essential elements, it is important to examine the progress of each essential element individually. Each element plays a critical role in moving the organization further along the continuum of institutionalization. Just as the overall aggregate view provides guidance for planning and assessment, the perspective of each element individually provides further guidance on how to direct resources and energies to progress toward a state of maturity. A simple table as portrayed in Table 2 can rapidly display the phase of institutionalizing QA for each essential element.

### Conclusions

Experiences have shown that QA can have a lasting positive impact on the culture of an organization, in the engagement of health care staff and users, and, most importantly, on the quality of care provided. The growing emphasis on health sector reform throughout the world provides ‘fertile soil’ for the concept of institutionalizing QA. However, QA will need to become part of the national health agenda, and not proposed in isolation, if health systems are to progress beyond the awareness and experiential phases. As the framework illustrates, the institutionalization of QA is a continual process with multiple elements that require sustained commitment from leadership. Hence, one of the challenges we face is convincing health decision makers to implement, support, and promote a culture of quality.

To this end, the use of quality indicators and self-monitoring systems to readily capture clear, quantitative results of clinical improvements are critical. Another challenge to institutionalizing QA is staff attrition and relocation, especially in Africa. For this reason, diverse capacity-building strategies should be implemented, including on-the-job learning (through self-learning, peer mentoring, and job aids) and pre-service education. In addition, sufficient resources must be allocated to assure that a critical mass of QA experts are developed who can train, coach, and mentor others, as well as keep up-to-date in the field of QA. Resources (human and financial) must also be devoted to implement QA activities.

The QA Project’s experience using the model portion of the Institutionalization Framework in Latin America and Africa indicates that it can be a useful tool to assist an organization or Ministry to plan and focus its efforts and resources to strengthen and sustain QA. Responding to requests from country programs and Ministries, we are now developing and will evaluate a self-assessment and monitoring instrument, based on the framework, which will help an organization to analyze its QA institutionalization progress more systematically over time. A more detailed description of the Framework, accompanied by country examples is available in the related QA Project Monograph [14].

### Acknowledgements

The authors acknowledge the technical contributions of the following colleagues in the development of the QA Institutionalization Framework: Karen Askov, Bruno Bouchet, Jorge Hermida, Lani Marquez, Rashad Massoud, and Jolee Reinke. This work was undertaken by the Quality Assurance Project with funds from the United States Agency for International Development under Contract Number HRN-C-00-96-90013 with the Center for Human Services, the non-profit affiliate of University Research Co., LLC.

### References


Accepted for publication 30 September 2002