A Primer for Quality Assurance and Improvement in Pacific Island Health Services

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Abstract

Quality assurance and improvement (QA/QI) systems are underdeveloped in Pacific island jurisdictions and building QA/QI capacity is one of the best opportunities for quickly improving performance of health services in the region. There is a variety of styles available for QA/QI in health care organizations and the best approach will vary with the size, scope of practice, and needs of the organization. This report briefly describes the major styles of QA/QI and provides suggestions for QA/QI program approach based on several common Pacific island scenarios.

Introduction

Quality Assurance (QA/QI) is the practice of actively using performance data to improve a health system. Quality Assurance includes the following components (Figure 1).[1]

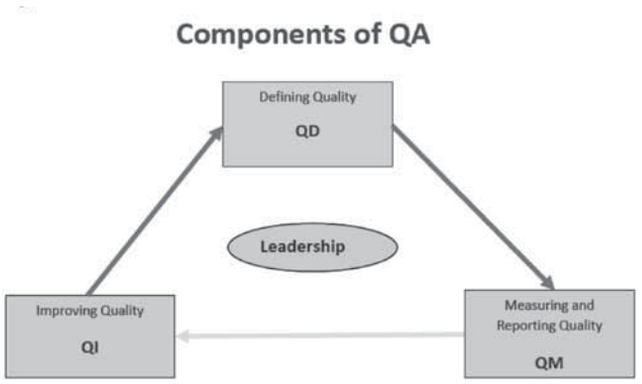
1. **Defining Quality (QD)** — the establishment of performance standards and targets to improve a health care system. Policies and procedures may also be developed to define how the organization should operate in order to reach these standards and targets.

2. **Quality Measurement & Reporting (QM)** — the use of performance data to measure progress in meeting standards and targets; the processing of data into a report that is easy-to-understand and use, and the distribution and presentation of these reports to the people who can best make use of them.

3. **Quality improvement (QI)** — the use of performance reports to make changes needed in order to meet quality standards. QI may involve changes in public health policies, procedures, programs, infrastructure, or staff training.

1. From the Quality Assurance Project: The Quality Assurance Kit, 2002. Available at http://www.QA/QIproject.org/pubs/pubscds.html (Accessed Sept. 24, 2008)

Figure 1. Components of QA



Once standards and indicators are selected, QA/QI becomes an ongoing process, with the QM and QI steps above being repeated at regular intervals so that the ideals (i.e standards) to which the system is striving can be achieved, then sustained over time.

There is a wide range of approaches that use the paradigm above and QA/QI has been applied to a variety of settings including hospitals, outpatient clinics, and government public health departments. The terminology used by various authors in the health quality literature can be confusing. Regardless of the terminology used, it is important to grasp the basic concept of QA/QI as outlined above, and to appreciate that this concept can be applied in a number of ways with varying program scope, emphasis and structure. The scope of QA/QI programs can be limited to standards for a single problem or be as wide as the entire health service. The emphasis can be on the coordination of processes within an organization, staff behavior and performance, aspects of clinical care, or the alignment of the organization's capacity and effort with a set of strategic goals. Programs can be structured to use sets of standards and measures that are generated internally or ones that come ready-made from an external source. Policies and procedures (i.e. the blueprints for how work teams will meet standards) can be developed as part of the process of setting up a QA/QI program, or the standards and indicators can be set first, leaving work units to decide which processes will lead to success on the basis of survey results. The surveyors who measure indicators can also be internal staff members, external independent contractors, or employees of an external accrediting authority. The data generated from surveys can be organized and reported in such a way as to reflect the performance of identified individuals, front line work unit teams, or departments within the organization, while the results can be linked to rewards and sanctions that are delivered to individuals, teams or, in the case of some accreditation systems, affect eligibility to receive funds from insurance companies or government.

The majority of QA/QI programs conducted in the developing countries to date are single- issue, clinical topic programs, often called "continuous quality improvement" (CQI) programs. CQI programs are based on the "Improvement Model". This model starts with the selection of a single difficult problem, for which a measurable indicator (or several indicators) is selected. Repeated "plan-do-study-act" cycles are then conducted with particular attention paid to improving performance as measured by the selected indicator. The focus of CQI is on reducing the gap between actual practice and best practice (given available resources) for a particular health issue. The Western Pacific Regional Office of WHO, in partnership with the Institute for Health Services Research in Malaysia, has developed an excellent CQI curriculum, and has conducted a train-the-trainer workshop for nurse leaders from many the Pacific islands jurisdictions in Papua New Guinea in November, 2009. An example of a CQI project that is practiced in several Pacific island jurisdictions is the Centers for Disease Control and Prevention (CDC)'s Diabetes Collaborative, which seeks to improve preventive care for diabetics.

"Clinical risk management" (also known as "patient safety management") is another QA/QI approach that

has been introduced in both developed and developing country settings. This approach consists of building systems to identify, manage and prevent errors in health services. WHO has recently adopted a curriculum and initiative for teaching clinical risk management to medical students throughout the developing world, and is working to adapt the curriculum for other health professions.[2]

Whole-system QA/QI programs, in contrast, seek to improve performance across an entire organization. The Standards-Based Management (SBM) QA/QI program that Mary Cowan worked to develop with several of the state health departments in the Federated States of Micronesia over the past 10 years is an example of a whole-system QA/QI approach that focuses on the improvement of organizational processes.[3]

Accreditation uses whole-system standards that are set and surveyed by an external authority. The first such authority, the Joint Commission for the Accreditation of Health Care Organizations (JCAHO), was founded in the U.S. in the 1950's. The focus of Joint Commission accreditation standards is the promotion of patient safety by regulating an organization's process of care, environment of care, and governance of staff. Over the past 50 years, most developed nations have established their own accrediting bodies for hospitals (and sometimes other clinical services). Three of these organizations, including JCAHO (through its subsidiary, Joint Commission International), the Canadian Council on Health Services Accreditation-International, and the Australian Council on Health Care Standards-International Division, are offering accreditation to hospitals and clinics worldwide. The standards set by these agencies are appropriate for developed country health care organizations (or very well financed facilities in other countries). Both the infrastructure needed to meet standards and the process of accreditation by these agencies can be very expensive. Some middle- income countries (e.g. Malaysia and S. Africa) and low- income countries (e.g. Zambia and, for outpatient "polyclinics," Bolivia) have also developed accreditation systems.

Until recently, there were no accreditation systems for public health departments. However, in a 1988 report entitled the "Furture of Public Health," the Institute of Medicine called for the establishment of an accreditation system for government public health departments.[4] Since then, there has been a great deal of activity by groups including the Association of State and Territorial Health Officials, the National Association of City and County Health Officials, the CDC and the Public Health Foundation toward creation of a national accreditation system. An independent Public Health Accreditation Board (PHAB) has been formed and, in February 2009, the PHAB released its draft accreditation standards for pilot testing, which is currently under way. Full accreditation system launch is scheduled for 2011.[5] The PHAB standards require that health departments (at the state and local levels) complete regular community health assessments, community health improvement plans and organizational strategic plans. The focus for accreditation is the ten essential public health services, a list of the public health activities that should be undertaken in all communities, which was developed by a committee composed of representatives from the agencies above. Thus, accreditation will confirm that health departments at the state and local levels have developed the capacity to perform the activities that are considered by consensus to be essential. Several state-wide local health department accreditation programs based on more or less the same framework are already in place.

2. Available at: http://www.who.int/patientsafety/education/curriculum/en/index.html
3. Quality Assurance for Healthcare Services in Developing Countries. Cowan M. Cowan Consulting Services, 2007. For copies contact: marymarmy@yahoo.com
4. Institute of Medicine: Committee for the Study of the Future of Public Health; Division of Health Care Services. The Future of Public Health. Washington, D.C. National Academies Press. 1988 (with update in 2002).
5. Available at http://www.phaboard.org/index.php/accreditation/standards/ (accessed on February 11, 2010).

The accreditation-related QA/QI surveys that are evolving for the public health side of the health sector in the US are still in a state of flux. Also, like the JCAHO surveys for hospitals, they are complex and demanding. There is general agreement that the practice of setting explicit standards, selecting indicators to measure whether standards are being met, and using the feedback provided from these assessments to make improvements is very effective. However, there is no clear consensus regarding which approach is best, with several recent reviews failing to find evidence that any one approach is superior.[6, 7, 8] Since there is no evidence to select one QA/QI approach over another, leaders should select an approach based on what is most appropriate to local needs.

Suggestion for Building QA/QI Systems

In this section, some common scenarios that reflect conditions that may be found in Pacific Island jurisdictions are provided, followed by suggestions for selection of a QA/QI approach based on these circumstances. Regardless of which QA/QI approach is selected, a baseline assessment is very useful, to determine whether the conditions needed for establishing a QA/QI system are in place and, in order to avoid duplication, to inventory any ongoing QA/QI activities. The scenarios presented are based on assessments and projects developed through the QA/QI Initiative of the Pacific Islands Health Officers Association in Guam, the Federated States of Micronesia, the Republic of Palau, American Samoa, and the Republic of the Marshall Islands.

Scenario 1:

You are the director of a government district health service that provides hospital services, outpatient care and public health programs. Your operating budget is low. Large portions of your health workforce lack formal training for their jobs and make frequent mistakes. Salaries have been frozen for years and it is difficult to motivate staff. There are frequent malfunctions of equipment and shortages of medications and supplies.

A whole-system QA/QI program to improve coordination and basic operations will be most helpful. Examples of such as system include the Standards-Based Management (SBM) program in the Federated States of Micronesia, and similar whole-system sets of standards which have been developed for accreditation in other low- to middle-income countries, such as Malaysia and S. Africa.
Whichever set of standards and indicators is selected, several additional steps will need to be taken to implement a program:

- Adapt the standards and indicators to local circumstances.
- Identify resources, both budgeted and in-kind
- Identify and train QA/QI surveyor(s)/coach(s)
- Orient health service leaders, mid-level supervisors, and front-line staff to the program
- Develop a strategy for the presentation of audit findings, for review by management, for linking of results to incentives, and the ongoing updating of standards and indicators

6 . What are the Best Strategies for Ensuring Quality in Hospitals? Ovretveit J, WHO Health Evidence Network, 2003. Available at: http://www.euro.who.int/document/Henhospquality.pdf (Accessed February, 11, 2010)
7. Using Research to Inform Quality Programmes. Ovretveit J, Gustafson D. British Medical Journal ; Vol 326 No 5 pgs 759-61, 2003.
8. Evidence-Based Quality Improvement: the State of the Science. Shojania K, Grimshaw J. Health Affairs Vol 24, No 1, pgs138-50, 2005.

The steps above are adequate to implement the three components of QA/QI in the health service. In addition, it is very helpful to systematically re-engineer policies and procedures to provide guidance to staff regarding how standards should be met. This is a big job that requires someone to be familiar with health services delivery, to have a talent for "systems thinking" (in order to fit the policies and procedures of multiple units into a functioning whole) and to have the ability to write clearly and precisely. A person who meets these qualifications should be identified and given the time and resources needed to perform this job. Mary Cowan's QA/QI manual provides a step-by-step method for writing good policies and procedures.[9] Once an SBM program is established, it is useful to add a CQI component. SBM is most useful for maintaining performance related to the many details needed for smooth functioning of routine processes, while CQI is most useful for addressing difficult problems one-by-one.

Scenario 2:

You are the chief executive officer of a hospital in one of the more developed jurisdictions in the region. Most of your workforce has been formally trained for the jobs they perform. You are able to provide emergency care, secondary hospital care and some tertiary medical services on a continuous basis with few major disruptions. If you are in one of the U.S. flag territories, you must secure accreditation through either the Joint Commission for the Accreditation of Healthcare Organizations or the Centers for Medicare and Medicaid Services in order to receive payment from private health insurance companies and U.S. government-sponsored Medicare and Medicaid plans. Though your budget per capita is much lower than that for most community hospitals in metropolitan countries, your clients expect delivery of metropolitan-style health care and are prone to litigation when their expectations are not met.

- Carefully review JCAHO standards for hospitals (available on-line)
- Decide with hospital Board and executive leadership whether to commit the effort and resources needed to attain and maintain accreditation. The process is expensive and takes most hospitals between 12 and 24 months of intensive effort to be successful.[10]
- Create work teams to develop the policies, procedures, building alterations, signage, forms, etc. for the various hospital departments.
- Hire a full time nurse who has successfully brought a hospital through accreditation to orchestrate preparation activities.
- Subscribe to one of the services, such as that offered by Joint Commission Resources, to guide the staff through the preparation process.

In addition to a whole-system QA/QI program in preparation for accreditation, hospitals in this category may also wish to provide special attention to selected problem areas with clinical risk management and/or CQI approaches.

9. Quality Assurance for Healthcare Services in Developing Countries. Cowan M. Cowan Consulting Services, 2007. For copies contact: marymarmy@yahoo.com
10. A first-time accreditation can cost several hundred thousand U.S. dollars in consulting and survey fees. Maintaining accreditation is also most easily done by purchasing a subscription from a consulting firm which assists hospitals in maintaining accreditation readiness. The cost for such a program, which includes quarterly site visits, twice-yearly workshops, audio conferences, e-mail and phone access to consultants, and access to an electronic self-assessment program, is between U.S. $35-40,000. In addition, most hospitals employ a full-time nurse to work on accreditation readiness.

Scenario 3:

You are the director of a government district health service as above which has had an SBM QA/QI program in place for several years. Over time, the standards, policies and procedures in the program have become increasingly outdated. This is creating resistance among staff members and undermining the effectiveness of the program.

It is very common for QA/QI systems to deteriorate over time, unless actively maintained. Putting such a program back on track is not difficult; though it becomes harder the longer it has been out of service. To re-establish such a QA/QI program, the following steps can be taken:

- Conduct a unit-by-unit review of existing standards, indicators, policies and procedures to identify those that are out of date, irrelevant or troublesome.
- Delegate or recruit someone with a health care background and writing skills to revise the standards, indicators, policies and procedures that need to be changed.
- Review the survey process to be sure that program surveyor(s) are sufficiently trained, objective in their observations, supported and accountable for performing surveys and conducting post-survey corrective planning meetings and submitting reports on time.
- Check to be sure that there is a linkage between QA/QI audit results and sanctions/rewards for mid-level supervisors and front-line staff.
- Repair any of the deficiencies identified above.

Scenario 4:

You are the director of a government public health department which is separate from the hospital and primary care services in your community.

If your basic operations *are not* running smoothly: You may choose a whole-system SBM QA/QI program that focuses upon improving operations. If your department is relatively low-budget, follow the steps for implementation as in Scenario 1, above). If your department has a relatively high budget, an operational QA/QI system such as that used in the local health departments in a metropolitan country setting.[17]

If your basic operations *are* running smoothly: You may wish to prepare for Public Health Accreditation Board accreditation (especially if you are in a US-affiliated jurisdiction), which will be available in 2011. Accreditation will be voluntary, but is likely to be useful for demonstrating competence to the local community, identifying gaps in the local public health system that need to be filled, and helping to attract U.S. federal public health grant funding. The following steps can be used to prepare:

- Review the "Guide to Accreditation" and "Readiness Checklist" of the Public Health Accreditation Board.[12]
- Review draft PHAB accreditation standards.[13]

11. Template available by request. (Contact the author)
12. Available at: http://www.phaboard.org/index.php/beta_test/give_us_your_feedback (accessed Feb 11, 2010)
13. Available at: http://www.phaboard.org/index.php/accreditation/standards (accessed Feb 11, 2010)

- Form a task force to work through the self-assessment, then to make recommendations for system changes to correct any identified gaps and deficiencies. (An example of a completed accreditation preparation report for a jurisdiction of 100,000 population can be obtained by request from Gaston County, North Carolina.[14]
- Also, consider requesting technical assistance through the Association of State and Territorial Health Officers (ASTHO) peer assistance network.[15]

Scenario 5:

You are the director of a community health center which is separate from the government public health department and the local hospital.

If your basic operations *are not* running smoothly: You may choose a whole-system QA/QI program that focuses upon improving operations. An SBM system will be helpful, as would other whole-system process oriented sets of standards and measures, such as that developed by Management Sciences for Health's QA/QI program for the outpatient clinics of the Bolivian Social Security Administration.[16] (See steps for implementation as in Scenario 1, above).

If your basic operations *are* running smoothly: You may choose to address selected problem areas with CQI initiatives such as CDC's diabetes and other chronic disease collaborative or the US Bureau of Primary Health Care's patient visit redesign collaborative. These activities can be supplemented by a variety of other activities, including standardized policy and procedure development, regular patient and staff satisfaction surveys, and the development of standardized patient management templates linked to the electronic medical record. Examples of excellent QA/QI program packages for ambulatory clinics are available.[17]

14. Available by request at: http://www.co.gaston.nc.us/healthdept/accreditation.htm (accessed Feb 11, 2010)
15. See: http://www.astho.org (accessed Feb 11, 2010)
16. Available in the Health Manager's Toolkit at: http://erc.msh.org/mainpage.cfm?file=2.56.htm&module=toolkit&language=English (Accessed Sept, 24, 2008)
17. Examples available on request from the author.

Comment

Since 1996, the Pacific Islands Health Officers Association has been working to build QA/QI programs throughout the region. A description of the Initiative and accomplishments to date is provided in Annex A.

QA/QI programs should be considered as an essential (perhaps the most essential) component of the health information system for a district health service. QA/QI programs enhance coordination within the health organizations and help to align efforts of people toward desired goals. A well-functioning QA/QI program creates a favorable climate for the success of both categorical public health programs and clinical services. Of the various components that make up a health information system, quality assurance is one of the most underutilized in the Pacific island jurisdictions. This may be due in part to the fact that most of the health related data collection and reporting that takes place in the region is driven by external funding agencies. Quality assurance programs, in contrast, generate and apply data locally. When well-executed, QA/QI programs put the power of data into the hands of those who are in the best position to deliver services that improve health- local health system managers and front-line staff. QA/QI programs also benefit funding agencies greatly by providing protection against the disorganization that cripples so many public health initiatives.

Efforts to build QA/QI programs and to develop the health workforce are complementary. Well-trained health workers are much quicker to identify and implement the changes needed to meet service delivery standards, while a disorganized health service is an unfavorable setting for training and maintaining the skills of health workers. Both QA/QI and training of health workers are cross-cutting strategies that build general capacity within the health system and improve the effectiveness of whatever endeavors are undertaken by the organization.

QA/QI is also analogous to workforce training in that interventions with a broad scope are especially important for the health services that are least developed. It is widely recognized that short-term workshops designed to improve a few specific competencies tend to have limited impact when applied to health workers who lack basic foundation training for their professions. This is one reason that the large number of topical workshops conducted in the region over the past 3 decades has had rather disappointing results overall. Health workers who are already equipped with basic skills and knowledge of their professions are much better able to understand and apply the narrowly focused material presented in a short workshop. In the same way, single-issue QA/QI programs work much better in settings with functional wide-scope administrative health information systems. Otherwise, a steady stream of administrative crises tends to "spill over" to hamper progress regarding whatever single issue QA/QI program is being conducted.[18] In general, developing country health services should emphasize the provision of basic health professions training and whole-system operational QA/QI systems before turning to narrowly-focused short term workshops and single-issue QA/QI initiatives. Health services in more developed settings that are operating smoothly, on the other hand, can benefit most from QA/QI systems that focus on particular problem areas, or that emphasize alignment with strategic goals, rather than operational processes.

18. Durand AM. Quality improvement and the hierarchy of needs in low resource settings: perspective of a district health officer. Int J Qual Health Care, 2009 (Available at: http://intqhc.oxfordjournals.org/cgi/reprint/mzp053?ijkey=tIsxNSeVPspCzUa&keytype=ref)

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Annex A: The PIHOA QA/QI Initiative-

The Initiative was established in 2007 with Resolution #43-6 of the Pacific Islands Health Officers Association (PIHOA). Guidance for the Initiative is provided by a QA/QI Advisory Committee which includes health service leaders within the region, international performance improvement experts, and funding partners.

The PIHOA Board has set forth a 3 phase approach for this initiative:

- Phase 1-Research into existing applicable models/ development of tools and introductory materials for use in the region. Phase 1 activities are now complete. Materials developed in this phase can be found online at: http://new.pihoa.org
- Phase 2- Assisting sites with assessment and QA/QI program planning. To date assessment and planning projects have been completed at Republic of the Marshall Islands-Majuro, Republic of the Marshall Islands-Ebeye, Chuuk Department of Health Services, Kosrae Department of Health Services, Pohnpei Department of Health Services & Community Health Center, Palau Ministry of Health, Am Samoa Department of Public Health & Tafuna Community Health Center, and Guam Community Health Center.
- Phase 3- Assisting sites with implementation of QA/PI program plans/regional capacity building including cultivation of within-region consultants). To date, site assistance has been given to Pohnpei DHS & CHC, Am Samoa-Tafuna, and RMI-Majuro. Regional capacity building activities include formation of a QA practitioner network, cultivation of within-region QA consultants, and planning assistance to groups such as American Pacific Nursing Leadership Conference, the Centers for Disease Control TB Elimination Program, Pacific Center for the Elimination of Ethnic Disparities and the PIHOA Regional Lab Initiative.

The current strategic goals of the Initiative include the following:

- Equip QA/QI practitioners and health service managers with needed skills (by developing courses, explore collaboration with POLHN and community colleges for course delivery, facilitate dissemination of existing training opportunities [e.g. WHO/ Institute for Health Services Research CQI training modules] and cultivate CQI and SBM consultants/trainers within the region])
- Professionalize the role of QA/QI practitioner (via conference calls, plenary workshops, establishment of a listserv to build a network of practitioners to share ideas, provide mutual support, and build credibility; develop more formal, institutionalized training programs for practitioners)
- Address the QA needs of categorical health programs operating in the region (via individual program consultation, development of tools that fit with current QA/QI programs in the jurisdictions, development of "special topics" community college Public Health Training Program courses).

Further information is available from the author

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