

Q.A. Brief

THE QUALITY ASSURANCE PROJECT'S INFORMATION OUTLET

Center for Human Services • 7200 Wisconsin Avenue • Bethesda, MD 20814-4820 • (301) 654-2550

Summer 1995

Volume 4, Number 1

CONTENTS

QA Planning and Structure	3
Methods for Selection of Quality Problems	7
Monitoring Quality Improvements and Measuring Results	10
QA Forum: Interview with Dr. Richard Morrow and Dr. Gilbert Burnham	12
Other Project Activities	14
Documentation and Dissemination	20
Some Strategies for Managing Change	22
Institutionalization Issues for Quality Assurance Programs	24

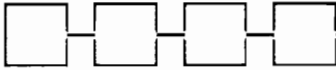
The Q.A. Brief, published twice yearly, shares with the international health community the methodologies, activities, and findings of quality improvement initiatives sponsored by the Quality Assurance Project.

From the Director

As we progress through the fifth and final year of the Quality Assurance Project, it has become increasingly important to seek out, reflect upon, and share the important 'lessons learned' from our efforts. Unlike some vertical interventions with clear end points, quality assurance, quality management, and continuous quality improvement are distinguished by their continuity. Quality is an ever changing concept, as are the outputs and outcomes along the way. Because of the dynamic and changing nature of the world in which we live, and the great variation in circumstances among the developing countries with which we work, we will not attempt, at this point, to offer the reader some universal truths about the project and quality assurance but will focus on lessons learned by our staff in specific country settings. We have conducted a wide variety of quality interventions in an even greater variation of circumstances. These include activities at Ministries of Health, Provinces and Departments, hospitals, primary care settings in the field, vertical interventions such as cholera, vitamin A, and measles, and general technical assistance where requested.

This project has taught us that bringing personnel together from all levels of an activity (process) and helping them solve problems as a team using universally established TQM tools, has been a very successful intervention. Many positive results have been achieved using this approach. Thus, team problem solving has been widely accepted in

From the Director continued on page 2



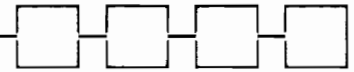
From the Director continued from page 1

those countries and situations where utilized. This issue of the *QA Brief* highlights this and other lessons learned to date in specific country interventions in QA planning, process improvement, training, dissemination, and institutionalization. More will come to light as we reach the end of the project.

William Jackman, M.D., Director, QAP

This issue of the QA Brief resulted from the contributions of almost all staff from the Quality Assurance Project. Each article was an attempt to consolidate their many viewpoints and experiences under the major headings or issues which emerged. Yet, this was by no means intended to be the definitive piece on 'Lessons Learned' for the project nor did we wish to present an overly idealistic view of our work in QA. Rather, we wished to feature some of the many experiences and reflections of our staff and colleagues over the past few years as they have worked to apply QA in their program.

The Editors



Quality Assurance Planning and Structure

Planning for the introduction, implementation, and conduct of quality assurance activities has been a key issue from the outset of the project. Of the many approaches to planning cited in current literature and as a result of QAP's experience, no single QA planning strategy can be said to be universally applicable to the developing country context. This is due in large part to variations in the socioeconomic, cultural, and political makeup of individual countries; the priorities of the Ministry of Health of each country and of other agencies with which we have worked and their capacity to carry out programs; the availability of financial, material, and human resources; and the influences of the USAID missions and other donors.

Despite the differences in approach to planning a QA program, QAP has learned a great deal from its experiences, some of which are summarized below.

Understanding organizational strengths and weaknesses

Knowledge about how an organization operates and what is possible within the organization is the foundation of a sustainable QA program. A good understanding of the organization is crucial for developing appropriate strategies for QA skills training and organizational change, and for determining what level of QA activity the organization can absorb. A general understanding of the dynamics and communication patterns within the organization is helpful in determining how to introduce QA and who might be an appropriate leader.

Also, in order to avoid duplication of effort, it is necessary to understand what already happens in the organization, as well as what works well. Such

knowledge often provides insight about where and how to introduce QA to ensure its acceptance and success. QA programs in Jordan and Egypt began with full-scale organizational assessments. In Chile, a small-scale assessment which focused on quality-related activities was carried out. In other countries, knowledge of the inner workings of the organization came from a series of consultative planning meetings with key host country staff, as well as from prior experience in the region.

Building on existing systems or activities

QAP has learned that it is useful to build on existing systems or activities which both support the organization's objectives and provide an adequate foundation for the QA program. This is true regardless of whether the program is implemented on a national, regional, or local scale, within selected health facilities or departments, or for multiple or single PHC interventions.

For example, the Jordanian Ministry of Health chose QA as a means for achieving greater returns on its health investments through improved efficiency. QAP is providing technical assistance in improving the quality of family health services and is working to develop a sustainable local capacity for achieving continuous quality improvement. In Chile, QA activities are part of a comprehensive strategy for motivation and capacity building at all levels of the health system.

Elsewhere, quality assurance has been introduced through existing vertical programs. These include Vitamin A supplementation in Honduras, TB case management in the Philippines, cholera case man-

Quality Assurance Planning Structure continued on page 4



agement in Ecuador, and measles immunization in Niger.

Assigning responsibility for quality assurance

Quality assurance requires an “owner,” that is, an individual, group of individuals, or organization which has the responsibility and authority to foster, nourish, and support quality assurance activities. In several countries, this has been achieved through the creation of QA councils and committees, and the assignment of coordinators and other individuals.

- In Chile, a QA Department has been established at the Ministry of Health to oversee and coordinate activities throughout the country’s nine regions. Full-time Ministry staff members provide support for quality assurance activities. In addition, each region has a QA committee with full-time QA staff. At the facility level, participating hospitals and clinics have QA teams to undertake problem-solving activities.
- Jordan has developed an extensive integrated QA structure involving all levels of the health system, from a Monitoring and Quality Control Directorate and a Quality Council within the ministry, to various councils and teams at the health directorate, hospital, and clinic levels.
- In the Tahoua Department of Niger, a Quality Council has been established comprising the Regional Health Director, QAP’s Resident Advisor, two District Medical Officers, and two Regional Health Services staff members. At the core of the QA effort are district level Quality Improvement Teams (QITs) operating within the medical center of each of Tahoua’s seven districts.
- For the QA micronutrient program in Egypt, QAP staff and Egyptian counterparts developed a

country plan with an action-oriented strategy at three levels. A QA Board at the central MOH level was established to oversee QA micronutrient activities. QA Committees were created at the regional (governorate) level to provide administrative and organizational support to the QA efforts. At the operational (district) level, process improvement teams were formed to carry out on-going monitoring and quality improvement activities.

Securing top-level management support

An essential ingredient in the success of any program is the commitment of top-level management. This support is needed to legitimize any changes which may be introduced by the QA process. Moreover, while successful QA activities are cost-effective in the long run, they do require an initial commitment of resources which often must be authorized at a higher level.

While involvement by higher level MOH staff in day-to-day activities may not always be feasible or necessary, key MOH officials should at least endorse and be kept informed of the QA efforts being operationalized at the other levels of the health system.

- Under the old “centralized” healthcare system in the Philippines, QAP operated under the auspices of the Department of Health (DOH) Undersecretariat for Public Health to assist one province with its vitamin A capsule program. Initial approval for project activities was obtained from the Undersecretary, who then facilitated contacts with those technically responsible at the regional and provincial level.

After health services were decentralized in 1993, provinces and municipalities were legally entitled to make decisions about receiving assis-



tance from external sources. For two new QAP activities undertaken at this time, there was now a sense of “informing” the Undersecretary rather than obtaining his formal concurrence for activities, which was given by local authorities. However, the DOH, given its broad knowledge of health system problems, was still helpful in identifying how best to use project resources, and moreover, was still seen to greatly influence local policy and practice.

Other examples of where the commitment of the MOH has helped to promote quality assurance:

- In Egypt, the success of QA efforts being undertaken by pilot health facilities as part of the Cost Recovery for Health Project, and the outcome of activities which comprise the micronutrients initiative in two governorates, have created interest within the Ministry of Health in developing a National QA Program.
- Support from the Ministry of Health, as well as USAID and other agencies in Ecuador, has helped to achieve significant improvements in the processes related to diagnosis, treatment, and overall management of Cholera within the region. Furthermore, it has helped to promote the expansion of QA activities to other health programs.
- Early in the Jordan program, MOH officials visited the project sites often and participated in local activities on a regular basis. In addition, a member of the royal family expressed a genuine interest in the project which provided staff with additional incentive to work on project activities.

Top-down or bottom-up?

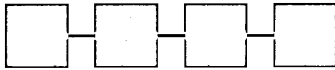
When introducing innovations into organizations, the relative advantages of top-down vs. bottom-up strategies are often debated. Introducing quality assurance is no exception. Some QA initiatives begin by introducing quality assurance to the

“Knowledge about how an organization operates and what is possible within the organization is the foundation of a sustainable QA program.”



highest levels of authority who in turn determine the actions to be taken at lower levels of the health system. Others begin with orientation and process improvement at the field worker level and later work toward securing positive endorsement and participation from higher up. (It should be noted, however, that no work can be started if high-level decision makers actively oppose the introduction of QA approaches).

- In Jordan, a focused effort was made to initiate and develop a QA structure and function at the MOH level while less energy was directed at the field level.
- In Niger, a mix of approaches was used. In keeping with the central MOH’s recent policy to decentralize the Niger health care system, QAP has worked through an effective implementation process which emphasizes top-down and bottom-up simultaneously.



Auxiliary nurse from the Vitamin A supplementation program, Honduras.

The MOH has been kept informed of all plans and activities. The regional level has been instrumental in designing strategies to build local QA capacity. Staff at all levels—departmental, district, and peripheral—have been trained in QA methods and tools, and are receiving financial and technical support for their work.

Though the impetus for quality assurance originally came from above, the program is currently being driven from the bottom up as problems are identified and solved at the district and peripheral level. This strategy to simultaneously inform, train, and support teams at the sub-national levels while keeping the central ministry informed, has helped to promote QA throughout the region.

Thus, although no single approach is the norm, field experience has borne out the effectiveness of a strategy which includes some mix of top-down and bottom-up approaches. In the end, however, the effort should work to foster an instinct for continuous

quality improvement at all levels, from staff at the service delivery level to policy-makers at the national level.

Having well-defined priorities and objectives

The very nature of planning suggests that plans should be flexible, as projects will evolve and grow over time. However, planning for quality assurance requires that all those involved clearly understand the primary objectives of the proposed QA effort and agree on the steps which must be taken to achieve them.

□ Early in the project, Jordan QAP staff conducted a strategic planning workshop, including key MOH personnel, to identify and discuss program objectives and priorities. QAP has learned that it is critical to document and disseminate all resolutions and decisions made at such meetings, and should any changes be made to those decisions, to institute a systematic group process for amending them.

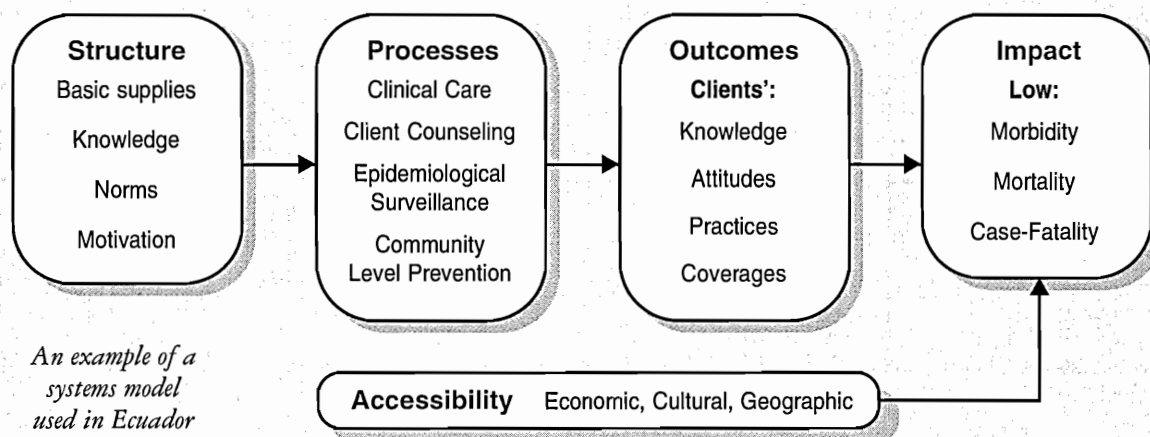
- At the start up of a micronutrient activity in Honduras, staff from QAP and the International Eye Foundation met repeatedly before traveling to the field, to clarify the approach to implementation, define resource and time constraints, and discuss options for intervention. The result was a narrow and manageable scope of work which focused on Vitamin A supplementation activities in the capital city and surrounding communities.

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FIGURE 1

Systems Model for Control of Diarrheal Disease Activities at the Local Level



Methods for Selection of Quality Problems

The Quality Assurance Project has employed a number of methods and techniques for identifying and measuring problems. These have ranged from quality methods such as soliciting suggestions from health workers, obtaining feedback from clients, and generating ideas through brainstorming or other group techniques, to quantitative methods such as analyzing outputs of existing information systems and conducting analyses of service delivery processes. The choice of method has been determined largely by the levels of skill and the resources of the teams or staff involved in the identification of problems.

From many of our experiences, we have learned that in the initial stages of a QA program, one of the most difficult tasks for QA teams is to select appropriate and well-defined quality problems. Frequently teams will arrive at a problem statement which is too vague or complex, and which may discourage team members early on in the QA effort.

A systems approach to identifying problems. To help prevent this problem, some programs have applied a Systems Model (Figure 1), which relates the different service components to one another, fol-

lowed by a Systems Analysis which enables teams to identify and diagnose key problems in the way services are being provided through the collection of essential data. This approach relies on direct observations of service delivery, interviews with health staff, exit interviews with patients, record reviews, and/or inventories of supplies and equipment. Some examples of where this *lesson learned* has been applied include:

- As part of an effort to improve cholera case management in Ecuador, QA teams began with a systems model and systems analysis to identify quality problems. This low cost "rapid assessment of quality" was carried out over a period of 2-3 weeks in a sample of health facilities. Consequently, QA teams were better able to identify and select quality problems, using data from the system analysis as well as from their own experiences. The end result was a much more structured and realistic definition of their problems.
- In Antique Province, Philippines, Regional Health Office staff and clinical supervisors in Rural Health Units were involved in implement-

Methods for Selection of Quality Problems continued on page 8



FIGURE 2

ing a quality assessment for the Vitamin A capsule utilization program. They conducted observations, interviewed health workers and mothers, and reviewed the logistics systems. These same managers and supervisors joined other health workers in the process of reviewing data and identifying problem areas, thus enabling them to gain consensus on the problems to be addressed by their QA intervention.

Using other data sources for identifying problems.

In the above examples, a special data collection effort was undertaken to supply the needed information. In other country programs, existing information systems have provided a first source of data for the identification of problems. In Niger, however, a mix of these data sources was utilized.

- Brainstorming was initially used by teams to generate problems, but the problems identified were either too vague or could not be adequately addressed at the district level.

To get a better sense of the existing problems, the teams looked at service statistics produced by the national health information system. Though data were readily available on indicators such as dropout rates for tuberculosis and vaccination, coverage rates for growth monitoring and antenatal care, and rehabilitation abandonment rates for nutrition services, they were not being routinely used as a basis for problem solving or decision making.

**Primary Health Care Service
Quality Checklist**
10: Acute Respiratory Infection

1. _____ Health Facility Name of child : _____
2. _____ Service Provider Age : _____
3. _____ Observer/Supervisor
4. _____ Date

Take Medical History
Did the service provider:

5. YES ___ NO ___ Ask the age of the child?
6. YES ___ NO ___ Ask about symptoms of cough?
7. YES ___ NO ___ Ask about duration of cough?
8. YES ___ NO ___ Ask about activity level?
9. YES ___ NO ___ Ask about ability to drink?
10. YES ___ NO ___ Ask about any past history of respiratory problems e.g.(asthma)?
11. YES ___ NO ___ Ask about family history of TB or other respiratory illness?
12. YES ___ NO ___ Ask about any treatment administered?

Conduct Physical Examination
Did the service provider:

13. YES ___ NO ___ Assess general status (alertness, muscle tone)?
14. YES ___ NO ___ Count respiratory rate?
15. YES ___ NO ___ Take temperature?
16. YES ___ NO ___ Observe breathing for chest indrawing?
17. YES ___ NO ___ Listen for stridor, wheeze, and/or hoarseness?
18. YES ___ NO ___ Auscultate chest?
19. YES ___ NO ___ Examine throat for discharge, enlarged tonsils, or inflamed pharynx?
21. YES ___ NO ___ Examine ears?

These indicators reflected broader outcomes related to the case management of preventive services, denoting some possible problem areas in which teams could focus their problem-solving efforts. The teams later went on to conduct some observations of service delivery which resulted in the identification of patient waiting times as a major problem in the clinics, and the reorganization of patient flow as the appropriate intervention.

Advantages and disadvantages of conducting quality assessments.

The greatest advantage to doing a quality of care assessment at the start of a program is that it helps



health providers acknowledge problems and move beyond an initial denial of the need for quality improvement. The assessment also helps focus QA efforts on clinical and management issues related to 'high risk', 'high volume' or 'problem prone' areas, and serves as a baseline from which to measure improvements.

Yet in spite of these potential advantages, starting with such an assessment is not without risk. For example, identification of poor service quality can be harmful politically; results can be exaggerated or misused in the hands of the wrong people; conducting the assessment may be too costly; and providers may respond to the results with some degree of fear and resistance.

To offset some of these more negative aspects, QAP has involved key local staff in decisions concerning the design, development, and conduct of the assessment.

In Indonesia, a systems analysis was used by health center staff to identify problems in the delivery of antenatal, immunization, and ARI services. The approach was well received in the field because it was seen as a practical and systematic means for assessing and defining quality, and provided a good starting point for QA problem-solving activities.

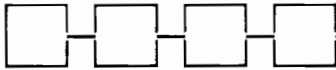
In addition, the involvement of local staff in the assessment process generated considerable interest and support among the participants as well as Provincial and District level staff, helping to further advance the idea of a participatory team approach to improving quality.

(See Figure 2)

In general, QAP has been flexible in its approach, utilizing and adapting various quality assessment approaches to the widely varying needs of developing country health systems. Field experience, however, has demonstrated the effectiveness of a systems approach in identifying and defining quality problems and has played a role in convincing senior management of the value of QA.

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Monitoring Quality Improvements and Measuring Results

Monitoring is “the periodic collection and analysis of selected indicators to enable managers to determine whether key activities are being carried out as planned and are having the desired effects...”¹ Quality assurance emphasizes monitoring the processes that lead to outcomes, as outcome measures alone or other service statistics that are the traditional outcomes of monitoring systems may be of limited use in problem-solving.

The following are some lessons learned from our efforts to conduct quality monitoring as a component of QAP’s approach in developing countries.

Collect only essential data for key indicators

This is an old problem, but always worth restating. There are limits to how much information can be collected and used effectively. Thus it is critical to use as few indicators as possible, paying close attention to the validity of the indicators which have been chosen.

- As part of the QA effort to combat cholera in Latin America, a lengthy list of indicators for clinical case management of cholera patients was developed by a team of national health authorities. When applied to the field situation, the number of indicators was substantially reduced based on the practicality of their use. Clinical records at hospitals were partially useful for constructing these indicators. Other essential information was gathered through the use of observation checklists and interviews conducted by local districts managers during routine supervisory visits to health facilities.

Keep data collection simple for staff with limited training

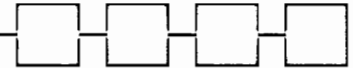
As part of the process of quality improvement, data collection may be indicated in essentially three places: identifying a problem and measuring its magnitude, verifying and measuring its causes, and monitoring the implementation and effectiveness of a solution.

Collecting data about a problem provides a basis from which to measure improvement; data on causes helps to determine the extent to which they contribute to a problem; and data on the effects of a solution (perhaps the same indicators) demonstrates whether a problem has been resolved, that is, whether a target or otherwise acceptable level of performance has been reached.

- For the cholera activity in Ecuador, routine supervisory visits to the health facilities made by local district management teams were strengthened to include data collection activities for measuring quality improvement interventions. District supervisors were trained in such methods as direct observations of service delivery, use of checklists, exit interviews, and focus groups.

As a result, data is processed periodically to generate indicators which can be compared to previous figures, thus giving supervisors and health facility staff a sense of what results are being achieved and what additional efforts are needed to get better results. In addition, data analysis by both supervisors and facility staff has served to motivate QA teams to pursue new

¹ *Module 5: Monitoring and Evaluating Programmes. The Primary Health Care Management Advancement Programme.*



quality improvement cycles at higher levels of complexity and detail.

In some instances, the use of data for decision-making and problem-solving is a relatively new idea, requiring transfer of new skills and some degree of technical guidance external to the teams.

- In Indonesia, during the first phase of QA training, less emphasis was given to the subject of indicators, data collection and analysis, and interpretation of results, because it was expected that external QA monitors would be on hand to provide teams with “just-in-time training” or assistance when the need arose. Workshops were then modified to include more direct training on the use of data at critical points in the process of problem-solving.

However, as evidenced by the difficulties experienced by some teams, there remains a strong need to provide more technical support in these areas, not only to improve the quality and the relevance of the data collected, but to interpret and apply the results.

Be prepared to improve the quality of data being collected

Although an indicator is a powerful tool for measuring health care quality and for triggering appropriate action, in some countries the use of indicators can present some problems, not the least of which has to do with the availability of data sources for constructing them. Clinical records and other data sources are often poorly maintained, incomplete, or nonexistent, and special data collection efforts are needed to supply the missing information.

- In a study of clinical records for tuberculosis patients, only 1% of records were perfect. More than one quarter of the records showed at least one error which might have compromised effective treatment of the patients.

Use the information and provide timely feedback

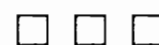
It is essential to utilize the results of monitoring activities and feed them back in a timely manner to health staff and managers involved in the QA undertaking. When quality improvements can be demonstrated, it strengthens the confidence of QA teams, enhances institutional and political support, and provides some direction in planning for the continuation of an activity.

- In Bolivia, the objective of a hospital-based quality assurance initiative was to demonstrate that by using QA methods, improvements in service delivery could be attained within the hospital’s current budget or with cost savings. Activities included the collection of data to measure the magnitude of problems and causes related to management/personnel systems, financial management and cost recovery, and patient satisfaction.

Additional data were gathered later to monitor the progress of solutions, and impact was assessed through a comparison of pre- and post-implementation data sets.

QA teams presented their successful results to hospital staff and then to representatives of public and private sector health organizations. The end result has been the continuation of QA activities within the hospital and the creation of a hospital-wide QA Committee, as well as expressions of interest by other institutions in initiating quality improvement activities in their hospitals.

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Decentralization Under Quality Assurance Programs

Lessons Learned From the Experience in Uganda

Martine H. Charles, M.P.H., Associate Scientist, Quality Assurance Project

Decentralization is the general transfer of authority in planning, management, and decision-making from higher (usually central) to lower (usually peripheral) levels of government. Decentralization of health system structures and management has become a key issue in the development of equitable and efficient PHC delivery systems. As various approaches to decentralization are tried, the lessons learned should be used to help guide future programs.

One such program began in 1993 in Uganda, where an ongoing overall decentralization of Government was occurring. A Quality Assurance program was introduced to the Ministry of Health (MOH) as part of a concerted effort to improve its capacity to provide better health services. A major emphasis was to help strengthen the district management teams in the process of improving their management skills to deal with these new decentralization realities. The Ugandan program began as a pilot in two districts in Western Uganda. Interest from all levels such as the Ugandan president, the MOH, UNICEF, and the World Bank pushed to introduce the program nationally in concert with the decentralization of all districts over a 3-year period. Now entering its second year of working with district political leaders and District Health Teams of the 27 decentralized districts (the remaining 12 will be decentralized in July 1995), the project has identified some lessons learned based on this work. The following is based on an interview by Martine Charles (MC) with Drs. Richard Morrow (RM) and Gilbert Burnham (GB) of the Johns Hopkins University School of Hygiene and Public Health.

MC: Please describe the Ugandan program.

GB: A National Quality Assurance Committee (QAC) comprising top management and all program managers of the MOH was appointed and a Quality Assurance Unit (QAU) was established to act as a secretariat. There was close collaboration with the secretariat of the Ministry of Local Government. The program began when JHU teamed up with a Ugandan doctor who was working for the German foreign assistance organization, GTZ, and who was interested in QA issues. He had put together some early QA programs on his own in two districts of Western Uganda. With some support from UNICEF, the team began to develop a pilot QA program. After barely a year, the MOH became very interested in this program. One of its major concerns was that district health teams were ill equipped to take on the responsibility of decentralizing health care systems. Both the MOH and the World Bank saw QA as an approach to help strengthen the district management teams by improving their management skills. From the beginning, the MOH set up a QA unit. This came about in the context of decentralization. The central government, I would imagine mainly with pressure from the president, decided that the health system and the entire government assistance in Uganda were going to be decentralized. Quality assurance management is an excellent complement to decentralization.

MC: What do you think are some of the required components of a successful decentralization program?

GB: For QA management to succeed, there needs to be a strong commitment from the central level,



coupled with involvement at all levels. The push for decentralization in all sectors came from the very top. The importance of involving both the periphery (the district level) and the center, and both at the same time, has emerged as a significant lesson learned. In Western Uganda, we have started with the districts because that was being managed by the GTZ, the German aid organization. But it was frustrating to them because this was all being done separate from the national system. At the same time, when we became involved at the national level, we could see very clearly that without strong emphasis on leadership from the top, it wasn't going to take off.

RM: Another extremely important component in introducing QA management is the district workshops. Right from the beginning, it was decided to involve local government groups. The district development committee, the district health committee, the head politician (RC1), and the district executive secretary, who is the head of local government, have been involved with the health team in the workshops. They have come to the initial workshops and have participated. In the first general meeting of all decentralized districts, they discussed their experiences with decentralization, with the QA management, and their lessons learned. In some respects, the involvement of the district executive and the RC chairman have been critical in the input from the community to the PHC work. There is genuine community representation by those who have authority as well as responsibility.

GB: One of the essential aspects of a decentralized system is the political will to do it, from the highest levels. Often, one finds a decentralization of responsibility but not authority. And when the decentralization is done, you have to let the people get on with it. Mistakes will be made. It is very important to have an open and transparent accounting system which will make a shift from what it was in the past in most countries. Even with strong political will,

you will find very substantial resistance from some sectors because many have been doing very well under the old system and they will not wish to see an open and transparent accounting system. Coupled with decentralization, it almost has to be that way because the central authority needs the accounting from the districts and the districts are going to demand it of the people.

MC: What were your experiences in training?

GB: The continuous reinforcement of the QA management approach is very important. Another lesson is that the training and the awareness and the use of QA management methods must be continued for quite a while, a number of years. This is not something where you do a couple of workshops and people automatically start using the methods. The workshops need to be followed up with supervision, continuous support from people who know something about QA and can help the district teams in solving their problems using QA mechanisms.

MC: Did you start your training and awareness courses at the central or peripheral level, or both, and what would you consider to be the better approach?

RM: We did the training and awareness courses at the central and peripheral level almost simultaneously. We did the one for the central level and went to the districts within a few days. Then started the second round of workshops in the districts before we got to the second round at the center. The center has had regular monthly meetings to provide support to the districts. They organized themselves so that two members from the central headquarters visit each district now every other month. Everybody has taken part in good spirit. I had anticipated all sorts of resentment but that has not happened. This represents a commitment of 20-25% of the time of the central senior MOH staff, spending a full week every other month in the districts. If noth-

Lessons Learned From the Experience in Uganda continued on page 16



Other Project Activities

Jordan

- *As a result of the enthusiasm growing out of the success of the pilot Family Health Services (FHS) Center in the Balqa'a Health Governorate, the program has been expanded to the Ma'adaba and Irbid Health Governorates at both the primary and secondary care levels.*

- *The model Family Care Center in Salt was inaugurated in April by the Minister of Health and the Ambassador of the United States. Several Jordanian dignitaries were in attendance.*

- *The Ministry of Health is hosting a Health Care Quality Certification Program which will include a test preparation workshop in August, followed by a certification examination in November. The Program will be open to Jordanian health professionals.*

Egypt

Egyptian Society for Quality Assurance

In response to a proposal to the Ministry of Health in Egypt, the Minister agreed to establish the first national society for QA in Egypt. The Egyptian Society for Quality Assurance (ESQA) will be headed by the Minister himself. A list of 50 potential founding members has presented to the Minister for approval. The

Minister has agreed to the proposed members and has issued invitation letters requesting their participation in founding the Society. Once the founding body is established, formal procedures to register the Society with the Ministry of Social Affairs will take place.

Micronutrients

Through the use of QA tools, process improvement teams have reached positive results in their efforts to improve micronutrient services in Egypt. Examples include a 75% improvement in patient satisfaction at Etsa Clinic in Al Fayoum Governorate and a significant improvement in mother's knowledge of nutritional needs at the Luxor clinic. The QA micronutrient assistance to Egypt has been recognized by MOH officials as an "action-oriented model" for technical assistance.

Niger

The Project received national recognition from the Niger Health Information Service (SNIS). In helping to mobilize an emergency response to the meningitis outbreak by supporting immunization campaigns, the project made it a point to remind health workers to simultaneously check measles immunization status and to immunize for measles as needed. This idea was promoted nationally.

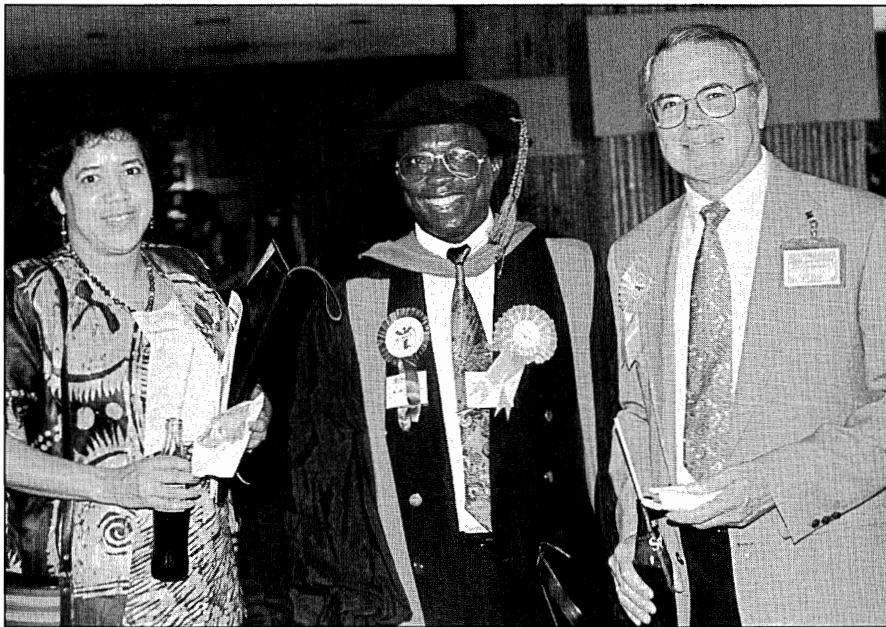
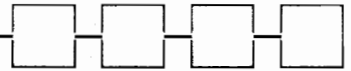
Nigeria

Dr. William Jackman, QAP Director, was a featured speaker at the Nigerian General Medical Practitioners Annual Conference held in Abeokuta, Nigeria in March. The presentation offered the providers some insights into the role modern quality assurance methods might play in the context of a private practice. It also allowed the development of QAP contacts in the private healthcare sector of the country.

Philippines

Iodine Deficiency Reduction

During Dr. Stewart Blumenfeld (QAP/Bethesda)'s visit in February, he found that salt production had ceased entirely because Tuba had not been conforming to the Commission on Audit rules in procuring raw salt. All procurement was halted until a set of operating rules could be devised that would both meet the Commission's requirements and allow for procurement of salt in sufficient quantity and acceptable quality. A meeting with the Provincial Governor led to a decision to essentially privatize the salt manufacturing and distributing system by placing it in the hands of the Benguet Barangay Health Workers' Association. QAP worked with the Tuba staff to finish the indicators and work out a plan to collect data on the



QAP Resident Advisor, Nigeria (JHU), Dr. Stella Goings, a distinguished Nigerian physician and QAP Director Dr. William M. Jackman at the Nigerian General Medical Practitioners Annual Conference.

variables required for the indicators. UNICEF, which is helping two other provinces in the region with their iodized salt programs, has asked to use the QAP indicators.

Honduras

Vitamin A

QAP has been collaborating with the International Eye Foundation (IEF) in Honduras to help build QA problem-solving capability for the Vitamin A capsule distribution program. Based on an initial assessment of quality, teams trained in the tools and techniques of quality assurance are currently working to address inadequacies in the health education provided to patients about the benefits of Vitamin A, as well as weaknesses in the delivery of Vitamin A

to post-partum women. Success of this effort will be determined by measuring selected indicators of effectiveness via pre- and post-intervention assessments.

Middle East

Quality Management Training Course

This course was held in Dabab, Egypt May 14-25 and sponsored by the Brookdale Institute in collaboration with a number of sources, including the Institute for Health Care Improvement and the Quality Assurance Project. Participants from Egypt, Jordan, Lebanon, Morocco, Tunisia, Israel, the West Bank, and Egypt were present. Dr. Walid Abubaker (QAP/Bethesda) participated as a faculty member.

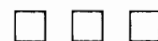
The National Workshops for Quality of Health Care in Palestine

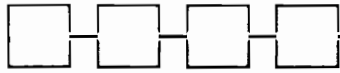
Sponsored by the Ministry of Health-Palestine National Authority, the Palestine Council of Health, and in collaboration with WHO and UNICEF, this workshop was held April 29-May 9. Dr. David Nicholas and Dr. Walid Abubaker (QAP/Bethesda) presented the session "Quality of Health Care: Concepts and Applications" and offered case studies drawn from the experiences of the Quality Assurance Project.

Latin America

Conference on Quality in Healthcare Services

Due to the increased enthusiasm and support for expanding QA in the region, it was decided to organize the first Latin America Conference on Quality of Healthcare Services to enable Latin American representatives to exchange experiences, strengthen their capabilities, and make contacts. The conference will be held in Quito, Ecuador on August 1 through 3, 1995, and is being jointly sponsored by the Latin America and Caribbean Health and Nutrition Sustainability Project (a USAID contract) and the Quality Assurance Project.





ing else, it has provided the opportunity for the people in the center to see what the real problems are at the district level and it provides the district people a chance to interact.

There is still a very strong sense from the center that these visits are to give directives to the districts to tell them what they should be doing and to give them forms to fill out and get information back to the center. But in fact, these views are shifting and the basic notions that the center exists in order to support the districts is beginning to take hold. Some

“The training and the awareness and the use of QA management methods must be continued for quite a while, a number of years.”

of the people who are particularly sensitive to this are beginning to make it clear that the purpose of the central divisions is really to provide support and to answer questions and to get information that the districts need, not vice-versa. It would be interesting to see how much further this progresses but it seems right on course. Among other things, the divisions in the central ministry have begun requesting QA management sessions of their own. They now have become quite caught up with the whole idea of TQM. There are interesting spin offs in that way.

MC: Tell me about the teams and the kinds of problem solving they chose to look at. Did the process require much outside direction once the teams were formed?

GB: Peripheral health centers and dispensaries are operated by one to four trained personnel. The lack of communication and reliable transport make net-

working and interchange fundamentally difficult. In districts with 50 to 100 units, hundreds of people are involved so the logistics of getting them involved in making decisions on their own are mind boggling.

Every health unit has established a health unit management committee. They view teamwork as one of the main principles under QA management. When the program started in Uganda, rather than trying to establish other kinds of teams, we worked with the existing district health management team and the health unit management team from the hospital by building on their teamwork concepts. So it's just a question of how to do everything at the same time. Yet I think one of the strengths to decentralization is that, at least in some of the districts, the district health management teams have actively been working with the GO groups. It is quite variable from district to district. The policy now is clearly to direct the involvement in all their activities in primary health care.

QA played an important role in getting things going even though that wasn't, perhaps, the initial intent in setting up the program. One of the things that we have done in the problem statements is to encourage people to select problems that they thought they could solve in a fairly short period of time. We set an arbitrary length of six months. A very widespread problem was that people tackled problems that were far more complex than they thought or the problems that ended in their front yard but the tail of it was way off somewhere else that they didn't have ownership or control over. I think that, on the subject of lessons learned, that's something that we probably didn't emphasize enough in the beginning. That is the selection of problems, the problem statement, and the ownership of problems.



GB: One of the QA tools that has worked very well is the use of scattergrams, where the district health team plot number of patients seen against revenues received. They saw a big spread and started asking why is this over here, and so forth. Another one people have used at least in two districts has been the allocation of new motor vehicles. When we started flowcharting this, it became apparent that in most places, there is no standard method. This is important when there are a number of programs, donor-supported or otherwise, that are going on at the same time. There are never enough vehicles to go around and people need vehicles on short notice. What the district did was flowchart the process of requesting vehicles, cancellations, changing plans, and vehicle repairs. In the two districts that I worked with that had the flowcharting, it was a real eye opener to them to see what was happening with the vehicles. It proved to be a big problem. I don't know if there is a permanent solution to this but I think it has helped people think more rationally about allocation of vehicles.

Another problem selected by the districts that was worked out quite well right in the beginning was that people weren't getting paid. It wasn't only the fact that people were getting paid every 3 or 4 months, but some people weren't getting paid at all. They flowcharted the process by which employees are being hired and they found there were three separate processes for hiring. One of them ended up that your name was entered into the payroll and you were getting a salary and the other two sort of disappeared up in the air someplace because they didn't seem to follow a standard pattern. So on the basis of that, they established a standard pattern so people went through this process and actually ended up on the payroll.

RM: At the first General Conference of District Health Teams held in Kampala in December, 1994, district after district related the problems they had identified and then described briefly how they had

gone about solving them. There were about approximately 20 districts represented and about 300 people came to the meeting and it was remarkable. They really felt that they had made measurable progress in solving some of their major problems.

MC: If they came up with problems or solutions that you felt were not what you'd like to see, did you try to guide them toward a better problem identification or a better solution or did you let them do it anyway?

RM: No, they were reporting about what they had done, I think that the one general deficiency was that it would have been helpful to have better documentation of exactly what had been done. They identified problems and, working with teams using QA tools, they developed generally sensible solutions. They had impressions about what the results were but to relate one to the other was a bit problematic. Actually, members of the QA Unit are following up on some of the more dramatic changes that have occurred, particularly in health care. For example, they are looking at maternal complication referral patterns and the shift in approach of transporting the women having problems to the hospital.

MC: Where does the program go from here?

GB: This is a country that has been destabilized by 15-20 years of war. It's been making good progress but we still have a very long way to go. Several big challenges lie ahead. One is how to keep the educational process going because the experiences in this country show that five years or so is reasonable for getting something going in a hospital. As someone who's done this before in developing countries, I'd say probably five years is the bottom end of the scale--how to keep people excited about it, how to keep encouragement up, how to keep the process going for five years, or whatever period of time it takes. That's one challenge.



The next challenge that we have is how to move the concepts of QA and QA management below the district health management team to the health centers themselves because we've looked at the whole issue of QA management as really methods of management, management culture. We have not looked at it as a series of checklists and a series of standards to which everybody has to adhere. So we've been very much in the management problem-solving mode. The issue is getting this down to the health units so they can start taking a lot of the responsibility for what they do themselves rather than thinking the supervisor or the district health team is going to solve their problems for them. In the whole concept of the quality improvement team, these are the key players.

RM: There needs to be continued training. As time goes on that with the idea of continuing workshops every six months, with introduction of a new theme at each is probably going to be useful. Clearly, there are certain specific skills that the districts health teams need to have. The next main theme is the development of clinical and managerial standards and that will be an ongoing activity.

There are certain other issues that need to be addressed. One that has been started but hasn't gotten very far is to develop a self-assessment instrument for the districts to assess the quality in their districts, not to use this for comparison between districts but for districts to use as a benchmark for themselves. An instrument has been developed but is not yet ready to be put into place. That is something that people have been thinking about: how to assess your own quality of services. The instrument looks at the actual plan of the district management teams. What do they select as indicators for quality in their districts. The unit has made some suggestions. Among these is to measure user satisfaction and also something to measure morale or health worker status. There's something that people can do consistently to see how their services are.

GB: Another thing that has started is a small grants program. If the districts want to do operations research on QA, how to improve quality in their district, and they don't have enough resources, they can apply to the competitive grant program. It's not very much money but it's enough to help them with transportation, somebody's time, or materials. That was started just a few months back.

RM: Two more important topics. One is the importance of the information system, which needs a lot of work. Our feeling is that an MIS should grow from the needs of management. Much better morbidity and mortality information will be needed and rationality requires a linkage between health programs and changes in health status. But we're a very long way from having such an information system. It's an important topic and shouldn't be separated from the other things. I think that doing anything sophisticated is not particularly appropriate.

The second topic is continuing education and the introduction of the quality improvement management methods into ongoing training programs at all levels in medical system training, nursing training, and university training. It is being introduced in the newly developed school of public health for advanced health training. Perhaps a good lesson that we've learned is the importance of the Ministry Continuing Education Center which is a very well run center. The Director, Dr. Vincent Ojome, has from the beginning been a member of the QA Unit and they are about to introduce QA into all their continuing education programs. Institutionalization requires that the ideas of TQM be part of the fundamental training of all cadres.

GB: One overall lesson—we've not only been involved in PHC activities based in district hospitals but also the central hospital, the National Hospital. One of the basic lessons is that the more complex the structure, the more vested interests there are, and the more difficulties. The QAC is full of enthu-



siastic and fairly flexible people but when you move up the line, the defenses set in and everybody has already established a system in their best interest. Of course, this is where a large amount of the budget goes, a large amount of money goes into the services of the larger hospitals and so it really does become important to look at how these resources are being used.

One of the biggest hurdles we found was that people believed that if you're going to have quality, you've got to have more resources. The first response you have when talking about improving quality is we need more resources, what are you going to do for us? In some cases, you're not going to do better unless you have more resources. You can't do a good EPI program if you don't have a cold chain. So there is that component to it but I think that one of the main emphases of the program, or at least what we have encouraged the unit to look at is to improve the quality with the existing level of resources because the chances of getting much more in the way of resources is not very great. One emphasis has been trying to close the gap between what's being achieved now and what could be achieved with the same amount of resources and then identifying those areas where specific kinds of resources need to be addressed. But it has not been a resource oriented kind of program at all.

MC: Would you consider the program a success?

GB: Overall, the program has been a success, but there have been many problems. I guess it depends on how you define success but if you define success in terms of doing what they said they would do and following through with it and making adjustments as needed, that has certainly been so. It is from nearly every point of view a success.

That's not saying that everything is going the way we would like it. I think many people in the center don't have as deep a concept of QA as we would like and hopefully these recent meetings we've had will

QA Forum

Each issue of the QA Brief features the QA Forum. This column provides our readers the opportunity to share their experiences in implementing quality improvement measures in LDC primary health care systems. We wish to hear about methods, results, or even unresolved issues related to LDC quality assurance initiatives. Our goal is to foster an exchange of ideas about successful quality improvement measures, such as:

- innovative methods for monitoring the quality of care
- team approaches to successful problem-solving
- supervision techniques which ensure quality of care
- tools used for quality assessment

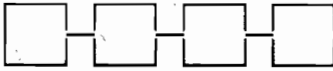
If you have an experience to share, please send a summary (1,000-word maximum) to:

QA Forum
Center for Human Services
7200 Wisconsin Ave., Suite 500
Bethesda, MD 20814

If appropriate, please indicate how readers may obtain further information. We will feature submissions in future issues of the QA Brief.

help strengthen that. But I think it's coming along and one of the major messages of QA in Uganda has been coordination, pulling things together. I think in that way, it has done a spectacular job.





Documentation and Dissemination

Over the past year, QAP has boosted efforts to gather concrete evidence demonstrating the association of QA approaches with improved service quality. Documentation from the field has been provided by quality teams as part of their problem-solving activities or been produced through a special effort on the part of QAP staff to ensure that results are chronicled, summarized, and made available for local as well as international dissemination and advocacy.

Local dissemination strategies have become an integral part of many QAP country programs and include the development of regional newsletters, participation in national conferences, and publication of articles in magazines and journals. Successful experiences have also been disseminated through presentations given to Ministries of Health and donor agencies, as part of formal QA training workshops conducted for local health staff, or through interpersonal networking. Of the many experiences and lessons learned from these efforts, a few are highlighted below.

- In Jordan, dissemination is perceived to be an active method of communication. Dissemination does not require merely producing a written guideline or other product and distributing it to all concerned, but actively communicating the work through focus group meetings, conferences, training workshops, and direct personal contacts.

The Jordan project has had an active dissemination campaign from the start. Every lecture, workshop, and meeting conducted has fostered the objective of having participants duplicate the QA effort and pass it on to others. Lectures and workshops have been conducted not only for

Ministry of Health officials, but for universities, the military health service, and management training institutes. In addition, several Jordanian journal, newspaper, and magazine articles have called attention to the start-up of the project, the various training courses held throughout the year, and related developments in quality assurance.

For Jordan, the lesson has been to develop from the outset of the program an active dissemination and communication strategy which designates target groups, defines objectives and methods to be used, and considers the resources needed to optimize the effort.

- In Tahoua, Niger, the creation and quarterly distribution of a regional health care newsletter has greatly served QAP's and the Tahoua Department's dissemination objectives. The quarterly newsletter, *Ader Santé*, is published by the Departmental Health Office and routinely includes news about QA activities, particularly the work of process improvement teams. Departmental staff have benefited from the process of preparing the information bulletin; moreover, it has filled a communication void existing among the districts of the region and between the Departmental Health Office and the districts.

The bulletin has also served to keep central MOH staff and the general public informed of health sector problems in Tahoua. In helping to mobilize an emergency response to the meningitis outbreak by supporting the immunization campaigns, the newsletter helped to inform people about the nature of the outbreak, and reminded health workers to check measles



QA Storyboard. A helpful tool to show the progress of a process improvement team.

Finally, an important lesson learned has been the need to concurrently gather information about project activities and retain it in documented form. In many of QAP's subprojects, storyboards have been used to exhibit the operational statement of a problem;

immunization status and give vaccines as needed. The approach is now being promoted on a national scale.

Local media networks are very useful in calling attention to the activities of QA teams. For example,

- At the May 15 Hospital in Cairo, Egypt, news of the hospital's effort to improve customer relations by establishing an efficient reception desk was publicized in one of the most widely read information magazines in Cairo. As a result, response and praise from multiple sectors of the community were directed at the hospital, and internally, staff are continuing to improve interpersonal skills in all areas of the hospital.

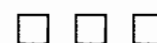
The sponsorship of local conferences has also helped to propagate the achievements of quality assurance work.

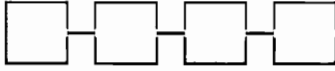
- As part of the quality effort in Chile, a national conference attended by over 100 local health professionals was held in Santiago to present the results of QA work and discuss regional QA plans. The principal sponsor of the conference was the Chilean Ministry of Health, with QAP and Panamerican Health Organization (PAHO) serving as co-sponsors.

demonstrate the use of tools such as process flowcharts, cause-and-effect diagrams, and matrices; present the results of data collection activities; describe the solution; and display results which show improvements in performance.

- As an example, storyboards have been used in the Rural Health Units (RHUs) of Antique Province, Philippines, as a means of disseminating the work of problem-solving teams. In creating the storyboards, the teams reviewed the process they undertook to resolve their problem and were encouraged to apply the methodology to address other problems. These storyboards were then prominently displayed on the walls of the clinics so that the public could see the steps being taken to improve the quality of services. The storyboards also served as a continuous reminder to the workers that skills they had used to resolve one problem could be applied again to other problems in the RHU.

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Some Strategies for Managing Change

by Elizabeth Mariani, M.S., Training Manager, QAP

QAP recognized early on that simply providing new knowledge and skills would not address the feelings of tension and anxiety experienced by many managers and staff during the transition to QA. To manage this process of change, QAP has been integrating the “change strategies” of coaching, team building, and rewards and recognition, into much of its technical support.

Coaching

When implementing quality assurance, the Quality Assurance Project has frequently found there is little pre-existing institutional infrastructure to support implementation of newly learned skills and knowledge when trainees return to their work setting. In some cases, a “coach” is utilized to not only help a team to apply and adapt the various skills and techniques of QA, but to provide the emotional support needed to bring about behavior changes. For example,

- A training plan in QAP/Egypt included not only a training needs assessment and a training curriculum, but also a plan for supporting the implementation of new knowledge and skills into every day practice.

After training was given to Operating Room nursing staff and supervisors to improve their technical and supervision skills, QAP employed an experienced full-time consultant, or coach, to work with the nurses in their home hospital for a period of 6 months. The consultant provided a role model for the supervisors and nursing staff as they implemented new skills and knowledge, and gave continuous on-the-job training when needed.

This approach served to re-enforce correct implementation of newly learned skills by the nurses and helped supervisors to assume responsibilities in training staff and maintaining technical standards.

- Similarly, in Tahoua, Niger, QAP has learned that resources for post-training support must be identified as part of any QA change strategy. In the case of Tahoua, coaches are individuals within the health care system who were selected for their demonstrated aptitude with the new material and who subsequently received special training to provide technical support to active Quality Improvement Teams (QITs) throughout the region.

The purpose of the coaching visits were to encourage the QITs to pursue the problem solving initiated in their training, to lend technical support, or to clarify the use of the problem-solving tools.

Most team members have commented that the coaching visits were indispensable in encouraging the members as they follow the problem-solving process. They felt that the coaching helped them overcome their feelings of helplessness when the solutions seemed beyond their control. They also helped to adapt the QA approach to the Tahoua experience. The team members felt that the techniques of QA were important and the problem-solving was logical, but change in behavior could only come with adequate coaching support after their training.



Team-building

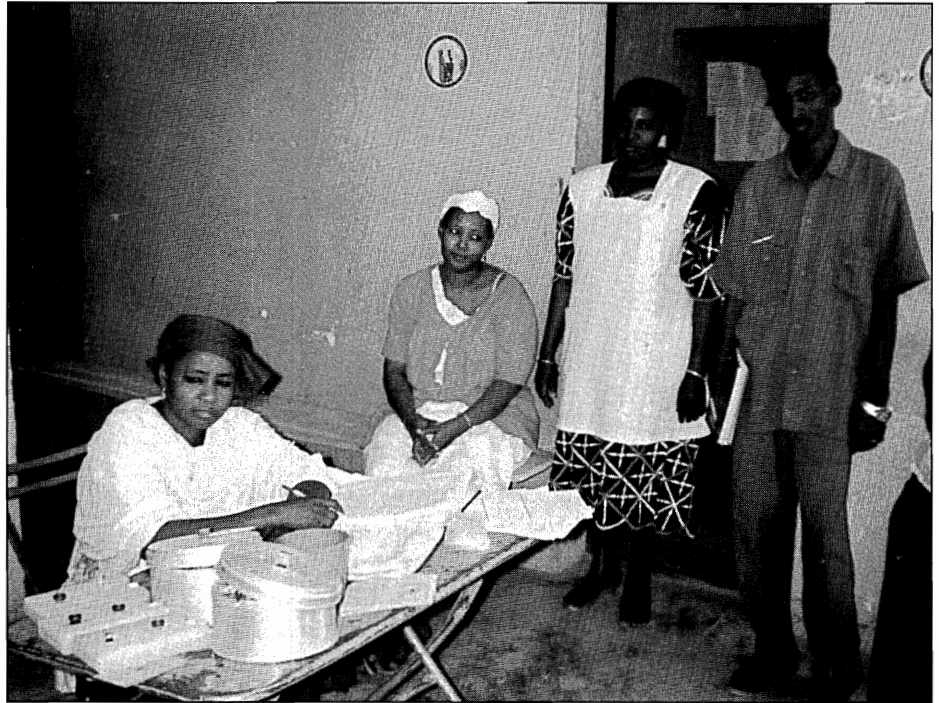
Team building, a process of working with team members to create an effective team, may be required to help team members identify and overcome obstacles to effective performance.

For both the Micronutrients Initiative in Egypt and the Jordan QA Program, a special training course was developed for the purpose of enhancing teamwork. The course enabled participants to better understand the importance of teams in quality management, acknowledge the roles of individual team members, apply effective meeting skills, use effective communication techniques, employ appropriate decision-making strategies, and manage conflict.

Rewards and Recognition

Rewards and recognition for those who are implementing quality assurance are also important. Such recognition can be as informal as letting a person know that he/she is doing a good job, or it could take the form of certificates or public and professional recognition.

- In Jordan, it was felt that a recognition and reward system for people working in QA should be designed and instituted early in the process. This would include an incentives system to encourage people to be involved in QA, but which doesn't necessarily include monetary incentives.

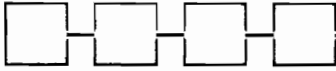


Routine coaching visit in Taboua, Niger.

QA staff in Jordan introduced the idea of giving out certificates of achievement to QA workshop participants. Also, they began recognizing teams with plaques, newspaper announcements, letters of gratitude from the general directors, certificates of excellence given to deserving individuals by a special committee, and authorship of articles in the local newsletter.

Contributors: A.F. Al-Assaf, M.D., M.P.H., M.S., C.Q.A., Norma Wilson, Dr.P.H., R.N., and Lauri Winter, M.S.N., M.P.P.N.





Institutionalization Issues for Quality Assurance Programs

Lori DiPrete Brown, M.S.P.H., Deputy Director, QAP

In order to achieve and maintain all the potential benefits of quality assurance, it must become a routine activity within health care organizations. Moreover, a structure which assures quality must be integrated into the overall health system. The following discusses lessons learned during efforts to institutionalize QA programs in Chile, Jordan, Costa Rica, Niger, and Egypt.

What is Institutionalization?

Institutionalization of QA is achieved when essential and appropriate QA activities are carried out effectively on a routine basis throughout an organization, health system, or health sector. Quality assurance activities can be said to be fully institutionalized and sustainable when expertise, commitment, and resource allocation are sufficient to apply, adapt, sustain, and further develop the QA approach.

The following are five important elements in a fully developed QA program:

1. *QA Structure*
2. *Standard Setting Activities*
3. *Monitoring Activities*
4. *Quality Improvement*
5. *Culture of Quality*

A "culture of quality" is the most intangible, and arguably the most important element of a QA program. While the culture of quality engendered in each organization will vary a great deal, there are several common characteristics. The achievement of quality should be seen as possible and feasible within the system. While this assumption may be realistic in many developed country settings, instilling this confidence in developing country health systems is often a big challenge. Quality care should

be explicit and be understood as a central objective of the system by all. Furthermore, each member of the health team should feel that "quality is my responsibility." Finally, some belief in the use of teams and teamwork should be present.

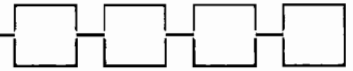
Below are some of the lessons learned from our many experiences. Though many of them will reiterate lessons learned in other sections of this issue, they underscore the need for a comprehensive approach to effectively institutionalize a QA program.

A QA structure should be developed gradually.

Efforts to define a QA structure often err on the side of completeness, trying to anticipate all the committees and structures that will be needed to implement QA in an organization. As a result, too many committees may be formed at the outset, leading to an excessive number of meetings and to unfocused QA activities.

It is often better to develop the QA structure gradually as needs arise, so that committees and working groups have clearly understood functions and concrete tasks. Letting the QA structure evolve slowly helps to develop the program in a more efficient way, and avoids setting up systems that have to be corrected or discontinued later.

Defining a flexible, but standardized methodology for QA is important. In defining a methodology for a QA program, it is important to strike the correct balance between standardization of the methodology to insure quality, and flexibility to allow for local adaptation.



Close alliance with the existing Ministry of Health (MOH) structure is essential.

Developing an effective partnership with and basing QA efforts in existing structures can lead to successful institutionalization of QA in even the most difficult circumstances.

In Niger, our partnership with the Departmental Health Director and his staff have been critical to initiating QA in the region. This alliance has also ensured that our efforts to introduce QA methods and tools through existing health support systems have been appropriate and effective.

The Niger QA program has since been working to improve supervision and management information systems. The results have been the establishment of trust and local support for the project, rapid integration of QA methods, and fundamental changes to key management systems.

Gain and sustain political support from various actors in the health sector.

Regardless of whether the QA program aims to work only in the public sector, or throughout the health sector, support will be needed from senior MOH Officials, leaders in the non-government sector, medical associations, universities and clinical experts, health clinic and hospital directors, health providers, and members of the health team who provide support services.

This support is needed because medical practitioners look to these sources as authoritative voices about what constitutes state-of-the-art medical practice. Physicians and nurses are more likely to accept and practice QA if they feel accountable to their peers as well as to senior managers in the system.

Be prepared to deal with frequent changes in personnel at all levels.

Turnover of personnel, from the Minister of Health to the doctors and nurses who direct rural health centers are real impediments to developing a culture of quality and sustaining political advocacy.

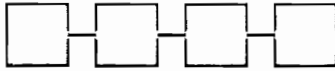
This frequent turnover is common among developing countries. For QA activities to be successful, it is probably best to expect this and develop appropriate strategies. For example, when planning training activities, they should be carried out close to the time of implementation, so that most of the trained staff will be able to participate in the implementation.

Awareness of the QA program must be sufficiently widespread and include the higher management levels. In this way, newly appointed officials (ministers, etc.) can be held accountable for the pursuit of quality, and cannot easily dismiss the quality initiatives that have taken place. In many institutions, there is often a core of senior technical staff less vulnerable to turnover. Leadership and technical skills must be developed in their ranks if QA programs are to survive staff turnover, reorganization, and political change.

Making extra funds available to QA programs has implications for financial sustainability.

A strategic issue that arises during the course of QA start-up planning, especially in settings where resources are scarce, is whether or not the organization or an external agency should make extra funds available for the development of QA projects or special activities such as orientation seminars and training. Such funding can provide incentives to test the introduction of QA. It could be argued that once it has been proven successful, health professionals will be willing to do QA without external financial incentives.

On the other hand, a QA program may be less sustainable if it is predicated upon additional funding. The available budget may be insufficient to continue support. It is possible from the outset to negotiate future funding, by making clear the purpose of the initial funding and its temporary nature.



The amount of funding is also important; it should be high enough to provide incentives, and low enough to avoid causing imbalances in the prevailing health system. Even if the issue of sustainability can be addressed adequately, financial incentives may detract from the message that better quality does not always require additional resources.

- In Chile, small-scale quality improvement projects and training courses were funded during the first 2 years of the project. Also, during the first year, the QA project paid for some staff support for the MOH quality unit. Over time, however, these costs were taken on by the Ministry of Health and the local health systems. Thus, the program was financially self-sustaining after 2 years.
- After only one year of the QA micronutrient effort in Egypt, the Egyptian contribution covers approximately 80% of the costs of both financial and human resources contributed to these QA activities. The MOH and the Health Directorates have developed a plan to sustain the program by maintaining teamwork and expanding similar QA work in other governorates.
- In the QAP program in Tahoua, Niger, a QA approach has facilitated the design and implementation of more efficient processes which have reduced waste and ultimately cost. However, given the resource-poor health management system, some activities require continued financial support. It is likely to stay this way for some time to come.

At present, the QAP is supporting activities such as quarterly staff meetings and supervision visits. Unfortunately, the MOH is unable to absorb the costs for current activities, and expansion to other Departments is not likely. In Niger, institutional and financial sustainability are

particularly difficult because of the country's extreme economic dependence on donor assistance for most of its healthcare.

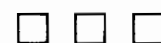
- In the last year, responsibility for the delivery of public health care in Costa Rica has been transferred to the Social Security Administration. With essential support from the head of the Human Resources Department, a central Quality Assurance Committee has been formed and a budget allocated. This committee has taken charge of all local costs associated with training and implementation of hospital process improvement activities in two regions of the country.

The idea of quality is powerful.

The definition of quality in all its dimensions might be mystifying to some, dry to others. But in fact, it has proven to be a very powerful tool for creating a culture of quality. Our QA activities have clearly demonstrated success in creating this culture when people at all levels are given a chance to define quality for themselves and to understand what it means for their work.

Once ideas about quality are internalized, it produces a profound transformation. The dimensions of quality become a lens through which health providers can see everything that they do. It gives them a common vision and a shared language with which to discuss their work and set about making improvements.

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Organizational Conditions That Favor Institutionalization of a QA Program

Some organizations or health systems possess characteristics that make it easier to launch a successful QA program. While the absence of these characteristics does not mean it will be impossible to start a program, program development and expansion may be slower when these conditions are not met. In some cases, the establishment of a fully developed QA program may not be possible until these characteristics are present.

There is top-level support for QA.

Top-level leaders must provide ongoing support for the QA effort. While they need not be involved in day-to-day activities, it is important that they send a consistent message about the importance and seriousness of QA.

There is a quality assurance “champion”.

In addition to top level support, it is also helpful to have a “champion” within the system who will lead the QA effort and be personally identified with the effort. The champion should have leadership qualities, enjoy the respect of colleagues, and have the ability to motivate others.

Organizational systems are relatively developed and stable.

Mature management and administrative systems within the organization or system will greatly enhance the likelihood of success of the QA effort. Systems that are stable at their base are more able to develop and sustain new programs and activities.

QA supports the organizational or health system mission.

Establishing a direct and visible link between the QA program and an organization’s *raison d’être* is a prerequisite for institutionalization. This link needs to be clearly established so that all members of an organization understand that QA serves their overall mission.

There is an existing system or activity that provides a foundation for the QA program.

It is much easier to build on existing systems rather than developing systems from scratch. If QA activities are already ongoing in the organization through supervision, monitoring, day-to-day management or special committees, QA programs can be developed around these activities so that they have more impact and increased prominence in the organization. In the case of national programs, QA programs may be built around existing expert bodies (i.e. accreditation bodies or governmental groups) or professional organizations.

Adequate time and resources are available.

Staff must have the flexibility to shift some of their regular activities to spend time on the QA effort. QA activities may also incur some financial costs related to data collection, documentation, and transportation. Without the commitment of staff time and modest financial resources, it will be hard for the team to get started. Furthermore, members of the organization may doubt the commitment of top-level leaders if allocations of time or money are not made.



The Q.A. Brief is available free of charge to health professionals worldwide. Those interested in receiving future issues of the Q.A. Brief or any other Quality Assurance Project publications should contact:

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The Quality Assurance Project is operated by the Center for Human Services in collaboration with Johns Hopkins University School of Hygiene and Public Health and the Academy for Educational Development. The project is sponsored by the United States Agency for International Development under Cooperative Agreement Number DPE-5992-A-00-0050-00. For additional information please contact:

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Q.A. Brief

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Summer 1996

Volume 5, Number 1

CONTENTS

Mother's Memorial Hospital, Łódź, Poland	3
Quality Assurance in Zambia	8
Introducing Quality Improvement Management Methods into Primary Health Care Services in Uganda.....	12
Other Project Activities	16
Quality Assurance Guides Health Reform in Jordan	19
How Quality Assurance Facilitates Decentralization in a Primary Health Care System: The Case of Niger.....	22
QA Forum: An Interview with M. Driss Bacheikh.....	25
Quality Assurance in the Provincial Health Department of Taounate, Morocco	28
What's New?	31

The Q.A. Brief, published twice yearly, shares with the international health community the methodologies, activities, and findings of quality improvement initiatives sponsored by the Quality Assurance Project.

Quality Assurance in Health Sector Reform

by Maria Francisco, M.H.Sc., Scientist, Quality Assurance Project and Tisna Veldhuyzen van Zanten, Ph.D., Deputy Director, Quality Assurance Project

Health sector reform efforts throughout the world have included broad public and private sector initiatives aimed at establishing cost-effective, equitable, high quality health services. Quality assurance is playing an increasing role in many of these reform activities by providing an integrated management approach particularly suited to the design, monitoring, and improvement of the quality of services.

Decentralization of managerial and financial control of health services is an important component of health sector reform in many of these countries. In decentralized management structures, the transfer of program responsibility, especially when accompanied by a transfer of resources or a redistribution of revenue-generating activities, can stimulate initiative at the service delivery level for providing optimal services to clients. Moreover, decentralization of health program management to the levels of the community can create opportunities for patients and their communities to actively participate in the design of public health programs and the improvement of health services.

Broader institutional and administrative strengthening is often carried out in conjunction with decentralization. These reforms may involve the redesign or improvement of

Quality Assurance in Health Sector Reform continued on page 2



key administrative systems such as those for information, personnel, and logistics; organizational restructuring to improve integration of vertical health programs and coordination among separate administrative units; development of systems for financial

In a number of countries, the Quality Assurance Project has been participating in the design of reform programs, strengthening organizational structures for ensuring service quality and designing interventions to resolve efficiency and resource prob-

lems affecting the provision of quality health services. The quality management approach to quality assurance, and its use of interdisciplinary teams and systematic problem solving, offers a framework that gives responsibility for change and program outcomes to the levels where service delivery actually takes place and where changes are introduced. Experience is showing that the quality assurance methodology provides health care personnel with the tools needed to resolve problems and assume new responsibilities created by

“...quality assurance methodology provides health care personnel with the tools needed to resolve problems and assume new responsibilities created by government reforms.”

planning and budgeting; and general strengthening of management and technical capabilities at all levels of the health system. Another reform may be seen in the private provision of primary health care services, as many governments are exploring the potential for shifting some of the burden of health care away from the public to the private sector, and looking for alternatives to mobilize financial resources as well as increase efficiency in the use of those resources.

government reforms. It also generates an enthusiasm and commitment to quality which leads to a cycle of continuous improvement instigated and managed by health care providers themselves, often with the active participation of clients.

The Quality Assurance Project's contribution to health sector reform and the successful outcomes of many of its initiatives are highlighted in the articles which follow.



Website Highlight

URC & CHS proudly welcomes you to visit our new website at <http://www.urchs.com>. Our main strategy for this site is to provide a quicker and more efficient means for disseminating our publications, training materials, and other products, as well as information on our company and other activities. We shall be updating and adding new information to our site on a weekly basis, so please be on the lookout and enjoy! For more of What's New? turn to page 31.



Mother's Memorial Hospital, Łódź, Poland

Minimizing Procedural Errors and the Need for Repeated Laboratory Tests

*by Małgorzata Majer, Pharmacist, Anna Wiśniewska, Nurse, Michał Krekora, Physician,
and Mirosław Szeligowski, Pharmacist*

Edited by Stewart Blumenfeld, Dr.P.H., CPHQ, Quality Assurance Project

The Polish health care system is being transformed from a centralized structure to a more decentralized one that emphasizes local direction, control, and financing. As a result, local governments and providers have a heightened interest in both the technical quality of the care they provide and the satisfaction of patients. While this basic restructuring has been occurring, Poland has become active in the worldwide movement toward improving quality of care by means of a quality management (QM) approach to quality assurance. In 1992, Poland began participating in a European Union project that was designed to improve the quality of care in several hospitals. The following year, the Polish Association for Promotion of Quality in Health Care was formed. Then, in 1994, the National Center for Quality Assessment (NCQA) was established in Krakow by the MOH to promote awareness of modern quality assurance (QA) technologies and to provide technical assistance to provider units that wish to apply these methods. The Center was assisted in its development phase by the United States Agency for International Development (USAID) and by a Flemish (Belgian) cooperation project, both of which provided resources for training Center staff to apply the techniques and tools of quality assurance.

In October 1995, NCQA and the Quality Assurance Project (QAP) entered into an agreement that enables QAP to provide technical assistance to the

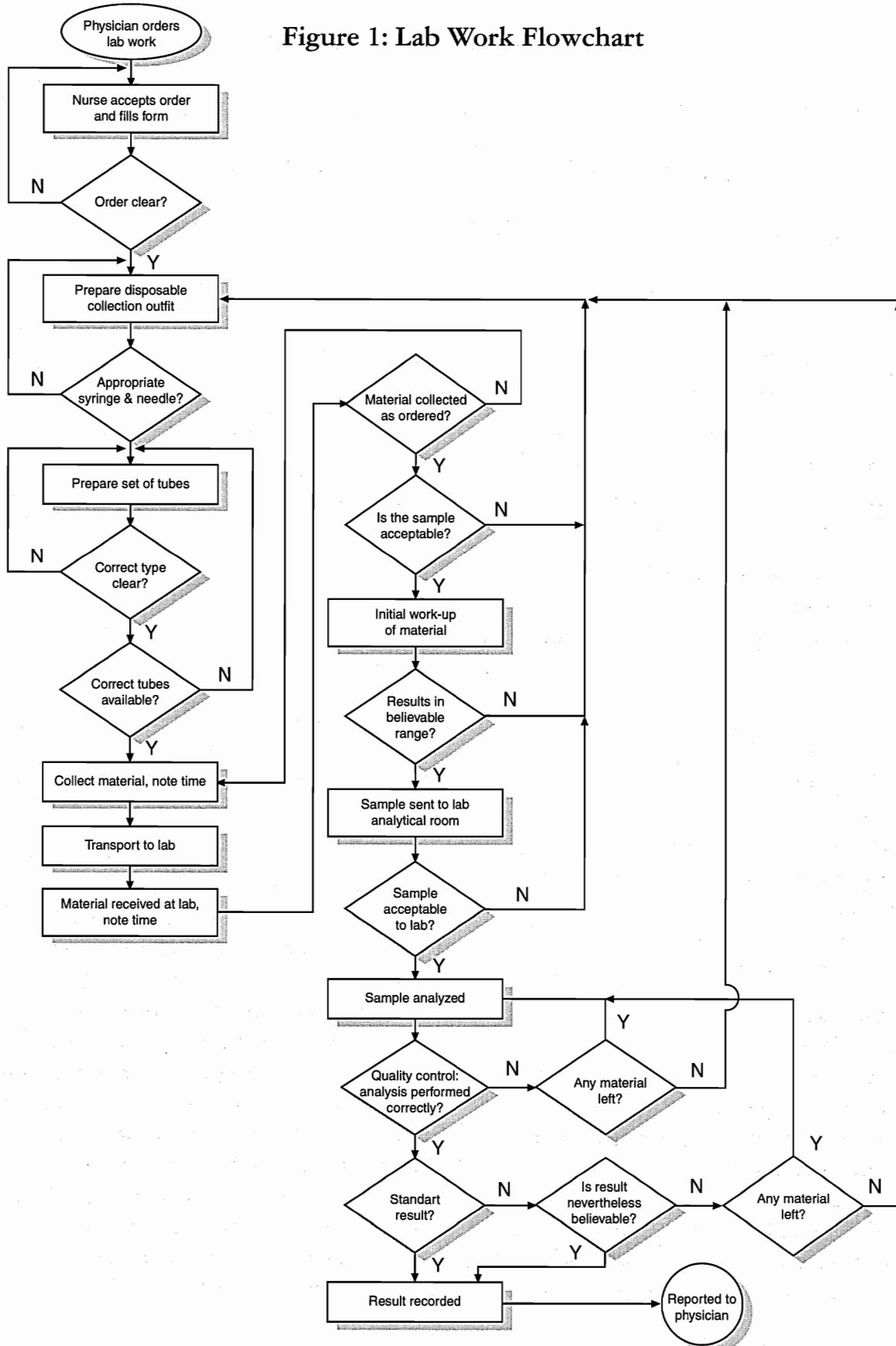
Center. The collaboration has two goals: (1) to demonstrate to a larger audience in Poland the effectiveness of modern QA methods and tools in improving service quality, and (2) to strengthen the capacity of the NCQA staff to provide training to service providers in hospitals and clinics and to facilitate these providers' quality improvement (QI) activities.

During late 1995 and early 1996, teams were recruited from eight service units to participate in a QI exercise. QAP staff presented a model workshop in January 1996; a few weeks later, NCQA staff replicated the workshop for additional members of the quality improvement teams. In the workshops, team members learned about the underlying philosophies of modern QA approaches, and about the use of basic tools for identifying and resolving problems. Each team selected from its own facility a problem to work on, and thereafter received regular consultative visits from Center staff.

In April 1996, under the auspices of NCQA, the teams convened in Krakow to present their results to one another and to representatives of the National Ministry of Health and of several voivodship health ministries (roughly equivalent to U.S. state health departments). This report of the Mothers' Memorial Hospital Quality Improvement Team is based on notes compiled by Dr. Stewart Blumenfeld and on translations of the Team's visual aid materials by Mrs. Barbara Kutryba of the NCQA staff.



Figure 1: Lab Work Flowchart



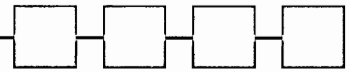
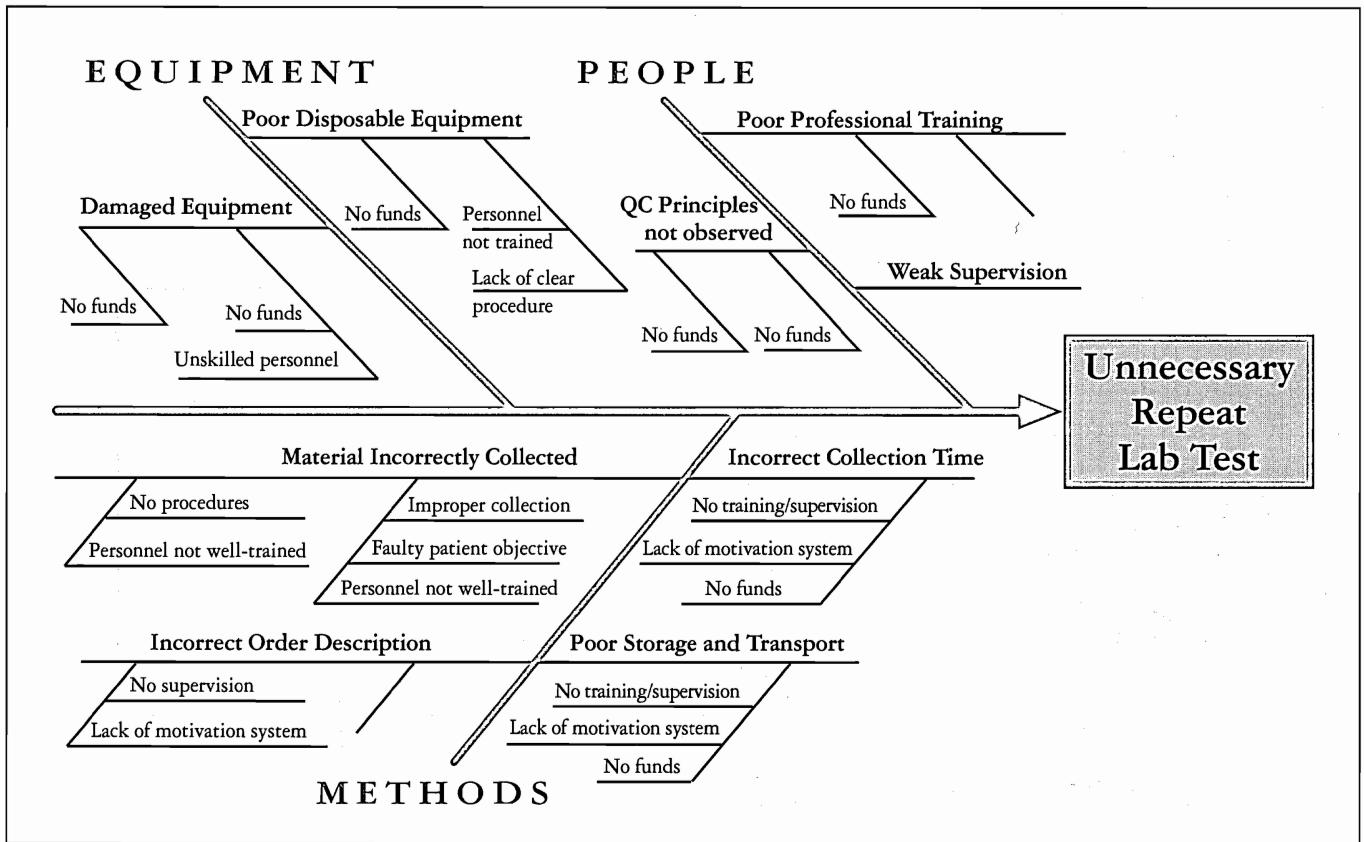


Figure 2: Lab Work Cause-and-Effect Diagram



Methodology and Results

The Problem

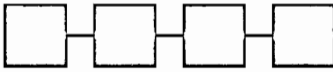
Many blood tests and urinalyses requested by physicians in the pediatric and obstetric-gynecology wards had to be repeated due to procedural errors. This caused delays in getting the final results to the physicians and unnecessary costs due to rework.

Problem Analysis

The first part of the analysis comprised a flowchart to examine the original process, beginning with the ordering of a test by a physician and following the process through to the reporting of results to the doctor (Figure 1). Although the flowchart contains some imperfections, such close examination of the process by the Team led to a greater appreciation of the complexity of what is often regarded as a simple "routine" process, and exposed the numerous places

the process can deviate from an assumed "standard" procedure.

Once the process had been detailed on a flowchart, the Team developed a cause-and-effect diagram to speculate on possible reasons for errors (Figure 2). This informed guessing was then used to guide a data-collection effort to measure the frequency of actual errors by type. On the basis of the cause-and-effect diagram, a number of problem areas were chosen and the frequency with which they occurred was tracked over a 3-week period. The resulting data were grouped into seven categories, then cast as a Pareto chart (Figure 3). As may be seen, the Team discovered that three classes of problems accounted for 80% of repeat tests. Because a fourth problem occurred almost as frequently as the third, the Team hoped to tackle it as well. Thus, four problems were



considered for improvement intervention activities: those related to malfunctioning analytical apparatus, sample collection, transport and/or storage of samples, and documentation or writing of orders. Ultimately, given the short time available for this activity, the Team chose not to deal with issues related to malfunctioning equipment because the resolution of this problem would likely require funds that were unavailable to purchase replacement equipment.

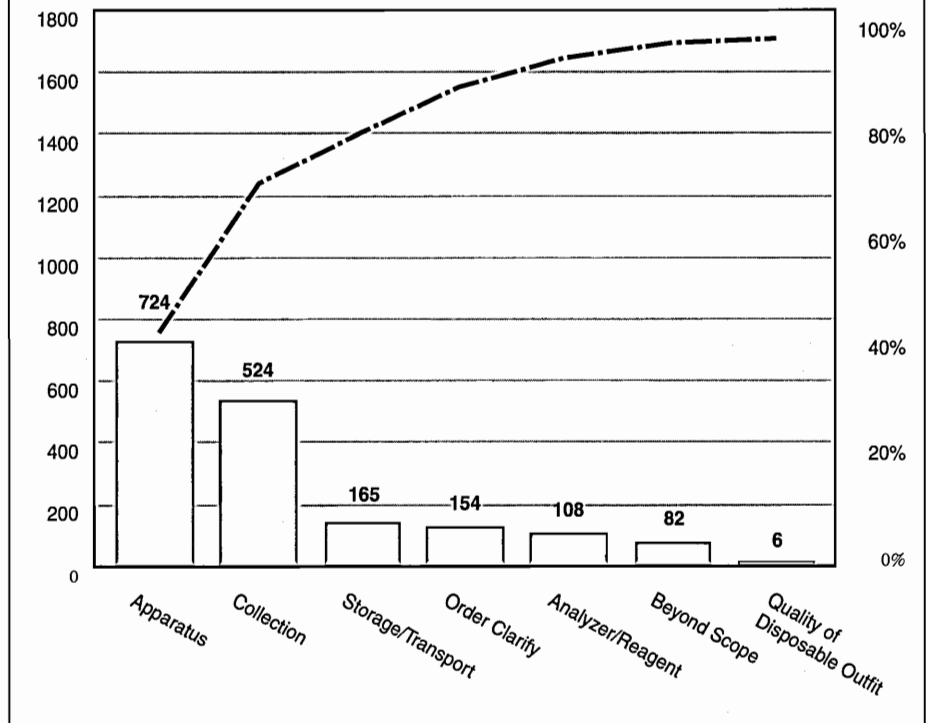
The Solutions

The interventions designed by the Team consisted of developing very specific standards and job aids for collecting blood samples and for transporting and storing the samples, and a review and discussion of the standards with the nurses and technicians responsible for these activities. In keeping with the QM principles the Team had learned, it tried to involve workers in the discussions of why the standards were necessary, as opposed to simply declaring that the standards must be followed or dire consequences will follow.

Post-intervention data were collected for 3 weeks, the results of which are shown in Table 1.

The three shaded problem areas were the subject of intervention. As may be seen, significant reductions in the numbers of errors were accomplished in these areas, whereas the others were relatively unchanged. From this data, the Team concluded that its targeted QI efforts were effective, and that the QI process had worked well in its context.

Figure 3: Reasons for Repeating Blood Tests
(3 week period)



A Final Note

During the training sessions, QAP staff had expressed its conviction that “quality does not cost, quality pays,” meaning that quality improvement often translates directly to cost reduction. The Quality Improvement Team, therefore, estimated the cost of the amount of potential rework it had saved, using its pre-intervention data as a baseline. On that basis, it estimated that in the 3-week post-intervention period, the two departments involved had saved approximately 5,714 zł, which is approximately US\$2,200. Projecting this to 1 full year yields an approximate savings of \$36,000 in the first year alone. The Team did not estimate the cost of the QI exercise and the resulting payoff ratio, but taking into account the time spent to train teams, the cost of travel and subsistence for Team members

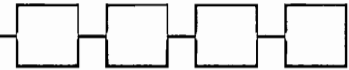
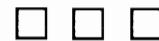


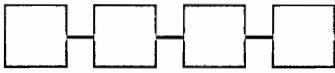
Table 1: Frequency of Error by Type, Pre-/Post-intervention

Cause	Number Pre-intervention	Number Post-intervention	Percentage Reduction (Increase)
Apparatus deficiencies	108	110	(2)
Collection errors	524	302	42
Transport/storage errors	165	112	32
Order clarity	154	138	10
Analyzer/reagent	108	110	(2)
Other causes	82	90	(10)
Quality of disposable outfit	6	9	(50)
Total	1763	1437	Ave. Change = 18%

in Krakow, and the cost of the Polish trainers/facilitators, the investment would not have come to half the savings in a 1-year period, to say nothing of succeeding years. Moreover, the Team, although it still might benefit from continued facilitation by the NCQA staff, will not require anything comparable

to the intensive, and relatively expensive, initial training received. Thus, the payoff ratio for a future stream of benefits would presumably be even greater.





Quality Assurance in Zambia

by Jolee Reinke, Senior Scientist, MSN, CHPQ, Quality Assurance Project



Staff at the Magaye Rural Health Center

In recent years, Zambians have experienced increasingly severe health problems and limited resources in the public health system for responding to these needs. The government directed attention toward improving the management and quality of health services. In response, the Ministry of Health vision “to provide cost-effective quality health care as close to the family as possible” was developed to guide reforms in health care.

Reforms center on three main themes: effective leadership, community involvement, and improved service quality. To address these topics, interventions have included the redesign of the Ministry’s organizational structure to include decentralized responsibility and authority at all levels, including strengthened financial management systems; involvement of neighborhood health committees and other local groups in defining and directing local health care; and improvements in the quality of care emphasizing an essential package of primary health care services.

A Health Reforms Implementation Team (HRIT) was established in 1991 to guide these efforts. Individual units direct activities which address the major reform themes. The Quality Assurance Unit, established in 1993, focuses on helping district and local health staff members to assess and improve health care quality.

A Structure for Quality

Although the Quality Assurance Unit is part of the HRIT, its interactions extend to other government and private sector organizations and professional groups (Figure 1). A National Quality Assurance Steering Committee was formed to guide interactions among the MOH, Military and Mines health care systems, and professional organizations such as medical associations, training entities, and consumer groups. The Clinical Committee is a technical advisory body that was convened to assist the HRIT Quality Assurance Unit with management planning for quality assurance (QA) implementation. Members include MOH leaders such as the directors of clinical care and nursing, as well as provincial representatives.

The Quality Assurance Unit, a two-person office, works collaboratively with other units, particularly the District Capacity Building (DCB) unit and Healthcare Management Information Systems units (HMIS), on issues of quality. The DCB unit is assisted by DANIDA, and focuses on management strengthening at provincial and district levels. The Quality Assurance Unit has been collaborating in areas such strategic planning, problem solving, facility assessment, standards setting, and indicator de-

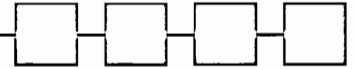
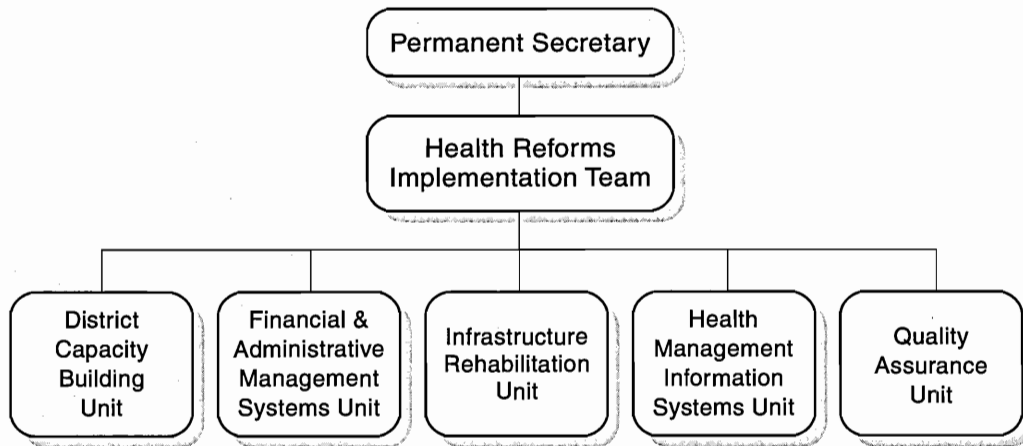


Figure 1: Organizational Structure of the Ministry of Health



velopment. In conjunction with the HMIS unit and the Data for Decision Making Project, implemented through the Centers for Disease Control (CDC DDM), the Quality Assurance Unit has been involved in defining HMIS indicators. Along with the entire HRIT, the Quality Assurance Unit has contributed to district management guidelines, which specify requirements for QA activities at the district level, and that include HMIS requirements and other planning information.

The Quality Assurance Unit relates to provinces and districts through linkage facilitators, who currently are district staff members. Each province has two linkage facilitators who have received special training in quality assurance, standards setting, coaching, and problem-solving skills. These facilitators provide QA training to districts and facilities, and support district-level coaches.

Provincial Health Officers have organized committees to oversee QA activities and support similar groups in district hospitals. District Health Management Teams are responsible for the quality of healthcare in their subordinate health centers. After completing training, each district will have at least one QA coach who is capable of assisting the service delivery level with standards development, monitoring, problem solving, and other QA topics. Some

large health centers have formed quality circles, or ad hoc problem solving teams, to work on quality improvements. Linkage Facilitators are in touch with provincial, district, and service delivery levels to assist their QA efforts and communicate results to the HRIT QA Unit.

Results of Quality Assurance Activities

On the basis of the work carried out by the Unit over the past few years, the impact of quality assurance can be felt in several areas which sustain the themes of health reform in Zambia: effective leadership, community involvement, and improved service quality

For example, several health centers in Southern Province are conducting problem solving and quality improvement activities, the results of which reflect the strength of local leadership and staff ability to resolve their own problems. Nanga Rural Health Center staff in Mazabuka District have been enthusiastic about adopting a client-centered approach to care, and have chosen to work on patient privacy for their first QI activity. Using their newly acquired QA skills and techniques, health staff have re-assigned space to establish a private enclosed area for patient interviews and assessments. This has drawn an immediate response from clients. Previously, clients were too shy to disclose all necessary infor-



mation, but now they have grown comfortable talking about sensitive topics such as genito-urinary tract complaints, family planning, and communicable diseases. Reported cases of sexually transmitted diseases doubled from an average of one every two days during the two weeks prior to redesign, to one per day in two weeks following. Staff members note that they are spending more time with patients during assessment and are gathering more complete information.

“...the impact of quality assurance can be felt in several areas which sustain the themes of health reform in Zambia: effective leadership, community involvement, and improved service quality.”



After that initial success, staff addressed the problem of pharmaceutical shortages, identifying user fees as a means for purchasing commonly unavailable drugs. User fees were introduced as part of the health reform efforts to place budget responsibility at the district level. Nanga Health Center designed a process that identifies drugs that often are unavailable through routine supply channels, notifies the district of these deficits, and, until a standard drug supply can be maintained, provides for its own patients through separate purchasing.

Staff from Rusangu Rural Health Center have involved a community perspective in their effort to improve the planning and delivery of malaria ser-

vices. Rusangu health staff noted that a large number of clients, after receiving initial treatment for malaria, were returning to the clinic with no improvements in their conditions. From their investigations, staff learned that health providers were inconsistent in either prescribing medications, teaching patients how to take antimalarials, or directing follow-up care. In addition, many patients reported not using preventive measures against mosquito bites. As a result, staff members worked to

reinforce standards of care with all clinicians, posting job aids to prompt correct treatment and standardizing patient education about taking antimalarial drugs. To improve community health worker knowledge of mosquito control, the environmental health technician conducted review sessions, after which community health workers conducted neighborhood training.

QA activities in Magoye Rural Health Center have led to a more efficient delivery of a larger volume of services, a result of the enhanced responsibility of the

Clinic Officer-in-Charge and staff to manage local care delivery and to exercise local decision making. Magoye Rural Health Center began its QA activity by addressing problems in the provision of maternal/child health services. Data revealed that, on average, 15 children and eight pregnant women were going home, unattended (without vaccination or antenatal care) each day. Baseline measurement over two weeks showed an average of 14 children and seven antenatal women receiving care daily; however, on the basis of estimates of the catchment area, 50 children and 20 women were expected each day. To complicate the situation further, one of two clinic buildings had been condemned, and subsequently, all patient services were moved into one location

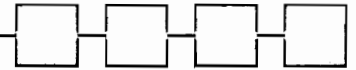
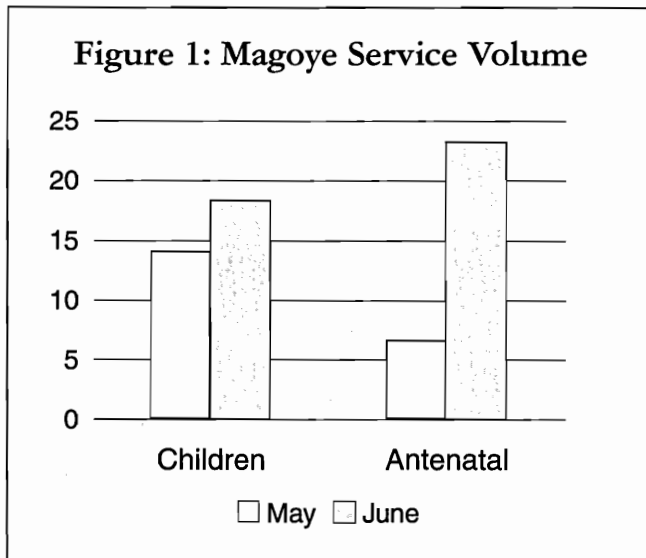


Figure 1: Magoye Service Volume



that provided inadequate space. Careful analysis of the problem revealed that the health center lacked a standard process to register, interview, assess, and treat MCH patients. Moreover, they lacked well-defined job descriptions for the three staff capable of assessing and treating patients. The health team also found that services that logically relate to one another, such as infant weighing and immunizations, were done in separate locations by different people.

As part of their quality improvement exercise, the team redesigned patient flow, located weighing and immunization services in the same place, and assigned trained staff to tasks appropriate to their expertise. One month after service redesign, the clinic

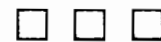
has not turned away any unattended patients, and during the most recent two week period, an average of 18 children and 23 antenatal patients have been seen each day (Figure 1).

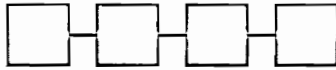
All of the above examples describe some of the successful outcomes of the many quality assurance activities underway in Zambia and their contributions to the government's health reform efforts. QAP continues to work with district and local health staff to realize further improvements in health care quality .

Acknowledgments

The author gratefully acknowledges the following contributors to this article:

Mrs. Joyce Tembo SRN, RM, Paed, HSM, Dr. M.F. Limbambala, MD, PhD, from the Health Reforms Implementation Team Quality Assurance Unit, and Mr. Sebastian Chikuta, Linkage Facilitator, from Mazabuka District in Zambia, and Mr. Dennis Zaenger, MPH, Associate Scientist, The Quality Assurance Project.





Introducing Quality Improvement Management Methods into Primary Health Care Services in Uganda

by Francis Omaswa, MB ChB, FRCS¹, Gilbert Burnham, MD, Ph.D.², Gladys Baingana, MB ChB, MPH³, Henry Mwebesa, MB ChB, MSc⁴, and Richard Morrow, MD, MPH⁵

After two decades of an internal conflict that seriously eroded health services, Uganda is undergoing major sociopolitical reforms. The Three Year National Health Plan Frame (TYPF) drafted in 1993, reoriented the focus of the Ministry of Health (MOH) toward primary health care.⁶ Government services, including health, have been decentralized to local district governments. MOH headquarters has been restructured to be more responsive to the needs of decentralized districts. Such changes have provided fertile ground for new health management initiatives to take root. Foremost among these initiatives is the development of the National Quality Assurance Programme.

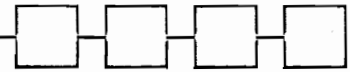
During the development of the TYPF, findings showed that the poor management of hospitals and health services was a recurring problem in Uganda. Consequently, under the auspices of the World Bank Second Health Project, improving the quality of care was made a priority. The National Quality Assurance Programme was launched in March 1994, and its first task was to assist health teams in managing their newly decentralized districts. Methods used to aid these teams were built on experiences

gained from a quality assurance pilot project carried out in the Kabarole and Bundibugyo districts of Uganda by German Technical Assistance (GTZ) and United Nations International Children's Emergency Fund (UNICEF).

The Programme began with the establishment of a Quality Assurance Unit that is composed of three medical officers. An initial quality awareness workshop was then conducted for senior personnel from MOH headquarters, Makerere University Medical School and Mulago Hospital. The workshop was followed by the establishment of a 25-member National Quality Assurance Committee that is composed of senior headquarters personnel, managers of all national disease-control (categorical) programs, and representatives from the medical school and the central hospitals. This committee currently assists the Quality Assurance Unit with implementing the National Quality Assurance Programme and integrating activities within the MOH.

The Programme focuses principally on improving the quality of district-level health services through the application of quality management (QM) methods that are used for identifying and resolving com-

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- 6 Uganda Ministry of Health. The Three year national Health Plan Frame 1993/4-1995/6. Entebbe, Government of Uganda, 1993.



mon service-related problems. This approach includes the development and dissemination of standards or guidelines, determination of the needs of patients and their families, strengthening of communication between health care providers and users, and the use of data to identify quality gaps.

Results

At Ministry of Health headquarters. An important achievement at the central level has been the strengthening of interaction among the disease control (categorical) programmes at the national level, facilitated by monthly Quality Assurance Committee meetings. District visits by committee members have helped Ministry headquarters appreciate the need for integrated district services.

Two examples of problems detected through district visits were inconsistent drug procurement procedures and difficulties obtaining health funds channeled through local government. In response, procedures and guidelines were quickly established by the Ministry of Health and Ministry of Local Government which eliminated the problems.

At district level. One of the programme's principal accomplishments has been to bring together District Health Teams with local administrators and political leaders to share responsibility for strengthening health services. Within the health system, the integration of curative and preventive activities has been improved, with hospital managers now being part of the District Health Teams in many districts. A smoother functioning referral system from health units to district hospitals has been one of the first benefits of improved cooperation.

Developing district problem identification and problem solving capacity has been a central objective of the programme. Table I shows the nature of problems which district health managers identified

Table 1: Problem Categories Selected by Districts for Resolution Using Quality Improvement Methods.

(Some districts selected two problems.)

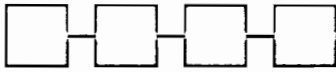
Type of problem	Number of districts selecting
Management and administration, including financial management	21
Quality of clinical and preventive services	20
Collection and use of information, especially for planning purposes	13
Patient or employee satisfaction	6

and undertook to resolve. Of the management problems addressed, those related to cost-recovery schemes were the most common. In resolving them, weak steps in the cost-recovery process were located and strengthened, and standard methods were established for health centres to allocate funds realised. Following these changes, a number of districts noted reduced health worker absenteeism, improved morale, and increased patient satisfaction with services provided.

Details from two districts illustrate the quality management approach taken and results observed.

Measles outbreak in Arua district.

In spite of an active immunisation programme, reported measles cases in 1993-94 were rising. Using a cause-and-effect diagram, multiple potential causes were identified. Of these, the District Health Team found three areas they believed to be major contributors to the problem, and which they could address: weaknesses in the district cold chain, problems with diagnostic accuracy, and a poorly func-



tioning information system. Nine of the 54 health centres did not have refrigerators, and relied on neighbouring clinics to store vaccine. The neighbouring clinics did not always have adequate space for ice packs to ensure safe vaccine transport. Of the 54 units with refrigerators, nine did not have reserve gas cylinders. When the cold chain was broken, health units did not have an established process to deal with vaccines affected.

A medical officer following up reported cases found that a variety of skin conditions were being classified as measles. In other cases, the diagnosis was felt to be correct in spite of the children having a record of measles immunization.

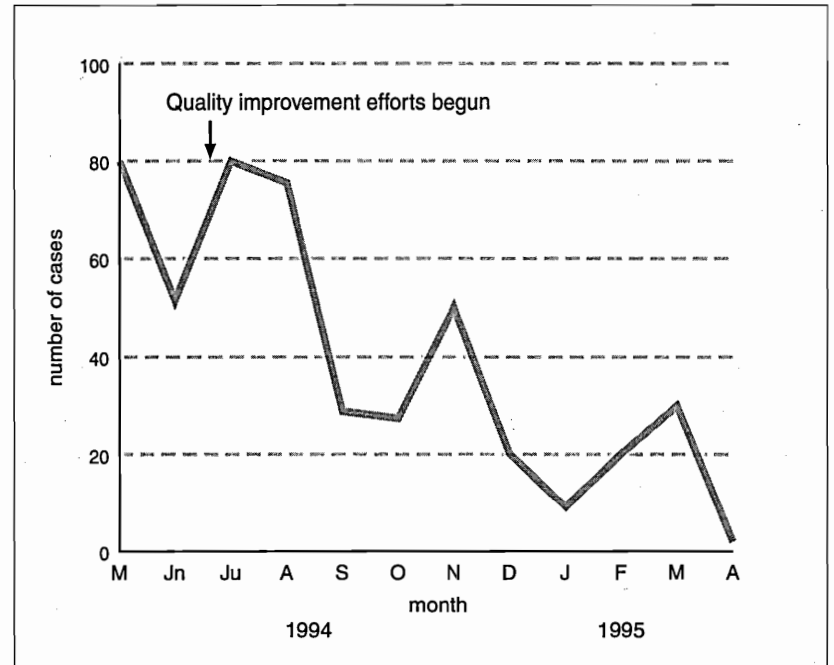
Clinic records frequently showed discrepancies between daily outpatient tally sheets and monthly summaries. Sometimes diagnoses were estimated because of a shortage of tally sheets.

A variety of corrective measures were put into place in July 1994, including reallocating refrigerators, obtaining reserve gas cylinders, strengthening cold-chain monitoring, and supplying adequate forms. Additional training was provided to strengthen diagnostic skills. The subsequent decline in reported measles cases is shown in Figure 1.

Waiting times at Masaka Hospital OPD

Outpatients reported early to the Masaka hospital, but many did not leave until very late, and then often without treatment. Both patients and staff were becoming increasingly dissatisfied. By drawing a cause-and-effect diagram, multiple potential causes were identified. Following this with an examination of outpatient records, observations of

Figure 1: Measles cases reported by month



patient flow, and discussions with patients and key staff, five areas were identified which the hospital staff felt could be addressed immediately: low morale among health workers, shortage of supplies, inadequate supervision by hospital management, poor patient flow, and inefficient dispensing of drugs.

The hospital management and the OPD staff together developed a work plan in mid-1994 to address each problem area. Uniforms were provided to the staff, and a work schedule for each staff member was established. In addition, some of the funds raised through outpatient user-fees were distributed among OPD staff as incentives to supplement low staff salaries (an accepted practice in Uganda). The ordering system for supplies was found to be poorly functioning and a new system established. Where supplies were not available through government channels, arrangements were made for local pur-



chase. Hospital management developed a regular supervision programme to support OPD staff. Duplicate and unnecessary steps were found in the flow of patients through the department, and a new patient flow pattern devised. Prepackaging common prescriptions reduced delays in dispensing medications to patients.

By the end of 1994, long delays had been eliminated, and patients arriving in the morning, were treated and released by noon. Reorganization of flow eliminated overcrowding in the outpatient process. Both patients and staff felt satisfied with the results. The utilization of OPD services in the second half of 1994 had increased 28% over the first half.

Key factors that have contributed to these and other Programme successes include the effects of Uganda's wide-ranging decentralization program and the restructuring of health services, the active participation of local government, unwavering commitment

from senior personnel in the Ministry of Health, and a generally well-educated and loyal work force. Even though results from the first 1 1/2 years have been encouraging, much remains to be done before quality improvement methods become a part of everyday health management in Uganda.

Acknowledgments

The Uganda Quality Assurance project is funded through the World Bank Second Health Project. Methodology development was supported by the USAID QAP Cooperative Agreement DPE 5992-A-00-0050-00. We express our appreciation to the hospital and district health staff in the Jinja, Arua and Masaka districts for their assistance, and to the Uganda Ministry of Health for permission to publish these results.





Other Project Activities

International Society for Quality in Health Care (ISQUA)

QAP staff participated in the International Society for Quality in Health Care (ISQUA) Conference, which was held from May 26-30, 1996 in Jerusalem, Israel. The theme was "The Impact of Quality Interventions on Health Care."

QAP sponsored Dr. M.E. Limbambala and Mrs. Joyce Tembo, of Zambia, to attend the conference and present a paper describing Zambia's QA experience. Following the presentation, Dr. Limbambala and Mrs. Tembo were asked to submit an article to the Canadian Journal of Quality in Health Care. The President of the Canadian Association felt that the Zambian experience would be extremely relevant to the start-up of provincial-level quality improvement programs in Canada.

Other QAP involvement at the conference included Jorge Hermida, QAP/Ecuador, who gave a presentation on Education and Training in QA in Developing Countries, and Dr. Walid Abubaker, QAP/Jordan, who served on the International Advisory Scientific Committee.

Niger-Measles Initiative

The project has achieved many encouraging results, especially through work done with quality improvement teams. For example:

The team from the Guidan Idder rural dispensary increased measles vaccination coverage from 11 percent in January, 1995, to 90 percent in December, 1995, by applying quality improvement tools.

The new gas bottle management system put in place for the Tahoua region reduced gas supply interruptions and reduced the number of lost or damaged bottles, thus sustaining the maximum number of available vaccination sites.

The use of the monitoring wall chart helps health workers recognize an increase in dropout and take appropriate and timely action to ensure continuation of services.

Integration of maternal and child health activities, including immunization, was piloted by teams in Illela and Guidan Idder and showed unequivocally its advantages for providers, as well as for clients.

The Measles Initiative Coordinator presented these project results at the 13th International Society for Quality in Health Care Conference in Jerusalem in May 1996.

Niger-Tahoua

QAP/Tahoua recently trained nurses in the Department of Dosso, as part of a collaboration with the BASICS Integrated Case Management Initiative. After receiving training in the application of the ICM protocol, supervisors and nurses themselves noticed they were not following the protocol regularly and complained that it was taking too long to evaluate a child properly. In response to this problem, BASICS requested that the QA project train the nurses and their supervisors in Quality Assurance.

Using the QA problem solving techniques, the nurses and supervisors are coming up with ways to solve their problems and improve the application of the ICM protocol. Plans are being made to train more teams in the future.

Jordan

Dr. Arif Batayneh, Jordanian Minister of Health, designated himself as head of quality assurance within the Ministry. This has created a stronger commitment to the QA approach, generating greater interest in QA within all the ranks of the Ministry. Dr. Batayneh approved the establish-



ment of QA units in all of the Directorates in Jordan. Units are made up of three full-time QA specialists and data collectors responsible for executing and monitoring the Ministry's Quality Plan.

URC/CHS hosted the Jordanian Minister of Health and members of his delegation on June 18, 1996. Also present at this meeting were representatives from the United States Agency for International Development (USAID) and the Department of Health and Human Services (DHHS). This candid exchange of ideas led to a better understanding of Jordan's expectations, objectives and needs.

Seven teams in Amman are currently involved in Quality Improvement Projects (QIP). Emphasis on development and use of standards in actual practices have been successful. In response to the establishment of procedures and systems. QI teams have been independently forming in Balqa and Madaba for the purpose of studying and improving Hospital conditions.

Morocco

Interest and activity in quality assurance is increasing in Morocco. One of the activities carried out under the USAID supported Family Planning/Mother Child Health Project is the creation of the Integrated Quality Management Project (IQM). A workshop sponsored by URC in May, 1996 in Rabat, and earlier activities of the Directorates of Population and of

Health & Ambulatory Care, led to the creation of this initiative.

The workshop was attended by a core group of 20 participants from both the central and provincial levels. Through lectures, individual and group exercises, and video and participant discussions, the participants created a core of central and provincial level promoters and facilitators for the implementation and support of the Integrated Quality Management Project. They also developed the proposed IQM workplan, and defined a strategy to integrate the quality management approach into project sites.

As a result of this workshop, a Training of Trainers in Quality Assurance is being carried out in the QAP Bethesda office in August, 1996. The team of trainers will develop training materials in QA Basic Skills and Coaching adapted to Moroccan needs. They will work to further expand QA/QM in the future by training peripheral level health staff.

Ecuador

The Minister of Health requested that Dr. Jorge Hermida integrate a high-level technical team appointed to design a Health Sector Reform Project to be financed by the World Bank (WB). Dr. Hermida will be in charge of integrating QA experiences and advancements to date in Ecuador's QA National Program into this new WB Project, which will have a specific component devoted to improving the quality of services in the

public health system. The inclusion of a specific QA component in the project is a direct result of the work developed by URC and the MOH in Ecuador, and constitutes a guarantee of further institutionalization of QA in the public health system of Ecuador.

Twelve QA microprojects were initiated in several health units, in topics such as reducing patient waiting times in hospitals, extending coverage for maternal and child health services in rural areas, reducing waste in surgical disposable items at hospitals, and improving interpersonal patient-provider relations.

Philippines

Due to a shortage of funds, assistance to the Philippine Iodine activity was essentially stopped after the QAP monitoring scheme was designed and had just begun implementation. In December, 1995, QAP's Dr. Stewart Blumenfeld ascertained that both the Tuba and Benguet Province teams were setting up their record systems to collect and track indicators developed from flowcharts, and that it would be a useful continuation of QAP assistance to demonstrate how to deal with off-target performance in the system through the identification of causes and solutions. The value of QAP in the Philippines is reflected in the efforts of UNICEF, which has adopted the QAP approach in providing technical assistance to other regions of the country.



Malawi

The Blantyre Integrated Malaria Initiative (BIMI) in Malawi is being designed to reduce the numbers of deaths and cases of severe illness attributable to malaria infection through access to and use of improved diagnosis and treatment of infection, and to reduce malaria transmission through appropriate preventive activities.

A baseline activity was conducted to learn more about the problems and constraints currently faced by Blantyre health staff in their efforts to provide quality malaria treatment and control services. This activity involved QAP, the Environmental Health Project (EHP), and District and Regional local health staff in conducting the assessment and interpreting its results.

Results will be presented at a one day work shop for the purpose of discussion, interpretation and identification of problems that could be resolved at health facility level, problems that require national or international assistance, and unavoidable constraints. The conclusions of this workshop will be incorporated into the design of the BIMI project.

Egypt

In June, 1995, Egypt's Minister of Health and the 50 founding members of The Egyptian Society for Quality Assurance (ESQuA) met to initiate the society and finalize all legal requirements. The mission of ESQuA is: "to introduce the concept of quality assurance and continuous quality improvement to all sectors of health care services in Egypt."

At the initial meeting, five committees were formed, including accreditation, consumer awareness, standards, human resource development, and research. ESQuA became a legally registered non-profit society in Egypt on July 2, 1995.

The First National Conference on Quality in Health Care was held in Cairo on September 26-28, 1995. QAP/Egypt staff collaborated with the Cost Recovery for Health Project (CRHP) to organize and present the conference. The conference objectives were to: 1) explain concepts of Quality Management in health care and how to build institutions based on these concepts; 2) exchange experience and knowledge with other countries that apply Quality Management in health care; 3) review the method-

ology of implementing Quality Management in hospitals and other health care institutions; 4) disseminate information and experience produced by CRHP and QAP; and 5) encourage Egyptian researchers to introduce their papers and share their experience in the field of Quality Management in health care.

Although only 350 participants were expected at the conference, 762 participants attended, due to widespread interest in quality assurance. Participants represented the MOH and other Egyptian institutions, including Faculties of Medicine, Armed Forces, teaching institutions, professional syndicates, the private sector, and the community. Regional participants came from Jordan, Lebanon and Bahrain. The U.S., Canada, Finland, and Germany were also represented.





Quality Assurance Guides Health Reform in Jordan

by *Walid Abubaker, M.D. Associate Project Director for the Middle East*
and *Mai Abdulrahman, Project Coordinator*

The Jordanian Minister of Health is currently working to improve its population's health status, provide universal health coverage, and enhance clinical effectiveness and quality of care without increasing expenditures. Although Jordan's health system performs well in terms of overall access and outcomes, it is expensive and inefficient in the area of service delivery. In addition, although Jordan spends almost 8% of its gross domestic product on health care, 20% of Jordan's population lacks health coverage.

As an initial step towards addressing these problems, a World Bank mission, with the Jordan Ministry of Health's (MOH) assistance, visited Jordan in November 1995 to conduct a comprehensive analysis of the country's health delivery system. On May 6, 1996, the Jordan Health Sector Study was finalized. The study findings and recommendations were submitted to Dr. Arif Batayneh, Jordan's Minister of Health, and proposed a number of reform strategies:

- Decentralize the MOH management to the individual facility level, and provide local public health officials and providers with the necessary responsibilities and authority to manage their medical facilities effectively.

- Improve clinical practices, quality of care, and consumer satisfaction.
- Adopt treatment protocols and standards.

Recognizing the need to decentralize and improve quality of care, and building on the wide acceptance of quality assurance (QA) concepts and management tools within the Ministry over the last 3 years, Dr. Batayneh identified QA methods and quality management (QM) techniques as the MOH choice to accomplish these reforms. In an attempt to reflect the Ministry's determination to focus attention on quality health improvements in the public sector, Dr. Batayneh designated himself as Head of Quality Assurance within the Ministry. In that capacity, the Monitoring and Quality Control Directorate, which is the Ministry's QA implementing and policy committee, reports directly to the Minister on all QA activities within the Ministry.



Dr. Arif Batayneh, Jordan's Minister of Health enjoys a visit to the U.S. (from left to right) Dr. David Nicholas, Dr. Walid Abubaker, Dr. Arif Batayneh, and Dr. Adnan Abbas.



The Monitoring and Quality Assurance (M&QA) Directorate, which is composed of 15 full-time MOH members, was established in 1994 to maintain a national capacity for quality assurance. The M&QA Directorate is responsible for overseeing QA applications within the Ministry, and for instituting and developing the capacity of local QA units in the 12 Governorates. Each QA unit is made up of three full-time employees who are responsible for implementing and monitoring day-to-day QA activities. The quality management approach that is promoted and implemented by the M&QA Directorate includes the following key quality principles:

- ❑ Establish a mission, a vision, and guiding strategic objectives.
- ❑ Plan to use a systematic approach (this includes educating, training, and improving).
- ❑ Teach lessons learned and applicable research conducted.
- ❑ Use QA training to teach quality care, quality improvement, and patient/client satisfaction.
- ❑ Educate physicians, nurses, nurses aids, midwives, and other health staff about quality management approaches.
- ❑ Using assessment tools and interviews, measure the needs and expectations of local health providers and patients/clients.
- ❑ Ensure that physicians, nurses, midwives, and clinic and hospital staff provide feedback on QA improvement projects.

- ❑ Ensure that data are valid and reliable, and monitor quality improvement efforts.
- ❑ Standardize systemic data collection and outcomes.
- ❑ Establish and disseminate QA standards and performance improvement efforts.

QA has become the vehicle of choice for adopting reform which espouses gradual transformation instead of radical change.



QA methods have been institutionalized through various committees and units within the Ministry (eg., Monitoring and Quality Control Committee, Primary Health Care Council, Model Center Quality Assurance Committee, and Quality Assurance Steering Committee, in addition to local quality improvement study teams and quality assurance units). These committees conduct their day-to-day operations according to QA by-

laws and guidelines. The Jordan Quality Assurance Project has been instrumental in successfully institutionalizing a QA system at both the central and local levels by setting QA standards and procedures for all aspects of operations, ranging from family planning training to needs assessment of model centers to client satisfaction surveys. The QA process has since become the foundation of all organizational structures at the MOH.

With QAP technical assistance, QA committees and councils are committed by their bylaws to use team participation in the decision-making process, in contrast to the traditional centralized decision-making apparatus that generally is used by Ministry officials. The QA units established by the M&QA ensure local input and active involvement of the local medical facility. Since Dr. Batayneh has ac-



knowledge of the impact of the Quality Assurance Project on the Ministry's management style, QA has become the vehicle of choice for adopting reform which espouses gradual transformation instead of radical change.

Other World Bank health sector recommendations for improving clinical practices, quality of care, and consumer satisfaction provide a basis for undertaking the QA approach to health improvement. For example, the M&QA Project, with technical assistance from the Family Health Service/Quality Assurance Project (FHS/QA), has been developing and communicating standards, protocols, and clinical guidelines for primary health care, maternal/child health, family planning, and curative care. In the last 2 years, 21 standards have been adopted for nursing, maternal/child health care centers, pharmacies, and medications. The Balqa pilot project has developed and shared 44 such protocols. Several quality improvement (QI) studies also have been carried out. These include:

- Hyper-allergic Patients
- Analysis of Patient Flow Rate
- Redistribution of the Nursing Staff
- Waste of Vaccine
- Anemic Pregnant Women

Through Quality Assurance Project efforts, QA monitoring and data gathering has become an ongoing process for Salt, Madaba, and Amman. Following are the clinical and non-clinical QI studies in progress:

Clinical Studies

- Vaccination
- Rabies
- Diarrhea
- Toxemia

- Leishmaniasis
- Anemia Among Pregnant Women

Nonclinical Studies

- Medical Record System
- Referral System
- Modern Contraceptive Technology
- Job Description
- Drug Utilization and Supply System
- Injury Care Accidents
- Patient Flow Analysis

In addition, four epidemiological studies are being carried out in the 12 Governorate in cooperation with John Hopkins University and the Quality Assurance Project:

- Maternal Mortality Study
- Causes of Death Study
- Morbidity Study
- Perinatal Mortality Study

Dr. Batayneh recognizes that the World Bank recommendations are being met by the Quality Assurance Project. The Quality Assurance Project has been an advocate of quality management principles that emphasize teamwork and participation within the Ministry and that promote the practice of using questionnaires and interviews for direct feedback. The Project also advocates a data-driven approach that requires the use of data collection and data analysis, as well as the quality improvement design that evaluates, adapts, and creates standards and measurements for health improvement. Consequently, the MOH has embarked on a health reform plan for 1996, declaring quality assurance to be one of its main objectives.





How Quality Assurance Facilitates Decentralization in a Primary Health Care System: The Case of Niger

By: Lauri Winter, MSc., MPH, Resident Advisor and Gaël Murphy, MA, MPH, Senior Scientist,
Dr. Xavier Crespin, Dr. Amsagana Maina Boucar

The Quality Assurance Project (QAP) provides the Government of Niger with both technical and operational assistance designed to improve the delivery of essential primary health care services in the region of Tahoua. The quality assurance approach is designed to improve health services and promote local responsibility (a key element in successful decentralization) for continuous quality improvements. Through training, supervision, and analytic use of data, the Quality Assurance Project is able to help health care providers and managers assess and correct problems in quality of care, including patient flow, counseling, and outreach.

Decentralization in Niger

In Niger, decentralization includes the transfer of planning, decision-making, administrative, and financial functions from the central level to the periphery. It allows clients and community members to participate in the planning and financial management of their health care system. In order to implement decentralization, it is important that individuals at each level of the system understand and perform their respective roles and responsibilities.

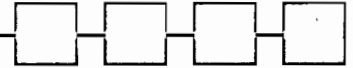
Although the Government of Niger has been promoting decentralized health care management for several years, the country has a long history of centralized management and decision-making. This, along with the variety of vertical programs, such as vaccinations, family planning, diarrheal disease control, and malaria control, which are managed by coordinators in the central Ministry, make the policy

of decentralization a challenge to the existing systems and thinking.

The recent reorganization of Niger's Ministry of Public Health has improved the definition of roles and responsibilities. However, other mechanisms and systems needed to support changes in behavior and to improve communication and feedback are still being negotiated. Some of the structures and systems envisioned include the creation of autonomous financial management systems establishing cost recovery in health centers, as well as management committees made up of community and government representatives. These committees must operate at all three levels of the healthcare system: national (central), regional (intermediate) and sub-regional (peripheral) in order to ensure ownership and coordination of the health sector development plan. Only recently have the legal texts been approved to put these committee structures for cost-recovery, and thus effective decentralization, into action.

Quality Assurance Structure

One of the most critical decentralized structures is the District Health Management Team. This team is ideally made up of the chief district medical officer, his or her deputy, the district medical center head nurse, the Information/Education/Communication specialist, the district statistician, and an administrator or general manager. The team-based approach for systematic and continuous improvements in quality, and for more effective use of data and management information to improve decision making



and resource utilization, is already in effect at the department and peripheral levels in Tahoua. Figure 2 demonstrates the way structures set up by the Quality Assurance Project reflect the basic intent of the decentralization effort in Niger.

By developing structures, skills and attitudes that encourage health workers and first line managers to provide for better systems and processes which will better satisfy clients, the expected result is an increase in client support of the health care system.

QA Paves the Way to Decentralization in Tahoua

The pivotal strategy in the Quality Assurance program for Tahoua is the development and support of Quality Improvement Teams (QIT). Training QITs in basic concepts and skills to solve problems systematically was the first activity of the project and became the heart of the strategy for institutionalizing Quality Assurance in Tahoua. In all, 76 people were trained, including regional health service staff, and every district chief medical officer, deputy medical officer, dispensary head nurse or social worker, head midwife, and head nurses from their two largest rural dispensaries from all 7 districts.

Working in teams has increased participation in decision making at the district level and demonstrated to all involved the power of multiple perspectives when developing and implementing solutions. Each district formed its own QIT. The result is that this district-level QA structure is initiating improvement activities at the local decentralized level (Figure 1). In addition to treating supervision as a system with norms, the Tahoua project instituted a team of supervisors, thereby increasing the possibility of regular supervision.

Six months after project start-up, the Quality Council (QC) was put into place to promote the regional

Figure 1

QIT: Follow-up & Rehabilitation of Malnourished Children

Solutions/Strategies

- Integration of services
 - Child assessed and treated in same day and by team of providers
- Reorganized patient flow
- Services offered daily

Results

- Dropout rates declined from 40% to 20%
- Rehabilitation rates increased from 7% to 34%
- Counseling time increased from 1 to 5 minutes
- Waiting time reduced from 4 hours to 40 minutes

vision and mission for a quality healthcare system, to oversee the implementation of project activities, and to ensure integration of QA into the overall concerns of the region's primary health care system. The QC has also influenced the major interventions of QA, such as strengthening the supervision system.

Important elements included in the structure of QA in Tahoua are department and district-wide management groups which meet on a quarterly basis to discuss the performance of the health system, based on presentations of the service statistics. These meetings contribute to participative decision making regarding the management of the health care system at each of the levels. QIT members and Supervision Team members selected for quality improvement and problem solving have now been

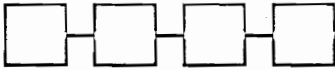


Figure 2

Organizing structures for coordination and decentralization	Structures for Quality Assurance in Tahoua
NATIONAL CENTRAL LEVEL <ul style="list-style-type: none">□ National Technical Committee for Health Evaluation & Coordination□ National Health Committee**	NATIONAL CENTRAL LEVEL <ul style="list-style-type: none">□ Quality Assurance Steering Committee**
REGIONAL LEVEL <ul style="list-style-type: none">□ Regional Technical Committee <i>Governmental & Administration</i>□ Regional Technical Committee for Health** <i>Coordination & Integration</i>	REGIONAL LEVEL <ul style="list-style-type: none">□ Quality Council <i>(1RHD, 2DMO, 2RHS staff, 1RA)</i>□ Quarterly Regional Management Meeting <i>(RHS staff & all DMO's)</i>
PERIPHERAL LEVEL <ul style="list-style-type: none">□ Sub-Regional Technical Committee <i>Governmental & Administration</i>□ District Health Committee** <i>Coordination & Integration (District Management Team)</i>□ Village Health Committee	PERIPHERAL LEVEL <ul style="list-style-type: none">□ District & Peripheral QIT□ District Supervision Team□ Quarterly Staff Meeting with DMT & RD Head Nurses

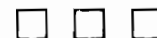
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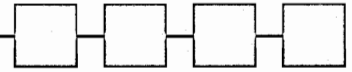
designated to be the district management team in the proposed Niger decentralization structure. As a result, Tahoua district health workers have acquired the management skills necessary to implement decentralization through district management teams.

Conclusions

Although the institutionalization of QA methods in Tahoua was not intended to be part of the decentralization design, the manner in which decisions are now being made, and the way the systems are set up to implement these decisions, is helping to promote increased responsibility at the local level. The collaboration between the Tahoua departmental and district health services and the Quality Assurance Project has brought to light many of the requirements and challenges of decentralization in the Nigerien context. The focus of Quality Assurance

on systems and processes has allowed district managers to become aware of the way their healthcare system operates in reality and the ways they may improve it to achieve an effective decentralized system of health care. The attention given to teams by the Project has been important because it reflects closely the proposed decentralized health management structure. Problem solving and process improvement efforts undertaken at the district level in Tahoua have strengthened analytical skills of staff and improved action-oriented decision making, as well as self-confidence, all of which are critical to effective decentralization in Niger. As a result of the success of the QAP effort in Tahoua, the Government of Niger is considering integrating QA as a focus in health sector reform.





QA Forum: An Interview with M. Driss Bacheikh

What major reform activities are underway in the health sector in Morocco, and what major problems are they meant to address?

One of Morocco's priorities is to improve the quality and expand the coverage of basic health care in rural areas. These isolated rural zones are the target of a series of activities within the outpatient care strategy that will allow this population to benefit from preventive care and to reduce the inequalities of access to health care :

- Efforts are being made to sustain achievements in the vaccination program, maternal and child health, and the fight against communicable diseases.
- The reference hospital sector is a major focus of reform, with efforts being made to expand administrative autonomy and to improve the efficiency and effectiveness of hospital management, particularly with regard to human and financial resources.
- The strengthening of the institutional and regulatory framework continues to give hospitals the opportunity to increase their own revenue without creating financial barriers to health care. In this way they can attain the resources necessary to improve quality of care and provide an adequate range of clinical services.

National policymakers and health care providers are committed to the priority of quality assurance in order to meet the health needs of Morocco's citizens and improve client satisfaction.

What specific role do you see for Quality Assurance (QA) in any or all of these reforms?

Quality assurance is not new to Morocco. It was initially applied in several vertical programs to improve the technical quality of services, as well as their accessibility and acceptability. At this time there is a pressing need for an effective local team to manage these quality management interventions. The integration of services at the service delivery level, and the availability of comprehensiveness and continuity of care constitute the basic philosophy of the quality assurance project in Morocco.



(from left to right) Ali Wakrim, Norma Wilson, Jamal Tekni, David Nicholas, My Ahmed Ghoulidi, Mohamed Akhatal, and Driss Bacheikh

What QA activities are already underway and what activities are being proposed for the coming months?

Currently, the Ministry of Public Health has produced a plan to implement quality assurance in seven provinces. The approach is entitled, Integrated Quality Management (GIQua).

The primary objectives are:

- To help the model sites establish the GIQua approach;



- To develop a generic process of continuous quality improvement (PACQ), in order to adapt it to the local context at each level of the health care structure;
- To demonstrate the feasibility and the effectiveness of integrated quality management so as to increase acceptance on the part of health professionals;
- To improve the quality of clinical care and health services.

In this project, we do not seek to create an additional...program concerned with quality assurance, but rather to help health personnel take ownership of their work environment...



The administration of the GIQua project is characterized by the participation of representatives from different central MOH offices in the National Committee for the strategic management of quality. This central level committee establishes the overall directions of the project and ensures the support of the project's management teams. A second central level is comprised of quality experts who may belong to different central offices in order to facilitate the institutionalization of the integration and improve the collaboration among the different departments.

At an intermediary level the project is managed by a Provincial "Orientation" (Advisory and Technical) Committee which has as its aim to provide the necessary support to hospitals and the health centers

within the model sites in selected Provinces. The Provincial committee is, in turn, assisted by a supporting group of local experts (clinical specialists, administrators, statisticians, computer experts, and epidemiologists) who are available to help any health provider with the quality effort.

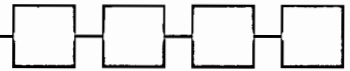
The GIQua project facilitator is a mid-level civil servant who may either volunteer or be chosen by the Ministry to perform the task of coaching in the model sites. The facilitator will be trained, and then considered as an internal consultant on quality management at the local level. The motivator ("animateur") of GIQua teams is the immediate supervisor in each of the model quality sites and is responsible for training, supporting, encouraging, and aiding the team to use the model continuous quality improvement process.

In this project, we do not seek to create an additional or parallel program concerned with quality assurance, but rather to help health personnel take ownership of their work environment, using quality management techniques to satisfy their external clients, and also to improve their own effectiveness and job satisfaction while benefiting the population they serve.

To date we have informed and sensitized the various partners at the central, provincial, and service delivery levels. The national workshop that launched the project took place in May 1996, with the assistance of URC.

What do you think will be the biggest impediment to implementing and sustaining a successful QA program?

Project managers believe that staff training is essential if the GIQua initiative is to succeed. Consequently they are planning an opening session in



October 1996. A quality management manual describing the GIQua approach is being developed, and will be used as the foundation for the training, and as a guide to continuous quality improvement. The training at the national level will involve first the facilitators, then the motivators. It will be followed by training sessions for service providers from the model sites in December, which will allow the GIQua teams to form, and to begin their continuous quality improvement cycles in January.

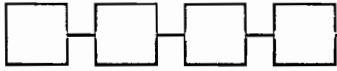
National policy makers are involved and committed to the institution of the quality management approach in the Moroccan health system. This high level political will is a major advantage for the eventual success of GIQua. However, implementation difficulties might arise, due to a potential resistance to the project on the part of certain doctors who may be insufficiently informed as to the project's spirit and goals. Or, if it takes too long to see positive results, the teams may get discouraged. The need for quality monitors, or "coaches" necessitates both the presence of supervisors trained in quality management, and a sustained effort to respect the steps involved in continuous quality management.

The GIQua project seeks to have a global impact on the improvement of service quality both by integrating itself vertically in programs, as well horizontally, through the service delivery level. The project will be instituted in both the service delivery structure, and also in the administrative and logistic support services. In other words, all central health offices should be considered as both clients and partners in the improvement of management at the central level. They, in turn, will contribute their expertise to the support of the GIQua teams working at the service delivery level.

Acknowledgments

M. Driss Bacheikh, MPH, is the Division Administrator for the Health Coverage and Integration of Service Activities Department in the Hospital and Ambulatory Care Directorate of Morocco. This interview was administered and transcribed in French by France Pruitt, Ph.D. The English translation was completed and edited by Laurie Emrich, MA and Gaël Murphy, MPH, MA.





Quality Assurance in the Provincial Health Department of Taounate, Morocco

by guest contributor Dr. Abdelali Belghiti Alaoui, Director of the Health Ministry, Province of Taounate

In Moroccan health policy, quality assurance is increasingly being seen as a necessity. With Quality Assurance, these policies attempt to address the increasing demands of both the public and political leaders. Several reforms are currently underway. First, there are efforts to develop health services management skills, to make hospital care more personal, to strengthen rural infrastructure, to integrate health programs, and to promote quality care. Although quality is the most recent component of this reform,¹ it is not the least important. In fact, the quality assurance movement is more than a response to a demand. The quality assurance movement also makes it possible to address several essential needs of the health care system, including: 1) the need for rational use of resources, in which quality management guarantees efficiency and is therefore a way to optimize the use of resources; 2) the need for legitimacy, which emphasizes clients' right to have access to quality care; 3) the need for credibility, which is linked to the ability of the system to ensure patients' loyalty; and 4) the need to provide a way to motivate human resources and improve professional image.

The Provincial Health Department of Taounate is convinced of the usefulness of a quality assurance approach to improve performance and to better meet the needs of people. Aware of the problems involved in applying business techniques to the health sector, the Provincial Health Department will initiate a simple process to systematically assess quality. The responsibility rests primarily with field personnel, whether it involves selecting criteria and standards of quality, or developing assessment tools. This pro-

cess has since been integrated as a prerequisite to successfully operating health services.

In line with its strategy to improve maternal and child health services, the Provincial Health Department of Taounate introduced a quality assurance program within its primary health care network, known as the Systematic Quality Assessment Project (PASQ). The recommended process follows a normative action-research approach which directly involves health professionals in the development of assessment criteria for health care quality, and in the definition of standards, leaving the facilitation role to specialists.

After a phase of increasing awareness of and commitment to quality, the program began by improving the capacity of personnel, organized in teams, to assess the qualitative aspects of their service delivery. A training workshop was organized for that purpose, which resulted in the production of quality assessment and improvement tools. After the training, the teams assessed the quality of their services and identified quality-related problems. This review first focused on the health care process, where quality assurance is considered essential, followed by a focus on the direct satisfaction of users. Based on the information obtained through the assessment, local work teams developed, implemented, and monitored an action plan.

Since PASQ's initiation in May 1994, it has evolved through six phases:

- A design phase, resulting in the development of a pre-project proposal.

1. A quality management approach has been developed which identifies major activities and houses a quality management unit within a division of the Ministry of Health and Population.

ACTION PLAN FOR THE PASQ PROJECT

Definition of Objectives

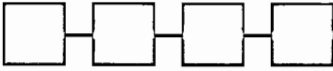
It goes without saying that the primary objective of the project is to improve the performance of service delivery activities, while respecting the purpose of the care provided to maximize benefits to the public. In this regard, the PASQ is only one of many strategies, with the following objective:

“Improve the quality of services provided to the population and the benefit to users.”

Specific Objectives

- Create a group dynamic, with respect to quality.
 - Improve the capacity of local work teams (ELT) to identify problems and to develop activities to resolve them.
 - Improve the work environment.
 - Integrate quality assessment in the monitoring, coordination and evaluation processes.
 - Generate local autonomy sufficient to allow local work teams (ELT) to claim ownership of the project, to value it and thus render it dynamic.
 - Develop the ability of the quality outreach group to support the ELT and to strengthen its experience with regard to quality management.
 - Extend the assessment of quality to curative services, both for out-patient and in-patient care.
 - Establish a documentation unit at the demonstration sites.
 - Prepare PASQ2 which concerns the result of this quality improvement process, i.e. users' satisfaction
-
- **An awareness-raising and a commitment phase**, which involved regular contacts with local teams, provincial health department staff and certain resource persons. These contacts emphasized the usefulness of a quality assurance approach, and its potential contribution to the population, the staff, and the services. It was also an opportunity to further develop the project design.
 - **A mobilizing technical and financial support phase**, through contacts established under the Population Directorate.
 - **A training and development of work tools phase**, which coincided with the first workshop, on June 1, 1995. During this seminar, an effort was made to encourage participants to take ownership of the quality management approach promoted by the project, by validating the process and producing operational tools.
- **A quality assessment phase**, during which local teams focused on exploring qualitative aspects of their work in order to identify specific problems. A team focused on developing and validating observation and measurement tools. This phase ended with a second workshop during which the results of the quality assessments were discussed and priorities to improve quality were identified.
 - **A phase to develop monitoring indicators**, during which the issue of integrating the project's implementation and monitoring tools into other routine activities was raised. This led us to develop an analytical framework that takes into account quantitative and/or qualitative aspects of services, and which allows for comparison and analysis.

QA Reforms in Taounate continued on page 30



ACTION STRATEGIES

Mobilization of Health Professionals

Let's talk quality

- through meetings and seminars about quality
- through dissemination of messages focused on the quality of work
- at coordination meetings
- during supervision
- during evaluation
- to identify prize winners for outstanding quality

Let's improve our work environment by

- improving our surroundings (park, garden, building, etc.)
- maintaining the cleanliness of our facilities
- promoting accountability
- mutual respect

Let's make quality a part of our outlook and a daily concern at work through

- the development of active listening
- the development of team work
- the introduction of evaluation indicators for the qualitative aspects of our work
- the promotion of a sense of competition

Let's respect our fundamental purpose

- by respecting the processes and purpose of care
- by developing on-the-job training
- by respecting clients' needs and desires

Accountability

- defining our tasks and the scope of our responsibilities
- developing self-evaluation
- decentralizing some evaluation techniques
- decentralizing coordination (meetings, supervision, etc.)
- active involvement in decision-making
- developing our capacity to analyze a problem and to resolve it

Future Plans

Training Activities

Training activities include organizing seminar/workshops in order to strengthen gains achieved in the quality process while extending the quality assessment process to curative in-patient and out-patient care. During these workshops, quality management tools will be introduced (flow chart, quality circle, team-based problem solving approach, etc.). To answer certain individual requests, we are planning to develop a training process aimed at promoting research on health systems. This process, which we have named Health Problem Analysis and Intervention (ARIPS), will insure that participants have at their disposal methodological tools such as the vertical system analysis approach, and causal analysis in order to strengthen their ability to deal with problems.

Technical Exchange Activities

We feel that it is crucial for our teams to be exposed to the experiences of others. This will enable them to enrich their own experience, to reinforce this culture of quality, and to gain confidence. These experience-sharing activities can be envisioned between teams, between provinces or even between countries, through personal exchanges, site visits, or simply through written material that would document these experiences. In this regard we would like to establish documentation units at the Provincial Health Department level or at the pilot sites. These reference centers would keep, for information and review, material pertaining to quality.

Coordination Activities

In order to make the local teams more self-reliant and allow them to function more effectively and accountably, the Provincial Health Department recommended a reorganization of the Province into Health Districts, and a decentralization of coordination, supervision, and normative evaluation.

Acknowledgments

The translation of this article from the French was completed and edited by Laurie Emrich, MA and Gaël Murphy, MPH, MA.

What's New?

Computer-Based Training Prototype for TB Case Management in LDC Settings

A Computer-Based-Training (CBT) multimedia application is being developed by QAP staff Paul Richardson and Marina Budeyeva to train health care providers (physicians, nurses and auxiliary staff) in TB case management. The CBT is designed for providers in less developed countries with limited diagnostic and treatment facilities. A major purpose for developing a CBT for TB is to evaluate its cost-effectiveness compared to traditional classroom lecture approaches.

Users are introduced to the TB center and three different rooms: the Learning Room, the Examination Room, and the Resource Room. After receiving instruction (Learning Room) on TB case management, the user is presented with TB cases and must make decisions regarding the diagnosis, treatment, and follow-up (Exam Room). After making the examinations and treating, the user is evaluated and remedial action suggested. The user can also refer to technical glossaries during the entire process (Resource Room).

Development of the CBT-TB will occur during two phases: Phase I, or prototype, and Phase II, the final CBT-TB application. Work on the application is being done under a current agreement with Johns Hopkins University. A completed storyboard will be fully reviewed and finalized by August, 1996.

Computer-Based Quality Assurance Kit (QAK)

The Quality Assurance Kit (QAK), which is being developed by QAP staff Paul Richardson and Edward Kelley, is a computer-based learning tool for quality assurance training. The kit offers training in all areas of quality assurance, including quality design, quality redesign or reengineering, and problem solving.

The purpose of the QAK is to provide methodologies and tools to health providers and support services that can be learned and used with no or minimal instructor assistance. The computer application helps users to select QA tools and techniques, and takes them through the process of doing QA. This approach provides the user with greater flexibility and more interactivity than a traditional classroom approach. In this manner, the QAK offers greater possibilities in terms of the "effectiveness" of quality assurance technical assistance and training. The QAK, in its ability to quiz the user regarding their own quality assurance needs and efforts, can be more standardized and focused in its approach and offers URC the opportunity to document QA activities and results.

The structure of the quality assurance kit can be described as an interactive training course that participants may begin, stop and restart at any time. The kit is organized around three central pathways that participants will follow depending upon the quality assurance needs of their organization. These three pathways are: a) quality

design (for designing a process that does not yet exist, b) quality improvement for reengineering processes and c) quality control. Additional sections on standards setting and accreditation may be developed as part of a later version. The QAK will be designed to allow participants the maximum flexibility in terms of moving from section to section and from training "courses" to using quality assurance "tools" (such as flow charts, cause and effect diagrams, etc.).

A comprehensive review of URC's quality assurance methodology has been undertaken in concert with research on the theoretical underpinnings of quality improvement, benchmarking and quality design. This methodology review has produced a map of the QAK that has been included in the specifications for the project. Based on the QAK specifications, an RFP has been developed and will be submitted to potential bidders by the end of July 1996.

New Division Announcement

Effective May 8, 1996, a new division was formed under the direction of Dr. David Nicholas, Vice President of URC & CHS. The new division's provisional name is the Quality and Performance Institute (QPI). Contracts included in QPI are the Quality Assurance Project and the Total Quality Management contract. Dr. Tisna Veldhuyzen van Zanten has been appointed Acting Director of the International Division, while Dr. Nicholas devotes his time and energy to making this new division work.



The Q.A. Brief is available free of charge to health professionals worldwide. Those interested in receiving future issues of the Q.A. Brief or any other Quality Assurance Project publications should contact:

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The Quality Assurance Project is operated by the Center for Human Services in collaboration with Johns Hopkins University School of Hygiene and Public Health and the Academy for Educational Development. The project is sponsored by the United States Agency for International Development under Cooperative Agreement Number DPE-5992-A-00-0050-00. For additional information please contact:

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Summer 1997

Volume 6, Number 1

C O N T E N T S

QAP's Operations Research Program 3

Quality Design: Creating High Quality, Client-Focused Care 4

Computer-based Training for Quality Assurance in Developing Countries Countries: the Quality Assurance Kit 13

Field Activities Update 15

Quality Assurance and Accreditation 17

Quality Assurance Project Supports MAQ 20

QAP on the World Wide Web 22

New QAP Publications 23

The Q.A. Brief, published twice yearly, shares with the international health community the methodologies, activities, and findings of quality improvement initiatives sponsored by the Quality Assurance Project.

From the Director

This is our first *QA Brief* of the new five year extension of the Quality Assurance Project. To our established readership, we thank you for your support and encouragement during the past five years. To our new readers, we hope that the experiences of the project reported in these newsletters will help you in your efforts to establish cultures of quality in the organizations with which you work.

During the past five years, we have witnessed an amazing growth in the advocacy for improving quality of care, in both developed and developing countries. Improving the quality of health care services has become one of the central priorities of nearly all major donors. During the past ten years, there has been a rapid advancement in the "State of the Art" of quality assurance with the addition or improvement of approaches, methods and tools. We have seen that the "traditional" components of quality assurance, standards and monitoring, are still very important. However, there is increased emphasis on using evidence based clinical guidelines as the standards of care and for monitoring the processes and outcomes of care, not just the inputs and outputs.

We have also witnessed the application of the newer approaches of quality management to the health sector in countries ranging from the most to the least economically advantaged. Across diverse cultures it has been demonstrated that paying attention to the needs of clients and using teamwork to systematically improve service delivery processes can help achieve dramatic results in quality improvement, just as it has in the industrial sector.

From the Director continued on page 2

From the Director continued from page 1

During the past five years, we have witnessed an amazing growth in the advocacy for improving quality of care, in both developed and developing countries.

Over the next five years, we will continue to apply these lessons learned in 15 long term countries and provide technical assistance and training to many others. We will also continue our operational research, seeking the most cost effective quality improvement methods and the best approaches to organize and expand quality assurance systems. Our emphasis will be on child and reproductive health but, as the World Bank's Burden of Disease study has shown, developing countries must already be preparing themselves for providing quality health care services for the rapidly changing spectrum of diseases which is resulting from the demographic changes of the past three decades.

*-David D. Nicholas, M.D., M.P.H.
Director, Quality Assurance Project*



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QAP's Operations Research Program

by Paul Richardson, Ph.D., Operations Research Director

Maximizing the impact of care delivery, improving the cost-effectiveness of quality assurance efforts and finding the best methods for understanding and meeting client populations' needs are the central tasks of the Quality Assurance Project's (QAP) Operations Research Program. Past operations research programs for health care in developing countries have emphasized solution development to specific operational problems. In its current operations research program, QAP is taking a new approach, matching local information needs with seminal research questions.

Research activities will be incorporated into long-term country activities with the objective of linking practical research findings to the quality assurance (QA) program activities of the country in question. QAP's operations research technical areas include: relative cost-effectiveness of alternative QA interventions, routine use of quality assessment instruments, job aids, competency testing, patient counseling, communication of standards, incentive systems, cost and quality relationships, patient satisfaction, record keeping, evaluation of QA programs, improved training approaches, regulatory QA strategies, quality design, adaptation of standards and community governance of decentralization.

Our basic strategy to ensure that important QA issues and opportunities are identified and developed includes:

- Formulation of issue papers to identify key QA research questions within each of the 16 areas mentioned above,
- Involvement of implementing organizations (e.g., Ministries of Health and non-governmental organizations), collaborating agencies and other

cooperating agencies who can link key research questions with opportunities in ongoing programs or projects, and

- Research needs analyses in long-term countries to determine the need for research, document the opportunities and match these opportunities with major health services research questions.

The Project's research approach has already been significantly refined through issue paper development in the following areas: cost and quality, cost-effectiveness of QA interventions, incentives, patient satisfaction, competency testing and quality assessment. In addition, QAP's Operations Research Program has attempted to implement a rapid start to the development of the first set of key studies. These studies have been selected both because their findings will fuel refinements in other QAP technical areas and because opportunities exist to demonstrate quick results of the Operations Research Program.

QAP has identified opportunities for two field laboratories in Ecuador and Niger, where the project has major long-term QA activities. Here, the aim is to use QA activities as a laboratory for studying various key technical areas. In both of these countries, research will be supported by a combination of local research skills and external technical assistance.

For further information concerning QAP's Operations Research Program, please contact: Paul Richardson, Ph.D.; Research Director; Quality Assurance Project, Center for Human Services; Bethesda, Maryland; USA, 20814 (e-mail: paulr@urc-chs.com).



Quality Design: Creating High Quality, Client-Focused Care

by Edward Kelley, Ph.D. candidate, Quality Assurance Specialist
and Lani Marquez, M.H.Sc., Senior Quality Assurance Advisor

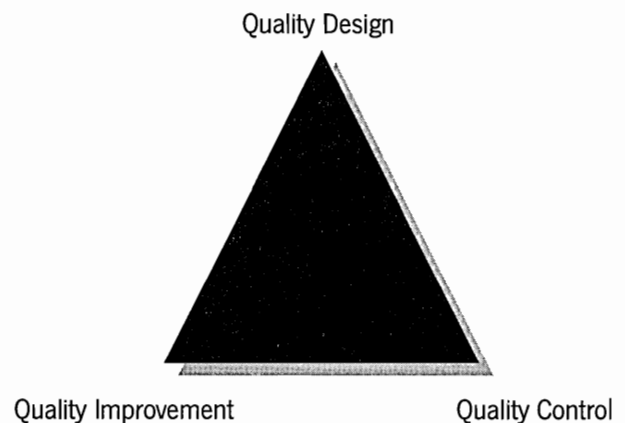
What is Quality Design?

In his book *Juran on Quality By Design*, J. M. Juran states that many US companies' losses of market share in the 1970s and 1980s were due to two major product-related facts: a) imported products in a number of key industries had quality features that were perceived as better meeting customer needs and b) the new imports did not fail in service as often as their domestic counterparts. More importantly, however, these problems did not come from random events. Rather, they were planned that way.

This is the fact that the quality assurance community has come to realize in the past 10 years: quality must be planned. Planning quality is the heart of the quality design methodology. Quality design is a process for creating and implementing a new service or product based upon the needs of the most important element in the service delivery field: your clients. Quality design is the third leg of the quality assurance triangle, the other two being quality improvement and quality control. (See figure 1)

Quality improvement methodologies recently have been featured prominently in the business literature based on interest in business process reengineering and redesign. Quality control in various forms has been used in many manufacturing and service delivery industries for some time. Quality design, on the other hand, has received comparatively little attention. The Quality Assurance Project's technical work on quality design was designed to help fill this gap. The Quality Assurance Project feels that there are many opportunities for quality design to be used as a tool in developing countries' quality assurance programs. This article attempts to outline the basic steps in quality design and

Figure 1: The Quality Assurance Triangle



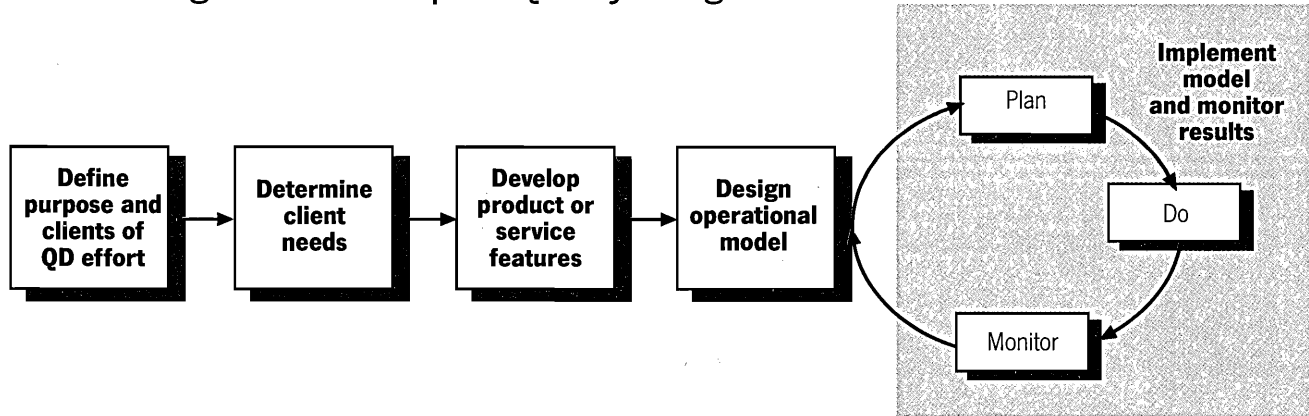
to show concrete examples of how quality design can be applied in real health care setting.

The Quality Assurance Project's quality design process draws alternately on quality design methodology by Juran and Deming as well as from quality methodologies from manufacturing industries, such as quality function deployment methodology¹. Considerable effort was made to develop a quality design methodology targeted for the health care sector by simplifying the process of designing new services while at the same time maximizing efficient use of key quality assurance tools.

¹ *Quality function deployment is a methodology for structured planning and development of new products or services which has been widely applied in manufacturing industries. It has a long history in Japan and was promoted in the US by Don Clausing of Xerox and MIT, and Bob King of GOAL/QPC. (Cohen, Quality Function Deployment. Addison-Wesley Publishing. pp. 11, 16).*



Figure 2: The Steps to Quality Design



Relevance of quality design for health systems

There are many aspects of the quality design process that have special relevance for health systems and health systems managers. Primary among these is that the quality design process continually emphasizes the place of the customer in the entire design process. In any organization, the needs and demands on management in day-to-day operations can be tremendous. This is especially true in health care organizations, which are notoriously labor intensive and whose tasks range from the highly specialized procedures of medical science to necessary, but less technical, tasks of facility maintenance. The quality design process, however, forces managers to reevaluate their priorities and performance evaluation so that the focus is the customer.

The client's perspective is very important because satisfied clients often are more likely to comply with treatment and to continue to use primary health services. In a cost recovery environment, this empha-

sis on the client's perspective results in services the clients want, which leads to greater utilization and increased revenues. This is the emphasis of the quality design process, that everything flows from an understanding of the clients' needs.

Steps in the quality design process

The Quality Assurance Project's quality design methodology emphasizes upfront and detailed analysis of critical features of the new service, specifically in how the service's features relate to key client needs. (See figure 2)

Step 1: Define the purpose and clients of the QD effort

In this step, the quality design effort first takes shape in the form of a purpose statement and the gathering of the team. Once the team is formed and has its purpose, the next substeps involve describing, very precisely, the clients for this new service you hope to create.



The purpose statement and QD team

Before beginning any quality assurance activity, it is essential to make sure that you have the right people involved and that everyone is clear on the reason for undertaking this endeavor. The best place to start the process of quality design is by coming up with a purpose statement and by selecting your team. The purpose statement is a simple statement of what you hope to accomplish. Selecting the team is an equally important first process and quality design efforts work best when those who will be involved in the new service take part in the analysis and development of the service itself.

Defining and describing your clients

Given the importance of clients to the quality design process as described earlier, creating an accurate description of your current and potential clients is a key planning activity in the design effort. It is important to realize that a client-focused quality design approach does not focus only on the patients that visit your facilities to receive care. In reality, health care delivery systems have several types of clients, all of whom must be considered when designing a new service. Quality design teams should characterize their clients by several dimensions, such as whether they are internal or external and their priority level (high, medium or low). Finally, your team should consider some of the key characteristics of the clients you have identified, in order to be specific about what types of clients you have. For instance, identifying mothers as a set of clients is helpful, but stating some key characteristics about these clients, such as “between the ages of

15 and 44” and “low-income” will allow the team to focus its work. (See figure 3)

Step 2: Determine client needs

Human needs seem to be unbounded, both in volume and variety.

-J. M. Juran

Once you have determined who your clients are, the next step is to determine exactly what it is they want.

The client's perspective is very important because satisfied clients often are more likely to comply with treatment and to continue to use primary health services.

The dimensions of quality health care

The best way to understand client needs is to understand how client needs relate to quality service. Quality is a comprehensive and multifaceted concept. Experts generally recognize several distinct dimensions of quality, including: technical competence, access to

services, effectiveness, interpersonal relations, efficiency, continuity, safety, and amenities. We feel that these dimensions are relevant to developing country settings; however, not all eight deserve equal weight in every program. These dimensions of quality are as appropriate for clinical care as for management services that support service delivery. More information on these dimensions can be found in the Quality Assurance Project's monograph, *Quality Assurance of Health Care in Developing Countries*.

Methods for gathering needs information

Information on customer needs can come from a wide variety of sources. It can be solicited or unsolicited, quantitative or qualitative, structured or unstructured. All of these different types of data can be useful in the quality design process. The team must decide what

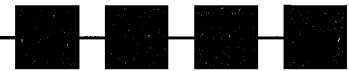


Figure 3: Quality Design and Client Needs: DISH Project, Uganda

The Quality Assurance Project worked with a team from the DISH (Delivery of Improved Services for Health) project in Uganda on training in quality design methodology. As part of the training, the DISH project team went through the design of new antenatal care

services. A prime focus of the quality design effort was identifying the new services' clients and what these clients needed. Below is a matrix the team used to describe their clients, their clients' needs and the quality dimensions linked to these needs.

Internal Clients	Needs	Quality Dimensions
Midwife	Knowledge/skills Equipment and supplies to enable her to do her job Feedback from client and supervisor Back up support e.g. doctors, laboratory Motivation, incentives Support and guidance	1,3,5,7
Physicians or Doctors	Antenatal records and information readily available in case of emergency Equipment and supplies Motivation, incentives, feedback	1,3,5,7
Support Staff	Supplies Recognition On-the-job training Support and guidance	1,2,3,6,7
Traditional Birth Attendants	Supplies Training and regular updates Referral network Support and guidance	1,4,7,8
Pharmacist	Equipment/supplies Training and regular updates Motivation/support	1,2,4,6,8
Counselor	Physical facility, i.e. private room Training and regular updates Motivation	1,6,2,4,8
External Clients	Needs	Quality Dimensions
Pregnant mothers	Assessment/examination of pregnancy process Correct diagnosis treatment in case of ailments related to pregnancy Counseling Pleasant environment Quick care (reasonable waiting time, etc.)) Quick care for problem visit or emergency	1,2,4,6,8,7,3,5
Unborn baby	Healthy mother Tetanus toxoid	4,7
Community/leaders, etc.	Healthy mothers Healthy babies	2,7,3,5
Policy makers	Implementation of quality services Information/data to guide policy making and policy	1,3,4,6

Quality Dimensions: 1. Technical competence 2. Access 3. Effectiveness 4. Inter-personal relations
5. Efficiency 6. Continuity 7. Safety 8. Amenities



types of information will be most useful in making decisions about the specific elements of the service being designed. Often quality design teams will gather qualitative information through interviews or focus groups. These data must be analyzed before being presented. For a discussion of various techniques for analyzing and presenting qualitative and quantitative data, see the Quality

Assurance Project's monograph *Achieving Quality Through Problem Solving and Process Improvement*. (See figure 4)

Step 3: Develop product or service features

The process of moving from knowing what your clients want to constructing a product or service that meets their needs is not as easy as it first sounds. There are many issues to consider, such as how are clients' words translated into specifications that we can use to make the service? Are any of the needs that clients stated related to each other and how do we pick the most important of those needs? Finally, out of all the possible features of a new service, which are the ones that most closely relate to what our clients want?

Developing your product or service features involves constructing what we refer to as a needs/features matrix. This is a matrix with client needs on the vertical axis and product or service features listed across the top, horizontal axis. In this step, teams will list their clients' needs on the matrix, generate

a list of product or service features and then quantify the relationship of each feature to each need in the appropriate cells of the matrix (see inset on Guatemala needs/features matrix for more explanation).

Diagramming clients' needs

In constructing a needs/features matrix, the team will need to understand and diagram their clients needs. Often, however, the information given to them by clients may not always be targeted or succinct or descriptive enough to allow a good understanding of the clients' needs.

Customers commonly state their needs as seen from their viewpoint and in their language. Clients may express these needs in many different types of statements. Some needs are stated as functions, i.e. "We need an outreach staff that does immunizations AND family planning visits." Other needs might be stated as target values, i.e. "As a physician, I need the laboratory staff to turn around these tests in 6 hours." Finally, needs might be stated negatively, such as "I don't need to keep returning for follow-up visits to get my medicine," or positively, such as "The clinic stays is open at the most convenient hours of the day." The quality design team may need to verify the information they have gathered on client needs through a feedback session to their clients ("Is this what you meant to tell us?").

Creating features to match the needs

Once you have mapped out a set of client needs in a useable format, the next step is to devise a set of features that will match these needs. One easy way to envision these features is to think of the needs of your

The best approach to simplify the process of creating the features of the new product or service is to think how to satisfy each client need in a measurable way.





Figure 4: Determining Client Needs in Peru

MAXSALUD is a private, non-profit organization which operates a small network of primary health care clinics serving a low income population in Chiclayo, Peru. Prior to opening its first clinic, MAXSALUD convened a series of focus groups with potential users of its services and with providers in order to better understand the needs, perceptions and expectations of its clients with respect to quality health services.

In all, six focus group sessions were held: four with different sub-groups of potential users and two with health care providers (one with providers hired to staff MAXSALUD clinics and one with external providers who worked for the Ministry of Health or in private practice). Individuals in each group were asked questions about

their understanding of the eight dimensions of quality: technical competence, access to services, effectiveness, interpersonal relations, efficiency, continuity, safety and amenities. Participants were asked to comment on what they perceived as barriers to meeting each quality dimension and how such barriers might be overcome.

As shown in the table below, the results of the focus group discussions provided a clear sense of MAXSALUD's clients' needs and preferences, both from the point of view of clinic users as well as health providers (who are themselves internal clients of MAXSALUD's management). These needs were eventually linked with specific features in the design of MAXSALUD's clinics and services.

Focus Group	Clients
Residents of MAXSALUD's first clinic catchment area	Reasonable cost Providers explain well to patients Physicians adhere to schedule Specialist care available Specialized health education Providers listen to patients 24-hour emergency care
Mothers of children < 5 years	Well trained specialists in general medicine, pediatrics, emergency care Good equipment Reasonable cost Reasonable waiting times (e.g., 30 minutes) 24-hour emergency care See the same doctor
Non-resident women	Thorough counseling by doctors 24-hour emergency care Female gynecologists Reasonable prices Clean, hygienic facilities Available medicines
Students	Friendly treatment Thorough explanations Good prices Reduced prices for drugs
Internal Providers	Norms and standards for care Low cost services Preventive care Clear job descriptions for all staff On-site laboratory Availability of essential medicines at low cost Coordinated team effort/communication among providers Timely triage of patients Infection control
External providers	Sufficient human resources Preventive education Compliance of physicians with assigned work hours Limited waiting times Infection control



Figure 5: QFD Matrix- Community Latrine Design, QAP and CARE, Guatemala, 1992

Client Needs	Features					
	Bowl	Slab	Pit	Cabin/Superstructure	Location	Ventilation Pipe
Easy to clean	■	■	●	▲	▲	■
Safe for children	■	▲	●	▲	▲	■
Allows the use of corn ears without filling up quickly	●	●	■	●	●	■
Doesn't make you afraid to sit down	■	▲	■	▲	▲	■
Doesn't smell bad	■	▲	■	▲	▲	■

■ High correlation ▲ Some correlation ● No correlation

clients as the “Whats” of your quality design, while the features are the “Hows”. Features describe exactly how your service team will respond to the needs of your clients.

The best approach to simplify the process of creating the features of the new product or service is to think how to satisfy each client need in a measurable way. For each client need, the team needs to develop one or a few technical performance measurements. These performance measures will be useful later when monitoring the new product or service and answering the question, “Is the quality design being followed?” The best way to generate features is through the technique of brainstorming.

The task of generating features to match your clients’ needs can be difficult. Many teams find that benchmarking², or comparing the features they

develop with comparable services at comparable institutions is an excellent method both for generating ideas for features and for validating features they may have developed. Benchmarking will also be useful for ensuring the competitiveness of the new service.

Once the teams have listed the features, they assign a value to the relationship between each feature and each need. Then the matrix allows the team to sum vertically and derive a “value” for the importance of each feature in terms of meeting clients’ needs. Features with a high value should be included in the design. (See figure 5)

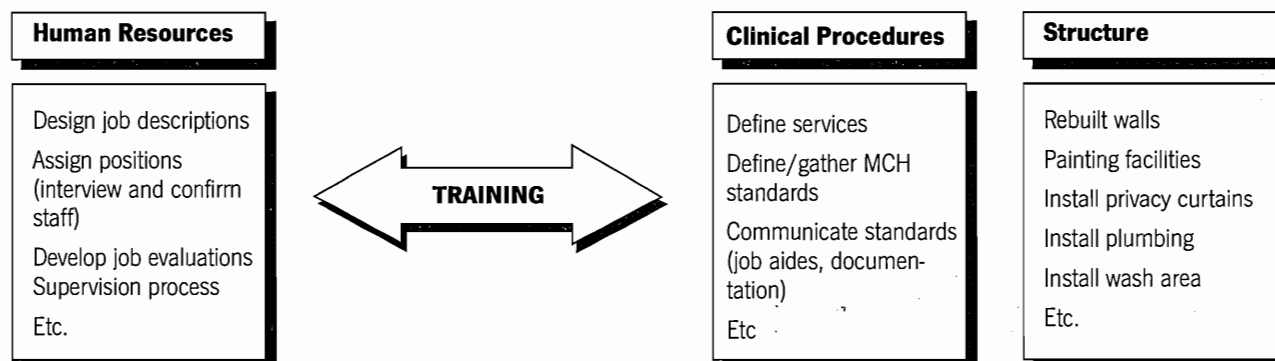
² Note that benchmarking has a technical methodology that is well established and involves its own series of discrete steps. Here we refer to what is called “best practices benching”, i.e., identifying and analyzing leading organizations’ practices in service areas of interest.



Figure 6: The Quality Design Model, Jordan

The Quality Assurance Project worked with Ministry of Health in Jordan in their effort to design clinic services that focused on client needs and high quality core services. Following a modified version of the Quality Design process, the team in Jordan worked with clinic providers and Ministry of Health officials to provide training in quality design, identify the clinics' clients and gather data on these clients.

Once client data had been gathered, the team mapped out the features and the way these features would be operationalized through a "systems" model. This model outlined the major functional areas necessary for clinic operations and the inputs and processes within those areas that would need to be set in place. These inputs and processes were, in essence, the features of the quality design for the clinics. Some examples of the elements of this systems model are presented below.



Step 4: Design operational model

In this step, teams are essentially mapping out all of the inputs and processes that will need to take place to turn their list of features into a real, working health care service. This could be done in a variety of ways, through a detailed written plan, through flowcharting the implementation steps, through job descriptions, or through a combination of tools. The primary goal, however, is to address two specific questions: "What is the organizational structure (core and support services) needed for the new product or service?" and "What activities need to be performed to create that organizational structure?"

Quality design uses systems analysis to describe the inputs and processes necessary for putting the features (which are, in a systems model, the "outputs") into

place. Other tools, such as flowcharts, tree diagrams or fishbone (cause and effect) diagrams may also then be useful to analyze these inputs and processes further. The entire process of designing the operational model should be well documented in order to ensure that the new service is performed as intended.

Once the operational model has been prepared, teams will have a good picture of how they will turn the abstract list of their new service features into an actual operation. Teams may need to validate the results of this model with clients, both internal and external, in order to confirm the specifications of the new service with the people that matter most: the potential users of the service. This could be done with a focus group of users or with several short interviews. (See figure 6)



Step 5: Implement model and monitor results

Implementation is an exciting time in the QD process. It is when a quality design team finally begins to

implement the design that they have developed.

One of the most useful ways of viewing the implementation step is in the form of Plan-Do-Monitor. In the **planning** step, teams concentrate on two key tasks: building a timeline and building a budget. **Doing** involves carrying

out the ordered steps in the team's plan, establishing checkpoints for progress reports on the implementation and implementing in a team-oriented manner. **Monitoring** refers to the periodic collection and analysis of selected indicators to enable managers to determine whether key activities are being carried out as planned and are having the expected effects on the target population. Teams need to identify key quality indicators for measuring inputs, processes and outcomes in both priority care delivery services and in support services.

Once the team has tabulated and analyzed its monitoring data, the team members and their managers must consider if the implementation step has identified opportunities for improvement in the design of the new service. Here we see how the quality design process may feed into other quality assurance efforts, including problem solving, in order to fine tune the final design of the new service.

Acknowledgments

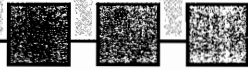
The author gratefully acknowledges the contributions of David Nicholas, Project Director, Paul Richardson,

Operations Research Director, Jolee Reinke, M.S.N., C.P.H.Q., Senior Quality Assurance Advisor, and Dennis Zaenger, M.P.H., Quality Assurance Advisor.

This work was originally undertaken as part of the development of the Quality Assurance Project's computer-assisted learning application, the Quality Assurance Kit, produced on CD-ROM. For further information on this product or with questions on this article, please contact

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Implementation is an exciting time in the QD process. It is when a quality design team finally begins to implement the design that they have developed.





Computer-based Training for Quality Assurance in Developing Countries: the Quality Assurance Kit

by Edward Kelley, Ph.D. candidate, Quality Assurance Specialist

We believe that there was one major quality breakthrough in the 1980s. It was not statistical process control, employee involvement, just-in-time, or total quality management. Nor was it quality function deployment, quality policy deployment, the improvement process, the Malcolm Baldrige Award, benchmarking, Taguchi methods, or poor-quality cost. It was the realization by management that the business and manufacturing processes, not the people, are the key to error-free performance.

-Dr. H. James Harrington
Business Process Improvement

Quality assurance (QA) methods can help health program managers to define clinical guidelines and standard operating procedures, to assess performance compared with selected performance standards and to take tangible steps toward improving program performance and effectiveness. The Quality Assurance Kit is a CD-ROM based computer-assisted learning tool that is designed to facilitate the most effective learning and application of these QA methods.

The need for alternate approaches

The universe of QA and its associated vocabulary of terms has been steadily expanding for the past 20 years. The development of new methods and new tools has facilitated the QA practitioner's efforts in solving problems and reducing errors in work processes. In recent years, as Harrington, Deming and others have argued, the emphasis in QA has moved from controlling error-prone processes and solving problems to the quality design or redesign of the work processes themselves. The QAP has designed the

Quality Assurance Kit (QAK) to enable practitioners to access the latest QA techniques to meet their specific needs.


Two key dimensions may exist for a user's QA effort, namely:

- the scope of change (from one team or one department to multi-departmental or organizational efforts) and
- the degree of change (from incremental change in existing processes to radical redesign of work or the new design of a service)

Depending upon the above, QA practitioners may apply very different QA methods and tools. The Quality Assurance Kit is designed to flexibly meet users' different needs.

What QAK is

The Quality Assurance Kit is a computer-based learning tool for quality assurance training that attempts to go beyond traditional management training methodologies. The Kit offers training in all areas of quality assurance, including quality design, quality process redesign (or reengineering), process improvement, quality control and problem solving. The purpose of this CD-ROM-based application is to provide methodologies and tools to health providers and support service staff that can be learned and used with no or minimal instructor assistance. The computer application helps users to select quality assurance tools and techniques, and then actually takes them through the process of "doing" quality assurance. This approach provides the user with greater flexibility and more interactivity than a traditional classroom approach.



In this manner, the Quality Assurance Kit offers greater possibilities of effectiveness of quality assurance technical assistance and training. The Quality Assurance Kit also provides users the ability to database and analyze key information about their quality assurance effort. This feature will allow the Quality Assurance Project to assess and document quality assurance activities and results. Finally, the Kit can be used as a general QA resource, in that its tools, database of QA training materials and organizations and "search" function are all directly accessible from the main menu.

The Quality Assurance Kit represents the state-of-the-art in terms of quality assurance training material. A comprehensive review of the Quality Assurance Project's methodologies, as well as of the international quality design, business process redesign and benchmarking movements, provide the Kit's technical content. In addition, the Kit reflects the state-of-the-art in interactive, multi-media training.

Its multi-level organization of resources, training courses and applications provide participants with maximal flexibility in moving from step to step in the quality assurance process. Users can also easily jump to definitions and tools (such as flow charts, cause and effect diagrams, Quality Function Deployment matrices, systems modeling, etc.) for their own work.

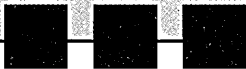

Release of QAK Beta version

Final production on the QAK Beta version was completed April 25, 1997. The Beta version contains some of the most essential features of the Kit, including:

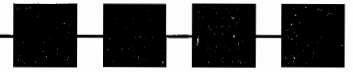
- About QAK, where users receive an introduction to the Kit
- Introduction to QA
- QA Tool Kit, where users can access the Kit's QA tools, such as criteria matrices, flowcharts, Gantt charts and timelines, etc.
- Doing QA, where users can fully engage in two of the primary QA "tracks": Problem Solving and Quality Design.

Plans are underway for a field test of the CD-ROM during Summer 1997. Results of these tests will help QAP's computer-assisted training team with the design of the full version of the Quality Assurance Kit. QAP has already initiated production of technical material for the full version of the Quality Assurance Kit which

will contain new technical material on Process Redesign, based upon process modeling and activity-based costing principles and tools. The full version is expected to be released in Fall 1997.



*The development of new methods
and new tools has facilitated the QA
practitioner's efforts in solving problems
and reducing errors in work processes.*



Field Activities Update

National Level QA Workshop in Niger

Due to the increased enthusiasm and support for expanding QA throughout the country, QAP decided that a National level Quality Awareness Workshop should be organized. The workshop was held in Niamey from February 12-15 earlier this year. QAP staff presented quality assurance concepts and principles to heads of all directorates and vertical programs in the Ministry of Public Health, along with regional heads. Also in attendance were medical and nursing school faculty, donor agency representatives and private sector institutions. The workshop was used as an opportunity to share experiences and results of the Tahoua Project and other QAP country experiences. Representatives of the World Health Organization, the World Bank and others expressed strong interest in replicating the Tahoua Project. Attendees participated in the development of an action plan and proposed a quality assurance structure for the entire Nigerien health sector.

Polish International Conference on Quality of Health Care

As a result of elevated demand for the implementation of quality assurance activities in Poland, the National Center for Quality Assurance (NCQA), along with the Polish Society of Quality Promotion, organized the Polish International Conference on Quality of Health Care and Central Eastern European Quality of Care Network meeting on Accreditation. The meeting took place in Krakow, Poland from March 13-14, 1997 and received support from the International Society for Quality in Health

Care (ISQua), Joint Commission International (JCI), and National Organization for Quality Assurance in Hospitals in the Netherlands (CBO).

QAP staff member Dr. Stewart Blumenfeld chaired a session, "Stimulating Grass-Root Initiatives in Quality Assurance in Health Care". He also delivered a presentation entitled *Technical Assistance in Improving Quality of Care in Poland* in which he described QA activities in Polish hospitals which resulted from the collaboration between the QAP and NCQA.

Representatives from three of the eight hospitals with which NCQA and QAP had worked presented their results. The hospitals had received training in the use of the methods and tools of quality management for improving the quality of specific services.

A full description of the QA activities carried out in the hospitals can be obtained from QAP in the report entitled *Improving Quality of Care in Eight Polish Hospitals*.

QAP Collaborates with the Honduran Association for Family Planning (ASHONPLAFA)

As part of the technical assistance to ASHONPLAFA, QAP is working to incorporate QA activities at the national level in order to improve the quality of family planning services in Honduras.

Last September, ASHONPLAFA organized a workshop during which QAP trained facilitators in basic QA concepts and methods. This training involved facilitators from all of the six regions of Honduras. Facilitators formed teams, selected problems for analysis, and identified instruments for collecting the data necessary for mea-

suring their selected problems and their probable causes. QAP followed up with work sessions in January, which were organized to provide additional technical support to the regional facilitators in charge of collecting the data.

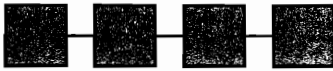
In the same month, the QAP held discussions focused on the development and review of a clinical standards system for ASHONPLAFA. As a follow up, QAP will hold a three-day workshop in June on Standards Development. The workshop will be attended by members of ASHONPLAFA's Central Committee for Quality Assurance (CCQA) and regional facilitators and heads of directorates.

Niger Hosts Regional WHO Workshop on Quality Assurance

The African Regional Office of the World Health Organization (AFRO) organized a one-week workshop in Niamey from April 21-25, 1997. Niger was selected as the host country because of its success in implementing a quality assurance project in 6 districts of the Tahoua Region. The meeting was attended by representatives from 23 Western and Central African countries as well as those from donor organizations with public health programs in Niger: WHO, UNDP, UNICEF and the World Bank. Niger field staff Dr. Maina Boucar and Lauri Winter represented QAP along with Dr. Bruno Bouchet of the Bethesda office.

The objectives of this workshop were:

- to assess the level of implementation of a QA approach in the francophone, lusophone and hispanophone countries of the Western and Central Africa region;
- to draw the lessons from the expe-



riences of the countries and partners in QA applied to health care;

- to define some directives for the establishment and implementation of national QA programs in health care.

The workshop provided an excellent opportunity to share lessons learned from the QA program in Niger. Dr. Zachari, a district medical officer in Konni, delivered a presentation entitled "The Work of Improvement Teams". Dr. Maina Boucar presented "QA project in Tahoua: 3 years of experiences", and Lauri Winter presented "Lessons to learn from QAP I". Two plenary sessions, which Dr. Boucar chaired, allowed the participants to draw up directives for the establishment of national QA programs. The staff also shared basic QA principles and methods with other workshop participants.

The meeting resulted in the formulation of recommendations for countries to begin establishing national QA programs. Areas of collaboration between WHO/AFRO and QAP to further support this effort in the region are currently being explored.

Quality Improvement Conference for Reproductive and Child Health in East and Southern Africa

Several QAP staff members represented the project at the Quality Improvement Conference for Reproductive and Child Health in East and Southern Africa held in Mombasa, Kenya from April 28-May 2 1997.

During the meeting discussions were held on best practices in the areas

of facilitative supervision, self assessment of QA tools, training, logistics, cost and quality issues, and guidelines and standards. Approximately 150 people representing more than 15 countries were in attendance

QAP filled a number of roles at the conference. David Nicholas presented better practice description in the area of guidelines and setting standards, and also gave an overview of quality management approaches at the self assessment sessions. Wayne Stinson organized and managed the better practice session on "Self Assessment and Other Tools". David Nicholas, Bruno Bouchet, Dick Morrow, and Jolee Reinke served as secretaries for country teams (Eritrea, Zimbabwe, Uganda, and Zambia, respectively). Lynette Malianga and Maina Boucar presented better practice descriptions in the area of self assessment, representing QA programs in Malawi and Niger, respectively.

Delegates from several of the countries represented, including Eritrea, Uganda, Zambia and Zimbabwe, developed strategies that were consistent with QAP approaches. QAP looks forward to participating in follow-up activities and supporting individual country efforts, as well as sub-regional and regional efforts.

National QA Conference to be held in Quito, June 18-19 1997

Despite recent political turmoil in the country, local QAP staff lead by Jorge Hermida, continue to provide technical assistance to the Ministry of Health.

Quality improvement micro-projects, developed by local level QA teams are addressing important issues

such as: long patient waiting times at emergency rooms and outpatient clinics, clinical case management of children's acute respiratory infections, quality of in-service education to mothers, interpersonal communication between providers and patients, improving efficiency in the use surgical supplies, shortening pre-operative waiting periods, improving the quality of medical records at ambulatory facilities, among others. It is estimated that most QA teams will need three to four more months to complete their microprojects. Teams will be able to present their findings at the National QA Conference to be held June 18-19 in Quito.

The application of QA approaches may eventually be able to support and influence the development of desired health policies in Ecuador: decentralization, autonomous management of health units, cost recovery, reorientation of any subsidies, new financing models based on quantity and quality of services produced, community participation and others. Information on these activities can be found in *Avances*, a newsletter produced by the Ministry of Health with support from QAP. The project has also succeeded in fostering the cooperation in concrete activities of several international cooperating agencies, including PAHO and UNFPA, which have included QA components in projects being supported in the MOH.





Quality Assurance and Accreditation

by Joint Commission International

The Joint Commission International (JCI), a partnership between the Joint Commission on Accreditation of Healthcare Organization (JCAHO) and its not-for-profit subsidiaries, Quality Healthcare Resources, Inc., joined the QAP contractor team in September 1996, bringing considerable technical resources and expertise in the area of developing quality assurance accreditation and evaluation systems. The following article describes JCI's approach and initial QAP efforts toward the creation of national accreditation programs.

History

Without question, the main expected result in investing time, resources, and effort in developing an accreditation program is an increase in the quality of health care provided to the population. The link between increased quality and accreditation was first represented in the United States by an implicit peer review process, which was followed by medical audits and later by ongoing monitoring and evaluation. However, almost ten years ago, the Joint Commission recognized that a less narrow approach to improving quality needed to be taken. The following general approach has been in place over the last nine years, and in fact, Joint Commission International has seen a similar

evolution in other countries where accreditation initiatives have been implemented.

Linking Accreditation with Quality

Accreditation is the process of evaluating health facilities according to a set of standards that describe activities and structures that directly contribute to desirable patient outcomes. These standards provide

guidance on achieving the highest level of quality care that is possible, given available resources. When a hospital meets or exceeds these facility quality standards, it earns the honor of accreditation. Accreditation is usually voluntary.

A collaborative approach to standards development in accreditation must

be implemented. A country's approach to developing *national quality standards* should rest on the following basic principles:

- The standards will assure the changes made in the delivery system are improvements in patient care;
- Simple, patient-centered objectives will be implicit in the standards; and
- The standards will serve the interest of all affected parties.

Without question, the main expected result in investing time, resources, and effort in developing an accreditation program is an increase in the quality of health care provided to the population.





The Joint Commission's recent approach to standards development combines some basic continuous quality improvement/total quality management principles with some basic business principles. These principles have a customer focus. They assume that, in order to improve outcomes, processes must be improved and individual performance must be assessed in the context of the systems in which they operate.

In addition, a continuous quality improvement approach in accreditation standards requires that delivery processes be designed well and their performance measured and evaluated to improve both the effectiveness and the efficiency of care delivery. The value of using good standards includes the following:

- Provides support for professionals' good performance;
- Introduces new ideas for improvement;
- Standards are objective and measurable;
- Standards are achievable with current resources;
- Standards are adaptable to different institutions and cultures;
- Standards demonstrate autonomy, flexibility and creativity;
- Quality of care for patients is improved;
- Costs are reduced;
- Efficiency is increased;
- The public's confidence is strengthened;

These efforts help health institutions understand and implement quality improvement principles, thus resulting in improved performance.

- Management of health services is improved;
- Medical staff involvement is enhanced.

JCI Experience

Joint Commission International has had extensive experience in developing accreditation programs throughout the world. JCI has initiated work in accreditation development in the following countries: Romania, Czech Republic, Ukraine, Kyrgyzstan, Hungary, Poland, Saudi Arabia, and Spain

The common thread among all of these programs is that quality improvement is the foundation. JCI has offered programs of consultation and education as an integral part of developing accreditation programs. These efforts help health institutions understand and implement quality improvement principles, thus resulting in improved performance.

In addition to the standards-based accreditation process described above, some programs have now included performance measures related to patient care, management, and in some cases outcomes as a part of their programs. Such measures provide valuable data to further support quality initiatives.

QAP Assistance in Accreditation

QAP offers the opportunity to approach accreditation through research efforts, training programs, or by "influencing the quality of care through a regulatory process."¹ Establishing an accreditation program in

¹ *Statement of Work, Contract NO. HRN-5992-C-00-6013-00, USAID, Washington.*



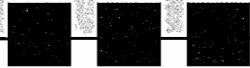
collaboration with other USAID projects can further strengthen quality assurance/quality improvement efforts already initiated or targeted for implementation. Requirements of a successful program dictate that the program:

- Be culture-specific;
- Serve the political agenda;
- Have clear objectives; and
- Support health care workers desire to learn better ways to improve.

Accreditation programs will consider these critical components. In addition, the process of establishing accreditation programs typically includes both training and/or research elements mentioned above. Countries already targeted for QAP work in the area of accreditation include the following:

Zambia: The major goal of the current health reform initiative in Zambia is to provide equal access to cost-effective, quality health care. Recently, the Ministry of Health established the Central Board of Health (CBoH), a national agency responsible for the overall technical management of the health sector. In order to achieve the goals of health reform initiative, the CBoH has decided to explore the implementation of a process of measuring organizational performance, which has led to the initial steps in developing an accreditation program. The QAP has already provided technical assistance to conduct an

Establishing an accreditation program in collaboration with other USAID projects can further strengthen quality assurance/quality improvement efforts already initiated or targeted for implementation.



initial assessment of the feasibility of implementing such a program. As a result, initial plans for accreditation development in Zambia have been refined, and QAP will further support the initiative by providing short-term and long-term technical assistance to fully implement the program.

Jordan: U.S. based technical assistance has been initiated with the

Jordanian Ministry of Health to facilitate the determination of a consensus process for the development of standards, clinical guidelines and administrative policies for several types of health care delivery settings in Jordan.

Ecuador: JCI has been requested to assist the MOH of Ecuador to plan an approach to the development of an evaluation and monitoring system for its health care delivery system.





Quality Assurance Project Supports MAQ

by Wayne Stinson, Ph.D., Associate Director, Africa

For reproductive health care, maximizing access and quality (MAQ) is one of USAID's highest priorities, and QAP is pleased to work with the Center for Health, Population and Nutrition in this endeavor. We have introduced US and field-based staff to quality management techniques; we have broadened the quality agenda to include self-assessment and problem-solving, and we have collaborated with other cooperating agencies (CAs) to build quality management into service delivery programs. Now a Center project, QAP is well-placed to expand support for MAQ over the next five years.

What is MAQ?

MAQ is an initiative of the USAID Office of Population intended to improve quality of care and availability of services in reproductive health. The MAQ Initiative works primarily through USAID-financed CAs. Meeting both as an overall Steering Committee and in sub-groups, CA and government staff have highlighted common medical, cultural, and economic barriers to care, and clarified technical standards for client screening, prescribing contraceptive methods, and enhancing interpersonal communication. Much of this work has been conducted in collaboration with the World Health Organization, and resulting guidelines and publications clearly represent international as well as US consensus.

As work has progressed on clarifying programmatic guidelines, however, it has become increasingly clear that the more enduring problems concern implementation, that is, the widespread and effective application of accepted standards. Even when policies are simple and clear, they may not be practiced in routine service delivery. This is one of the core focal areas for the

Quality Assurance Project, and has been one of our two main areas of involvement in the MAQ process. (The other has concerned interpersonal communication.)

Brainstorming around implementation issues identified a number of hypotheses about weak performance, many related to management and supervision. Explanations focused on inadequate knowledge, weak logistics, poor staff motivation, lack of resources, and other nearly universal service problems. There was little question about the importance of these factors, but also consensus that a more global factor was paramount, namely, lack of problem-solving mentality and capacity. The question of what this was and how it could be developed was referred to MAQ's Management and Supervision Sub-Committee, co-chaired by a QAP staff member.

What is problem-solving?

Sub-committee members agreed on the importance of problem-solving and its impact on implementation, but had difficulty reaching an operational definition and measurement approach. The importance of problem-solving is that appropriate attitudes and skills lead to rapid identification of process failures and gaps between standards and reality. Many of these "opportunities for improvement" are within the reach of motivated health workers, provided they understand and use simple analytical techniques. Even the sorts of "intractable" management problems cited above are amenable to gradual improvements, provided staff use these tools consistently and hold on to the gains as they are achieved. QAP specializes in helping managers and service providers to use such tools, and we naturally encouraged the sub-committee to move in this direction.



Meeting at the QAP office in 1995, the Management and Supervision Sub-Committee identified four key elements in problem-solving capacity:

- Broad participation in a process for identifying problems;
- Mechanisms and processes for considering possible causes of these problems;
- A process for developing and implementing solutions; and
- Feedback mechanisms to evaluate solutions and move on to further improvement.

The consensus was that reproductive health and child survival CAs had learned a great deal about problem-solving and how to develop it, and that MAQ should strengthen these approaches



Subsequent sub-committee meetings focused on approaches, techniques and tools, leading to a large and well-attended CA's meeting in June 1996 to share experiences in problem-solving. The consensus was that reproductive health and child survival CAs had learned a great deal about problem-solving and how to develop it, and that MAQ should strengthen these approaches. At the same time, there was disagreement about steps necessary to institute change: Could tools be isolated from approaches and broader organizational development, or were they simply mechanisms by which already motivated and empowered teams could move forward? QAP staff have and continue to play an active role in these discussions, with an emphasis on systematic approaches to change.

MAQ itself is undergoing change, with increasing concern about actions needed to move from standards to implementation. QAP is likely to play a significant

role in this movement, since this has been our focus since 1990 and cuts across much of our work on Integrated Management of Childhood Illness (IMCI), the African Integrated Malaria Initiative (AIMI) and other high priority activities. Based on experiences that will be shared at the next CAs

meeting on problem solving this June, QAP will continue its collaboration with the Association for Voluntary and Safe Contraception (AVSC) and Management Sciences for Health (MSH) in the development of guidelines and identification of priority research topics in the area of performance management.





QAP on the World Wide Web

by *Chinwe Madubuike, M.P.H., Quality Assurance Specialist*
and *Faith Powers, M.A., Project Assistant*

With the initiation of the second five-year phase of the Quality Assurance Project, the project continues to face the challenges of reaching vast audiences with information and results of quality assurance activities that QAP is involved with world wide. This entails using different media to get the word out on QA activities quickly and effectively. In this computer-dominated era, this means grabbing hold of the Internet and becoming a part of "cyber-action".

The Internet was developed in the 1970s in the United States for military purposes. There was a need to establish a network of computer sites that could function independently in the event of catastrophes, such as power failures, etc. In 1984, the National Science Foundation established a network of faster computers in academic institutions, government agencies and research centers. There was an overload in the networks information traffic system, and the problem was eventually solved by individual computer gurus located in different parts of the world. This process improvement effort marked the decentralization of control of the network, leading to the Internet as we know it today: a forum in which information can be gathered and shared, in which ideas can be exchanged, and in which international partnerships can be established.

However, the "internationality" of the Internet is a point that is often argued. Wide access to Internet services are limited in many developing countries, as well as access to software and hardware which are necessary adornments of computers. On the other hand, the fever of the computer age is a contagious one and many local organizations world-wide are finding the pull into "cyberspace" an irresistible one.

The QAP is already utilizing the Internet to disseminate information concerning quality assurance and related activities through the University Research Center-Center for Human Services (URC-CHS) web site. One advantage of a web site is that it is never static; rather, it is constantly developing, changing, and growing in order to attract new visitors and to maintain the interest of our current visitors. On the QAP web page within the URC-CHS site, information is already available under the following topics:

- Long Term Country Activities
- Short Term Country Activities
- Operations Research
- Training
- Publications

The URC-CHS site probably has one of the most extensive set of links to quality resources on the Internet. Our quality resources page is designed to be a major source of information for practitioners involved in all areas of quality worldwide. For instance, anyone interested in learning more about total quality management or quality assurance in family planning and reproductive health will find several links to institutions and organizations specializing in these areas.

As has already been mentioned, QAP has many plans for taking advantage of the technology available via the Internet. We plan on creating a forum for discussing quality-related topics, thereby thinking globally and acting locally. We also plan on introducing reader surveys which will enable us to take into consideration



reader opinions and comments while strengthening our dissemination efforts.

Please visit the URC-CHS web site to receive updates on the Quality Assurance Project. If you are interested in establishing a link between your organization and

ours, URC-CHS invites you to fill out the form provided on the web site with the appropriate information.



New QAP Publications

Quality Assurance Methodology Refinement Series Monographs

Improving Interpersonal Communication Between Health Care Providers and Clients by Bérengère de Negri, Lori Diprete Brown, Orlando Hernández Julia Rosenbaum & Debra Roter. 1997.

Country/Field Activities Reports

Internal Quality Assurance: Lessons Learned from the PKMI Hospital Pilot Program in Indonesia by Patricia MacDonald, Maria Francisco, and Azrul Azwar. June 1996.

Improving Quality of Care in Eight Polish Hospitals by Stewart Blumenfeld. December 1996.

Niger Country Report: Tahoua Project by Lauri Winter, Maina Boucar, Wayne Stinson, Diane Mason, & Gaël Murphy. March 1997.

Improving Interpersonal Communication Between Health Care Providers and Clients by Bérengère de Negri, et al

This monograph discusses the importance of (Interpersonal Communications) IPC as a tool for improving health care outcomes in developing countries and describes techniques for enhancing

provider communication skills. It also provides a job aid and several data collection instruments that can be used in various settings. Finally, the monograph can serve as an introductory overview on provider-client communications skills, a framework for assessing IPC skills, a guide for developing IPC training activities, and a resource describing important IPC experiences in selected developing countries.

Because each health care setting requires locally-appropriate strategies, the guide provides only a general framework for action, leaving health care policy makers, managers, and providers to develop their own analyses and interventions. Therefore, we encourage readers to modify the content of the monograph as needed and to develop locally-appropriate examples for training other IPC interventions.

For individual copies of these and other reports, please contact: Chinwe Madubuike, M.P.H., Information Dissemination Coordinator and Quality Assurance Specialist; Quality Assurance Project, Center for Human Services; 7200 Wisconsin Avenue; Suite 600; Bethesda, Maryland, USA. (e-mail: cmadubuike@urc-chs.com). Most of these reports will also be available for downloading from our web site at <http://urc-chs.com>.



The **Q.A. Brief** is available free of charge to health professionals worldwide. Those interested in receiving future issues of the Q.A. Brief or any other Quality Assurance Project publications should contact:

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The **Quality Assurance Project** is operated by the Center for Human Services in collaboration with Johns Hopkins University and the Joint Commission International. The project is sponsored by the United States Agency for International Development under Cooperative Agreement Number HRN-C-00-69-90013-03. For additional information please contact:

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C O N T E N T S

QAP Editorial:
Quality Assurance
and Supervision Systems 1

QAP Feature:
Quality Supervision 4

*Operations Research
Activities and Results:*
Client Satisfaction 7

QAP Approaches:
Assessing the Quality of the
Supervision of Reproductive
Health Services in Uganda 11

Field Activities Update 16

SUPER-L:
The Electronic Forum
on Supervision and
Performance Management 18

New QAP Publications 19

*The Q.A. Brief, published twice
yearly, shares with the international
health community the methodologies,
activities, and findings of quality
improvement initiatives sponsored
by the Quality Assurance Project.*

QAP Editorial

Quality Assurance and Supervision Systems

James Heiby, M.D., M.P.H.,

QAP Project Manager,

United States Agency for International Development

SUPERVISORY systems in developing countries have ambitious goals: supervisors have a leading role in dealing with almost anything that goes wrong in the delivery of services. However, the concrete activities by which supervisors could solve or prevent problems remain surprisingly ill-defined. Published research in this field provides little practical guidance for the typical supervisor. The field of quality assurance (QA) provides a promising new perspective on how supervision can be more effective.

For the most part, QA approaches have been developed in the health systems of developed countries, where supervision is a minor component of service delivery. For developing countries, however, well-established supervisory systems are already responsible for quality issues. How would these systems be changed if they were to adopt QA methods and strategies?

To the role of the supervisor, QA approaches bring a new emphasis on measurement. We are only beginning to appreciate the pervasive implications of this new orientation. This focus on measurement flows logically from a widely accepted definition of quality of care: increasingly,

Quality Assurance and Supervision Systems continued on page 2

quality is viewed in terms of compliance with evidence-based clinical guidelines, such as the WHO/ UNICEF initiative for Integrated Case Management of Childhood Illness (IMCI). Even non-clinical functions, such as drug management, appear to be suitable for written standards that specify in some detail how a given process should be carried out.

As they implement new, detailed standards, programs are discovering that even the most basic services involve a large number of discrete activities. Few supervisory systems have well-developed mechanisms for dealing with such a mosaic of details. Supervisors will need to deal with issues such as the thoroughness of patient assessments or the content of counseling. But supervisors also gain a critical advantage: compliance with guidelines is a well-defined, objective variable. Efforts by supervisors to improve provider performance can be judged quantitatively by measuring changes in compliance.

In principle then, programs can learn which types of supervisor interventions produce the best results. Further, measurements of compliance can be made not only by front-line supervisors, but by other interested parties as well.

Under these conditions, supervisory systems can be held accountable for the resources they use and the results they produce. Further, the activities of supervisors can be actively managed: the effectiveness of a supervisor in assessing provider quality and in solving problems can be measured by others. Higher level supervisors and managers can provide front-line supervisors with training, incentives, and other support to improve their performance on the basis of data. In view of the wide range of possible areas of focus for a given contact, supervisors also need active guidance in setting priorities. A number of specific QA techniques can contribute to this transformation.



Q.A. Brief

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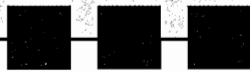
A substantial body of QA experience addresses the properties associated with effective standards. Many programs can reduce the burden on supervisors by focusing on the process by which they develop and communicate standards in the first place. Once standards are in place, supervisors will have a major role in monitoring provider compliance. There are a number of methodologies for such monitoring, and these vary in difficulty and reliability. Most programs are likely to have use for several methodologies for different purposes. For techniques such as peer-based monitoring or self assessment, the supervisor's role is indirect, but critical.

Different strategies for provider feedback of monitoring data have also emerged from QA programs. Supervisors will need to know how to select the most appropriate feedback strategy and then apply it effectively.

Although supervisors have traditionally had a general mandate for solving problems, this basic function has lacked a well-defined approach. Quality management (QM) strategies first developed in industry have been successfully applied to health programs. QM provides a robust, stepwise framework for problem solving that is appropriate for supervisory systems.

QA programs have also developed strategies for dealing with a distinct organizational problem: it is surprisingly common to find that no defined process exists for a basic function, such as inventory control. In many other cases, the existing process is incomplete, or otherwise does not fulfill program needs. Currently, few supervisors are prepared to respond to such problems, but the common-sense principles known as Quality Design address this frequently overlooked deficiency.

The field of quality assurance (QA) provides a promising new perspective on how supervision can be more effective.



In order to make effective use of QA methodologies, supervisors will require training in these skill areas, including competency testing. Management of the supervisory system will require improved records of findings and interventions. Many programs would also benefit from

examining the impact of performance-related incentives for both providers and supervisors. Finally, it is important to note that QA strategies do not assume a particular level of resources for supervision. Rather, the issue is how to make the best use of whatever resources there are.



Quality Supervision

by *Wayne Stinson, Ph.D., Associate Director for Africa;*
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SUPERVISION is often identified as the vehicle through which the quality of health care services can be assured, yet typically it does not receive the support—human or financial—required to fully carry out and sustain supervisory activities. In the context of the decentralization of health services management that is occurring in many countries, full responsibility for supervision of facility and community level health workers has been shifted to area and district levels, often without providing the training and resources needed to undertake supervisory functions.

Exacerbating the lack of resources for supervision in many country health systems is the fact that the actual activities which supervisors are supposed to perform have often not been clearly defined or communicated. Facility-level supervision activities are largely undocumented. While supervision in the broad sense is understood to mean the process of directing and supporting staff so that they may effectively perform their duties, the actual tasks which supervisors perform to accomplish this are not standardized between health systems.

Issues in Supervision

Health care systems face a wide range of options in developing a locally appropriate and sustainable supervision strategy at the primary level. A fundamental issue is **who** performs supervision. Technical specialists (such as specialized trainers) may be the most appropriate staff to provide support for clinical interventions and yet may find it difficult to

address systemic and organizational problems that determine program effectiveness. In many systems, supervision is delegated to district level managers who may have limited clinical expertise. This problem has been addressed in many settings by having technical specialists carry out periodic assessments of clinical competencies while generalists serve as routine supervisors to follow up problems identified.

Closely related to who performs supervision is **how often** supervision encounters should occur given the available resources. While experts suggest that quarterly supervision visits are the minimum needed to address problems in a timely manner, many systems have difficulty achieving supervision visits every six months or even once a year.

There is no single strategy for who supervises and how often supervision should occur that meets the needs of all or even most health systems. Instead, these issues must be determined by local conditions—resources, personnel structure and responsibilities, staff availability, degree of regional and local autonomy, and location of facilities.

In most primary health care settings, **the tasks of supervision** involve checking that activities are taking place, adequate records being kept, and supplies are being delivered. The degree to which supervisors actually observe health providers interacting with patients and evaluate individual health workers varies widely. Supervision usually involves a variety of functions, some of which might take place centrally (e.g., review of records submitted to



a district health office, issuance of written guidelines, interview of health workers when they visit a central location such as to collect pay or supplies), some of which occur during on-site visits, and some of which may be carried out by supervisors who share job sites with their supervisees.

Another critical issue concerns **supervisory job aids** and their possible use for measuring quality of care. Many programs have developed checklists to guide supervisors in assessing quality, and a few have attempted to use resulting data for standardized measurement. As assessment guides, they have helped even experienced supervisors recall and observe essential tasks, but as measurement tools they have sometimes seemed to detract from flexible observation and targeted problem solving. Few checklists remain in use for long periods; either they become less relevant as worker skills evolve, or supervisors memorize them and no longer feel a need for continued use. Supervisors need quantitative data on worker performance, but only in a few places have checklists proven to be effective for this purpose.

A Quality Assurance Approach to Supervision

Quality assurance, with its emphasis on objectively measuring performance against standards, team work, and meeting client needs, provides a facilitative context for supervision. Supervision in a quality assurance context is a continuing process designed to assist and help facility and community

level teams to improve their services to provide high quality care that satisfies clients' needs. Quality supervision thus involves providing information, educating and motivating staff to identify and correct errors. A major thrust of supervision in quality assurance programs is to help health workers undertake process improvement and problem solving activities.

In a quality assurance approach, supervision tasks encompass:

Quality assurance, with its emphasis on objectively measuring performance against standards, team work, and meeting client needs, provides a facilitative context for supervision.

- communicating and verifying understanding of standards;
- monitoring performance by assessing compliance with standards;
- providing feedback on errors and suggesting solutions;
- providing training in team building and problem solving;

- assisting in the identification of problems impeding quality and in the development and enabling of solutions; and
- motivating, coaching and empowering staff members to solve problems.

A QA approach to supervision differs from traditional supervision approaches in its focus on problem solving and on empowering supervisees to monitor their own performance and seek quality improvements. The role of the supervisor is one more of a quality assurance coach than inspector. Because quality standards are made explicit, supervisees gain a clearer understanding of performance expectations and how their performance is assessed.



Implementing Quality-Focused Supervision

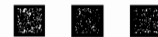
Developing quality-focused supervision systems has been a central part of QAP assistance to the Ministry of Health of Niger and the Central Board of Health of Zambia.

As part of an overall program of assistance to institutionalize quality assurance in the Tahoua region, QAP worked with the Quality Council of the Ministry of Health of Niger to redesign the supervision system. The Quality Council identified supervision as the main vehicle for introducing quality assurance in health care facilities and for preventing and correcting deficiencies in the quality of patient care. A thorough assessment of the existing system pointed to lack of time and resources on the part of district health officers as a key barrier to supervision.

Beginning in 1994, QAP collaborated with the Circonscription Médicale de Formation to train members of all eight district management teams in Tahoua in quality assurance and basic supervision techniques. In 1995, QAP led a more advanced supervision course for district level supervisors which placed more emphasis on supervisory reporting and data analysis. The supervisors included physicians and nurses who were responsible for conducting monthly supervisory visits. One of the main objectives of the training was to reduce paper work within the supervisory reporting system and facilitate the provision of appropriate analysis and feedback to supervisees and to the regional level. Checklists for quality monitoring of clinical and management aspects of essential services were reintroduced. District supervisors now participate in bimonthly district management team meetings to share experiences and report progress of the facilities they supervise.

In Zambia, QAP has helped to develop national capacity to train Linkage Facilitators throughout the country in quality assurance and process improvement techniques. Linkage Facilitators are supervisors based at the provincial level who act as Quality Coaches for facility-based Quality Improvement Teams. The Linkage Facilitators have been instrumental in developing clinical and administrative standards for district and facility level service delivery, in developing indicators to monitor those standards, and in enabling district and facility level staff to interpret health and management information system data. They have also been instrumental in identifying performance problems and determining what actions should be taken.

QAP has found in both Niger and Zambia that training supervisors in quality improvement, problem solving and coaching has been an effective strategy to provide supervisors with the skills needed to motivate supervisees and work with them to determine what the barriers are to quality services. Focusing on process improvement rather than on the deficiencies of individual health workers has helped to make supervision less punitive and more facilitative.





Client Satisfaction

OPERATIONS research is a major component of the Quality Assurance Project's (QAP) strategy for improving health care delivery quality worldwide. The main purpose of QAP's Operations Research Program is to improve the feasibility, utility and cost-effectiveness of quality assurance strategies in developing countries. QAP and its field partners base their approach to operations research upon the idea of maximizing the utility of each study's results. To this end, the Project hopes to disseminate information on all aspects of important operations research projects, from design to implementation to results.

Over the course of the Project, QAP operations research staff and partners will be developing studies in 16 technical areas. One key area is the study of client satisfaction with health care delivery. QAP has two major studies currently underway on client satisfaction, in Niger and Peru.

Client Satisfaction Measurement: Results of Niger Research—Phase One

The first phase of QAP's satisfaction study in Niger, entitled "The client perspective: helping district teams measure and act upon client satisfaction data," was implemented in October and November 1997 in three districts in the Tahoua Region of Niger, West Africa.

The primary objective of this phase of the study was to test two different data collection tools (focus groups and exit interviews) and three different data collection methods (different types of data collectors). The two tools and three methods were assessed on the basis of feasibility, utility, cost and validity. Through analysis of the data and a multiple criteria matrix, the research team determined that exit interviews and using supervisors from the same district as data collectors were the best approaches.

However, important advantages and disadvantages were found for each tool and method (see Figure 1).

The QAP Operations Research Report on this phase of the study will be completed in early Summer 1998. The report presents results useable by managers interested in the implementation of client satisfaction measurement as well as examples of data collection instruments and an innovative "rapid" feedback package for client satisfaction measurement.

Data collection for the second phase of the study was completed at the end of May 1998 and analysis of these data is ongoing to determine changes in satisfaction levels and the links to quality improvement efforts.

Client Satisfaction for Quality Improvement: QAP and the Max Salud Institute in Peru

QAP is working with the Max Salud Institute for High Quality Health Care on the implementation of a client satisfaction operations research project. The Max Salud Institute is a private non-profit organization created with assistance from USAID whose goal is to provide low-income Peruvians with quality health care at an affordable price. Care is provided in a growing chain of clinics in the northern coastal city of Chiclayo. The clinics offer services which include general medicine, pediatrics, gynecology, pre-natal care and delivery, post-partum care, growth monitoring, vaccinations, family planning, emergency services and dentistry. Max Salud's model of cross-subsidization of health services aims to recuperate its operating costs and achieve financial sustainability. However, financial sustainability must be accompanied by sustained demand by the community. QAP's operations research project is intended to assist Max Salud in testing an approach



Figure 1: Summary of Key Conclusions

	Key advantages	Key disadvantages	Overall rating*
Tools			
Exit interviews	<p>Utility - Greater depth of information per interviewee versus focus groups; 42% more “key” comments per interviewee than focus groups</p> <p>Validity - Significantly more valid (content and construct validity) than “streamlined” focus group tool</p>	<p>Validity - Lower “external” validity through self-selection of participants - systematically gives higher levels of satisfaction (89% satisfied versus 55% satisfied for focus groups)</p>	14
Focus groups	<p>Cost - 59% less costly than exit interviews in terms of time-efficiency during data collection</p>	<p>Feasibility - Set up and preparation demand considerably more time than exit interviews</p>	11
Methods			
Supervisors from same district	<p>Utility - Districts using data collectors (see below as well) within the health system were more likely to use results of study for immediate action</p> <p>Cost - Least costly method by at least 20%¹</p>	<p>Validity - Significantly lower validity rankings than other two methods</p>	14
Outside enumerators	<p>Feasibility - Significant advantages in that providers are not taken away from work for data collection</p>		13
Supervisors from neighboring district	<p>Validity - Seems to have best rating of three methods for validity</p> <p>Utility - Districts using data collectors within the health system were more likely to use results of study for immediate action</p>	<p>Cost - Most expensive of three methods</p>	12
<p>*Overall rating from multiple criteria matrix. This rating represents a comparative value of the particular tools and methods used in this study based upon the advantages and disadvantages identified by the research team. It should not be taken as an absolute indicator of value of the tools and methods, as local circumstances will dictate the appropriateness of any given tool or method.</p> <p>¹ Note - opportunity cost was not measured.</p>			

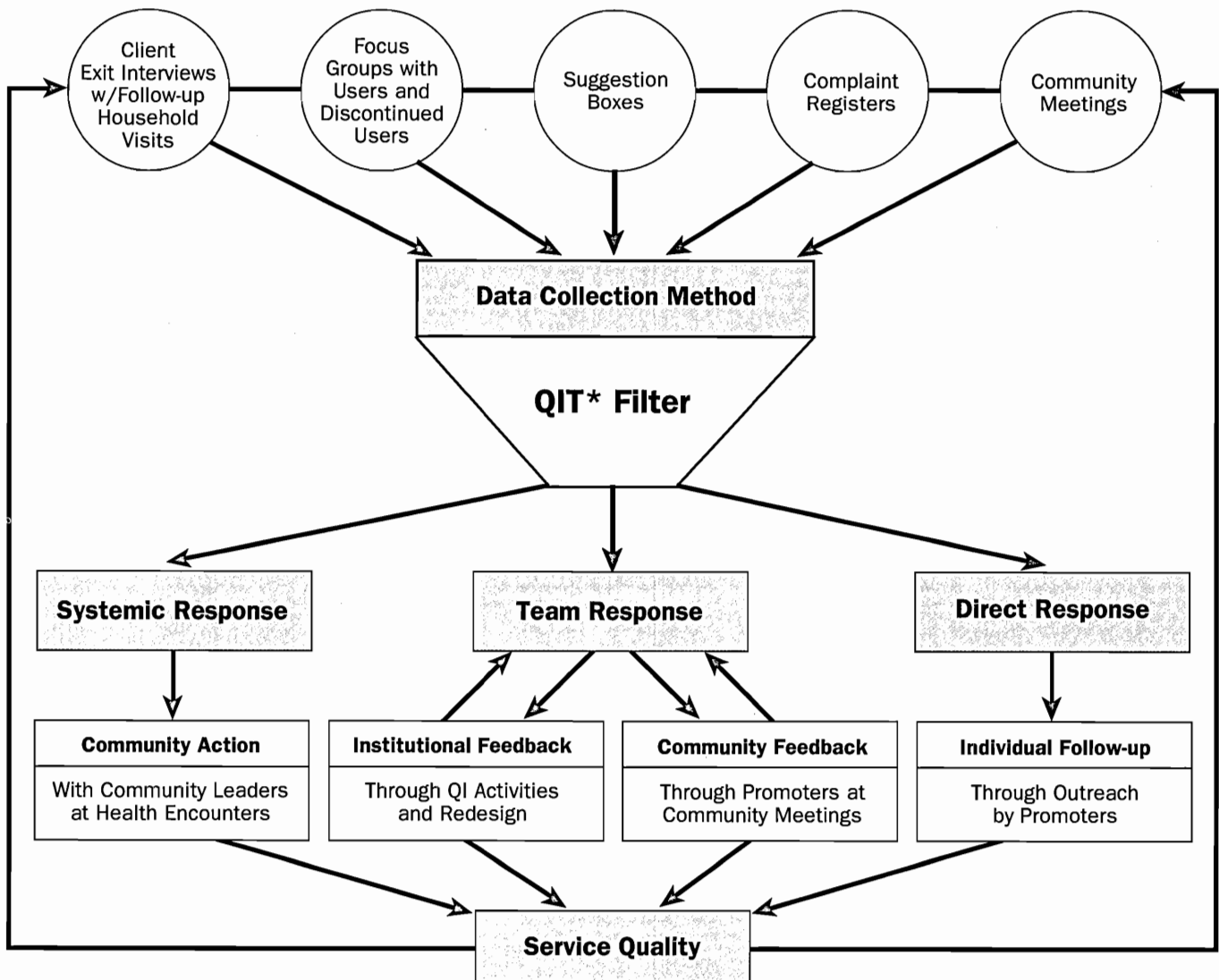


for the routine collection and use of client satisfaction data for quality improvement at the clinic level. It is hoped that the approach will significantly increase Max Salud's responsiveness to community and individual concerns.

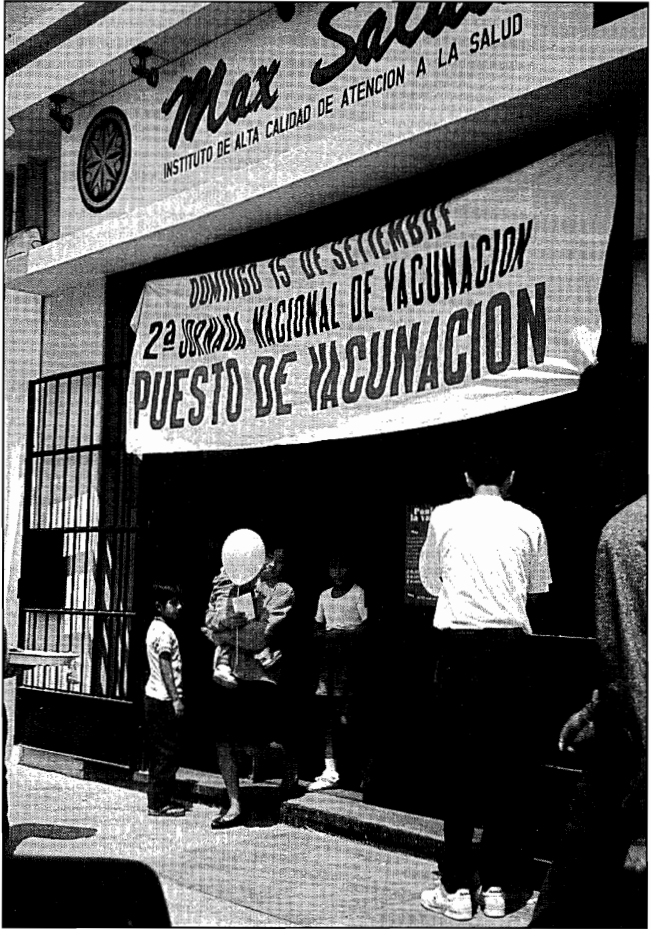
QAP's study in Peru tests a "client-centered quality improvement system". This system involves using effective data collection tools to obtain satisfaction

data, using these data to drive quality improvement teams' activities and feeding back information about these teams to clients, clinic personnel, central staff and the community. The ultimate goal of this system is the improvement of the quality of Max Salud health care services and an ongoing dialogue between Max Salud and its catchment population. The following model illustrates this relationship.

Figure 2: Client-Centered Quality Improvement System in Peru



*QIT = Quality Improvement Team



Recent events in Peru, most specifically torrential rains and flooding due to El Niño weather patterns, have delayed the implementation of data collection. However, the instruments for this study have been drafted, and the operations research team began pre-testing the instruments in Chiclayo in late May. Regular data collection is expected to begin in July. During this time the team will be evaluating client satisfaction issues (such as the dimensions of quality clients emphasized and how satisfaction levels vary by client subgroup) and organizational issues (such as the feasibility, utility, cost and overall impact of the client satisfaction system).

For further information on the issues presented in this article, please contact Ed Kelley; Quality Assurance Project, Center for Human Services; Bethesda, MD 20814-4811; USA, (email: ekelley@urcchs.com).





Assessing the Quality of the Supervision of Reproductive Health Services in Uganda

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Wayne Stinson, Ph.D., Associate Director for Africa, Center for Human Services

THE Quality Assurance Unit (QAU) of the Ugandan Ministry of Health (MOH) has promoted quality of care in that country for a number of years, initially with technical assistance from the International Health Department of Johns Hopkins University, a Quality Assurance Project partner. At the facility level, the QAU has proposed as a sustainable strategy to ensure quality, supervision by the District Health Teams (DHT), which depend administratively on local governments rather than on the MOH. It is recognized, however, that DHTs are limited in their capability for technical supervision of clinical skills, due to the fact that DHT staff are more focused on administrative tasks and somewhat removed from day-to-day patient care.

USAID has played a lead role in promoting quality of care in family planning, case management of sexually transmitted diseases and maternal care, working primarily through reproductive health projects implemented by the non-governmental organizations Pathfinder, AMREF and Care under the aegis of the District Improved Services for Health (DISH) Project.

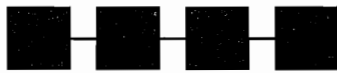
The three projects (DISH/Pathfinder, AMREF and CARE/Kabale) have all emphasized training as the primary means of building worker competence and have promoted supervision as a means for quality control and improvement. All three have developed supervisory checklists to confirm worker skills and collect data on compliance with standards. Project trainers, as opposed to routine program supervisors,

have played major roles in technical supervision, especially for DISH/Pathfinder, though each project has also collaborated to varying degrees with DHTs.

As part of an overall review of reproductive health project activities, USAID asked the Quality Assurance Project to assist in an intensive review of supervisory effectiveness and data quality. QAP collaborated with the MOH Quality Assurance Unit to design and carry out a quality assessment of reproductive health supervision, looking in particular at the use of supervision tools, frequency and quality of supervisory encounters, and the use of supervision data and sustainability.

Assessment methodology

Working together, QAP and QAU organized an internal peer assessment of the supervision systems in the three projects by staff from the three NGOs and selected DHTs, coupled with external technical review of the supervision instruments, checklists and data tabulations. The assessment used three primary data sources: (1) direct observation of supervisors at work using standardized data collection instruments; (2) interviews with supervisors, supervisees, and district health staff; and (3) reviews of records and reports. Participation of actual supervisors was seen as a technique for exposing staff to the strengths and weaknesses of their own systems as well as the best way to gain insight into common problems. More senior supervisors observed less experienced supervisors, and supervisors from one project observed those from another.



In October 1997, participants in the supervision assessment (largely project staff plus some district health officials) gathered in Kampala to clarify supervision policies, review supervisory tools, and develop assessment instruments. They also discussed and pretested procedures for validating supervisory quality assessments. Then in late October, approximately ten assessors spent two weeks accompanying actual supervisors to a total of forty-five facilities in fourteen districts.

Findings

Supervision strategy

The assessment found that supervision was performed somewhat differently in each of the three projects. In DISH/Pathfinder, it was planned that District Health Visitors or other staff from the DHT would be trained to serve as routine supervisors for clinical reproductive health services, with problems identified to be followed up by DISH

trainers. Weaknesses in the technical skills of DHT members and the administrative demands of their positions made this arrangement unworkable. Technical supervision is now provided almost entirely by DISH/Pathfinder trainers through scheduled visits every six months. In the AMREF districts, supervision of reproductive health services was designed to be integrated into routine supervision by DHT staff. AMREF provides funds and logistic support to the DHTs to facilitate supervision visits, which are supposed to be performed quarterly. Trainers and clinicians trained by AMREF also provide follow up

supervision to trainees. Supervision in the CARE project involves both CARE trainers and DHT staff, who are supposed to make joint visits to each health center on a quarterly basis. CARE trainers focus on supervision of quality of clinical services, and CARE provides funds to cover travel expenses of the DHT staff, who have received some technical training in reproductive health.

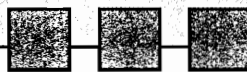
Use of supervision tools

DISH/Pathfinder makes the most extensive use of supervision tools, with eleven different instruments in use, covering eleven skill areas and nearly one

hundred individual tasks.

The external reviewers on the assessment team found the DISH instruments to be technically sound but aimed at supervisors with stronger clinical skills than are likely present among DHT staff. During the assessment observations, the scores obtained by the routine DISH supervisors tended to rate providers' performance slightly higher than

Participation of actual supervisors was seen as a technique for exposing staff to the strengths and weaknesses of their own systems as well as the best way to gain insight into common problems.



the scores assigned to the same providers by the external assessors. DISH supervisors appeared to be very comfortable with the instruments. AMREF has developed its own supervision checklists based on the training curriculum and focusing on several reproductive health tasks and health worker knowledge. DHT supervisors seem to be hesitant to use the health worker knowledge checklists. CARE uses a health facility checklist called *Elements of Supervision* which was developed in conjunction with the DHTs in the project areas. The checklist is directed at structural indicators (facilities,



equipment, completion of records, method choice, availability of IEC materials) and lacks assessment of health provider skills. The assessment found that supervision forms for CARE were often incomplete, suggesting that supervisors did not clearly understand how forms were to be completed.

Frequency of supervision

The assessors found that supervision of trainees by DISH/Pathfinder supervisors seems to be carried out more or less on the schedule envisioned of every six months. The assessors concluded that while this frequency may be adequate to maintain clinical skills and transfer new information, it is probably inadequate to provide management support, which is a fundamental function of supervision. Both service providers and supervisors in the DISH/Pathfinder area expressed that visits need to be more frequent. The AMREF schedule of visits every three months would seem to provide better overall support, but the assessors found that only about 20% of AMREF

trainees can be located and supervised on this schedule. CARE has also experienced considerable difficulty in covering its trained personnel and facilities with a quarterly supervision schedule.

Quality of supervision

In all three project areas, the assessors found that supervision visits were generally thorough and followed an appropriate structure. Most supervisory encounters began with a meeting with the health center's In Charge and often service providers, followed by accompanying service providers while he or she was attending a client. Records were routinely examined, although stock inventory forms and equipment were usually not inspected. Service providers generally expressed satisfaction with the visits and stated they would like them to occur more frequently. Supervisory encounters averaged about 4 hours per health center. Selected indicators from the assessment observations and provider interviews are presented in Tables 1 and 2 below.

Table 1
Selected Supervision Quality Indicators from Supervision Observations
N=45 Health Centers Visited

Indicator	% of facilities in which task performed
Supervisor reviewed results of previous visit with health center staff	39.1%
Supervisor reviewed clinic records	89.1%
Supervisor met with health center In Charge at completion of visit	33.3%
If met with In Charge, discussed follow-up plan to address issues identified	73.3%
Met with DHT following health center visit to discuss findings	56.2%



Table 2
Selected Supervision Quality Indicators from Interviews with Service Providers
N=51 Service Providers in 45 Health Centers

Indicator	% of providers reporting
Supervisor used some type of checklist during the visit	80.4%
During previous supervision visit, there was constructive interaction with the supervisor	88.2%
Supervisor provided verbal feedback during the previous supervision visit	86.3%
Supervisor s previous visit was helpful to the provider and clients	98.0%
Feels supervision could be improved by more frequent visits	88.2%

Use of supervision data

The assessment team found that reports from supervision visits were reaching District Health Teams in the projects' areas, although only about half of the DHT staff interviewed say they have time to read them. In the CARE districts, the assessors noted that while supervision reports were read by project staff at the district level, there was little apparent attempt to extract, record and systematically monitor performance data from the supervision visits. Supervision reports from the DISH/Pathfinder districts are routinely sent to Pathfinder headquarters in Kampala where data on observation dates and overall scores are entered into a computerized database to permit calculation of summary statistics, although reports from the database have not yet been produced. The assessment found that the database suffers from problems of accuracy and completeness and recommended that Pathfinder carefully analyze what its priority needs are for statistics from the supervision data before entering additional data.

Conclusion

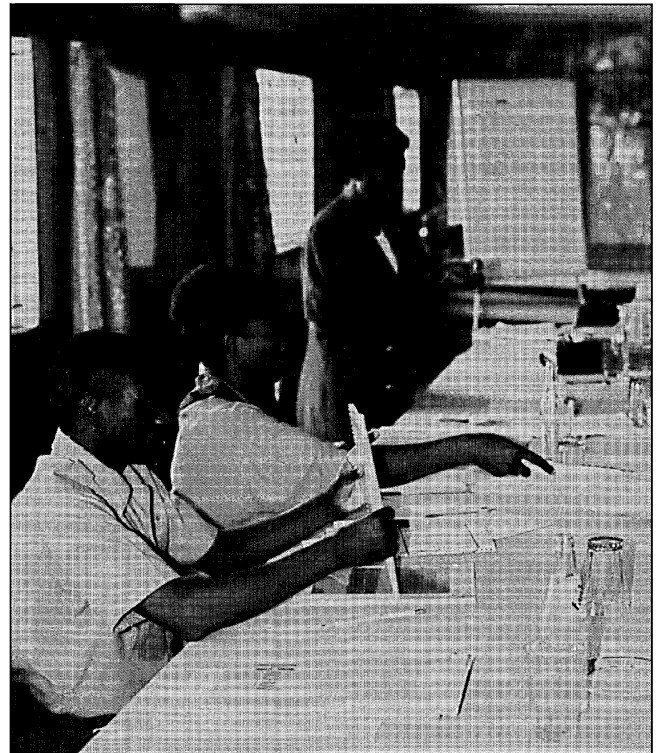
The assessment found that each of the three NGO projects has made significant achievements in developing a strategy for quality-focused supervision of reproductive health services. The findings did point, nonetheless, to several areas in which supervision could be enhanced, especially related to supervision tools and the use of the data they generate, and the integration of NGO project and DHT supervision.

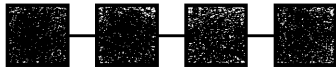
The DISH/Pathfinder supervision strategy, while comprehensive in its focus on health provider competencies in a large number of tasks, would benefit from stronger integration with the District Health Teams, since facility-level staff depend on the Ministry of Health DHTs for the follow-up and managerial support needed in many cases to affect improvements. A larger role for DHT personnel in reproductive health supervision in Pathfinder-supported districts will require development of a less



detailed supervision checklist that is more readily usable by DHT staff. Conversely, the CARE project needs to revise its supervision instruments to improve assessment of health provider clinical competencies and performance. In each of the three programs, better advance notification to health centers of dates of supervision visits will help to ensure that In Charges and service providers are present when supervisors arrive.

While the CARE and especially AMREF projects have achieved a large degree of collaboration with DHTs in supervision, the difficulties each has experienced in reaching all personnel with quarterly supervision visits underscore the weaknesses in district MOH supervision, in spite of NGO financial and logistic support provided to the DHTs. The experience of the three projects point to the basic challenge in Uganda and elsewhere of strengthening the technical and managerial capacity of district health officials to carry out routine supervision which includes assessment of service quality and provider competency.





Field Activities Update

Greater Horn of Africa Initiative

ASMARA, March 10-13— Ambrasi Edwards, James Heiby (Project Manager), and Wayne Stinson attended a workshop organized by several USAID partners (AVSC, BASICS, Linkages, OMNI, and QAP), REDSO/ESA, and a number of African partners from the GHAI region. The workshop was held to discuss one of the intermediate results (IR) of the Greater Horn of Africa Initiative, which is sponsored by President Bill Clinton. The IR aims to enhance capacity to implement household level nutrition and other child survival interventions. The workshop allowed the representatives of the collaborating agencies to meet with the African partners and develop an umbrella implementation plan.

In the plan, REDSO and potential African partners identified three priority areas for intervention which include:

- improving maternal, infant, and child nutrition, with a focus on improving the quality of program design;
- improving the use of information and advocacy to influence policies, strategies, and programs across sectors to improve nutritional outcomes; and
- improving maternal and child nutritional status in emergency and refugee situations.

The group was called upon to construct regional and country profiles to document the linkages between household level maternal and child nutrition, micronutrient, and food security in all the countries of the Greater Horn region.

After the workshop, the QAP team was involved in developing an options paper for the third priority (Priority Area 3) and developing draft proposals for the Initiative. They will include activities for improving community health worker (CHW) worker performance, growth monitoring, and improving the quality of Vitamin A and iron supplementation programs.

In June, the team began identifying potential African partners for implementing these activities. Implementation is expected to begin in September 1998.

Sector Wide Approach Program in Ghana

ACCRA, March 9-27—Dr. Bruno Bouchet, Senior Quality Assurance Advisor, collaborated with a team of nine specialists in evaluating the Sector Wide Approach (SWA), a five-year health sector reform program implemented by the Ghanaian Government. The team was seconded from various cooperating partners, each member possessing expertise in the following areas: economics, financial management, capital investment, public health and epidemiology, clinical care and quality assurance, procurement, and policy and institutional development. A team leader headed the group that formed the Joint Monitoring Mission. The team assessed progress made during the first year of implementing the program, helped in identifying challenges the program may face during the next four years of implementation and made recommendations. The Ministry of Health will consider these recommendations before implementing third-year activities.

QAP Assists Malawi Community Health Partnerships

LILONGWE, March-April—Under the Community Health Partnerships (CHAPS) project, QAP is providing technical assistance to five Private Voluntary Organizations (Africare, the International Eye Foundation, Project Hope, Save the Children/UK, and Save the Children/USA). The USAID-funded initiative creates partnerships with PVOs and district health offices and supports them in their efforts to improve the quality of service delivery in five districts in Malawi.

In March, QAP participated in a startup workshop with PVO and district health office staff to identify priorities and define the scope and objectives for assessing quality of care at the facility-level. In April, QAP trained district health staff in quality assessment techniques, including data collection and analysis. In May, the teams carried out facility assessments and reported findings to their respective district health offices.

QAP will work with the teams and PVO partners to identify opportunities for improvement. Implementation plans for improvement activities should be finalized by the end of Summer 1998.

QAP Implements Accreditation Activities in Zambia

LUSAKA, March 22-April 9—As part of ongoing accreditation activities in Zambia, a QAP team comprised of Anne Rooney and Karen Hoffner of



the Joint Commission International, and Jolee Reinke of the Center for Human Services, conducted a "Train the Trainer" workshop for five Zambian accreditation trainers. The training was designed to educate them on draft hospital standards, survey process design, and surveyor training concepts. The team then conducted an initial surveyor training program for selected surveyor candidates and representatives of the Zambia Health Accreditation Council (ZHAC).

The QAP team worked with the five new trainers to conduct a pilot test of the standards and survey process at the University Teaching Hospital (UTH), a 1400-bed teaching hospital in Lusaka.

Training sessions and pilot tests led to revisions in the surveyor training design and to the development of case studies for the primary functional areas addressed in the standards.

Latin America and Caribbean Maternal Mortality Initiative

The Latin America and Caribbean Maternal Mortality Initiative is a collaboration between MotherCare, the Pan American Health Organization (PAHO), and QAP to reduce maternal mortality through community mobilization, national policy establishment, and quality assurance activities. QAP is responsible for improving the quality of emergency obstetric care services by providing assistance in the following areas:

- development and/or adaptation of standards and protocols of care;

- communication of standards through training or other means;
- monitoring of compliance with standards and outcomes of care; and
- implementation methods for process of care improvement and problem solving.

Activities are targeted to three countries in the region: Bolivia, Ecuador, and Honduras.

In March, QAP began rapid survey assessments of the capacity to provide essential obstetric care in 10 health facilities in Comoyagua, Honduras and Cotopaxi, Ecuador. Based on these results, a full baseline assessment was carried out in all three countries in April and May.

Problem-solving activities with hospital and district management teams have begun in Ecuador and are expected to start shortly in Bolivia and Honduras. QAP assistance over the next six months will also focus on standards development and monitoring.

QAP/JHPIEGO Develops Family Planning Standards in Jamaica

KINGSTON, January-May— QAP/JHPIEGO has begun work with the National Family Planning Board (NFPB) of Jamaica and the Ministry of Health (MOH) to develop national family planning standards.

The JHPIEGO team met with staff from the NFPB, the MOH, and Victoria Jubilee Hospital to clarify the need for

and expectations of national family planning guidelines. The staff expressed concern about the quality of care offered by public sector facilities. They expected that updating family planning guidelines would contribute toward establishing standards for providing quality services within an integrated reproductive health network. They also recognized that the guidelines should focus on family planning and related topics building upon existing guidelines developed in 1991.

The participants of the meeting decided upon a team approach to the guidelines development process. They agreed that, in order for national family planning guidelines to remain consistent with the MOH norms and maternal health guidelines, technical experts would develop the guidelines while the MOH developed the policies and norms.

In March, the JHPIEGO team facilitated a technical review of the draft guidelines with twenty representatives from the NFPB, the MOH, and the University of the West Indies. Participants reached consensus on specific service guidelines and determined what further changes were needed in the working draft. JHPIEGO assisted with the editing of the revised guidelines and with preparations for their field testing in May and June. A final technical review incorporating the field test results is planned for July.



SUPER-L: The Electronic Forum on Supervision and Performance Management

THE Quality Assurance Project, in cooperation with the Management for Health Sciences (MSH) and Association for Voluntary and Safe Contraceptives (AVSC), moderated an electronic forum on supervision and performance management from April 2, 1998 to June 26, 1998.

The forum, sponsored by the Management and Supervision Working Group of the USAID office of Population's Maximizing Access and Quality (MAQ) Initiative, was designed to identify relevant approaches, tools, and experiences that can be used to improve the supervision of health programs. Members of the working group were assigned the task of developing guidelines on supervision and management, and wanted to incorporate the perspectives of individuals working on supervision in developing countries. They designed the forum with the objective of having a focused exchange of opinion and experience on key issues and questions related to supervision to better understand why supervision

often fails, secrets of successful supervision, and how to do it better.

Readers can access the archives of the forum by visiting the "What's New" page on our website at <http://www.unc-chs.com>. For more additional information concerning the forum, please contact:

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New QAP Publications

Quality Assurance Methodology Refinement Series:

*La qualité, par la résolution de problèmes et
l'amélioration des processus (Deuxième Édition)*

par Lynne Miller Franco, Jeanne Newman,
Gaël Murphy & Elizabeth Mariani. 1997.

*La resolución de problemas y el mejoramiento de
procesos como medios para lograr calidad
(Segunda Edición)*

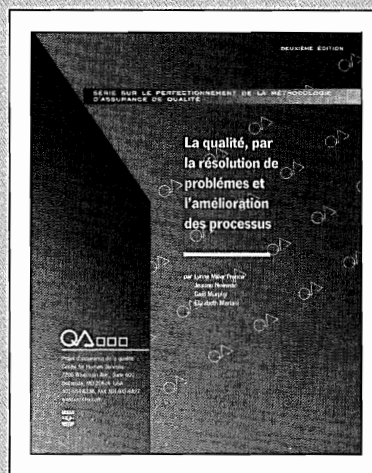
por Lynne Miller Franco, Jeanne Newman,
Gaël Murphy & Elizabeth Mariani. 1997.

*Améliorer la communication interpersonnelle entre
prestataires de soins de santé et clients*

par Bérengère de Negri, Lori DiPrete Brown,
Orlando Hernández, Julia Rosenbaum
& Debra Roter. 1997.

*Cómo mejorar la comunicación interpersonal entre
proveedores de servicios de salud y clientes*

por Bérengère de Negri, Lori DiPrete Brown,
Orlando Hernández, Julia Rosenbaum
& Debra Roter. 1997.



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The **Quality Assurance Project** is operated by the Center for Human Services in collaboration with Johns Hopkins University and the Joint Commission International. The project is sponsored by the United States Agency for International Development under Cooperative Agreement Number HRN-C-00-69-90013-00. For additional information please contact:

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C O N T E N T S

QAP Editorial:
 Organizing for Quality:
 Options for Country Programs 1

Feature Article:
 Country Experience in
 Organizing for Quality 6
 Chile 6
 Ecuador 9
 Niger 12
 Zambia 16

Field Activities Update 20
 New QAP Publications 23

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QAP Editorial

Organizing for Quality: Options for Country Programs

*David Nicholas, MD, MPH,
Director, Quality Assurance Project*

QUALITY ASSURANCE (QA)¹ can be viewed in its broadest sense as encompassing all those activities that are carried out to assure that health services meet or exceed expectations of quality. These QA activities are cross cutting in any health care organization. They are concerned with the inputs, processes and outcomes of the health care system, and they must involve, to some extent, every department and every health care worker. The theme of this issue of the *Q.A. Brief* is to examine the organizational choices made by several established national QA programs. In this article we will review the most important QA functions and then discuss the various ways in which these functions can be organized and managed.

Quality care can only be achieved if one builds quality into the design of the service in the first place, then assures that quality is maintained through monitoring and other quality control activities and, finally, assures that

¹ We use the name quality assurance (QA) as the comprehensive term for these activities. Some prefer the term quality improvement (QI) and some prefer not to use such term at all, feeling that such terms imply a separate program rather than activities that must be completely integrated into the routine work of any health care organization or service.

Organizing for Quality: Options for Country Programs continued on page 2



the services are continuously improved through quality improvement activities. There are many types of QA activities. Not all organizations will carry out all of them. For example, some may not utilize accreditation. How QA activities are organized and how QA responsibilities are designated vary greatly from one country to another, and from one organization to another. Some of this variation is based on differences in culture, in management philosophy and in the range of QA activities adopted. Some of the variation is also related to controversy or uncertainty as to the most effective organizational structure for QA. There has been little evaluative research carried out to guide health managers in making decisions about the organizational structure for QA. The Quality Assurance Project is at present conducting evaluations of QA programs in several countries of differing socio-economic status. In the next year, we expect to produce a guide for health managers that will assist them to make appropriate decisions about the type of QA activities they should have in place and the most appropriate organizational structure for assuring effective and sustainable implementation.

QA Functions

The most important QA activities can be grouped into functions as follows (see also Table 1):

1. **Capacity Building and Training:** Managers, clinicians and support staff at all levels need skills in order to carry out the QA tasks and activities essential in their work. These skills can include directing QA activities or functioning as team members in guidelines development or quality improvement projects.
2. **Standards:** This includes those activities carried out to develop standards and guidelines, whether for preventive care, clinical care or for administrative procedures. Important here is the growing world-wide consensus that preventive and



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Table 1. QA Functions and Illustrative Activities

Capacity Building & Training	Standards	Quality Design	Quality Monitoring	Quality Improvement	Documentation
QA Methods	Standards Development	Service Design	Self-assessment	Problem Solving	Story Boards
Training of Trainers	Communication of Standards	Service Re-design	Supervision	Process Improvement	Newsletters
Facilitation	Accreditation		Surveys	Process Re-design	Journal Publications
Coaching	Certification		Information Systems		Evaluations
	Licensing				Conferences

clinical guidelines, and even the organizational arrangement of care, should be based on the best available scientific evidence.

Implementation of standards and guidelines often fails because health workers are not adequately informed, trained or motivated to implement them. There is a wide range of activities that can be used to meet these communication needs including the development of manuals, reinforcements of standards through supervision and self-assessment, and, of course, training.

3. Quality Design (and Re-design): This is the systematic design of new services or the re-design of existing services to incorporate features that maximize the satisfaction of the needs of the community, of patients and of health care providers while taking into account the resources available.

4. Quality Monitoring: Achievement of quality requires that performance be monitored at all levels to ensure that standards are complied with, that problems are identified and that outcomes of care are measured as benchmarks to be continuously improved.

5. Quality Improvement: The science of management has advanced in recent decades, and much has been learned both in industry and in the health care field about employing Quality Management (QM)² principles. Client needs assessment, process and root cause analysis, team based problem solving, and performance measurement methods are being used to raise quality to new levels. There is actually a continuum from rapid, simple problem solving by workers or managers through team-based problem solving to process re-design. Similar quality improvement tools may be used across the spectrum.

6. Documentation: Those involved in assessing and improving quality have a responsibility to document the results of their activities as a way to motivate the organization to continue to improve quality and as a way to teach others.

² *Quality Management (QM) is a management approach which focuses on four themes: (1) understanding client needs and expectations, (2) understanding the process of service delivery, (3) a team approach to continuous process improvement, and (4) measurement of performance.*



Organization of QA Activities and Functions

Here, one needs to consider structure and responsibilities. The structure for organizing QA functions and activities can depend on the management structure and management philosophy of the health care organization, whether it is centralized or decentralized or whether it employs (or wishes to employ) a quality management approach.

If the organization has a quality management approach then almost all QA activities can be easily integrated into the routine management structure. In certain situations where there is no clear, or a very weak, management approach, QM may be introduced as a fairly rapid way to improve both management and the quality of services. Some ministries and some facilities have set up separate QA units to carry out certain QA functions in close collaboration with managers, clinicians and other front line health workers. These units may assist in quality design, organize the development of standards and guidelines, assist in designing monitoring systems, analyze performance measurement results, report on results of quality and outcome assessments, train or coach teams in quality improvement projects and activities, and document and disseminate results of QI initiatives. Sometimes, only specialized QA activities require a separate organizational identity, such as infection control or accreditation.

Thus, at one extreme, all QA functions may be built into the ongoing organizational structures with direction provided by the line managers. At the other

extreme, certain QA functions may be directed and ensured by a QA Unit or QA Director. Then, there may be many variations between each extreme. In any case, most of the actual work of carrying out QA activities must be carried out by line managers, clinicians and other health care staff as part of their normal work.

Allocation of responsibility for QA functions and activities may also vary. The responsibility for oversight of QA may rest with line managers or some responsibility may be given to a director of a QA Unit. The development of clinical guidelines may

be done at the national level by an expert panel that reviews the scientific evidence, or guidelines may be developed by a group of clinicians at the local level. Teams or jurisdictions may monitor their own performance through self-assessment, or supervisors may assess health

worker compliance with standards. The activities must be carried out but it is for each organization to decide the best structure for doing so and the most appropriate way to assign responsibility.

Regardless of the choice of activities, structure or assignment of responsibility, QA and QI cannot take place, or the organization succeed in achieving quality, unless strong **leadership** is provided at all levels by managers who continuously demonstrate this commitment and support for a culture of quality³, and the work of those engaged in QA activities. Allocation of staff time and other resources

Quality care can only be achieved if one builds quality into the design of the service in the first place...



³A Culture of Quality is a culture in which **staff** view quality as a primary objective of their work and value it as a reward in itself, and where **clients** expect quality as their right as human beings, as citizens or as payers of care.



needed for QA activities is essential. Numerous evaluations, both in industry and in health care, have shown that leadership is indispensable and that it is the most important factor that determines the success of QA and the achievement of high quality products and services.

organization. Our experience thus far suggests that the more that QA functions and structure can be built into the routine management structure, and the more that line managers direct the QA activities, the greater will be the chance of success and sustainability. Finally, assessment and review of

Sustainability

Sustainability refers to the ability of an organization to maintain and support QA functions and activities and to continuously improve quality over the long term after external assistance is no longer available and after initial enthusiasm has waned. Several factors

are important. It is essential to create and advocate for a culture of quality among professional organizations, politicians, citizen groups, training institutions, employers and insurance funds. Issues of professional ethics, equity and commitment to service are critical elements in training and in the example demonstrated by people of influence in the

How QA activities are organized and how QA responsibilities are designated vary greatly from one country to another, and from one organization to another.



performance at all levels is essential because knowledge of performance stimulates improvement.

The following article describes the organizational arrangements for QA structure and functions chosen by four countries that have been engaged in QA activities over the past seven years with

varying degrees of QAP support. Their stories will illustrate ways in which they have addressed the issues described in this article.



Country Experience | Organizing for Quality

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Chile

Background

The National Program for the Evaluation and Improvement of Quality (known by its Spanish acronym, EMC) was created within the Ministry of Health (MOH) in 1991 with the following goals:

- 1) raise awareness about the importance of quality throughout the health system;
- 2) develop a structure for the support of quality assurance activities;
- 3) achieve measurable improvements in quality of care and service delivery; and
- 4) improve patient satisfaction.

QAP provided technical assistance to a core quality assurance team in the Chilean Ministry of Health from March 1991 until December 1994, to develop local QA expertise and training capacity and help in designing the strategy for extending QA activities throughout the health system. Because public sector health services in Chile are managed through 29 decentralized Health Services, the EMC's main thrust was to develop QA capacity and motivate health workers to undertake QA activities at the Health Service and facility levels, rather than direct QA activities from the national level.

Organization for QA

While Chile began its national QA effort with a central level coordinating team, the Ministry of Health now has only one full-time staff member, placed in the Unit for Quality and Norms of the Department of Integrated Health Care. This person is dedicated to promoting quality assurance activi-

ties by providing training and technical support to the country's 29 Health Services. In keeping with Chile's policy of decentralization of health service delivery, most quality assurance activities take place at the Health Service level, where Quality Committees have been formed at the Health Service and/or facility level in the majority (79%) of the country's 29 Health Services.

The Health Services have been encouraged to develop their own QA policies and action plans and organize QA activities through local Quality Committees. Some Health Services have several Quality Committees (primarily in hospitals), while most have only one, at the Health Service level. The quality committees provide a structure for priority setting, assignment of tasks, coordination of training and technical support, and information sharing and dissemination.

In addition, quality monitors have been trained by the MOH's central level QA staff in the majority of the Health Services. These monitors have played a vital role in quality assurance training and coaching at the local level, thus facilitating the decentralization of the EMC program and creating the basis for its continuity.

Capacity Building and Training

The main thrust of the national level QA team in the first four years of the EMC program was to train and motivate health workers throughout the country in quality improvement techniques. To date, over 6500 health professionals have been trained in quality assurance methods by the central team and 4012 by the quality monitors, all 615 of whom were trained in advanced QA techniques and coaching



Chile 1997	
Population, mid-year (millions)	14.6
GNP per capita (Atlas method, US\$)	5020
Average annual growth, 1991-1997 Population (%)	1.5
Most recent estimate (latest year available, 1991-1997)	
Poverty (% of population below national poverty line)	21
Urban population (% of total population)	84
Life expectancy at birth (years)	75
Infant mortality (per 1000 live births)	11
Child malnutrition (% of children under 5)	1
Access to safe water (% of population)	85
Illiteracy (% of population age 15+)	5

Courtesy of the World Bank Website



methods. The result was 10,600 health professionals with QA capacity.

Standards

Recently, the central quality unit has been given an additional role in developing the regulatory role of the Ministry of Health with a quality focus. The unit is currently reviewing existing laws, decrees, regulations, norms and protocols with respect to their effect on quality of care and is studying how the MOH can appoint groups of experts to develop norms in specialized areas.

Quality Improvement

The central MOH team which developed the Ministry's quality assurance program made a conscious decision to make quality improvement activities the dominant emphasis of the QA program in Chile. Quality improvement was felt to best respond to the perceived needs for immediate results in the



quality of health care services, especially at the PHC level. The national QA program's first two years of implementation emphasized activities to recruit and train health workers at every level of the health system in quality assurance principles and methods, and motivate them to undertake local quality improvement projects. The result of this emphasis was that a large number of health professionals throughout Chile committed their energy and abilities to making small and large contributions to improved quality of care in the hospitals and clinics where they worked. In the first 5 years, over 400 quality improvement projects were carried out nationwide, and many more ad hoc improvements implemented outside the structure of a formal project.

Documentation

The MOH sponsors an annual national Quality Assurance Conference to provide a forum for presentation of results of process improvement efforts and for sharing experiences with the implementation of QA activities. The Unit for Quality and Norms in the MOH maintains a QA resource center, including the reports of individual process improvement projects.

Sustainability

External technical assistance to the Chilean QA program ended in 1994. Since July 1993, all Health Services have paid for QA training and technical assistance from the central level QA Unit out of their local budgets. QAP staff and their Chilean counterparts believe that the following factors have contributed strongly to the institutionalization of QA in the Chilean health system: 1) the creation of a central level team with a strong command of QA methods, training approaches, and interpersonal skills; 2) a decentralized implementation strategy, which motivated personnel in the Health Services to develop QA activities in response to local needs, priorities and resources; 3) development of QA training and reference materials tailored to the Chilean context; 4) the training of quality monitors throughout the country, which facilitated sharing of experience and skills transfer; and 5) collaboration with Chilean professional schools and Universities which both enhanced the technical expertise available to the MOH and led to the inclusion of quality assurance in professional curricula, further promoting institutionalization. In 1993, the MOH identified October as "Quality Month." For the last five years, activities relating to quality improvement have taken place throughout the country during the month of October.



Ecuador

Background

The Ministry of Health of Ecuador created its National Quality Assurance Program in March 1996. While the program has undertaken national level training activities to stimulate interest in quality assurance throughout the Ministry, most of its efforts to date have been concentrated in 7 of Ecuador's 21 provinces, including the country's three largest cities. In the pilot districts, QAP's resident advisor has coached teams in the implementation of quality improvement microprojects and worked with district level officials to develop strategic and action plans for quality assurance and to define basic quality standards. The Ministry of Health is now focused on scaling up QA activities from the pilot level to more fully incorporate QA into the operations of the Ministry throughout the country, as part of a larger health sector reform process that is underway in Ecuador. National policies have been drafted which include improving quality of care as one of the central objectives of the reform process.

Organization for QA

At the national level, there is a Coordinator for the Quality Assurance Program who provides oversight

and support to the pilot activities. Recently, the Coordinator was relocated to sit in the Technical Unit for Health Sector Reform in the MOH in order to strengthen the integration of QA activities within the health sector reform project.

Pilot efforts in the provinces of Azuay and Bolivar have resulted in the formation of quality assurance teams at the provincial, hospital and health district levels to develop strategic plans for quality, including identification of critical areas for quality

improvement. Pilot quality improvement teams, made up of health providers and program managers, have been formed in several provinces and health districts to identify and develop solutions for specific quality problems.

Capacity Building and Training

In its first year, the National Quality Assurance Program focused on developing capacity in quality improvement by training national

quality assurance facilitators who, in turn, could support the creation and training of local quality improvement teams in provincial hospitals and facilities in the pilot health districts. Provincial level QA training seminars on problem solving, process improvement, strategic planning for quality, and standards development have been held in Azuay and Bolivar provinces. QA capacity building activities are now focusing on training of QA trainers and

Ecuador 1997	
Population, mid-year (<i>millions</i>)	11.9
GNP per capita (<i>Atlas method, US\$</i>)	1590
Average annual growth, 1991-1997 Population (%)	2.1
Most recent estimate (<i>latest year available, 1991-1997</i>)	
Poverty (<i>% of population below national poverty line</i>)	35
Urban population (<i>% of total population</i>)	60
Life expectancy at birth (<i>years</i>)	70
Infant mortality (<i>per 1000 live births</i>)	33
Child malnutrition (<i>% of children under 5</i>)	17
Access to safe water (<i>% of population</i>)	70
Illiteracy (<i>% of population age 15+</i>)	10
<i>Courtesy of the World Bank Website</i>	



facilitators to support the development of QA capacity in three additional provinces.

Standards

Technical assistance was provided by JHPIEGO to revise the country's national norms and clinical standards for reproductive health, including management of essential obstetric care. The MOH is now issuing the revised standards throughout the country and piloting an intensive training and orientation to the new reproductive health standards in Cotopaxi province. In preparation for activities to communicate and reinforce the written standards, an assessment was carried out of the knowledge of health professionals of selected standards in four hospitals in the province. Rapid assessments of the capacity to provide essential obstetric care (EOC) have been carried out in 10 health centers, one district hospital and in the regional hospital in Cotopaxi.

Quality Design/Redesign

Quality design activities are being undertaken in Ecuador as part of the Latin America and Caribbean Initiative to Reduce Maternal Mortality. A workshop was held in Ecuador in May to train teams made up of health care providers, community representatives and NGO representatives in the quality

design approach to enable them to work together to design components of a system to deliver high quality EOC. Five teams have been formed: two teams are designing procedures for the reception/triage of patients, one team is designing IEC interventions, one team is designing referral/counter-referral procedures, and the fifth team is designing antenatal care procedures. A second series of design efforts

will start soon addressing EOC care in facilities, training in EOC and transportation for women with complications.

Quality Monitoring

The development of local quality indicators is of increasing importance in Ecuador, as the Ministry of Health is now initiating a major World Bank-funded Health Sector Modernization Project (MODERSA) which will create local health networks utilizing performance-based contracts. QAP's resident advisor is participating

on a high level technical commission to design quality indicators for use in the management of the first two pilot local health networks.





Quality Improvement

Approximately 16 quality improvement teams have been formed in pilot districts in the provinces of Azuay and Bolivar. Most of the teams have completed their work or are in the process of implementing a solution intervention. One feature of the pilot teams in Ecuador is that importance has been placed on using patient satisfaction data in problem selection and analysis.

Documentation

The Coordinator of the National QA Program maintains information on central and provincial level QA activities. A newsletter reporting on QA activities throughout the country was initiated in 1997. A national conference was organized in 1997 to provide a forum for quality improvement teams to present their experiences and achievements to a national audience.

Sustainability

QAP continues to field a resident advisor in Ecuador to provide technical support to the MOH in the design and implementation of QA activities. At the

central level, the MOH has recently created a “Quality and Productivity Management Unit” which will advise the Director of Health Services on escalating QA activities from the pilot/ demonstration stage to implementation of quality assurance throughout MOH facilities and geographically based local health systems. It is

expected that the recently launched Health Sector Reform Project, funded by a World Bank loan, will provide a framework for initiating QA activities throughout the country, as part of the health sector reform process.

National policies have been drafted which include improving quality of care as one of the central objectives of the reform process.



Niger

Background

The Tahoua Quality Assurance Project began in 1994 as a five-year collaborative effort between the Ministry of Public Health of Niger and QAP to improve the delivery of critical primary health care services by integrating and institutionalizing the quality assurance approach in the primary health care system in one demonstration region. The region of Tahoua, with an estimated population of 1.6 million and severely limited resources to meet the population's primary health care needs, was selected as the intervention site. After assessing health needs of the mothers and children in Tahoua, the QAP/Tahoua staff selected clinical interventions to be included in the "package of minimum services" to be targeted for Tahoua project support. These services included: family planning, prenatal care, nutrition, immunization, case management of diarrhea, malaria, tuberculosis, and acute respiratory infection. The project sought to introduce a quality management approach to health care delivery through training, clarifying and communicating clinical and management standards, monitoring, and initiating a process for preventing and correcting problems.

During the past two year collaboration with BASICS, QAP assisted all seven of Tahoua's District Health Management Teams (DHMTs) to

develop indicators and data collection tools to conduct rapid performance assessments of the implementation of the Integrated Management of Childhood Illnesses (IMCI). The Tahoua project has demonstrated that measurable gains in service quality are possible, even when health system resources are severely limited, by motivating and empowering local health workers. Planning is underway to introduce quality management in other regions of Niger.

Organization for QA

In Tahoua, the MOH formed the Quality Council to promote the regional vision and mission for a quality health care system, support and oversee the quality improvement activities in the districts and ensure the integration of QA in the overall primary health care system. DHMTs have taken oversight of QA activities as part of their regular responsibility. A QA Unit at the central level of the MOH was recently organized to support QA activities throughout the country but it is not yet fully staffed.

Capacity Building

Training was a central strategy in Tahoua to enable health personnel to apply quality assurance concepts and methods. The first major training activity prepared quality improvement teams for process improvement and problem solving at the Regional Health Directorate level and at the seven district medical centers. Training gave participants a frame-





work and skills to systematically solve quality-related problems as a team, using methods and tools adapted to local conditions. During the training workshops, participants chose a problem, drafted a definition statement and began preliminary analysis before leaving training.

The project trained 76 health workers in quality assurance skills during the first two and half years.

An additional 168 health personnel from all over the region were trained in May and June 1996, using a cascade training strategy.

QAP trained other regional staff to serve as coaches or facilitators to the quality improvement teams. The role of the facilitators was to ensure correct application of problem solving tools, oversee teaming arrangements and activities, and provide other technical support.

In recent training workshops, DHMTs learned how to integrate coaching into the regular supervision system.

Standards

The quality improvements initiated in the districts helped focus attention on services for which norms or standards were not clear. Supervisors identified a gap in the availability of norms and standards for management and clinical functions. To address the lack of clear guidelines, the project assisted the Regional Health Directorate to organize a

multidisciplinary, multilevel team to develop a manual of norms and standards for vaccinations. The team also developed a Standard Operating Procedures Manual for the managerial and administrative procedures in health centers and districts, including personnel management, equipment inventory and vehicle maintenance. The manual was disseminated through the district level quarterly meetings.

Niger 1997	
Population, mid-year (<i>millions</i>)	9.7
GNP per capita (<i>Atlas method, US\$</i>)	200
Average annual growth, 1991-1997 Population (%)	3.3
Most recent estimate (<i>latest year available, 1991-1997</i>)	
Poverty (<i>% of population below national poverty line</i>)	63
Urban population (<i>% of total population</i>)	19
Life expectancy at birth (<i>years</i>)	47
Infant mortality (<i>per 1000 live births</i>)	116
Child malnutrition (<i>% of children under 5</i>)	43
Access to safe water (<i>% of population</i>)	53
Illiteracy (<i>% of population age 15+</i>)	86
<i>Courtesy of the World Bank Website</i>	

Quality Monitoring

The Quality Council identified supervision as the main vehicle for introducing quality assurance and for preventing and correcting errors in quality of care. Analysis of the supervision system revealed significant gaps, however, due in part to the lack of time and resources available in the districts. To address these underlying constraints on supervision, the Quality Council decided to redesign the

entire system. As a result, a new policy was developed which created regional and integrated district level supervision teams, and detailed their organization, roles, responsibilities, methods, frequency, and reporting requirements. The district supervision teams predated official constitution of the DHMTs nationwide in July 1996 and gave their members a head start in grappling with the management needs of running a district.



Quality Improvement

Quality improvement teams were established in each of Tahoua's seven districts, based in the district medical centers. The teams are responsible for initiating quality improvement activities within the district and assisting with facility-level process improvement efforts.

Quality improvement teams were initially given technical support and coaching by QAP's resident advisor in Niger who visited quality improvement teams approximately every six weeks to motivate and help them apply the quality assurance methodology. The Regional

Health Director also made site visits. Intense follow-up was found to be essential because quality assurance techniques and tools required very different attitudes and skills than those health workers were accustomed to.

There is currently a core group of QA professionals in Tahoua who share their expertise not only with health professionals in other parts of Niger, but also with professional colleagues in other Francophone African countries.

Many of the quality improvements accomplished by teams resulted from the identification of problems during supervision. Quarterly regional and district meetings initiated by the project have provided a forum to monitor the performance of the health system based on service statistics and the progress of quality improvement teams. The teams analyze feedback from the supervision system, discuss issues and problems identified during the quarter, and establish priorities for further improvement.

Regional and district meetings often led to the creation of cross-functional teams to deal with multiple level problems. They also contributed to participatory decision-making on management of the health care system at each of the levels.

Documentation

Dissemination activities were emphasized throughout the project as a means both to document progress and to evaluate results. The project's primary means for internal dissemination is the quarterly bulletin entitled "ADER SANTE INFO"

which is written and distributed by the Regional Health Directorate staff. Responses to the publication from the field have been positive, and interest in continuing the "ADER" remains high.

After two and a half years of experience and results in the field, the project organized a three-day national conference in December 1995 to

disseminate the Tahoua experience with quality improvement, quality-oriented supervision, and the use of norms and data to monitor improvements in service quality. Based on the results in Tahoua, the conference participants endorsed the quality assurance methodology as an effective tool for improving the quality of clinical and support services at all levels of the Nigerien health system and called for inclusion of quality assurance training in basic and in-service training for all health providers.

Staff from the Tahoua Regional Health Directorate and districts have made numerous presentations in

The quality improvements initiated in the districts helped focus attention on services for which norms or standards were not clear.





country and internationally, including to the International Society for Quality Assurance in Health (ISQua), the East Africa Quality of Care Conference, and an Africa regional meeting of the World Health Organization.

Details of the project's most recent dissemination effort, "the International Conference on Quality Assurance and IMCI for the Quality Improvement of Health Care and Services," can be found in the Field Activities Update section (see page 22) of this newsletter.

Sustainability

Due to the closing of the USAID mission in Niger, QAP stopped providing technical support to the MOH in December, 1998. At the central level there

is a clear commitment to QA, including the assignment of QA experts to key decision making positions in the MOH. The Ministry of Health believes that the following results from the Tahoua experience will facilitate institutionalization of QA at the national level: 1) successful application of quality management to health services; 2) community participation; 3) development of Tahoua as a national and international QA demonstration site; and 4) increased health worker competence.

As a result of the MOH commitment to sustain results in Tahoua, WHO has pledged to support QA activities for at least one year after QAP ceases activities in Niger. Last year, the World Bank and UNICEF also agreed to support quality assurance projects in Niger and will begin to do so in 1999.



Zambia

Background

In 1993, Zambia started an important reform of its health sector. As part of the reform, a Quality Assurance program was established to improve the quality of care. The program's strategy was to build QA capacity at district and health center levels by training staff in:

- i) setting standards for health services,
- ii) monitoring indicators of achievement, and
- iii) team-based problem solving methodology. A network of coaches (facilitators for the health center based quality improvement teams) and link facilitators (quality assurance trainers providing support to coaches and in charge of several districts) now covers almost the entire country. Process improvement teams have been formed in a majority of districts throughout the country. Teams select quality of care problems identified both from user and provider perspectives, document the root causes, design solutions that they implement, and monitor the progress through indicators.

Organization for QA

Before the establishment of the Central Board of Health (CBoH), the Zambian Quality Assurance Program was the responsibility of the Quality

Assurance (QA) unit of the Health Reform Implementation Team of the Ministry of Health.

Since the creation of the CboH in late 1996, The Service Quality and Performance Audit Unit of the Directorate of Monitoring and Evaluation has been responsible for ensuring that all levels of health care are introduced to the concept of Quality Assurance. This central level unit provides training and technical oversight in QA to District Health Management

Teams (DHMTs) and health centers. In addition, DHMT members were trained as QA coaches or link facilitators, or had participated in another type of QA training activity.

Zambia 1997	
Population, mid-year (<i>millions</i>)	9.4
GNP per capita (<i>Atlas method, US\$</i>)	380
Average annual growth, 1991-1997 Population (%)	2.7
Most recent estimate (<i>latest year available, 1991-1997</i>)	
Poverty (<i>% of population below national poverty line</i>)	86
Urban population (<i>% of total population</i>)	44
Life expectancy at birth (<i>years</i>)	43
Infant mortality (<i>per 1000 live births</i>)	113
Child malnutrition (<i>% of children under 5</i>)	29
Access to safe water (<i>% of population</i>)	43
Illiteracy (<i>% of population age 15+</i>)	22
<i>Courtesy of the World Bank Website</i>	

Capacity Building

Training in the target districts initially focused on the setting and monitoring of standards, and was later expanded to include techniques for problem solving. At the central level, staff of the Directorate of Monitoring and Evaluation

facilitate the training of health providers to self-assess, to measure their performance and compliance to agreed standards, and to respond to client/user needs. This unit provides training and technical oversight in QA to the DHMTs and their health centers. The training in quality assurance (subject to variation by district) has generally consisted of:

1. a 'sensitization' workshop (a one-day orientation seminar to introduce the concepts of quality assurance);



2. a week-long training of staff in the dynamic standard setting system (DySSSy);
3. a similar five-day training in the development of monitoring indicators for groups at district and facility level; and,
4. a two-week basic skills training in the use of QA tools and techniques.

In addition to receiving training in basic QA skills, members of the DHMTs were trained as QA coaches and link facilitators.

Quality Monitoring

The CBoH uses three main mechanisms to monitor performance of health services: performance audits, supervision visits, and the health management information system.

Performance audits are supposed to be carried out quarterly by each of the four regional directorates and consist of an inspection of DHMTs, hospitals and health centers. Performance audits collect information mainly on financial management, accounting procedures, health facilities, structural standards, and managerial and planning processes. There are few indicators related to compliance with process standards, such as the proportion of patients examined and diagnosed correctly. There is a review of a sample of ten records for outpatients and inpatients. Since medical records usually indicate only the symptoms and the treatment, their review allows only checking the appropriateness of the treatment without knowing the accuracy

of the diagnosis. There is no direct observation of the delivery of care, and therefore the complete clinical performance of health workers remains unknown.

Supervision visits of health centers are frequently carried out by the DHMT. The average duration of the visit is between one and two hours. Supervisors typically use a checklist, though there is not a standardized checklist in use which assesses quality of

clinical care. The CBoH developed an integrated checklist involving direct observation of care which is used primarily for IMCI. Members of DHMTs prefer using checklists that focus on inspection of facilities and record reviews rather than using direct observation as a supervision tool.

The current **health management information system (HMIS)** was recently redesigned to replace an old system that required health facilities to report ser-

VICES statistics to the central level. The new system was pilot tested in fifteen districts and is being rolled out nation-wide. One of the key features of the HMIS is the use of self-assessment forms on a quarterly basis by health centers and then by districts to monitor their own performance and compare it to pre-determined national and local targets. The forms are designed to allow the teams to easily identify areas of low performance and take action.





Standards

The development of clinical standards takes place at the central level. To eliminate confusion from having several guidelines for different vertical programs, the CBoH decided to develop a manual of standards for six priority preventive, promotional and curative activities. The manual, entitled “Integrated Technical Guidelines for Front Line Health Workers,” (ITG) covers standards in the following health areas: i) malaria; ii) reproductive health and family planning; iii) HIV/AIDS and sexually transmitted diseases; iv) child health and nutrition; v) tuberculosis; and vi) water and sanitation. The primary strategy for communicating these standards is through classroom training sessions. The CBoH is combining training in ITG with training in the new HMIS, for a total duration of two weeks per training session. The training should be completed by 1999.

Through QAP, the Joint Commission International is working with the Zambian Central Board of Health, nursing and medical councils, and professional associations to initiate the development of hospital accreditation standards and the creation of a national hospital accreditation program. QAP is currently working with the Zambian Health Accreditation Council and the Central Board of Health to develop a governing and administrative structure for the hospital accreditation program and has developed standards for accreditation which are currently being tested at 20 hospitals. The standards

will eventually be applied in all hospitals in the country.

Quality Improvement

Approximately 85 quality improvement teams are operating in 90% of the districts in Zambia. Quality improvement teams usually consist of the staff of a health facility. Examples taken from quality assurance training workshops have a great deal of influence over the identification of problems for quality improvement cycles. Teams also identify some

problems by incorporating client and neighborhood committee input. The average quality improvement cycle lasts seven months although this can vary depending on the type of problem selected.

In Zambia the application of the problem solving methodology yielded many benefits in addition to finding solutions to problems impeding the

delivery of quality services. The use of problem solving methodology:

- promoted team building among professionals from different disciplines;
- increased competence and confidence of staff to tackle problems on their own; and
- built capacity and prepared staff for management positions.

In Zambia the application of the problem solving methodology yielded many benefits in addition to finding solutions to problems impeding the delivery of quality services.





Documentation

At the health center level, the recommended storybook format is intended to facilitate more efficient and complete documentation of team-based problem solving activities. Teams can thus describe how their problems were identified, record the problem statements, demonstrate the use of tools and data gathering instruments, and present solutions and results. In addition, posters or storyboards are sometimes prominently displayed in the health center. Together, such visuals work to communicate the facility's commitment to quality, calling attention to the need for similar improvements in other departments, and strengthening advocacy for QA throughout the health center.

At the district level, a summary report of health center activities is completed by the link facilitator and forwarded to the Quality Assurance staff at the Central Board of Health. The reports list the active teams and describe the status and results of their quality improvement activities. Quarterly meetings of all link facilitators are then held to disseminate

results and share experiences regarding the work of their teams. The Central Board of Health uses the results of these meetings to identify opportunities for improvement as well as to track numbers and locations of active QA teams.

Sustainability

Earlier this year the Central Board of Health of Zambia requested that an evaluation take place in order to help them design the next steps to further improve quality of care in Zambia. The evaluation was carried out in September 1998 by an international evaluation team led by QAP. In order to validate results, the evaluation team presented preliminary findings to the CBoH and its partners during an end-of-mission meeting and incorporated comments into the final report. The CBoH is currently reviewing the report which contains evaluation findings and recommendations proposed by the team.





Field Activities Update

The Latin American and Caribbean Initiative to Reduce Maternal Mortality

During the last year, three collaborating NGOs—Sacoa, PLAN International and Prodim—carried out community baseline assessments in each of the countries in which the initiative is being implemented: Bolivia, Ecuador and Honduras, respectively. At the same time, QAP carried out facility baseline assessments of the quality of essential obstetric care (EOC) in these same countries.

Between May and August, QAP also conducted workshops to initiate the process of Quality Design of EOC in the three countries. The workshops resulted in the formulation of quality design teams (four teams in Bolivia, five teams in Ecuador and eight teams in Honduras) that are currently addressing various components of their respective EOC systems.

The teams, comprised of representatives of health facilities and communities, are using quality design methodology to address weak components of the essential obstetric care system. These components include community mobilization, training, information, and communication (IEC), and referrals/counter-referrals. A second series of design activities for facility EOC, training in EOC and transportation for women with obstetric complications will begin in early 1999.

Russia

As part of activities initiating quality assurance work in Russia, QAP participated in two meetings for the planning of activities under the US-Russian Joint Commission on Economic and Technological Cooperation. The Health Committee of this Commission has identified “Access to Quality Health Care” as one of its priority areas. The Agency for Health Care Policy and Research (AHCPR) has been selected to take the U.S. lead in coordinating access to quality issues with Russian counterparts, and QAP is supporting several of the activities.

As a result of the planning meetings, QAP has been working with the Ministry of Health of Russia since July to develop operations research demonstration projects in Tula and Tver Oblasts (provinces). The Tula demonstration project seeks to improve the system of hypertension care at the district level. The pilot demonstration project in Tver is developing strategies to improve maternal and child health care. QAP and the Ministry of Health of Russia identified the following maternal and child health issues as improvement areas for Tver: management of toxemia of pregnancy at the primary care and hospital levels, and management of newborn respiratory distress syndrome.

The objectives of the operations research demonstration projects are:

- To determine the results that can be achieved by a team-based approach

to continuous quality improvement (CQI) carried out across a province and aimed at achieving statistically significant improvements in health outcomes. QAP would also expect to see improvements in compliance with evidence-based clinical standards and efficiency (cost savings).

- To determine if the use of evidence-based clinical standards achieves better results and participation of physicians than not using such standards.
- To determine if linking nationally recommended Health Quality Indicators with activities to improve the processes of care results in improved outcomes as measured by these indicators.

QAP has made the first steps toward meeting these objectives by organizing and convening a series of QA seminars to build local capacity. In October, QAP conducted a one-week training of trainers (TOT) course on principles and methodological approaches of improvement and (re) design of health care systems. During December, QAP conducted additional TOT courses for the research project teams in Tula and Tver. In the next few months, QAP will work with the teams to collect baseline data on indicators of quality in hypertension care, toxemia management and management of newborn respiratory distress syndrome. QAP will then work with the MOH to identify training needs for those clinical areas and will coach the teams as they design and implement changes to the systems of care.



Rwanda

In February 1998, the Ministry of Health of Rwanda requested through USAID, QAP's assistance in developing a national Quality Assurance program. Six weeks later Senior QA Advisor Barbara Kerstiëns assisted the MOH in identifying priorities and developing a QA work plan. In August, in an effort to share their experience from the Nigerien QA program, two QA experts from Niger—a Senior QA Advisor and the Director of Health Services of the Ministry of Health in Niamey—conducted two seminars in Kigali for health care providers and health service managers in Rwanda. The first course was on Quality Awareness, and the second was on Problem Solving. The objective of the quality awareness seminar was to increase awareness among providers and services managers about the Quality Assurance/Improvement approach, its principles, methodology and potential application to the Rwandan health system. Participating in the seminar were 17 representatives of Directorates within the Ministry of Health, Regional Medical Officers, District Medical Officers, the Rwandan Medical Association and the School of Nursing.

Upon completion of the workshop, the staff of the Centre Hospitalier Kigali (CHK), who was the main target audience, began problem solving activities in the emergency ward of the hospital. Following the workshop, Dr. Rwakunda, head of the Division of Promotion of Quality of Care of the MOH, suggested that a national

quality assurance team be formed to support the QA unit. The team consists of members of the Division of Promotion of Quality of Care, the medical officers of the two pilot districts, a representative of the emergency ward problem solving team, two regional medical officers, and the technical advisor to the Directorate of Health Services. The team held its first meeting in October to define rules and objectives, and to develop a work plan. The team will meet monthly in Kigali to work on quality improvement projects.

Zambia

In 1993, Zambia established a Quality Assurance program as part of a more comprehensive strategy to reform the health sector. The program set out to build QA capacity at district and health center levels by training staff in standards development, monitoring, and team-based problem solving.

In October, QAP led a team to evaluate the Quality Assurance program in Zambia. The purpose of the evaluation was to document achievements and identify lessons and challenges in order to make recommendations that would shape the vision and strategy of the next phase of the program. The team, comprised of three international and three local public health and quality assurance specialists, evaluated the following programmatic areas: i) the development and communication of standards and quality performance monitoring, ii) the work of the quality improvement teams, and iii) the

support systems for the Zambian QA program.

The evaluation team found that a small team of central staff has been able to build a QA structure and capacity throughout the country, generate enthusiasm for quality assurance and initiate work on quality of care issues in a large number of districts throughout the country.

Recommendations focused on ways to more fully integrate QA activities into other directorates of the Central Board of Health, regional and district management teams, regulatory bodies and the private sector, especially in the areas of developing and communicating standards, introducing job aids, and introducing quality performance assessment in routine supervision.

QAP Co-Sponsors Global Seminar on Quality Assurance in Developing Countries

QAP collaborated with the World Health Organization, Liverpool University, and the CBO (the Netherlands) to convene an international seminar on quality assurance in developing countries. The meeting was held October 4-7, 1998 in Budapest, Hungary, in conjunction with the 15th Annual Conference of the International Society of Quality Assurance in Health Care. Along with representatives of 15 countries, QAP representatives and colleagues shared the experiences of



implementing quality assurance activities in Bolivia, Chile, Ecuador, Guatemala, Honduras, Morocco, Mozambique, Nepal, Niger, Peru, Uganda and Zambia. Discussions at the pre-conference meeting focused on evaluating quality management and improvement actions at all levels of a health care system. Participants reported on different aspects of leadership, policy, strategy, staff management, resources, processes, customer satisfaction, staff satisfaction, impact on society and business results. Senior Quality Assurance Advisor and co-organizer of the seminar, Dr. Rashad Massoud, moderated the session on leadership.

International Conference on Quality Assurance and IMCI for the Quality Improvement of Health Care and Services in Niamey, Niger

In October, the Quality Assurance Project (QAP) and the Basic Support for Child Survival Project (BASICS) organized a three-day conference to draw lessons from five years of implementing quality assurance in Niger and two years of collaborative efforts to combine quality assurance and the Integrated Management of Childhood Illnesses (IMCI) in health facilities in Niger.

Approximately 200 participants, most of them Nigerien, attended the conference held in Niamey. Both the structure and the content of the conference

reflected the ownership of the Nigerien health staff who work in two regions and nine districts supported by QAP/BASICS. Both Niger's Minister of Health and Secretary General of Health were present. Attendees also came from Benin, Burkina Faso, Burundi, Guinea, Ivory Coast, Mali, Senegal and Togo. Presentations highlighted the experience of introducing both a quality assurance based model and the IMCI approach for district health workers to use in improving the quality of care. The experiences, as presented by the Nigerien health managers and workers, demonstrated that when quality management methods are integrated at the district level, quality of care is improved. The presenters attested to the fact that, though quality assurance work takes time, it is a worthwhile endeavor in which they will continue to invest their efforts. The dynamism of the presenters, as well as the high level of exchange, were indicative of the culture of quality that has been established in Tahoua.



New QAP Publications

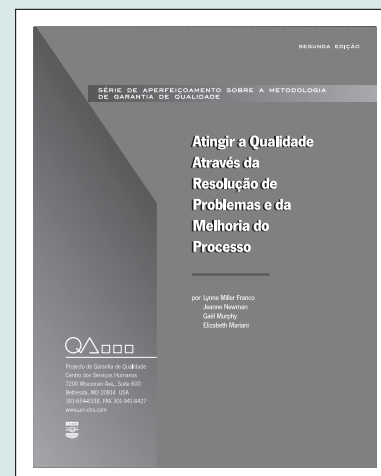
*QAP Operations Research Analysis Report.
The client perspective: Helping district teams
measure and act on client satisfaction data in
Niger. An analysis of tools and methods*
by Maina Boucar and Edward Kelley. 1998.

*Reducing Treatment Default among Tuberculosis
Patients in the Philippines*
by Stewart N. Blumenfeld, Maricor De los Santos,
Ma. Corazon V. Teoxon, Nora Cruz & Frank Dizon.
1998.

*Making a Commitment to Quality:
Development of a National Quality Assurance
Program in Chile. 1991-1995*
by Lori DiPrete Brown & Gilda Gnecco. 1998.

*Atingir a Qualidade Através da Resolução de
Problemas e da Melhoria do Processo*
por Lynne Miller Franco, Jeanne Newman,
Gaël Murphy & Elizabeth Mariani. 1997.

*Garantia da Qualidade dos Cuidos de Saude nos
Países em Desenvolvimento*
por Lori DiPrete Brown, Lynne Miller Franco,
Nadwa Rafeh & Theresa Hatzell. 1997.



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The **Quality Assurance Project** is operated by the Center for Human Services in collaboration with the Joint Commission Resources (formerly known as the Joint Commission International) and Johns Hopkins University (including the School of Hygiene and Public Health, The Center for Communication Programs, and the Johns Hopkins Program for International Education in Reproductive Health). The project is sponsored by the United States Agency for International Development under Contract Number HRN-C-00-69-90013-00. For additional information please contact:

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C O N T E N T S

QAP Editorial
Using Accreditation to Improve Quality 1

Feature Article
Improving Health Services Delivery with Accreditation, Licensure, and Certification 4

Jointly Sponsored Regional Conference Held on Quality Improvement 12

Development of a Hospital Accreditation Program: The Zambian Experience 15

Self-Regulation of Hospitals: A Private Sector Initiative in Mumbai City, India 18

What's New 20

Quality Improvement in South Africa: The COHSASA Accreditation Initiative 21

Field Activities Update 24

Focused Accreditation 25

ISQua Establishes New Accreditation Federation 31

New QAP Products 32

Improving the Implementation of IMCI 33

Electronic Resources 35

The QA Brief, published twice yearly, shares with the international health community the methodologies, activities, and findings of quality improvement initiatives sponsored by the Quality Assurance Project. Those interested in receiving future issues of the QA Brief or any other Quality Assurance Project publications should contact:

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QAP Editorial

Using Accreditation to Improve Quality

*David Nicholas, MD, MPH
Director, Quality Assurance Project*

A GROWING interest and expansion in accreditation programs has occurred worldwide during the past decade as demands for improved quality have increased and as a means to qualify providers for payment under new health reform models or to otherwise regulate providers. Under its scope of work, QAP has been exploring the role of accreditation in improving quality in developing countries and assisting these countries in determining whether to develop appropriate accreditation programs.

The concept of accreditation evolved during this century from an approach involving simple, voluntary programs that applied a few basic standards to an evaluation process that, when possible, applies evidence-based standards to determine the capability of large, complex health care organizations to deliver quality care. In the last two decades new, less formal accreditation programs that focus on encouraging health care organizations to provide good, client-centered care have also arisen, such as UNICEF's Baby Friendly program, the Gold Star Family Planning program in Egypt, the Proquali Reproductive Health program in Brazil and the emerging Adolescent Friendly Clinic programs in Jamaica and South Africa. Thus, the field of accreditation is evolving rapidly, presenting many interesting and sometimes difficult issues to consider.

continued on page 2



Accreditation continued from page 1

Just as the health community believes that medicine should be evidence-based, so, too, should the choice of QA activities. Thus, the question might be raised as to whether scientific evidence indicates that accreditation improves patient outcomes. Certainly, if the standards used for accreditation were evidence-based—that is, because studies have demonstrated that compliance with standards improves outcomes—it would seem logical that accreditation would improve outcomes. However, health care organizations may only comply with standards at the time of the accreditation evaluation (survey) and not at other times. In such cases, outcomes would not change. In an unprecedented study of the international application of accreditation standards, QAP is examining the effect of accreditation on outcomes in Zambia and South Africa.

Other important questions must be answered by developing countries that are considering accreditation:

- What sectors of the health system should be accredited—hospitals, ambulatory and primary care facilities, or both?
- Should both public and private sectors be included?
- To what extent should community representatives participate on accreditation boards or survey teams?
- Should the results of accreditation surveys be published and open to the public?
- Should the accrediting bodies be governmental or nongovernmental organizations?
- Should accreditation be mandatory or voluntary? If it were made mandatory, how would it differ from licensing?



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University Research Co., LLC
Center for Human Services

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- What should be the strength of the evidence required to qualify a standard to be used for accreditation? Should the accreditation be based on outcomes, compliance with standards, or both?
- Should accreditation be linked to data from the routine monitoring system and not just external evaluations?
- Should accreditation surveys be scheduled or “surprise visits” or both?
- Should accreditation be primarily a facilitative, coaching encounter to help the organizations meet the standards?
- What should be the relationship between ongoing organizational self-assessment and the external assessment?
- What consequences should ensue for an organization that fails accreditation, especially if it is located in an area where it may be the only available health care provider?

Based on past experience, accreditation would seem to offer added value to health care systems.



- Should accrediting bodies be accredited to ensure compliance with accepted standards for accrediting and certifying bodies? Who should pay for the accreditation process?
- Finally, is accreditation cost-effective compared with other quality improvement approaches, and is it an “appropriate technology” for developing countries?

QAP is conducting research in an effort to answer these questions. QAP is also helping to sponsor

international conferences where experts and interested countries can reach consensus on these issues and find ways to assist developing countries resolve these questions. Based on past experience, accreditation would

seem to offer added value to health care systems. However, it will have to be proven cost-effective and adaptable to many different environments.



Improving Health Services Delivery with Accreditation, Licensure, and Certification¹

Donna Vincent Roa, PhD, Director of Communication and Associate Project Director, Quality Assurance Project

Anne Rooney, RN, MS, MPH, Executive Director Consulting Services for Joint Commission Resources, Inc.

HEALTH care managers and policy makers throughout the world are adopting quality approaches, methods, and tools to improve operations, create more efficient care processes, reduce work and inappropriate use of scarce resources, improve staff performance and oversight, and enhance patient and staff education. Though most agree that the ongoing evaluation of these kinds of improvements is imperative, less agreement exists on which evaluation approach can best meet the expectations of relevant stakeholders: the organization, regulatory agencies, senior public health officials, and patients.

This article presents a brief overview and history of standards-based quality evaluation and compares accreditation, licensure, and certification (Table 1) —three approaches that can provide quality and performance information needed by decision makers to:

- maintain and improve quality
- ensure public safety
- provide legal recognition to qualified health professionals
- verify that design or maintenance specifications are met

A Standards-Based Approach to Quality Evaluation

In 1917, the American College of Surgeons established a set of minimum standards for hospitals. Seen as the first standards-based external evaluation mechanism and as somewhat controversial at the time, these minimum standards encouraged a process of professional peer review based on the outcomes of care, an approach that is still being used today.

In 1951, the American College of Surgeons joined with several other professional associations to form the Joint Commission on Accreditation of Hospitals, the first formal health care accreditation program. Thirty years later, this voluntary accrediting body changed its name to the Joint Commission on Accreditation of Healthcare Organizations to more accurately reflect its broader scope of health services evaluation. In addition to hospitals, the body evaluated long-term care facilities, home health agencies, hospices, clinics, pharmacies, managed care organizations, and health care networks—more than 17,000 accredited health care organizations in the United States.²

¹ This article is based on the *Quality Assurance Project* publication: *Licensure, Accreditation, and Certification: Approaches to Health Services Quality* by Anne Rooney and Paul R. van Ostenberg. For copies of this document, write to qapdissem@urc-chs.com or call 301-941-8532.

² Smaller accrediting bodies focus on specific areas of accreditation (e.g., the College of American Pathology accredits clinical laboratories).



Table 1

Definitions of Accreditation, Licensure, and Certification

Process	Issuing Organization	Object of Evaluation	Components/Requirements	Standards
Accreditation (voluntary)	Recognized body, usually an NGO	Organization	Compliance with published standards, on-site evaluation; compliance not required by law and/or regulations	Set at a maximum achievable level to stimulate improvement over time
Licensure (mandatory)	Governmental authority	Individual	Regulations to ensure minimum standards, exam, or proof of education/competence	Set at a minimum level to ensure an environment with minimum risk to health and safety
		Organization	Regulations to ensure minimum standards, on-site inspection	
Certification (voluntary)	Authorized body, either government or NGO	Individual	Evaluation of predetermined requirements, additional education/training, demonstrated competence in specialty area	Set by national professional or speciality boards
		Organization or component	Demonstration that the organization has additional services, technology, or capacity	Industry standards (e.g., ISO 9000 standards) evaluate conformance to design specifications

Accreditation Programs and Key Features

Canada, Australia, the United Kingdom, and New Zealand are among the countries that have well-established hospital accreditation programs. Table 2 provides an overview of these and other existing hospital accreditation programs around the world and a comparison of their key features including types of standards, number of accredited hospitals, whether or not the body developed indicators, funding sources, and definition of scope.

Of the 21 hospital accreditation organizations shown in Table 2, about one third develop structure, process, and outcome standards. Most of the remaining two-thirds set structure and process standards. A few of the organizations set only process and outcome standards.

A large majority of the organizations rely on survey fees for financial support. Other sources of

funding include: member fees, publications, education programs, grants, consulting fees, and government, to name a few. Nearly three of four organizations limit their evaluation scope (e.g., hospitals, rehabilitation services, community hospitals, medical specialists, teaching hospitals, nursing, and rehabilitation and medical care hospitals).

Health Care Quality Evaluation Approaches

The three primary approaches for evaluating health care quality—accreditation, licensure, and certification—use standards to determine the level of quality achieved by an individual or organization. Selecting the right approach or combination of approaches requires a careful analysis and prioritization of user needs. The most effective system, even with its limitations, can generate objective quality data to:



- support comparisons of performance between the public and private health sectors and more appropriate government oversight of the health sector
- shape health care services delivery in new settings by monitoring access, quality, and risk
- demonstrate whether a predetermined rate of beneficiary coverage for preventive services is being achieved
- ensure efficient use and allocation of limited health care resources
- identify and create centers of excellence (e.g., those facilities that can provide greater volume of services, greater efficiency, and lower per case costs)
- integrate structures and services of several organizations to improve coordination and efficiency of care and reduce administrative costs

Accreditation

Unlike licensure, which focuses on adherence to minimal standards intended to assure public safety, accreditation

focuses on continuous improvement strategies, achievement of optimal quality standards, and ongoing education and consultation. Effective accreditation programs have well-defined missions; pre-determined infrastructure and authority for the program; participation from health professionals in standards development and interpretation; and relevant, objective, and measurable standards. A strong accreditation program:

- encourages professionals to continuously seek to improve quality despite resource limitations
- provides sustained management of field operations (e.g., selection and training of peer reviewers, supervision and ongoing education of surveyors, etc.)
- ensures a fair, valid, and credible process
- establishes an accreditation database of information to determine compliance, pinpoint problem areas, or highlight opportunities for improvement

Accreditation standards, which are usually developed by a consensus of health care experts, reflect

state-of-the-art thinking about health care quality, advances in technology and treatments, and changes in health policy. Organized by key organizational processes or functions (e.g., patient assessment or human resource management) or by department (e.g., pharmacy services and nursing services), accreditation standards offer health care organizations a systematic way of organizing operations

The threshold for determining whether or not the health care organization is accredited must be based on pre-determined rules that are consistently applied in order for an accreditation program to maintain its credibility and customer confidence.



for optimal efficiency and effectiveness—a key tenet of quality assurance. Most health care accrediting bodies use a variety of evaluation strategies to determine compliance, performance, and quality of care:

- document and record reviews
- interviews



- observations
- achievement evaluations
- facility inspections

Evaluation teams comprised of peer reviewers or surveyors visit facilities, either announced or unannounced, to evaluate compliance with accreditation standards. Announced evaluations guarantee greater participation in the process, although this allows organizations time to enhance surface appearances, potentially making it more difficult for a team to determine usual practices and operations. Once the evaluation is completed, an accreditation designation—accreditation with commendation or accreditation with recommendations, for example—is given.

For an accreditation program to flourish, decision makers should consider the question of sustainability or financial viability and address funding sources for each phase of the program. Financial incentives, for example, can help to maintain the program, reward organizations' superior performance, and stimulate professional commitment.

Licensure

Established to protect basic public health and safety, licensure standards address the minimum legal requirements or qualifications health care profes-

sionals and organizations need to operate. They also guarantee appropriate adoption of new medical practices and provide a framework to accommodate amendments to existing practices.

Licensure programs for individuals involve examination of credentials, inspection of educational programs, testing of professional qualifications, reciprocal granting of licenses to applicants of other

countries, issuance of regulations establishing professional standards of practice, and investigation of charges of violations of standards.

In the United States, the Federation of State Medical Boards and its member boards use *A Guide to the Essentials of a Modern Medical Practice Act*, a document containing concepts and policy statements for establishing or improving systems of physician regulation or medical practice acts. Topic areas include:

- examinations
- requirements for full licensure
- granting of temporary and special licensure
- disciplinary action against licensees
- procedures for handling impaired or incompetent practitioners
- unlawful practice of medicine
- periodic renewal of registration

Many countries have a licensure system. However, due to lack of funding and poor oversight, system inspectors typically focus on the individual's or organization's compliance with the minimum regulations and do not consult, educate, or share best practices on ways to meet standards or improve procedures and processes.





Table 2

Comparison of Existing Hospital Accreditation Organizations

Country	Accrediting Body	Types of Standards	Number of Accredited Hospitals	Developed Indicators	Funding Source	Limited Scope?
United States	Joint Commission on Accreditation of Healthcare Organizations	Structure, processes, and outcomes	5,155	Yes	Survey fees, publications, education programs, and consulting	No
United States	American Osteopathic Association	Structure, processes, and outcomes	400	No	Survey fees	Yes, hospitals
United States	Commission of Accreditation of Rehabilitation Facilities	Structure, processes, and outcomes	700-800	Proposed	Survey fees, publications, and education	Yes, rehabilitation services
Canada	Canadian Council on Health Services Accreditation	Processes and outcomes	502 (1996)	Proposed for 2000	Member fees and survey fees	No
United Kingdom	Health Services Accreditation	Structure, processes, and outcomes	Unknown	Yes	Survey fees or grants	Yes, hospital departments
United Kingdom	Kings Fund Organizational Audit	Structure and processes	79 (1994)	No	Survey fees and publications	Yes, hospitals
United Kingdom	Southwestern Hospital Accreditation Program	Structure and processes	67 (1994)	No	Grants, survey fees, consulting, and publications	Yes, community hospitals
Netherlands	National Organization for Quality Assurance in Hospitals	Structure and processes				Yes, medical specialists
Netherlands	Netherlands Institute voor Accreditation van Ziekenhuizen	Structure and processes	18	No	Survey fees	Yes, hospitals
Australia	Australian Council on Healthcare Standards	Structure and processes	203 (1994)	Yes	Survey fees, publications, and education	No



(continued)

Table 2

Comparison of Existing Hospital Accreditation Organizations

Country	Accrediting Body	Types of Standards	Number of Accredited Hospitals	Developed Indicators	Funding Source	Limited Scope?
New Zealand	Health Accreditation Programme for New Zealand	Structure and processes	115 (1997, all services)	Proposed	Member fee (1998)	No
Taiwan	Ministry of Health	Structure, processes, and outcomes	525	Yes	Government	Yes, hospitals
Japan	Council for Quality Health Care		79			Yes, community hospitals
Korea	Joint Commission on Accreditation of Hospitals	Structure and processes	131	Yes	Survey fees	Yes, teaching hospitals
Korea	Hospital Performance Evaluation Program	Processes and outcomes	96			Yes, hospitals
China	Hospital Grade Appraisal Committee, HB		1,086 (1991)			Yes, hospitals and teaching hospitals
South Africa	Council for Health Service Accreditation of South Africa	Structure, processes, and outcomes	40	Proposed	Survey fees	No
Czech Republic	Joint Committee on Accreditation	Structure, processes, and outcomes	13	Yes	Survey fees	Yes, hospitals
Kyrgyzstan	Ministry of Health	Structure, processes, and outcomes		No	Survey fees, board member organization support, other	Yes, hospitals
Lithuania	State Accreditation Services by Ministry of Health	Structure and processes	53	No	Ministry of Health and survey fees	Yes, nursing, rehabilitation, and medical care hospitals



Hospitals and health care facilities must be licensed to provide care or services to patients. Governments or regulatory authorities grant licenses when facilities meet defined levels of quality or provide certain services (e.g., surgery, radiology testing, round-the-clock nursing care, pharmacy services, and laboratory services). In some jurisdictions within the United States, the hospital or health center also may be required to demonstrate a need for the services within the local community before receiving a license to operate.

Certification

Distinguished from accreditation by its application to both individuals and organizations, certification involves a recognized authority or board granting recognition to individuals who have demonstrated specialized knowledge and skill and to organizations that have the ability to practice in a certain area or speciality.

In the United States, the American Board of Medical Specialties (ABMS) and the American Medical Association Council on Medical Education (AMA/CME) review and approve medical speciality boards and work to standardize their approaches. The two organizations also maintain a rigorous process of application and review for new boards in emerging medical specialities (e.g., the American Board of Medical Genetics).

Most medical speciality boards require re-certification at periodic intervals, usually seven to 10 years for an evaluation of continuing experience, skills, proficiency, performance, and clinical outcomes. If an individual does not meet the standards, certification can be withdrawn. Verification of performance, however, does not include a review of actual care processes or patient outcomes.

In recent years, professional organizations, such as the American Medical Association, through its American Medical Accreditation Program, have started to evaluate individuals within their work environment. This voluntary, standards-based evaluation mechanism complements the formal medical speciality certification. Reviewers conduct an evaluation of credentials and qualifications, actual practice conditions, environment of care, clinical processes, and patient outcomes.

For organizations, lack of proper certification can affect funding, reimbursement for health services, and legal recognition. Certification distinguishes organizations as capable of practicing or delivering services in a speciality area.

Summary

The heightened interest in the quality evaluation of health services and the growing expectation for quality services from communities and consumers in developed and developing countries alike have created a unique climate for health care managers, policy makers, and senior decision makers. They must rely on strategies that can affect the daily operations of health care organizations and ensure better service delivery. Accreditation, licensure, and certification yield the objective data they need to do just that. Each approach, tailored appropriately, can lead to increasing the availability and quality of health care services, decreasing the cost to patients, and strengthening the health care delivery systems.





Joint Commission International Accreditation

Building on its experience in accrediting health care organizations in the United States, the Joint Commission on Accreditation of Healthcare Organizations initiated the development of an international accreditation program in 1998. An international task force representing all regions of the world was convened to provide input into the standards development process. The task force distributed the draft standards to international reviewers to determine their applicability to an international health care setting; they were then pilot-tested in several hospitals in Latin America, Europe, and the Middle East.

Full implementation of the Joint Commission International Accreditation (JCIA) program took place in late 1999. Accreditation may be requested either by an individual hospital or by an accrediting body in another country that may wish to partner with JCIA to offer a joint accreditation, using a full or modified set of JCIA standards.

The final standards represent the important processes and functions of any hospital and are flexible enough to be adapted to meet the needs of a particular country with unique cultural or health care characteristics. The JCIA standards, organized according to either patient

care functions or management functions, represent the following important hospital functions or processes:

Patient-Focused Standards

- Access to care and continuity of care
- Patient and family rights
- Assessment of patients
- Care of patients
- Patient and family education

Health Care Organization Management Standards

- Quality management and improvement
- Governance, leadership, and direction
- Facility management and safety
- Staff qualifications and education
- Management of information
- Prevention and control of infections

Further information about JCIA and the international hospital standards can be obtained by contacting JCIA, One Lincoln Centre, Suite 1340, Oakbrook Terrace, IL 60181. Phone: 1-630-268-7400.



Jointly Sponsored Regional Conference Held on Quality Improvement

*Joanne Ashton, RN, MN
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FIFTY-TWO representatives from 19 Latin American countries participated in a regional conference in Bogota, Colombia in May 1999 organized by the Quality Assurance Project (QAP) and the Pan-American Health Organization (PAHO) to explore the differences between accreditation, licensure, and certification in the context of quality improvement. Representatives from the various Latin American Ministries of Health, the Association of Latin American Hospitals, medical and nursing associations, the World Bank, the Inter-American Development Bank, QAP, and its partner Joint Commission Resources (JCR) discussed options, strategies, and tools for accreditation, licensure, and certification, in addition to identifying the related functions of government, financial entities, and health care providers in implementing these processes. The group also developed conclusions and recommendations regarding the application of these quality improvement approaches within Latin America.

Introductory Presentations

Dr. Daniel López Acuna (PAHO) opened the conference by proposing that quality be defined in terms of satisfaction of clients' needs and expectations through improving health care processes. He suggested that quality should be the primary objective of the political health care sector. Dr. Acuna indicated that the main challenges that face quality improvement programs include the coordination of services and resources, continuous professional education and certification, articulation of a health technology evaluation process, and evidenced-based medicine.

Dr. Jorge Hermida (QAP) discussed the importance of total quality management, starting with the premise that all elements of the management process should be oriented toward quality as defined by the client. A quality program was defined in terms of quality control, quality improvement, and quality design.

Dr. Hermida reviewed various needs of clients (both internal and external) that affect their perception of quality, including interpersonal relationships, access to services, comfort measures, technical competence, effectiveness, and efficiency. Accreditation, licensure, and certification were identified as methods of generating and measuring evidence to support the quality assurance process.

Accreditation

Accreditation models from Canada and the United States were presented. Dr. Elma Heideman (CCHSA) described the Canadian experience and emphasized the importance of a philosophy of patient-centered care, quality improvement, and community health. Competency standards, information systems, and a high degree of leadership were identified as essential ingredients for a successful accreditation program. The Canadian accreditation model is oriented toward the fulfillment of indicators and standards to reduce risks. Accreditation reports are submitted to the assessed organizations, as well as to authorities at the provincial and national levels. Areas summarized include risk management, strengths, weaknesses, and recommendations. The focus of the Canadian accreditation program is on establishing standards of



accreditation, assisting organizations to monitor their achievements, and accrediting the institutions.

Mr. James Janeski (JCR) and Dr. Paul van Ostenberg (JCR) presented the process of accreditation used by the Joint Commission of Accreditation of Hospitals in the United States. They stressed that the development of standards must be a participative process among surveyors and health professionals and that surveyors demonstrating knowledge and diplomacy should perform surveys. They also stressed that standards established through the accreditation process require time to implement and institutional preparation. Accreditation is not a final goal, but a dynamic process that is part of generating a culture of quality. The granting of accreditation differentiates an institution, thus placing it in a better position to deliver quality health services.

Certification

Dr. William Jessee (AMA) outlined the key elements of professional certification in the United States. First, certification is not governmental; the executing agency is usually a private organization. Physicians, nurses, and other health care professionals seek certification as a means of establishing credibility in a specialty such as critical care. Thus, certification is voluntary and outside the formal education and licensure processes. Typically, certification involves taking a specialty examination for which the candidate covers the cost. Dr. Jessee described some weaknesses of certification (e.g., examinations measure knowledge but not the technical competence of a practitioner). Once a practitioner has been certified, the focus may be on the “pedigree” rather than on professional accomplishments. Also, intervals between recertifications are long.

Dr. Jessee also described a new program of physician accreditation initiated by the American

Featured Presentations

- Dr. Daniel López Acuna, Pan American Health Organization, *General Framework on Quality Assurance and Quality Improvement Programs in the Region of the Americas*
- Dr. Jorge Hermida, Quality Assurance Project, *Principles and Framework of Quality Assurance*
- Dr. Elma Heideman, CCHSA, *CCA Program in Canada*
- Mr. James Janeski and Dr. Paul van Ostenberg, Joint Commission Resources, *General Vision on Accreditation*
- Dr. William Jessee, American Medical Association, *Certification*
- Dr. Joelle Lescop, Medical College of Quebec, *Licensure in Canada*

Medical Association. The program requires physicians to meet standards relating to personal qualifications, the environment of care, clinical care processes, and results of patient care.

Licensure

Dr. Joelle Lescop (Medical College of Quebec) described licensing procedures in Canada. Licensing is carried out after an individual receives a university diploma and completes the specialty requirements. The practitioner submits not only to an exam to measure knowledge, but also to an evaluation of clinical competencies in real practice for five days. The system in Canada is unique in that the state is the payer and a database is maintained that permits the government to locate each professional. Thus, the government has the ability to track physicians and their performance. The state also regulates the educational process, determines income levels, and sets caps on the number of individuals who can enter a particular specialty per year.



Conclusions

Several important conclusions were drawn from the information presented and from the small group discussions. In general, it was felt that systems of health care service delivery vary throughout the world as well as political processes of health care reform and methods of quality assurance. Thus, it was concluded that the social, cultural, and political context of a particular country should be considered before designing a quality program, with emphasis placed on primary and intermediate care.

In addition, it was felt that proposals for quality improvement should be comprehensive, to include accreditation, licensure, and certification. Voluntary accreditation was considered the most reasonable approach such that client participation is stimulated and that standards are promoted and established. The accreditation process would be most effective if it were designed by and adapted to the needs and resources of individual countries. Accreditation would be a valuable quality assurance approach not only in hospitals, but also all health care institutions within the system of services.

Most countries have a standard system for licensing professional practitioners; however, this is a purely bureaucratic process that does not evaluate the quality, knowledge, or competence of the practitioner. Licensing should remain the responsibility of the state, which is legally authorized to do so and can maintain a database to support quality control. However, objective measurements have not been designed to evaluate the impact of the process. Also, there is a disparity in standards between countries in relation to the licensing of institutions (e.g., hospitals).

Certification procedures also vary between countries. A universal definition and process of certification would be helpful to all Latin American countries. Unfortunately, incentives for certification

are primarily economic. Specialists who are certified are more likely to receive referrals and consequently, higher wages. The focus of certification would be better placed in assuring quality of care, rather than creating competition between professionals.

Recommendations

After two days of sharing information, four small groups were assigned specific topics—accreditation, licensure, certification, and the role of the government. These groups developed the following recommendations, which were discussed during the final round table:

- Create a national plan for assuring the quality of health care services and make it a priority
- Develop a legal framework that supports the correct application of standards
- Include a mechanism to incorporate scientific and technologic advances (i.e., evidence-based medicine) into medical care
- Include the certification, licensure, and accreditation of health providers (individuals and institutions) in the process of quality improvement and in the national plan for health services
- Develop a culture of quality
- Reinforce professional ethics and include human rights
- Reinforce continuing professional education
- Develop a glossary of quality terms for the region
- Construct an integrated approach to quality measurement
- Take into account cultural and ethnic differences in the development of processes
- Establish incentives that promote and reinforce the processes
- Promote the participation of scientific societies, associations, educators, and health authorities
- Establish certification and evaluation of educational programs for health professionals





Development of a Hospital Accreditation Program: The Zambian Experience

Dr. Mwendaweli Maboshe and Mrs. Joyce Tembo, Central Board of Health of Zambia

Anne Rooney, RN, MS, MPH, Executive Director, Consulting Services for Joint Commission Resources, Inc.

ZAMBIA, a developing country of nine million people located in southern Africa, faces multiple and serious health challenges as a result of its significant resource limitations, widespread poverty, rising unemployment, waterborne diseases (e.g., cholera and dysentery), tuberculosis, and the HIV/AIDS pandemic that has devastated much of sub-Saharan Africa. In response to these formidable challenges, Zambia initiated a major health reform effort in the mid-1990s, resulting in a restructuring of health sector planning and financing, as well as monitoring and evaluation structures and functions. In support of this reform effort, and with the sponsorship and technical assistance of the Quality Assurance Project (QAP), Zambia instituted a national quality improvement and accreditation initiative in 1997.

Because of the lack of standards or regulations for the performance or evaluation of the majority of Zambia's approximately 80 hospitals, Zambian health leaders identified the development of a mechanism for establishing standards and evaluating hospitals as a reform priority. In order to facilitate standards development and the design of an accreditation program, a multidisciplinary advisory group entitled the Zambia Health Accreditation Council (ZHAC) was established as a first step.

The ZHAC was actively involved in developing and field-testing a first draft of standards that identified 13 key functional areas for every hospital (Figure 1), as well as 49 performance standards and associated measurable criteria. A sample performance standard and associated measurable criteria for the functional area Admission and Assessment are

shown in Figure 2. The set of draft standards was then distributed to all hospitals and health professional associations throughout Zambia as part of a consensus-building process known as a "field review." The reviewers' responses were overwhelmingly in favor of adopting the standards, with some modifications.

Following the field review, the standards were revised and a draft survey process developed and field-tested at hospitals of various sizes and types, ranging from a 100-bed mission hospital in a rural village to an 1,800-bed teaching hospital in the capital city of Lusaka. The survey methodology included a combination of leader, patient, and staff interviews; building and equipment tours; observation of patient care; document review; and clinical record review. All areas of the hospital, from patient care to the operating theater, laboratory, pharmacy, radiology, kitchen, laundry, and central sterile supply are included in the scope of the hospital accreditation survey process. Because of limited resources and the relative absence of formalized written policies and procedures in most Zambian hospitals, much of the survey's emphasis is on evaluating processes and outcomes of care through observation and interview.

The Monitoring and Evaluation Unit of the Central Board of Health, operating under the direction of the Ministry of Health, currently administers the hospital accreditation program. Accreditation surveyors were selected and trained. The group was comprised of physicians, clinical officers, nurses, dentists, pharmacists, and medical technologists. A team of three surveyors was assigned to conduct the



on-site hospital surveys. Each new surveyor completed a three-day didactic training course on the standards and survey process; followed by an on-site preceptorship at several hospitals, before being assigned to independently conduct a survey.

The standards and survey process are designed to assist hospital leaders and staff in prioritizing their resources, needed improvements, and funding. The major functional areas requiring improvement, as demonstrated in the initial surveys, were as follows:

- general hospital infrastructure supports, (e.g., building and equipment maintenance)
- availability of adequate supplies (e.g., soap, gloves, laboratory reagents, radiology film, medical equipment) and essential medications
- documentation of standardized processes or written policies and procedures in patient care, laboratory, radiology, and pharmaceutical services
- infection control practices, policies and procedures, and surveillance
- environment of care issues (e.g., fire safety and disaster preparedness)
- adequate and competent staffing for safe patient care

Despite the severe resource limitations of a developing country such as Zambia, both hospital leaders and key stakeholders within the country, including

the Minister of Health, believe that many improvements in health care delivery processes are achievable and that the standards will help to prioritize resource allocation and planning.

Throughout 1998 and the first half of 1999, consultative surveys were conducted in all hospitals in Zambia as part of a major field education and consultation effort. The final “rollout” of the accreditation program, whereby actual accreditation decisions and written findings will be distributed, is planned for the last half of 1999. As part of the operations research component of QAP, a multi-year impact study is being conducted in which performance of the standards will be measured for a set of randomly selected cohort hospitals over time, and improvements will be noted.

In addition to monitoring compliance with defined structures and processes identified in the accreditation standards, the cohort hospitals will be evaluated for improvements in patient and organizational outcomes that are expected to be related to

improved processes (e.g., a reduction in nosocomial infection rates or an increase in patient satisfaction). The study will be among the first of its kind to measure the impact of organizational standards and accreditation on improvements in health care delivery and hopefully will provide valuable information to guide the development of similar health reform and improvement initiatives in other developing countries.

Figure 1

Key Functional Areas of the Zambian Hospital Accreditation Standards

- Admission and assessment
- Laboratory services
- Radiology services
- Pharmaceutical services
- Patient care
- Patient rights
- Continuity of care
- Environment of care
- Infection control
- Leadership
- Quality assurance
- Human resource management
- Management of information



Figure 2

Functional Area: Admission and Assessment

There is an established process for admitting patients to the hospital that prioritizes care based on the assessed needs of the patient.

Intent Statement: The order in which patients are seen for admission is determined by their degree of need. Patients with immediate needs are given priority for assessment and intervention. The hospital designs and implements an effective and efficient process for admitting patients that considers the following elements:

Scoring					
	Met	Partially Met	Not Met	Not Applicable	
a					a) Registration process is completed.
b					b) Patients with immediate needs are prioritized for assessment and intervention.
c					c) There is a standard for checking waiting times of patients in Outpatient Department and Admission.
d					d) Communication of information between departments and staff involved in care.
e					e) Timely completion of requested diagnostic testing.
f					f) All of these processes are documented in policies and procedures and standardized within the hospital.

Sources of Information:

1. Interviews with clinical and nonclinical staff addressing the registration process
2. Observation of the admitting area
3. Interviews with patients and families
4. Patient records

The Zambian approach to applying quality assurance to its hospital system is unique for a developing country facing such enormous health and social problems. If successful in standardizing hospital care processes and improving health out-

comes, the Zambian model of hospital accreditation could serve as a model for other countries around the world.





Self-Regulation of Hospitals: A Private Sector Initiative in Mumbai City, India

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THE issue of quality in health care services assumes special significance in countries with limited resources. In such instances, the private sector, which often provides questionable quality of care and more often than not functions without regulation and accountability to authority, dominates health care services. Many countries, operating under structural adjustment programs, have policies that support and promote increased involvement of the private health sector in the delivery of health care services. Thus, health ministries have endeavored to find ways and means to ensure that private health care services provide quality care (e.g., enacting legislation for hospitals,¹ evolving standards for hospitals, setting up accreditation systems, setting up accreditation systems, establishing QA programs,² and setting up health care facilities).

The scenario described above is similar to the situation in India. Recent studies show that 60 to 70 percent of ambulatory care patients and 40 to 50 percent of hospitalized patients solicit medical care from the private health sector, which accounts for 4 to 5 percent of the gross domestic product. But too often, services offered by private health care agencies are characterized by over-prescribing, unnecessary use of injections, over-investigation, and prohibitive cost. Because a majority of Indian states do not have laws or standards governing private hospitals, there is a virtual absence of

monitoring or accountability for most provider hospitals.

To address this concern, India is exploring various methods of providing and monitoring the quality of private health care services, including the viability of self-regulation for private hospitals through an accreditation system.

From August 1997 to June 1998, Mumbai City assessed and documented the needs and views of various stakeholders (various hospital owners and administrators, specialist and consumer associations, government functionaries, financial and insurance companies, and patients) about the possibility of creating an accreditation body for private hospitals. A number of tools, including a mailed questionnaire, a semi-structured interview schedule, a structured interview schedule, and two workshops generated quantitative and qualitative data.

The study called attention to areas of agreement and disagreement among the stakeholders but noted overall consensus regarding the need and desire for an accreditation body. Most stakeholders thought that hospital owners, consumers, and the government should play a leading role in establishing such a body. They further agreed that the body should assess and assist hospitals in maintaining and upgrading standards to ensure continuous quality improvement. A majority of those involved felt that

¹ Until recently, only the states of Maharashtra, Delhi, and West Bengal had an act for regulation of private hospitals. Due to pressure from consumer organizations, the states of Tamil Nadu, Bihar, Punjab, Manipur, and Kerala are in the process of enacting legislation.

² All India Institute of Medical Science, New Delhi is working on a QA program for hospitals. Additionally, there is a project undertaken in the four states of India, namely, Andhra Pradesh, West Bengal, Punjab, and Karnataka, to improve quality of care in secondary hospitals.



the accreditation body should monitor consumer satisfaction pertaining to physical aspects of health centers, medical equipment, qualification and number of staff, type of treatment, and follow-up care.

The stakeholders also believed that the forum should function as a non-profit body, that hospitals should be graded, and that internal assessments should be conducted by participating hospitals (followed by evaluations from external teams), and that the body should provide recognition and rewards to hospitals that satisfy standards. Stakeholders' views differed regarding the monitoring of the number of hospitals and beds in a geographical area, professional fees and hospital charges, incorporation of patient redress, and disclosure of assessment findings.

In response to these findings on stakeholder needs and heightened interest in creating an accrediting body, Mumbai City established the Forum for Healthcare Standards (FHS). The FHS consists of hospital owners' representatives, professional bodies, consumer and nongovernmental organizations, nurses' associations, and government representatives. FHS is currently at a formative level, though the potential exists for it to become a credible accreditation body on the basis of a collaborative and democratic system that addresses the needs of all stakeholders through open dialogue. Ideally, participants will mutually acknowledge areas that need strengthening while working cooperatively towards solutions.

For hospitals with 10–50 beds, FHS is involved in setting standards for structural design, equipment, and medicine, including wards, labor rooms, operating theaters, essential drugs, reception rooms,

consulting rooms, changing rooms, pantries, medical records, and waste management. The FHS is simultaneously considering system- and process-related issues, including grading, method and periodicity of assessment, and financing of the body, as well as other areas (e.g., indicators). Subsequently, the forum plans to develop performance standards and indicators for specialties and superspecialties.

Administering an accreditation system is not an alternative to the government's role in regulating health care, but is rather an additional, more collaborative role for governments, given the present scenario of changing health care systems. The present efforts (which are seen as formative) in Mumbai demonstrate how the introduction of accreditation systems in many developing countries can improve the quality of care through cooperative alliances and partnerships. Furthermore, they model a process for implementing accreditation system that is practical, indigenous, and relevant to the unique health care concerns of individual countries.³

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To request copies of the study, please e-mail: snandraj@hotmail.com.

Acknowledgments: The author acknowledges the contributions of Ms. Anagha Khot and Ms. Sumita Menon in the conduct of this study. The Special Programme for Research and Training in Tropical Diseases (TDR), World Health Organization, Geneva, provided the funding.

³ The author notes that findings continue to be disseminated to other parts of the country. Several states in India have shown an interest in the work done in Mumbai City.



This article is based on the author's direct experience with the development of the initiative in Mumbai City and on the following sources of information:

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What's New

Upcoming Conferences:

17th International Conference of the International Society for Quality in Health Care. September 13–16, 2000. Royal College of Surgeons, Dublin, Ireland. Fax: 353-1-402-2458 or Email ISQua at Conferences@rcsi.ie

American Society for Quality, 54th Annual Quality Congress and Exhibition. May 8–10, 2000. Indiana Convention Center and RCA Dome, Indianapolis, Indiana. <http://aqc.asq.org>

Products and Publications:

"Quality: A Focus on Results"—a profile of three companies that made a commitment to continuous quality improvement. Free from The American Society for Quality, 800-248-1946.

Health Care Quality Review – a compendium of articles, strategies, case studies, and proven quality tools for the implementation of effective quality programs. Call 800-655-5597 or Email: customer.service@aspenspubl.com. Order #10678 for \$79.00.

QCI International, publisher of *Quality Digest*, sends out monthly a free Email newsletter titled, "Timely Tips for Teams." If you are interested in receiving the newsletter, please write to don@qci-intl.com for more information.

Quotable Quotes:

"The real key to quality is the behavior of our people. To bring about the level of quality that is required to survive in the 21st century we need to change the way our people—all people, from the boardroom to the boiler room—think, act and behave."

H. James Harrington, *Quality Digest*, July 1999



Quality Improvement in South Africa: The COHSASA Accreditation Initiative

Stuart Whittaker, Managing Director, COHSASA

Anne Rooney, RN, MS, MPH, Executive Director, Consulting Services for Joint Commission Resources, Inc.

IN a variety of industries worldwide, accreditation is recognized as a symbol of quality indicating that an organization meets certain performance standards. In 1992, a set of multidisciplinary accreditation standards appropriate to health care delivery systems in South Africa was developed as a pilot project. Three years later, the Council for Health Service Accreditation of Southern Africa (COHSASA) was initiated to develop an accreditation program for South African health care facilities that includes hospitals, sub-acute care facilities, psychiatric programs, and primary health care clinics.¹

COHSASA's vision is the development of a cost-effective accreditation program for South African health care facilities that will enhance their performance, be seen by the public and funders as a hallmark of quality, and result in quality patient care. The specific objectives of COHSASA are highlighted in Figure 1.

COHSASA Standards

In South Africa, COHSASA has established close links with national and international professional organizations that actively participate in the standards development process. Several key concepts underpin all standards, individually and in the aggregate. These concepts are relevant to standards used to judge minimum expectations, as well as to those identifying exemplary practices. They include the following:

- The focus of standards is on the patient and, when appropriate, his or her family; on the provision of services to meet the identified needs of patients, consistent with the mission and resources of the health care organization; and on the protection of and respect for basic patient rights.
- Health care organizations have a basic obligation to understand the needs and expectations of those whom they serve and the extent to which they are meeting those needs and expectations.
- The leaders of a health care organization have a responsibility to provide effective management; services that are responsive to community needs for preventive, curative, and palliative services; and foster a culture that supports continuous improvement in the performance of the organization and the quality of the services provided.
- The standards address and provide a framework for a systematic approach to the measurement and improvement of care processes and outcomes of care, and the continual reduction or elimination of risks to patients.

Most frequently, structural standards define the expectations of entry-level organizations, while standards that identify expected outcomes are most useful in determining exemplary practices. Accreditation standards that reflect an appropriate mix of types are most likely to enjoy broad application and use.

¹ *In the South African health industry, to earn and maintain accreditation, an organization must undergo an on-site survey by a team of health professionals at least every two to three years.*



Figure 1

COHSASA Objectives

- *The development and implementation in South African health care facilities of standards that defined requirements for quality health service provision throughout all levels of service delivery*
- *Accurate assessment of existing performance of participating facilities through the identification of deficiencies and requirements for meeting the prescribed standards*
- *Empowerment of staff through the introduction of quality improvement and participative management processes*
- *Optimal use of resources to effect compliance with the standards according to the financial constraints of the country while considering the rights of all South African citizens to receive quality care as specified in South Africa's constitution*

The standards are comprehensive and establish performance and structural expectations that address the care of the patient, the creation of a safe environment of care, and the effective management of the organization. Such standards can be grouped into two general categories—those that focus directly on **the care of the patient**, and those that focus on **the management of the organization** (Figure 2).

The Accreditation Process

The accreditation process includes the preparation of facilities for accreditation, the external survey, and the decision process.

The Preparatory Stage

The baseline survey is carried out at the start of the program to determine the starting level of compliance with the standards. This is followed by introduction of a multidisciplinary continuous quality improvement approach and a second internal survey.

The COHSASA program has been designed to empower employees to achieve accreditation through their own efforts, based on a multidisciplinary continuous quality improvement (CQI) approach. CQI is a management method that seeks to develop the organization in a new way so that, in an orderly and planned fashion, everyone at all levels can play an active role in understanding the problems and the processes of the work.

A COHSASA facilitator is appointed to work with a participating hospital for a period of 9 to 18 months for first-time entrants, depending on how far the hospital is from meeting the standards and 3 to 6 months for second-time entrants, depending on the

Figure 2

COHSASA Standards Areas

Standards that focus on the care of the patient address at least:

- *Patient rights*
- *Access to care*
- *Continuum of care*
- *Patient assessment*
- *Care planning and the delivery of care*
- *Education of the patient and his or her family when appropriate*

Standards that focus on the management of the organization address at least:

- *Leadership of the organization*
- *Roles and responsibilities of staff*
- *Management of information*
- *Creation and maintenance of a safe environment for patients*
- *Infection prevention and control*
- *Quality management and human resource management*



need of the hospital. Facilitators are highly qualified, experienced, and well-trained health professionals who work with hospital staff to assist them in their efforts to meet the program's standards through personal involvement and networking.

Facilitators conduct in-service training programs aimed at helping hospital staff to understand the standards and to be in a position to assess the degree of compliance the hospital has achieved in meeting the standards. Hospital staff are then taught to use a variety of analytical tools to gain an understanding of the work processes. As a result, they develop a sense of ownership of the program and become empowered to use their own skills and resources to understand the standards, assess their hospital's level of compliance, and work towards meeting the standards. Staff members do this by applying a systematic problem-solving methodology based on sound project management principles.

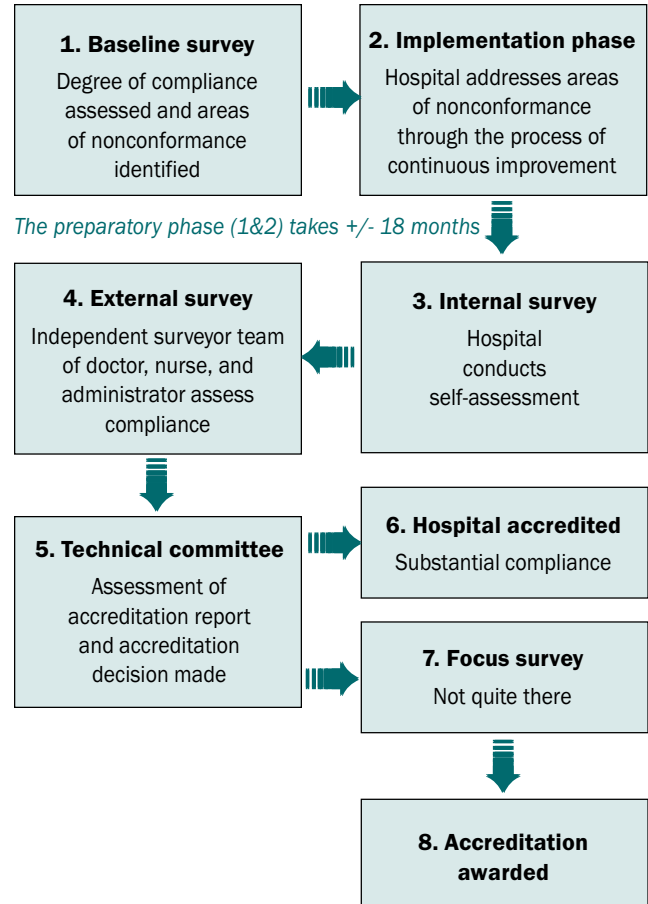
Toward the end of this phase, staff conduct a second internal survey to evaluate their own performance. The results are again processed by COHSASA, and the hospital receives extensive feedback regarding its compliance with the standards.

The External Survey

The external survey is conducted by COHSASA's external surveyor teams and is usually made up of a doctor, a nurse, and an administrator. The external survey is carried out after the preparatory phase and is designed to provide an independent assessment of the hospital.

The Accreditation Decision

Reports are submitted to a technical committee that consists of experts in the field of health care. The committee makes recommendations to the Board on the accreditation of participating hospitals. The



Board, based on the recommendations of the technical committee and the evaluation of all reports, awards the certificate of accreditation.

Accreditation Impact Research Study

In May 1999, under the sponsorship of the Quality Assurance Project (QAP), a two-year multinational research study assessing the impact of the COHSASA accreditation program on selected structural, process, and outcome measures was initiated. Using a randomized control methodology, the study monitors improvements in standards compliance over time in ten control hospitals, as well as in ten intervention hospitals that are participating in the COHSASA accreditation program.



Figure 3

Results achieved

Through June 1999, 101 public and private hospitals and 48 primary health care facilities and subacute care facilities have been accredited by COHSASA.

In both the private and the public sectors, a large proportion of facilities failed to meet the core standards at the baseline survey. Even at the time of the external survey, a large number of hospitals still had important deficiencies that had to be addressed by a focus survey. However, the attitude of participating hospitals was extremely positive, and the hospitals rapidly put the remaining requirements in place. Even in those public hospitals where resources are extremely scarce, magnificent achievements are being made. Extra effort, however, will be required to enable some rural hospitals to achieve compliance. Given this effort, compliance is not out of reach.

In addition, a joint U.S.–South Africa research team will measure the performance of the study hospitals on 10–15 quantitative and qualitative indicators, such as rates of post-operative wound infections, patient perceptions of care, general hospital sanitation, completeness of medical records, and neonatal mortality. This study, along with a complementary accreditation impact study in Zambia, is expected to be seminal research studies evaluating the impact of accreditation on health outcomes.



Field Activities Update

Use of Quality Design in Guatemala

In 1999, QAP began working with the Ministry of Health (MOH) of Guatemala to: 1) support the MOH in the decentralization of health care services; 2) introduce a focus on quality to all levels of care through the application of different QA methods and tools; and 3) design and implement information, education, and communication campaigns at the local level of health facilities regarding the new quality of services offered.

As part of its second objective, QAP has been introducing quality design tools and techniques to health personnel of six hospitals in the Western High-

lands. The hospitals are using quality design to redesign obstetric services. QAP experience has shown that the redesign or design of obstetric services based on client needs leads to higher client satisfaction.

In each hospital teams composed of all levels of hospital personnel were formed. The teams conducted focus groups to identify the needs and requirements of the women who came to the hospitals for obstetric care. The focus groups revealed several chief complaints: perceived misdiagnosis by providers, lack of privacy and comfort, poor explanation of the procedures and treatment by providers, long waiting times for care, difficulty understanding the language of hospital personnel, and having to share beds with other

patients. This dissatisfaction with hospital amenities and poor communication of providers resulted in women infrequently coming for care, and thus greatly increasing the rate of high-risk and problem pregnancies.

The quality teams used this information to make necessary changes in the waiting time and addressed features of the hospital that would make it safer and more comfortable. Now the teams are expanding their scope by training hospital doctors in clinical standards of care; introducing the provision of services at the of the community center level, where most communities seek care; and incorporating regular monitoring and supervision in all activities.

Dr. Carlos Gonzalez L.



Focused Accreditation

Diana R. Silimperi, MD

Deputy Project Director, Quality Assurance Project

AS NOTED in the preceding articles, there is a growing expectation for improved quality in health services in both developing and developed countries. Traditional accreditation has proved to be a powerful quality improvement method, especially in hospital settings. More recently, a more selective or “focused” form of accreditation is being piloted, largely in primary health care settings in a number of countries. For the purpose of exploring this emerging adaptation of traditional accreditation, this article will introduce the term “focused accreditation,” though some may prefer the terminology “nonformal, informal accreditation” or “quality evaluation.” No doubt, as more experience is gained, the differences between focused and traditional accreditation will be clarified, as well as whether or not those differences merit the use of a new terminology “focused accreditation.” Hopefully this article will stimulate thinking about new applications of accreditation.

What is “Focused Accreditation”?

The term “focused accreditation” refers to the process by which a recognized body performs a selective (or focused) review of one or more functions of a health care organization (in contrast to all functions of the entire organization), and assesses its ability to meet a set of standards and criteria specifically related to the selected function or service area. Health care organizations which consistently meet the standards receive recognition from the assessing body, and may be awarded a symbol (e.g., star) to exemplify their achievement. The symbolic quality award and ensuing public recognition make focused accreditation a powerful vehicle

to improve individual provider and organizational performance. The process also fosters increased public expectations of quality service.

Focused accreditation is a relatively new term, and hence, may evolve with time to reflect new applications of the accreditation process in diverse care settings. The examples discussed below are drawn from project experiences. Currently there are few large scale focused accreditation programs (UNICEF’s Baby Friendly Hospitals being the exception).

How Does Focused Accreditation Differ from Traditional Accreditation?

Development of Standards, Health Facility Setting, and Accrediting Body

Accreditation is a formal process whereby a recognized body (often a nongovernmental organization) assesses a health care organization’s abilities to meet pre-determined, published performance standards.¹ The standards it uses to assess performance are commonly developed by expert committees working with the accrediting body and are revised periodically to reflect advances in technology, treatment regimes, or policy changes. Traditional accreditation has commonly been applied in hospital settings, although recently its application in primary care and community settings has been receiving considerable attention. It uses a formally recognized body to analyze performance results and determine accreditation status. The accrediting body may be a government body or a parastatal, but is most often a nongovernmental, private (often nonprofit) organization.

¹ Licensure, Accreditation, and Certification: Approaches to Health Services Quality, A. Rooney et al, 1999, p. 3.



Figure 1

Comparison of Traditional and Focused Accreditation*

Traditional Accreditation	Focused Accreditation
<i>Development of Standards</i>	
Uses pre-determined, published standards or guidelines	May use pre-determined, published standards or guidelines, but may also stimulate the development of new standards specifically for the review
Standards tend to be process oriented, less emphasis on performance outcome measures	Standards include both process and performance outcome measures, with more emphasis on individual provider performance
Standards are optimal achievable, designed to encourage continuous improvement at organizational level	Standards are optimal achievable, designed to encourage continuous improvement at individual and organizational levels, with emphasis on self-assessment prior to external review
Standards focus on quality from organizational perspective, relative to client criteria of quality	Standards include more client perspective of quality
Standards are usually developed by an expert body and recognized nationally	Standards are more likely to be developed locally, with community and client input
<i>Health Facility Setting</i>	
Concentration on hospital accreditation	Concentration more on primary care facilities
<i>Accrediting Body</i>	
Accrediting organization is usually a legally recognized, established, and sustainable organization (often nongovernmental) with broad purview	Accrediting body may be constituted just for the purpose of a particular review, does not necessarily have a legal identity, and may focus on smaller region or specific geographic area
Accrediting body is often nongovernmental, independent from Ministry of Health	Accrediting body commonly is associated with (or part of) the Ministry of Health
<i>Scope of Assessment</i>	
Standards are focused on broad organizational processes or functions within entire organization	Standards are focused on specific processes inclusive of the entire organization
<i>Role of Self-Appraisal and QI Skills Development</i>	
Self-appraisal and QI skills development are not emphasized	Emphasis on self-appraisal and QI skills development, viewed as integral aspects of the process
<i>External Surveyors</i>	
Accreditation decision made by team of external peer reviewers, usually professionals	Accreditation team more likely to include community/clients as well as local providers and professionals
<i>Dissemination and Use of Results</i>	
Results available to public, but degree of public dissemination varies; traditionally used more internally by organization (this is changing with link to financial/government financial incentives)	Results purposefully shared with public/consumers to foster improved provider performance and stimulate demand for quality services
Voluntary process, but increasingly linked to financial “incentives”	Voluntary process, but commonly linked to public recognition and increasing public expectations for quality
<i>Tenure of Accreditation</i>	
Time between reviews varies, based on results of review, but typically is between 2 and 3 years	Time between reviews varies, but generally about one year

***Bold** indicates area of critical difference



Focused accreditation is more commonly used in primary health care facilities and is usually carried out by a newly constituted local organization or body established specifically to perform the focused assessment. The performance standards used in focused accreditation may be pre-existing, but are relatively unknown and are often newly developed for the purpose of focused accreditation. Hence, although pre-agreed upon by the participating organizations and the accrediting body, they may only be published with the start of the focused accreditation program. The accrediting local body for focused accreditation is more likely to be part of or directly associated with the Ministry of Health.

Finally, it is important to note that both focused and traditional accreditation are standards-based forms of evaluation, and use optimal, but achievable standards.

Scope of Assessment, Role of Self-Assessment, and External Surveyors

Traditional accreditation emphasizes organizational capability and performance, rather than individual practitioner performance. Hospital accreditation standards are usually arranged around key patient and organizational functions or departmental services. All functions or departments within the health organization are included in the scope of traditional accreditation; hence, it is the entire facility that is assessed. Specially trained surveyors perform the assessment, reporting their results to the accrediting body. Community representation is limited.

More recently, traditional accreditation programs (especially in developing countries) have included some element of self-appraisal and incorporated quality improvement approaches to assist the institution in its preparation for the external survey. Although the accreditation process itself encourages continuous improvement, traditional programs have tended to concentrate more on the external survey,

giving less attention to capacity building in the area of quality improvement (QI) methodological skills.

Focused accreditation also assesses organizational capability, but pays relatively more attention to individual practitioner performance. The standards it uses are more likely to be developed by local professionals, and may include community or client input. As the name implies, the scope of focused accreditation is more limited, concentrating on a particular type of service or organizational function (i.e., reproductive health or adolescent services), rather than the full range of functions performed by the health care facility.

While both traditional and focused accreditation use external peer reviewers to perform the assessment, reviewers for traditional accreditation tend to be professional providers or managers, while the review team for focused accreditation may include community members or clients. In addition, focused accreditation uses self-appraisal as a vehicle to incorporate quality improvement (particularly team-based problem solving) as an important component of the accreditation process, and puts more emphasis on the development of QI skills within the participating institution.

Dissemination and Use of Results, Tenure of Accreditation

Both traditional and focused accreditation are voluntary processes, with the results of their performance reviews available to the public. Although the dissemination of specific findings from traditional accreditation may be limited to the participating facility, the results increasingly have financial ramifications (i.e., approval to receive third party or public sector payments). Focused accreditation, on the other hand, is more commonly associated with a communication campaign to disseminate findings, in order to bring public “recognition” to the



providers and their facility, and to increase public awareness of quality. For this reason, the accrediting body of focused accreditation may reward facilities that achieve accreditation status with some symbol of quality (e.g., gold star). Although, monetary recompense may follow due to increased public utilization of an accredited facility, focused accreditation is less associated with funding agency decisions about reimbursement for services and more with increasing the public's knowledge and use of quality services.

The usual cycle of traditional accreditation is 1 to 3 years, with shorter intervals for those institutions given conditional accreditation, requiring specific improvements noted in the accreditation report. Focused accreditation relies on more frequent monitoring and may be repeated every 6 months to a year.

Because the concept of focused accreditation is relatively new, there are only a few experiences upon which its "characteristics" can be based. As the process gains wider use, the differences and similarities with traditional accreditation can be delineated in more detail, as well as the functional interface between both approaches when they co-exist within a country.

Examples of Focused Accreditation Programs

Gold Star (Egypt)

In Egypt, the Ministry of Health and Population (MOHP) teamed with the Ministry of Information (MOI) to launch the Gold Star Quality Program.¹ Research and evaluation of client perceptions of quality, as well as images of providers and services

associated with quality, were used to select a symbol of quality—the "gold star." A communication campaign was then undertaken to foster consumer recognition of the gold star as a symbol of quality family planning services, and to inform the public about realistic expectations of quality family planning services. Communication messages promoting provider and service quality were widely disseminated and influenced not only consumer, but also provider perceptions of quality.

During the campaign period, the MOHP concentrated on improving basic equipment and renovation of primary clinics, along with training physician and nurse providers. National Clinical Standards of Practice were implemented with 101 indicators of quality service. In addition, management and monitoring systems were introduced at family planning units, in conjunction with a computerized MIS that enabled providers to track quarterly indicator scores at each service delivery site. It was decided that a gold star award would be granted to any family planning unit that met all 101 indicators for two quarters in a row and retained by any facility that was able to maintain its score. Quarterly monitoring of the quality indicators in accordance with the National Clinical Standards promoted facility-based quality improvement.

A second phase of the communication campaign was launched after a sizeable number of units had achieved "gold stars"; it focused on promoting the specific local "gold star" clinic sites and the providers in them. Public recognition of gold star accreditation stimulated increased expectations and demand for such services, as well as increased utilization of gold star facilities.

¹ *The Gold Star Program was developed and implemented with technical assistance from JHU/CCP. References for this section include: Population Reports, "Improving Care and Raising Expectations" (H. Gebaly et al. ICPD 1998) and Communication Impact, "Egypt's Gold Star Quality Program Wins Clients and Communities" (CCP 1998).*



Proquali (Brazil)²

In the northeastern region of Brazil, several concurrent, but individually focused initiatives to expand coverage and improve the quality of reproductive health services met with limited success. The state health officials, USAID, and the three Cooperating Agencies (Management Sciences for Health [MSH], Johns Hopkins University/Center for Communication Programs [JHU/CCP], and Johns Hopkins Program in International Education and Training in Reproductive Health [JHPIEGO]) then developed an integrated, synergistic, client-centered performance improvement model. Essential to this model was the prior development and approval of reproductive health service guidelines (RHSG), which could serve as performance improvement standards for quality reproductive health (RH) service within the two participating states. During this period, decentralization also gained momentum, and local municipalities began to assume responsibility for health services, actively identifying service delivery gaps and strategies to improve the quality of local services.

The “Proquali” model includes: infrastructural supports, a clinic-based recognition process, and a performance improvement process. The recognition process coupled with the performance improvement process became an example of focused accreditation. One important element of the Proquali model of focused accreditation is its emphasis on self-evaluation. Self-assessment checklists for providers and managers of service delivery points are used as learning and performance monitoring guides. The checklists can be used to assess whether practices are consistent with the RHSGs and to identify areas needing improvement. External assessment is also conducted by members of the state Quality of Care

Recognition Commission (QCRC), established specifically to undertake the review and grant approval (focused accreditation in reproductive health) of participating primary health clinics.

In order to receive a QCRC assessment, a health clinic must successfully pass a two-day qualifying visit and then demonstrate that it has maintained the standards of quality RH for three months. During the pilot phase, 61 “recognition” assessment criteria were developed in five service areas: RH service delivery; infection prevention and control; Information, Education, and Communication Programs (IEC); physical plant and materials; and management infrastructure support systems. Each of the criteria was given the same value, one point. But, in order to satisfy each criteria, all items listed for verification had to be met. Furthermore, at sites with more than one provider, up to three providers had to be observed and all of them had to meet the items in order to receive the one point for that criteria.

During the pilot project, a clinic had to achieve at least 80 percent in each of the five service assessment areas in order to qualify for the second visit. Ninety-five percent of the total criteria had to be achieved at the second visit in order to be “recognized” by the QCRC. After the pilot, only one external assessment visit was built into the model, and the “cut-off” point for recognition was set at achieving 95 percent of the criteria. In this example of focused accreditation, results from the assessments serve the basis for both the quality improvement and the recognition processes.

² The Proquali model was developed and implemented with technical assistance from MSH, JHPIEGO, and JHU/CCP. Dr. Edgar Nechochea, JHPIEGO, kindly supplied the information for this section.



Baby Friendly and Mother Friendly Hospitals, Worldwide³

The Baby Friendly Initiative, co-sponsored by UNICEF and WHO, is one of the earliest and largest focused (or nonformal) accreditation programs. The initiative recognizes hospitals and birthing centers that create optimal environments for breastfeeding through the implementation of ten steps designed to promote successful breastfeeding. Hospitals or birthing centers make the decision to participate in the initiative through submitting an application, which includes a letter of intent, fee, and self-appraisal in regard to the promotion of breastfeeding. The “standards” for recognition consist of the “10 steps to successful breastfeeding.” When a participating hospital has implemented all steps, an onsite assessment is conducted by a WHO/UNICEF-appointed, “baby friendly” survey team, along with a review by the Baby Friendly External Review Board. Those hospitals assessed by the surveyor team and the Review Board to have successfully implemented all steps are deemed “baby friendly” and may display the logo.

The Coalition for Improving Maternity Services (CIMS) has a similar approach, delineating “10 steps of mother friendly care.” One of those steps is to incorporate the “10 steps of the Baby Friendly Hospital Initiative.”

Future Directions

As decentralization and health sector reform gain impetus in many countries, the responsibility and decision making for health care shifts to local authorities who may be expected to directly experience the benefits of quality service at their local facilities. Expectation and demand for quality services can then be translated into local authority

decisions regarding resource allocation and community pressure to maintain standards. One of the most important characteristics of focused accreditation programs is the emphasis on broad public recognition of quality, conferred by the award of a widely recognized symbol of quality. The symbol conveys status to the institution and its providers, often elevating their own expectations of quality performance.

A number of trends today foster the utility of focused accreditation programs: increased privatization of health services, the shift in public sector responsibility from service provision to policy and oversight for quality/standards, as well as health sector reform, which places the technical oversight of all medical services (private and public) under the aegis of the MOH and strongly encourages cost recovery. When clients pay for service, they demand quality and seek information indicating which service delivery sites or providers are rated as “the best.” Focused accreditation provides clients with an objective comparison (based on standards) between health facilities and may become a means for client participation in recognizing quality through consumer representation on the accrediting body.

It is likely that focused accreditation, with its more selective appraisal and emphasis on performance outcome measures at primary health centers, will also be useful for assessing home-based and community-based medical services—two rapidly expanding service areas. Finally, focused accreditation is particularly suited for promoting quality services for special populations with specific needs (e.g., adolescents or the elderly). The process can also help identify those “accredited” facilities capable of providing quality services and tailored for the needs of these special populations.

³ This section is based on information found in the QAP publication, “Licensure, Accreditation, and Certification: Approaches to Health Services Quality,” A. Rooney et al. 1999. p. 22-23.



ISQua Establishes New Accreditation Federation

Sean Yu, BA, Communication Assistant

THE International Society for Quality in Health Care (ISQua) is currently establishing the foundation for the first worldwide membership body to unite national health care accrediting organizations. The new body, federated in structure, will be known as the ISQua Accreditation Federation. Operating under the umbrella of ISQua, this special interest group will oversee the development of ISQua's Agenda for Leadership in Programs for Health Care Accreditation (ALPHA), the collective name for all of ISQua's accreditation-related activities.

ALPHA had its inception in a series of annual meetings, beginning in 1994, between representatives of long-standing national accreditation programs and those from countries where accreditation had recently been implemented or was being considered. In 1996, it was proposed that ISQua take the lead in developing and maintaining international standards and exploring ways in which accreditation organizations could work together as an international council. The launch of the ALPHA program by ISQua represents a major step forward in the development of a global approach towards aligning health care standards and accreditation processes.

The federation's final structure, council, and subcommittees were endorsed and fully operational for ISQua's Sixth Accreditation Symposium in October 1999. Reporting to the ISQua Executive Board, the Federation Council will manage the ALPHA program, which will have several components:

- Support for the development of accreditation activities in different countries

International Society for Quality in Health Care

Incorporated in Australia and consisting of members from more than 60 countries, the International Society for Quality in Health Care (ISQua) is a nonprofit organization that enables individuals and organizations with a common interest in quality health care to share expertise and experience via an international multidisciplinary forum. ISQua is already well known for its work in accreditation and standards. However, as Lee Tregloan, CEO of ISQua, comments:

"ISQua as an organization is about much more than accreditation and standards. An ISQua Board subcommittee steered the groundwork for ALPHA and, like many organizations, is now handing this to a more widely representative group. ALPHA will happen in parallel with other activities. Accreditation and standards development are seen as part of a range of methodologies required to facilitate quality in health care. Hence, ISQua is also developing interests in measurement and performance improvement, with the perspective that these aspects don't only relate to accreditation; other areas are working with governments on quality policy developments and also education programs."

ISQua's Sixth Accreditation Symposium was held on October 10–11, 1999, in Melbourne, Australia, just prior to the start of the 16th International Conference on Quality in Health Care, held October 12–15, 1999, also in Melbourne. QAP staff made two presentations at the October conference: "Improving Quality in a System of Care" and "Evaluation of QA Programs."



- Maintenance and further development of an international framework of principles to serve as the foundation for national health care standards
- Assessment and endorsement of national accreditation standards
- Maintenance and further development of an international set of standards for the operations of national accreditation bodies
- Peer-assessment services for national bodies
- Development of an “accreditation of accreditors” program

The Quality Assurance Project (QAP) has applied for Associate Membership in the ISQua Accredita-

tion Federation. Associate Membership indicates that an organization is in the process of developing an accreditation program, which, when fully estab-

lished, may qualify that organization to be a Full Member—an organization that performs accreditation of health care services as its primary function, addressing specific clinical areas or services. Benefits of membership include access to ISQua’s set of international standards as the basis of peer assessment and the

broadening of a member organization’s own scope of accreditation ability.



From the president of ISQua. . .

ISQua is now proceeding with implementation plans to assess national health care accreditation standards in line with the approved framework and several accreditation organizations have now expressed interest in being peer-assessed in the coming year for international “accreditation as an accrediting organization.” Full membership of the federation is available to ISQua member organizations that are fully operating as accreditation organizations. Associate membership is available to individual or organizational members of ISQua. Contact ISQua for details at www.isqua.org.au

New QAP Products

Bouchet, Bruno. 2000. Monitoring the quality of primary health care. *Health Manager’s Guide* 1(1) (Spanish and French).

Budeyeva, M. 2000. The Tuberculosis Case Management CD-ROM. *Quality Performance Learning Series* 1(2).

Kelley, E., C. Geslin, S. Djibrina, and M. Boucar. 2000. Improving performance with clinical standards: The impact of QA methods on compliance with the Integrated Management of

Childhood Illness algorithm in Niger, West Africa. *Operations Research Results* 1(2).

Knebel, E., S. Lundahl, A. Edward Raj, and H. Abdallah. 2000. The use of manual job aids by health care providers: What do we know? *Operations Research Issues Paper* 1(1).

Knebel, E. 2000. The use and effect of computer-based training in health care. *Operations Research Issue Paper* 1(2).



Improving the Implementation of IMCI

Edward Kelley, PhD, Senior QA Advisor

THE Operations Research (OR) Program of the Quality Assurance Project (QAP) has a mandate to develop and test cost-effective methods for quality assurance in developing countries. To inform partners in developing countries and collaborating agencies about results from the field, QAP is releasing regular OR updates in the *QA Brief*. This update features results of QAP's work in improving the Integrated Management of Child Illness (IMCI) algorithm, a set of clinical guidelines for the care of sick children under five years of age.

The IMCI algorithm is designed to treat the most common causes of morbidity and mortality in children worldwide: measles, malaria, pneumonia, diarrhea, ear problems, malnutrition, anemia, and lack of adequate immunization. WHO and UNICEF have introduced the algorithm in more than 50 countries worldwide.

Whereas considerable evidence exists that the correct application of IMCI will lead to effective treatment of sick children, in practice health workers often fail to comply with the complete algorithm. Health workers report that the algorithm is very time consuming, that they receive little ongoing guidance in correct use of the algorithm after training, and that drugs and supplies necessary for compliance are frequently unavailable.

QAP's OR Program has developed a multipronged strategy designed to address the many issues that hamper the implementation of IMCI in those countries where QAP is working. The priority areas of this strategy appear below.

Research is ongoing in virtually all of the above areas, with results from a number of studies now available. QAP, for example, has tried to improve health worker mastery of the IMCI algorithm by developing a computer-based training (CBT)

program, which has already been tested in Uganda. Here, the program earned wide praise from Ministry of Health officials and participants in an IMCI training course; they see the computer-based program as a useful and innovative tool for learning.

More important, results from the both posttest knowledge scores and scores on performance

in the field indicate no significant differences in performance between the computer-based training and the traditional IMCI courses.

However, the computerized course, through savings in facilitator time and in-class time, costs from 20 to 25 percent less than the traditional course. This study is ongoing with further results due in Winter 2000. Work is also underway to issue a Spanish translation of the program. This program is being developed with USAID in Bolivia.

Priority Areas for Effective IMCI Implementation

- **Mastery.** Health workers achieve sufficient knowledge and skill to perform IMCI correctly and efficiently
- **Attitudes.** Health workers have favorable attitudes towards IMCI
- **Consequences.** For health workers, the positive consequences of performing IMCI outweigh the negative consequences
- **Support.** IMCI-trained health workers have an effective support system
- **Resources.** Facility has adequate resources for correct performance of IMCI



Meanwhile, in Niger, the final results of two studies on IMCI are now available. One measured the cost impact of improved health worker compliance on provider time and drugs. The other examined the effect of two specific quality assurance methods—the structured feedback and quality improvement teams—in improving compliance.

The first study found that at reasonable levels of compliance (75 percent), IMCI has the potential to offer significant cost savings through more rational and efficient drug use without increasing the time providers must spend with clients.

The second study found that using structured feedback, an extremely affordable tool that comes to less than 25 percent of the cost of traditional training, has good prospects for improving health worker performance in problem areas of compliance. Quality improvement teams, in their own right, also

exhibited major potential as a tool for districts implementing IMCI. Facilities with active quality improvement efforts performed significantly better on IMCI indicators than comparable facilities without teams. These results are summarized below.

QAP plans to continue its work as a leader in studying and improving approaches to IMCI implementation through its OR Program. Reports from a number of studies will be available soon. In addition, the Uganda version of the IMCI CBT program is completed and a Spanish version is expected to be completed in Bolivia by Spring 2000.

For further information on any of these products, please contact Dr. Ed Kelley, Quality Assurance Project, at ekelley@urc-chs.com.



Results from the Field: Selected Findings of QAP IMCI Operations Research

Computer-based vs. traditional training

- No significant differences in knowledge or performance
- CBT course is about 20-25 percent cheaper than standard course, if costs of software and computers are not included

IMCI compliance results in drug savings

- Savings as high as 60 percent appear at highest levels of compliance (>85 percent compliance)
- In addition, time costs of client-provider encounters do not appear to increase at higher levels of compliance

Feedback raises low areas of IMCI performance

- Feedback is four times cheaper than traditional training
- Feedback improves certain assessment areas by 34–85 percent
- However, feedback does not seem to reinforce high-performance areas

Team-based QI can help workers improve performance

- Facilities with Quality Improvement teams are significantly (chi-square 7.001, p=0.008) more likely to perform above average on both overall IMCI compliance and specific IMCI indicators



Electronic Resources

QCI International

www.qci-intl.com

This full-service consulting, training, and publishing firm offers a source for products and services that fall under the total quality management umbrella. It focuses on teams, such as employee involvement teams, with special emphasis on building facilitator and team-leader skills.

Medical Quality Assurance (MQA)

www.doh.state.fl.us/mqa/

MQA is responsible for the planning, development, and coordination of programs and services of 18 regulatory boards, six councils, and five professions directly administered by the Florida Department of Health. MQA develops policies to effectively regulate medical professionals while protecting the health and safety of Florida residents. Many links available, including health care provider license look-up and information on regulated professions.

HQHq

www.hqhq.org

This FUN site produces educationally certified learning material for today's worldwide population of health care professionals. The cost-effective, on-line training is designed to hold the interest of any user. The "Candhu" and "Nocandhu" soap operas and learning texts are based on real-life situations...with a twist. An "Evidence of Learning" section gives participants a chance to check their own progress (including their responses to text questions) via an Email review. A PGEA/CPD certificate, giving two hours' credit for each unit completed, is available.

International Journal of Health Care Quality Assurance

www.mcb.co.uk/cgi-bin/mcb_serve/

This professional journal, published in Great Britain, provides a forum for the international exchange of the theoretical and practical aspects of quality assurance and management in health care. It also endeavors to develop knowledge about quality assurance and its implementation in health care organizations. Articles submitted to the journal should be original contributions not under concurrent consideration for any other publication.

IQMA Classifieds

www.openhouse.org.uk

Email address: iqma@openhouse.org.uk

This site represents a clearinghouse for those interested in all aspects of quality assurance. Individuals may post classified ads in these categories: quality training courses, recruitment, articles for sale, articles wanted, research, publishing, and general classifieds. Not specifically oriented to health care.

AddVal Inc.

www.addvalinc.com

AddVal Inc., founded by nurse executives, specializes in credentials and primary verification, quality improvement, and accreditation consultation. Its mission is to add value to health care; it creates products and services for physicians, managed care companies, and hospitals. Its nurse consultants create specific work plans for organizational needs and resolve issues while adhering to customer timelines.

American Society for Quality (ASQ)

www.asq.org

ASQ promotes the development of individual and organizational performance excellence, providing information for the newcomer as well as the skilled professional. Its Standards and Certification link provides information on the ISO 9000 and ISO 14000 standards, QS-9000 requirements, and ASQ certification program. An on-line catalog is available. Also helpful is the Virtual Quality Network link, a directory of products and services for quality and continuous improvement.

Registrar Accreditation Board (RAB)

www.rabnet.com

The RAB site offers access to searchable databases to find an auditor, training course, or accredited registrar. It is a complete source for information on RAB-approved ISO 9000 and ISO 14001 registrars, training course providers, and individual auditors. It also provides quarterly updates on its national certification and accreditation programs. The user can download an application package for QMS auditor or QMS internal auditor certification.

Quality Assurance Project is operated by the Center for Human Services in collaboration with the Joint Commission Resources (formerly known as the Joint Commission International) and Johns Hopkins University (including the School of Hygiene and Public Health, The Center for Communication Programs, and the Johns Hopkins Program for International Education in Reproductive Health). The project is sponsored by the United States Agency for International Development under Contract Number HRN-C-00-69-90013-00. For additional information please contact:

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C O N T E N T S	
<i>QA Project Editorial</i>	
Quality Assurance and Performance Improvement: Important Approaches in Improving Health Systems	1
<i>Feature Article</i>	
The Importance of Involving Physicians in Quality Improvement	4
<i>Feature Article</i>	
Quality Improvement and Performance Improvement: Different Means to the Same End?	6
Advances in Quality Improvement: Principles and Framework	13
COPE: A Process and Tools for Healthcare	18
Facilitating Accreditation: The South African Experience	21
Identifying Root Causes: A Step in the Problem-Solving Process	25
(Re)Designing the System of Care for Neonates Suffering from Respiratory Distress Syndrome in Tver Oblast, Russian Federation	26
Quality Improvement Increases Compliance with Standards	28
Quality Improvement Teams in Guatemala: Working to Improve Healthcare Access and Quality	31
Community-Based Problem Solving: Improving the Health of Women and Children	34
New Computer-Based Learning Tool Available for Improving Healthcare Services Delivery in Developing Countries	38
New QA Project Products	39

QA Project Editorial

Quality Assurance and Performance Improvement: Important Approaches in Improving Health Systems

James R. Heiby, MD
USAID Project Manager

THE term *performance improvement* (PI) is new to most healthcare professionals. However, those who have long worked to improve the quality of care in developing countries will quickly notice how similar PI is to approaches we have known as *quality assurance* (QA). At first blush, this may seem to be a distinction without a difference, little more than a proliferation of specialized jargon. A closer look, however, leads to a much more interesting and provocative conclusion.

For many years, the training of service providers has been the centerpiece of international assistance in health. The development of new interventions, from oral rehydration therapy to HIV/AIDS counseling, requires health workers to carry out new activities, and training is the logical place to begin. The implicit assumption was that this training, supported by the existing health system, would be enough to realize the potential of new technologies. This assumption, however, is increasingly being questioned as we gain new insights into the complexities of delivering healthcare.

The most impressive advances over the years have been in understanding the process of care itself, that is, in a better

continued on page 2

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University Research Co., LLC
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QA Project Editorial continued from page 1

understanding of what providers actually do when they leave the training course and return to the work of taking care of patients. Evidence-based clinical guidelines have rapidly gained acceptance as the standard for evaluating the process of clinical care.

The principle is straightforward. In many circumstances, there is enough scientific and clinical evidence to specify what the provider should do. Translating this evidence into a practical written guideline for clinicians is more challenging, of course, particularly since the guideline must reflect what is actually feasible in a given setting. In developing countries, however, most health issues are well suited to guidelines. Further, only a limited number of such guidelines would be needed to cover most visits. The World Health Organization (WHO) guideline for the Integrated Management of Childhood Illness (IMCI) is a prominent example of such a guideline.

We are only now beginning to appreciate the far-reaching implications of this apparently simple concept. The health impact of training providers depends on influencing what they do in the clinic, and the guidelines provide a yardstick to measure the way providers are doing their jobs. Such assessments are still too few, but when they are made, they consistently show that actual care falls substantially short of the guidelines. We cannot yet specify what this shortfall means in terms of health impact, but there are

The QA Brief, published twice yearly, shares with the international health community the methodologies, activities, and findings of quality improvement initiatives sponsored by the Quality Assurance Project. Those interested in receiving future issues of the QA Brief or any other Quality Assurance Project publication should contact:

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grounds for concern: training alone increasingly looks inadequate as a way to improve the quality of health care.

The fields of quality assurance and performance improvement have their origins far from the problems of lesser-developed country health systems. From a QA perspective, compliance with clinical guidelines is a central measure of quality of healthcare, and the field offers a wide range of tools for improving quality. Many of these tools reflect the efforts of thoughtful health professionals, but other approaches have been adapted from industry. The idea of a program of accreditation for facilities that is based on objective criteria, for example, comes from the health sector. Nevertheless, QA programs also make extensive use of the structured problem-solving technique of quality management first developed in industry.

Like quality management (QM), performance improvement began in industry. However, unlike QM, PI begins with a focus on the limitations of staff training rather than on the role of managers. Nevertheless,

in their applications to health systems in developing countries, modern quality assurance and performance improvement reach surprisingly similar conclusions.

Provider compliance with guidelines is a central measure of both performance and quality. Experts in both fields agree that what providers do is influenced by the nature of the health system in which they work,

as well as by training. The approach of both fields is to understand these other factors and change them in ways that support improved compliance with evidence-based guidelines.

The two fields do not have every technique in common, but the similarity of their approaches is striking. Indeed, the very fact that two distinct fields have

converged on a similar overall idea of what needs to be done should give us confidence. Considering the magnitude of change in health systems that will be required, we will need that confidence.

The most impressive advances over the years have been in understanding the process of care itself, that is, in a better understanding of what providers actually do when they leave the training course and return to the work of taking care of patients.



The Importance of Involving Physicians in Quality Improvement

David Nicholas, MD, MPH, Director, Quality Assurance Project

THERE is documented evidence from countries at all economic levels that medical outcomes, both clinical and preventive, can be improved through the work of quality improvement teams. This is especially true when medical systems and work processes are changed to allow for the effective implementation of evidence-based medical guidelines. Physicians, both as leaders in their organizations and as practitioners adhering to the guidelines, are crucial to the success of these quality improvement teams.

Physicians usually play a leadership role in a medical setting: they often serve as managers and may make or influence the decision as to whether improvement activities will occur. Experience shows that if they are not actively involved as members—and often as leaders—of these teams, quality improvement work either will not start or will soon come to a halt. Furthermore, if physicians are not involved, they probably will not cooperate in implementing the changes or adhering to the new guidelines. Yet, the Quality Assurance Project experience is that it is not always easy to involve physicians in such improvement work.

Why is this so? Physicians who are primarily clinically involved may see quality improvement as a management function not related to their own responsibilities. They also often hesitate to admit that the clinical processes or standards currently in use are not the best. They may not see that clinical outcomes are tied to the processes being followed or that the results and outcomes could be improved. They may also feel that they do not have the time for such activities.

Even those physicians who have management responsibilities may not have been trained in management

and may not be prone to forming or leading teams to improve organizational processes. Physicians are not usually trained to work in teams and may feel uncomfortable working as an equal member of a team of health workers with less professional training or credentials. They may see themselves more like a military platoon leader than as a coequal member of a team.

The QA Project has found that physicians can be motivated to become active participants and leaders of quality improvement activities. This begins by identifying physician leaders who are interested in improving certain medical outcomes. Success is most likely if these physicians can attend an “executive seminar” in quality improvement principles. The seminar sets the stage for the physician to provide the necessary leadership in future activities.

A physician can then involve colleagues in a review of the medical conditions for which he or she thinks outcomes could be improved. Purely administrative issues for improvement should be avoided at first unless the physician demands these priorities. During the review of medical conditions, the physician can choose one condition or area to tackle for the first improvement effort. The physician can also form a team that includes one or more physicians who are key to the process being improved. Other key health workers are also selected for the team as appropriate (nurses, laboratory technicians, pharmacists, etc.).

The team reviews the system of care and the steps in the improvement process. This review covers the diagnostic and clinical decision-making steps, as well as treatment and follow-up. For each step, the team assesses the scientific evidence justifying current practice. If evidence is lacking, the team consults the



literature and/or nationally or internationally accepted guidelines such as those maintained by the Cochrane Center in the United Kingdom or the U.S. Government (www.guidelines.gov). Interdepartmental steps and relationships, such as involving laboratory or X-ray departments, are also examined. The team may also need to consider logistical essentials, such as transportation for emergency cases. Community and patient education are other important components of both preventive and clinical services and need appropriate attention from the team.

Community and patient education are other important components of both preventive and clinical services and need appropriate attention from the team.



Finally, the team describes the new process and guidelines to be followed in treating the condition and identifies the indicators it will use to measure compliance and outcomes. Process indicators could include essential diagnostic or therapeutic tasks carried out. Sometimes “care maps” (or critical pathways) are developed. Other process steps to be monitored could include completed medical records with all essential information. Such information can be obtained by a medical audit of a sample records. (Information that is automated can be analyzed more easily.) Outcome indicators of particular interest to physicians could be case-fatality rates, mortality rates, postoperative infection rates, complication rates, hospitalization rates, client satisfaction, and cost of care.

The team works to implement the changes it has designed and to self-assess the results by assisting in the monitoring and analysis of process data and outcomes. The “story board” of the team’s work can be posted on a staff bulletin board to communicate the work done, and the results can be charted on a monthly basis for all to observe. Usually the results

achieved are quite significant and provide continued motivation to the team along with encouragement to others to begin similar work. Thus, the physicians on the first team become champions of the approach, and others soon follow. This can lead to a multiplying number of improvements in clinical care.

This approach has been used in two Russian states by the Quality Assurance Project where the problems of pregnancy-induced hypertension (PIH), neonatal respiratory distress syndrome (RDS), and adult hypertension

were tackled. In 18 months, there were dramatic reductions in hospitalization for PIH, deaths from RDS, and complications of adult hypertension.¹

In Nicaragua, a similar project dealing with Essential Obstetric Care (EOC) has resulted in an increased use of partographs from a pre-project level of 3 percent to 90 percent in only 10 months. There are strong indications that maternal mortality is decreasing as well. In Bocay, one of the districts in Nicaragua where the QA Project is working, there were 10 maternal deaths in 1999. In the first 10 months of 2000, there were only two. Such visible changes are very motivating to the physicians involved. They are rewarded with a sense of greater professionalism in their work and with the gratitude of their clients and community.



¹ Detailed data may be found in the article on page 26: (Re)Designing the System of Care for Neonates Suffering from Respiratory Distress Syndrome in Tver Oblast, Russian Federation.

Quality Improvement and Performance Improvement: Different Means to the Same End?¹

Thada Bornstein, MEd, Deputy Training Director, Quality Assurance Project

PERFORMANCE IMPROVEMENT (PI) is a methodology for improving the quality of institutional and individual performance. PI, a term often used interchangeably with Human Performance Technology (HPT), has attracted much attention lately in the international development community, due largely to the enthusiasm of the USAID Office of Population, which is encouraging Cooperating Agencies (CAs) to adopt PI. The CAs are at varying stages of familiarity with both PI and quality improvement (QI). Because even seasoned practitioners have different perspectives on the relationship between PI and QI, the topic has caused lively and useful discussions in the CA community.

This article describes some of the similarities and differences between the two methodologies. It is written and should be read with the understanding that QI and PI are continually evolving and that there is no discrete boundary between them.

In both QI and PI, their application in the U.S. and other developed countries is at a later stage of evolution and experience than in developing countries. This paper is limited to the application of QA/QI and PI in international healthcare. (Many of the statements in this article apply equally to QA and QI.)

The USAID-sponsored Performance Improvement Consultative Group (PICG) is composed of CA representatives who have worked with the Office of Population to develop performance improvement strategies, tools, and approaches. The PICG has developed its own framework based on that of the International

Society of Performance Improvement (ISPI). The customized version is suited to the needs and experiences of those who work in the developing world. This version emphasizes the step of obtaining stakeholder agreement to the PI process from the very beginning, before any intervention is attempted—thus avoiding the problems that can arise when there are multiple clients with different goals. PICG has agreed to use the common framework in the field in order to reduce confusion among clients, although each group will apply the PI process somewhat differently.

Origins

Although PI and QI arise from different beginnings, both take a systems view. ISPI defines HPT/PI as: “Human performance technology is a set of methods and procedures, and a strategy for solving problems, for realizing opportunities related to the performance of people. It can be applied to individuals, processes, and organizations. It is, in reality, a systematic combination of three fundamental processes: performance analysis, cause analysis, and intervention selection.”²

HPT has deep roots in human resources, instructional design, and training, and draws on many fields, including systems theory, learning psychology and behaviorism, information technology, feedback systems, organizational development, analytical systems, ergonomics, human factors, and psychometrics.³ PI grew out of the realization that

¹ In general, the Performance Improvement framework is an evolving concept with new concepts emerging as work continues in this field. The concepts presented here reflect the current thinking when this article was prepared.

² International Society for Performance Improvement. 2001.

³ M. Rosenberg, W. Coscarelli, and C. Hutchison. 1992. “The Origins and Evolution of the Field” in Stolovitch and Keeps, eds., Handbook of Human Performance Technology. San Francisco: Jossey-Bass Publishers.



poor job performance seldom is due solely to the performer's lack of skills and knowledge, but usually to other factors in the system.

PI is based on the theoretical framework of HPT, a systematic method based on data, aimed ultimately at improving human performance by addressing the gap between the present state and the desired state. Its foundation is the belief that to improve human performance, one must manage the performance improvement system, which must be the core of an organization's human resource efforts.⁴

Progressive companies in private industry have practiced both PI and QI since the '70s. Performance improvement is helping to change the widespread notion that all performance problems are best addressed by training. Traditionally, management viewed poor performance as a lack of knowledge or skills, without regard for a variety of internal and external determinants of performance, such as motivation, incentives, environmental factors, resources, feedback, coaching, supervisory support, and others. This mentality leads managers to think that workplace performance problems can be "fixed" by training, so training became a panacea for those problems but rarely solves them. Even when training *is* required, it alone is often insufficient to improve job performance ("training transfer"). Without certain supports present in the workplace, performance may improve for a short period following training, and then erode.

Quality assurance (QA) and its component, QI, originated in engineering and manufacturing where systems theory, statistical process control, and continuous quality improvement were combined with general management methods. Both QA and QI have long since been adopted and adapted by healthcare systems in many developed countries.

Theory and Principles

Simply stated, QI examines processes in order to improve them. Like the other components of QA, QI relies on the guiding principles of teamwork, systems and processes, client focus, and measurement. The focus on *teamwork* recognizes that team members bring valuable insights regarding the process to be improved because of their knowledge of and experience in it, and are more likely to implement improvements they helped to develop. The focus on *systems and processes* recognizes that providers must understand the service system and its key service processes in order to improve them; resolving the problem of unclear, redundant, or incomplete processes or systems yields better results than placing blame on individuals. Focus on the *client* emphasizes that services should be designed so as to meet the needs and expectations of clients and community. Focus on *measurement* means that data are needed to analyze processes, identify problems, and measure performance. This focus promotes taking action based on facts rather than on assumptions.

A more complete examination of the fundamental principles of QI are presented in "Advances in Quality Improvement: Principles and Framework," on page 13 of this issue. However, it is good to remember that the one of the simplest definitions of quality, "Doing the right thing, right," illustrates that author's two major components of care: content (doing the right thing) and process (doing it right).

Methodology

PI

PI addresses human performance within organizations at the individual, process, and organizational levels. It uses a systematic method that has five stages: (a) getting agreement on the project goal from the

⁴ *International Society for Performance Improvement, 2001.*



clients, stakeholders, and PI practitioner; (b) conducting a performance needs assessment (identifying performance gaps and their root causes); (c) designing the interventions to close the gap; (d) implementing the interventions, and (e) evaluating the change in the performance gap.

The PICG has identified the following conditions⁵ needed for people to perform well:

- Clear job and performance expectations
- Clear and immediate feedback on performance
- A supportive environment, including adequate and proper tools, supplies, and work space
- Motivation to perform to expectations (intrinsic motivation to do the job)
- Organized support in terms of strategic direction, leadership and management communication, organizational structure, and well-conceived job roles and responsibilities

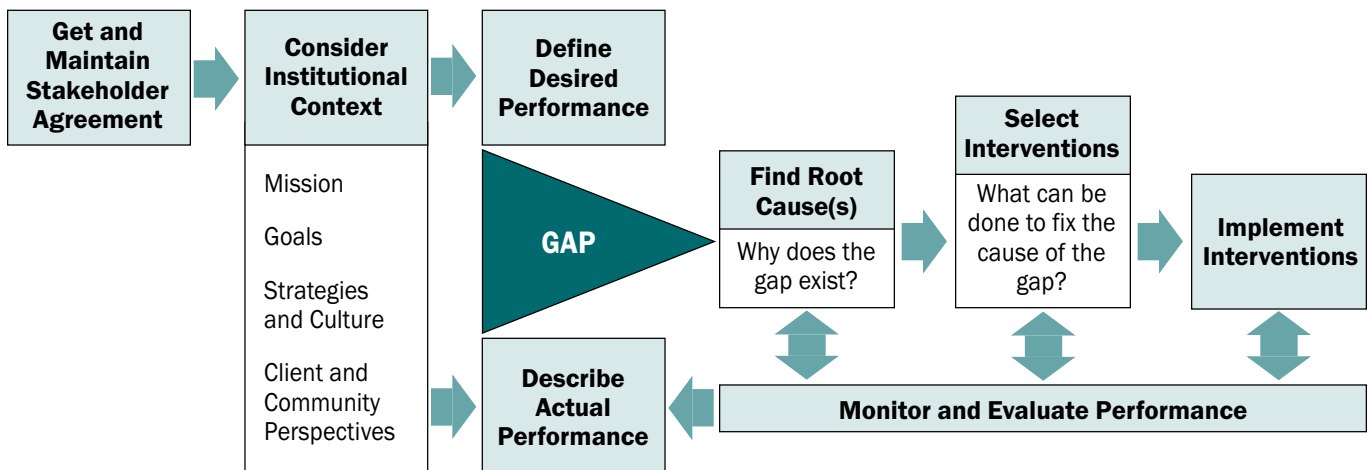
- Knowledge and skills to do the job (technical competencies that match the requirements of the job)

The types of interventions most often recommended by PI address the performance factor deficiencies, including: information systems, job aids, job and work design, leadership, organizational design, performance support, staffing selection, supervision, appraisal systems, career development, coaching/mentoring, culture change, compensation, documentation, environmental engineering, health/wellness, team building, training, and education.

As illustrated in Figure 1, PI is a systematic process that considers the institutional context, identifies gaps between actual and desired performance, determines root causes, chooses one or more solutions aimed at closing the gap, and measures the change in performance. The performance needs assessment identifies current performance or competence, comparing the

Figure 1

The Performance Improvement Process



⁵ U.S. industrial models of performance factors differ from these and include categories such as Capacity, which refers to individual capability and aptitude for the job, as well as selection of the right person for the job, and Incentives, which encompasses adequate pay and non-pay incentives made contingent upon performance, clear consequences for performance, and absence of disincentives, such as rewarding poor performance or negatively rewarding good performance.



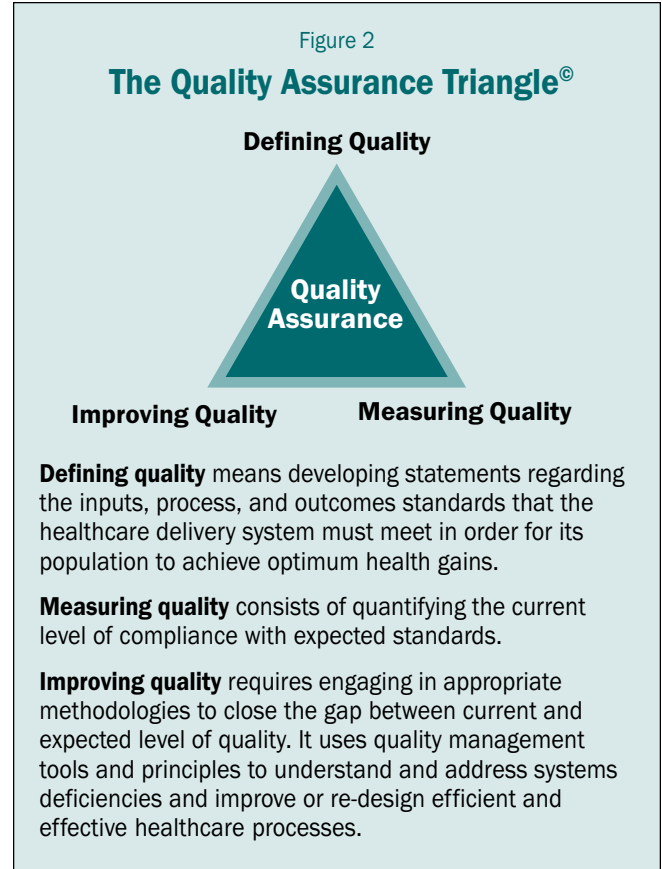
desired state to the actual state, and seeks the root cause of poor performance.

PI practitioners also identify the need for future training when new tasks, equipment, or techniques are introduced, anticipating future performance deficiencies as the worker's job changes. Root-cause analysis ensures that the interventions recommended are based on data and are what is really needed. Often a combination of multiple interventions is implemented as part of a comprehensive solution. While PI's focus may range from the micro level (individual performers) to the macro level (the organization), its roots and close alignment to human resources, training, and organizational development may influence its practitioners to favor certain types of interventions.

QA/QI

The Quality Assurance Project illustrates QA activities as three points on a QA triangle (see Figure 2). The points are: defining quality (QD), measuring quality (QM), and improving quality (QI). QD means developing statements regarding the input, process, and outcome standards that the healthcare delivery system must meet in order for its patients to achieve optimum health gains. Such statements are used to define expected quality in all aspects of healthcare. QM consists of quantifying the current level of compliance with standards. QI involves using appropriate methodologies to close the gap between the current and expected levels of quality; it uses quality management tools and principles to understand and address system deficiencies.

Approaches to conducting QI activities are numerous and lie along a continuum from simple to complex. Four basic approaches are: (a) individual problem solving, (b) rapid team problem solving, (c) systematic team problem solving, and (d) process improvement. (These four approaches are explained in "Advances in Quality Improvement: Principles and Framework" on page 13). The PI approach is most



similar to the third, systematic team problem solving (see Figure 1).

QI activities are conducted using variations on a four-step method: (a) identify (determine what to improve), (b) analyze (understand the problem), (c) develop hypotheses (determine what change[s] will improve the problem), and (d) test and implement, or Plan, Do, Study Act (PDSA). In the fourth step, the solution is tested to see whether it yields an improvement; the results are then used to decide whether to implement, modify, or abandon the proposed solution. If the tested solution does not achieve desired results, the process cycles back to the third step for reiteration. If the results are achieved, the solution is implemented on a larger scale and monitored over time for continuous improvement.



QI does not end with step four; it is an ongoing process. In fact, QI is generally considered in the context of QA, itself an ongoing process.

QI vs. PI

Although both QI and PI take a systems view, a noticeable difference between them is that PI places more emphasis upon human performance while QI focuses on processes. Both assert the need for data.

The QA Project recommends a flexible stance in deciding how to perform the analysis step, i.e., whether to conduct a root-cause analysis, whereas PI holds firmly that root-cause analysis should be performed. When root-cause analysis is conducted in QI, hypotheses are produced using a variety of techniques, such as generating possible causes and organizing them on a fishbone (Ishikawa) diagram, or using the Tree Diagram technique (“Five Why’s”), narrowing down the most likely causes, and developing simple data collection tools to verify which one is the actual root cause. Descriptions of root-cause analysis in PI often exclude the verification step.

The QA Project advocates not performing root-cause analysis when the cause is obvious (this usually applies when the individual approach is used), or when the problem solvers are sufficiently knowledgeable about the process to make educated guesses as to the cause (often used by teams using the rapid or process improvement approach). These approaches yield a quicker result, but require a level of QI expertise to know when they should be applied. Rapid approaches employ solutions from a list of known change strategies that have a history of results in reducing errors and rework.

Another significant difference between PI and QI is that PI is usually led by a specialized practitioner,

while QA and QI have always been intended to be managed by the health program staff itself. This approach supports the institutionalization of quality in many of the countries where the QA Project works and is exemplified in the autonomous and continuous character of QI teams, which are central to the sustainability of QI. QI teams are usually self-directed groups of facility-based health workers.

The teams are developed and supported by coaches who provide them with both formal and just-in-time training in QI—the process, tools, and techniques—and on team process matters such as: the functions and roles of team members; communication skills (e.g., active listening, giving and receiving feedback); decision making; planning, conducting, and documenting team meetings; and presenting team results to managers.

Teams use the QI process to decide what they want to improve, and are thus empowered to improve their

work conditions and outcomes, often making systemic transformations to their work environment. This contrasts with PI, which does not emphasize the use of teams. QI team members are selected for their expert knowledge of

Rapid approaches employ solutions from a list of known change strategies that have a history of results in reducing errors and rework.



the process being improved or other special skills. This combination of knowledge and skills gives the team the expertise that enables them to deal with complex systems and processes. Often a QI team is wholly responsible for the process they are improving (process improvement teams). Such teams can continually seek opportunities for improvement, and design, test, and implement solutions without requiring higher authority to initiate the effort.

On the other hand, PI is often initiated at a client’s request and directed by a PI practitioner. While teams are formed to design and implement interventions,



there is less indication that, after the original performance problem is improved, self-directed facility-level teams continue to initiate PI activities independently as part of their regular way of doing business. However, many CAs are now conducting PI training to develop the capacity of field staff and host country counterparts to use PI independently of headquarters.

Because of its roots in human resources (HR) and training, PI is more inclined than QI to consider

HR-related causes and solutions, for example, clear job expectations, performance feedback, motivation, and incentives.

And QI is more predisposed toward looking at processes and systems, a focus that generates a broader array of interventions. One example of such complex interventions is an accreditation system that may incorporate both internal and external monitoring and improvement. Another is the systematic monitoring of Health Management Information Systems (HMIS) data to generate opportunities for continuous QI.

However, there is increasing evidence of common ground between QI and PI: QA/QI is developing and testing so-called “HR”-type interventions, such as supervisory feedback and health worker motivation, while PI is identifying systemic causes such as lack of systematic monitoring and evaluation.

Many system-wide intervention mechanisms (e.g., licensure, accreditation, regulation, and certification) that are tailored to healthcare and employed by QI have not yet been adopted in the current practice of PI.⁶ Accreditation can take any of several forms:

focused accreditation (focused on a single service) and facilitated accreditation with self-appraisal are two such complex interventions that improve quality in an organized way. Another solution that can arise from QI is Quality Design, which employs a well-developed methodology to create new services or processes.

QI is only one methodology in the larger QA system, and as such, it is not the sole entry point for improving the performance of a healthcare system. One can

just as easily begin with QD or QM. In fact, there are many entry points by which quality can be introduced into a healthcare system. It is a function of QA’s maturity, and the great needs of healthcare systems in developing countries, that the interven-

tions mentioned in this article can be implemented and achieve results without necessarily going through the QI process.

Both QA/QI and PI emphasize standards, but the former is more systematic and comprehensive. In QA/QI, standards are classified into two domains: technical (clinical, based on evidence-based medicine) and administrative. In each domain, there exist model standards for inputs (e.g., staff, equipment, supplies), processes (e.g., patient care, admission, housekeeping), and outcomes (the results of the inputs and processes: e.g., delivery of a baby, health gain of a patient, mother appropriately following a health provider’s guidance for the care of her child). QA recognizes that standards must be in place and met for these inputs, processes, and outcomes in order to maximize the potential for desired health outcomes.

QA recognizes that standards must be in place and met for these inputs, processes, and outcomes in order to maximize the potential for desired health outcomes.



⁶ This statement excludes Joint Commission Resources, Inc. (JCR), an internationally focused subsidiary of the US-based Joint Commission on Accreditation of Healthcare Organizations (JCAHO), and JCAHO, who use the term “Performance Improvement” slightly differently from the PICG. For more information on JCR, see their website at <www.jcrinc.com>.



In PI, the term “standards” is most often applied to worker performance expectations, namely job descriptions or specifications although, as mentioned above, clinical guidelines are a well recognized performance factor and solution in PI. However, PI uses terminology for performance factors (e.g., “environment”) that include elements QI would call “input standards.” The different terminology can cause confusion. QI and PI may both recognize the same deficiencies, but while one sees the lack of a standard, the other sees a lack of an environmental support mechanism. In this case, the two perspectives may lead to the same conclusion, but QI/QA’s more comprehensive and systematic process for developing, communicating, and implementing standards around those or similar factors appears more likely to achieve success, and successes are sustained longer if staff retain, refer to, and follow standards.

Summary

Both QI and PI use a systems approach and are data-based. They also share some tools and techniques. Because proponents of each approach who work in the international arena may not be well versed in both, they don’t always recognize how much they have in common. However, each has developed unique approaches, along with deep knowledge in specialty areas that the other, in the spirit of continuous improvement, would do well to embrace.

For example, PI practitioners could draw on QI’s use of faster approaches and expand its use of interventions to include already developed methodologies such as QD, etc. QI could benefit from formalizing the stakeholder process and placing a greater importance on human performance support systems such as capacity and selection, individual job descriptions, motivation, and incentives.

As CAs better define the commonalities and improve our understanding of these two approaches to achieving improvements, we will be better equipped to draw on the strengths of both. USAID has made a significant contribution by bringing both of these approaches to the table, and the clients are the ultimate beneficiaries.

Many thanks to the individuals who graciously agreed to review and give comments on this article: Jim Heiby, Diana Silimperi, Jolee Reinke, Joanne Ashton, Lynne Miller Franco, Rick Sullivan, and Jim Griffin, and especially our editor, Beth Goodrich. I thank you for your useful suggestions; any errors are solely my own.





Advances in Quality Improvement: Principles and Framework

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EXPERIENCE with implementing quality improvement in different settings has led to a better understanding of how the methodology can be applied to the healthcare field and to further development of the methodology. Advances include the simplification of the methodology, its further application to a wide range of circumstances, and the integration of evidence-based medicine in clinical quality improvement efforts.

This article outlines the key principles and framework of quality improvement. They comprise the fundamental principle of improvement, the four principles of quality management (i.e., Focus on the Client, Understanding Work as Systems and Processes, Teamwork, and Focus on the Use of Data), and the framework for clinical quality improvement. The article also describes the four-step quality improvement methodology (i.e., Identify, Analyze, Develop, and Test/Implement). Lastly, it illustrates the application of this methodology to a spectrum of quality improvement approaches. Four points along this spectrum have been chosen to illustrate a range of approaches (e.g., individual problem solving, rapid team problem solving, systematic team problem solving, and process improvement) that can utilize the quality improvement methodology.

Key Principles and Framework

The Fundamental Principle of Improvement

The central idea underlying modern quality improvement is captured in the words of D. M. Berwick: “Every system is perfectly designed to achieve exactly the results that it achieves.” The level of performance (results) is a characteristic of any given system of

work. A system left unchanged can only be expected to continue to achieve the same results it has been achieving. To achieve a different level of performance, it is essential to change the system in ways that enable it to achieve a different level of performance. QI methodology identifies unnecessary, redundant, or incorrect parts of processes, and then changes processes in ways believed to yield improvements. However, because not every change is necessarily an improvement, a change must be tested and studied to determine whether it has actually resulted in improvement.

The Principles of Quality Management

There are four main principles of quality improvement.

Focus on the client. Services should be designed to meet the needs and expectations of clients and community. An important measure of quality is the extent to which customer needs and expectations are met.

Understanding work as systems and processes. Providers need to understand the service system and its key processes in order to improve them. Using tools of process engineering allows simple visual images of these processes and systems.

Teamwork. Because work is accomplished through processes and systems in which different people fulfill different functions, it is essential to involve in the improvement representatives of the people who fulfill these functions. This brings their insights to the understanding of changes that need to be made and to the effective implementation of the appropriate processes, as well as to the development of ownership of the improved processes and systems.



Focus on the use of data. Data are needed to analyze processes, identify problems, and measure performance. Changes can then be tested and the resulting data analyzed to verify that the changes have actually led to improvements.

The Framework for Improving Clinical Quality

Improvement looks at two major components: what is done (content) and how it is done (process of care). Either component could lead to improvement, but the most powerful impact occurs by addressing both simultaneously. A key advancement in the use of this framework has been to develop norms, standards, protocols, and guidelines based on clinical evidence. In so doing, the literature on clinical practices is reviewed and the content developed based on the highest levels of evidence available. Where evidence for practices is weak or inconclusive, this is also acknowledged. This concept¹ is illustrated in Figure 1.

Quality Improvement Methodology

Quality improvement methodology consists of four key steps, as shown in Table 1.

Step One: Identify

The goal of the first step, *identify*, is to determine what to improve. This may involve a problem that needs a solution, an opportunity for improvement that requires definition, or a process or system that needs to be improved. Examples of problems or processes that are commonly identified include unavailability of drugs, lost laboratory reports, and waiting time.

This first step involves recognizing an opportunity for improvement and then setting a goal to improve it. Quality improvement starts by asking these questions:

- What is the problem?
- How do you know that it is a problem?

Table 1

Key Steps of Quality Improvement

Identify	Determine what to improve.
Analyze	Understand the problem.
Develop	Hypothesize what changes will improve the problem.
Test/ Implement	Test the hypothesized solution to see if it yields improvement. Based on the results, decide whether to abandon, modify, or implement the solution.

- How frequently does it occur, or how long has it existed?
- What are the effects of this problem?
- How will we know when it is resolved?

Step Two: Analyze

Once we have identified areas for quality improvement, the second step is to *analyze* what we need to know or understand about this opportunity for improvement before considering changes. The objectives of the analysis stage can be any combination of the following:

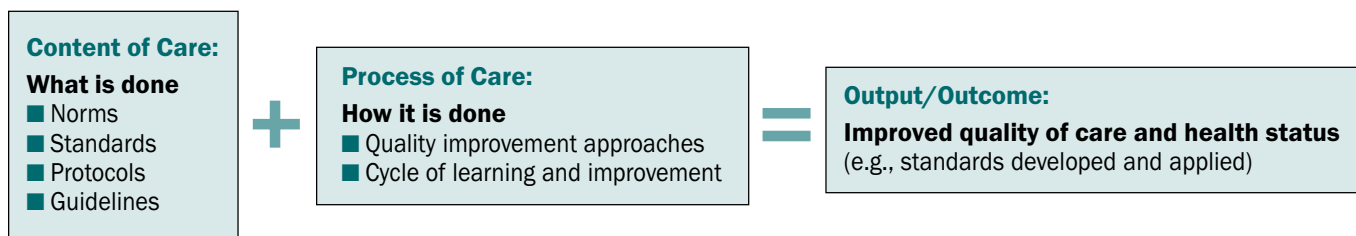
- Clarifying why the process or system produces the effect that we aim to change
- Measuring the performance of the process or system that produces the effect
- Formulating research questions, such as the following:
 - Who is involved or affected?
 - Where does the problem occur?
 - When does the problem occur?
 - What happens when the problem occurs?
 - Why does the problem occur?

¹ Adapted from P.B. Batalden and P.K. Stoltz. 1993. A framework for the continual improvement of healthcare: Building and applying professional and improvement knowledge to test changes in daily work. The Joint Commission Journal, 424–52.



Figure 1

How QI Integrates Content of Care and the Process of Providing Care



- Learning about internal and external clients through the tools available

To reach these objectives, this step requires the use of existing data or data collection. The extent to which data are used depends on the quality improvement approach chosen. A few techniques to analyze problems include:

- Clarifying processes through flowcharts or cause-and-effect analyses
- Reviewing existing data
- Collecting additional data

Step Three: Develop

The third step, *develop*, uses the information accumulated from the previous steps to explore what changes would yield improvement. Hypotheses, tentative assumptions used to test consequences, are formulated about which changes, interventions, or solutions would reduce the problem and thus improve the quality of care. Hypotheses are based on people’s knowledge and belief about the likely causes and solutions of the problem. It is crucial to remember that at this point the hypothesis remains a theory, as it has not yet been tested.

Step Four: Test and Implement

This step, *test/implement*, builds on the first three. A hypothesis is tested to see if the proposed intervention or solution yields the expected improvement. Because interventions that prove to be effective may not yield immediate results, allowing time for change to occur is important in the testing process. The results of this test determine the next step (Table 2).

Table 2

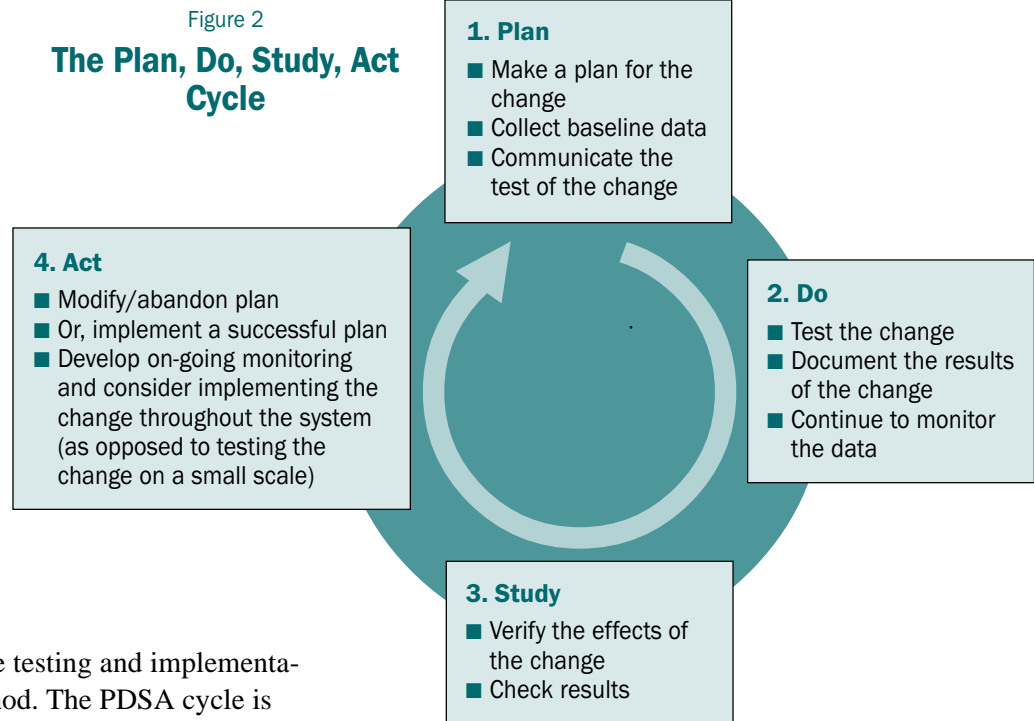
Test Results Determine Next Step

Test Result	Next Step
Proposed change did not produce an improvement	Start the improvement process again or look for flaws in the proposed change
Proposed change yields improvement that is not completely satisfactory	Modify the proposed change and then re-test the modification
Proposed change yields satisfactory improvement	Begin the implementation of the change or intervention



Testing a Hypothesis

The scientific method generally involves planning a test, conducting the test, and studying the results. Quality management has adapted this method, expanding it by adding “act on what is learned.” Thus, the expanded method includes *plan*, *do*, *study*, and *act* (PDSA), also referred to as Shewhart’s Cycle for Learning and Improvement.² PDSA is a four-step process included in the testing and implementation stage of every QI method. The PDSA cycle is represented in Figure 2.



The Spectrum of QI Approaches

Many approaches to quality improvement exist; deciding on which one to use depends on the circumstances. Some problems are simple and can be resolved rapidly, while others involve core processes and require extensive research. The approaches can be visualized along a continuum of complexity of increased time, resource allocation, and group participation. Along this continuum, the QA Project has identified four points that represent four approaches to quality improvement. They are not the only points along the continuum of complexity, but they do illustrate how quality improvement approaches differ.

Individual problem solving occurs when an individual identifies an apparent problem, recognizes his or her ability to fix it, and feels empowered to make

necessary changes. Although teamwork is an essential part of quality improvement, the QA Project has learned from experience that the simpler or more urgent improvement needs do not necessitate lengthy team-based approaches. The hallmark of individual problem solving is its use to address problems that are not interdependent, meaning that one person can make and implement the decisions necessary to address a problem. Individual problem solving tends to require little time or data and is methodologically the least complex of the approaches. It is seen in organizations where each individual recognizes the overall goal of delivering quality care and acts accordingly when needs arise that he or she can personally address.

² W. Shewhart. 1934. *The Economic Control of Quality of Manufactured Products*. New York: D. Van Nostrand. (Reprinted by the American Society of Quality Control, 1980).

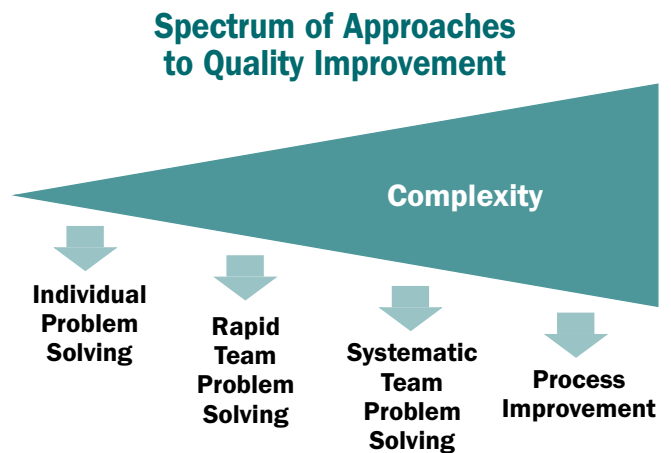


Rapid team problem solving is an approach in which a series of small incremental changes are tested in a system for improvements in quality. This approach can be used in any setting, although it generally requires that a team has some experience in problem solving and/or seeks a mentor for help in managing this approach quickly. This approach is less rigorous in terms of time and resources required because it relies largely on existing data and the team's understanding of the cause(s) of the problem and likely solutions. Teams are ad hoc and disband once the desired level of improvement has been achieved.

Systematic team problem solving is often used for complex or recurring problems that require detailed analysis. The mainstay of this approach is a detailed study of the causes of problems and then the development of appropriate solutions. This detailed analysis often involves data collection, and therefore often requires more time and resources. Although systematic team problem solving can be used in any setting, its in-depth nature makes it most appropriate when the ad hoc team is able to work together over a period of time.

Process improvement is the most complex of the four approaches because it involves a permanent team that continually collects, monitors, and analyzes data to improve a key process over time. It is generally used in organizations where permanent resources are allocated to quality improvement. This permanent team can use more than one approach, for example, forming ad hoc teams to solve specific problems. Process

Figure 3



improvement is often used to assure the quality of important services in a health facility or organization.

In sum, experience with quality improvement has rendered it a simpler, more robust methodology, and the application of QI methodology to a wide range of settings has become clearer. The settings include both clinical and nonclinical environments, with the approaches ranging from individual problem solving to core-process improvement by permanent teams. In all of these approaches, the methodology and principles remain unchanged though their different aspects are stressed differently.





COPE: A Process and Tools for Healthcare

Erin Mielke, MPH, Program Manager for Quality Improvement, EngenderHealth
Karen Beattie, MA, Senior Director, EngenderHealth

CCOPE is both a process and set of tools designed to help healthcare staff at a service delivery site continuously assess and improve the quality of their services.¹ COPE, which stands for “client-oriented, provider-efficient services” is built on a framework of client rights and staff needs adapted from Huezco and Diaz.² COPE’s four tools are: (a) self-assessment guides (one for each client rights or staff need), (b) a client interview guide, (c) a client-flow analysis, and (d) an action plan. The self-assessment guides encourage staff to review the way they perform their daily tasks and serve as a catalyst for analyzing the problems they identify. The guides contain key questions based on international clinical and service standards. The guide on safety includes a medical record review. The tools also highlight client-provider interactions and other client concerns.

The COPE Process

When introducing COPE, all site staff (or representatives of all departments at large sites) describe the key elements of quality services that they would like to receive if they were a patient at the facility. As part of this exercise, the staff reviews the concept of client rights and provider needs.

Clients have a right to:

- Information
- Access
- Informed choice

- Safe services
- Privacy and confidentiality
- Dignity, comfort, and expression of opinion
- Continuity of care

Staff need:

- Facilitative supervision and management
- Information, training, and development
- Supplies, equipment, and infrastructure

Next, working in teams, the staff uses two main tools for identifying problems: the self-assessment guides and the client interviews. Teams analyze the root causes of the problems, asking “Why?” multiple times. All staff meet together to develop an action plan to resolve the problems identified. Then the site establishes a quality improvement committee to oversee the implementation of the action plan and organize future COPE exercises. Subsequent exercises generally take place every three to four months. In these exercises, the staff reviews the status of the previous action plan and continues to identify new problems through various COPE tools (client-flow analysis, modules for maternal care, child health services, etc.).

Why Use COPE?

The health staff members, who are held accountable for the quality of services provided, have few tools to help them gauge their performance or identify factors that affect their ability to provide client-centered

¹ AVSC International. 1995. COPE: Client-oriented, provider-efficient services. New York: AVSC International.

² C. Huezco and S. Diaz. 1993. *Quality of care in family planning: Clients’ rights and providers’ needs*. *Advances in Contraception*. 9:129–39.



services. Many find COPE user-friendly. Simple and practical, it creates ownership of the quality improvement process by involving all levels of staff. It helps staff to put standards and guidelines into practice, as well as to identify where they are unclear about the standards and guidelines. COPE builds teamwork and provides a forum for staff to interact. It is adaptable and transferable—it has been used in more than 35 countries and translated into 14 languages.

Self-assessment guides have been adapted for family planning, reproductive health, maternity care, child health, and post-abortion care. COPE is cost-effective because it relies on local experts—the staff itself—to identify and resolve problems related to the quality of services. It promotes initiative and innovation, encouraging staff to consider the best possible use of existing resources. It is empowering, providing staff with the tools and opportunity to take concrete action to improve the quality of their work, their competency, and their interactions with clients.

In the words of a clinic cleaner, “No one ever asked me before what I thought about services, and I do have ideas.”³ Similarly, one hospital supervisor said, “I did not know that I could ask for the suggestions of junior staff. Now we work as a team.”

Why Use Self-Assessment?

Healthcare staff want to perform their jobs well. COPE is based on the value of self-assessment to help staff do just that. Some argue that, compared to external assessment, self-assessment lacks objectivity and validity and is not based on standards. COPE is not intended to replace periodic, external, objective assessments. Rather, the process can complement and enhance medical monitoring, supervision, and evaluation activities by internal and external supervisors. It

is an ongoing process that integrates routine self-evaluation into service delivery.

COPE tools guide staff members’ assessment of their service delivery practices through specific, closed (yes/no) questions that are based on international standards. Staff then interpret the results of their own discussions, as well as the client interviews and client-flow analysis, and apply their understanding of their working environment to propose solutions that make sense given their resources and setting. Staff and supervisors have an incentive to be honest about problems because they generally benefit from the solutions. The staff responds more positively to self-assessment than they do to inspection and feel greater ownership of the QI process. As a result, they are better prepared to collaborate with internal and external supervisors in a more objective evaluation of their work.

Some Results to Date

Through COPE, hundreds of sites have solved a variety of problems. Some typical examples follow.

- Changes in service hours and staff assignments to better meet client needs
- Reductions in client waiting time for services through reorganization of staff time
- Improved client-provider interaction and counseling following counseling training and periodic technical updates
- Improved infection-prevention practices throughout a facility, including such solutions as providing decontamination supplies to all wards and departments
- Digging a well to provide a reliable water supply to a site

³ J. Bradley. 1998. *Using COPE to improve quality of care: The experience of the Family Planning Association of Kenya*. Quality/Calidad/Qualité, No. 9, New York: Population Council.



- Repairing more than 200 beds in one hospital using local resources
- Improved understanding by site managers and providers of user fees introduced as part of health sector reform

In a study of 11 clinics in four African countries, 109 problems were identified: 59 percent were solved. Of the problems that could be solved without outside help, 73 percent were solved.⁴

COPE Is Not a Magic Bullet

COPE alone cannot sustain the QI process at a site. It is only one of a package of approaches. *Facilitative supervision*, for example, emphasizes coaching, joint problem solving, and two-way communication between the supervisor and those being supervised. *Whole-site training* evolved to meet the learning needs of all levels of staff at a site through skills training, updates, and orientations. It emphasizes training at the site level and the link between supervision and training. *Inreach* increases the integration of services and reduces missed opportunities to serve clients by providing information about the facility's services to staff, clients, and potential clients in all departments of the facility; improving linkages and referrals between departments; posting signs about services throughout the facility; and orienting staff from other departments about reproductive health services.

Newest COPE Modules

The original COPE handbook focuses on standards of care for family planning services. Over time, our partners have requested that we adapt the tools for other health services. As a result EngenderHealth has published a working draft of the reproductive health COPE guides addressing twelve specific reproductive health services/issues⁵ and a draft of guides on child health services.⁶

Expanding the Reach of COPE

EngenderHealth is developing and testing a new process and tools to involve the community in site-level quality improvement. In collaboration with community leaders, staff from a service-delivery site engage the community in a process to assess the quality of services at the site and to determine how the site might better meet client needs. With this information, staffs use the same COPE process to develop an action plan for enhancing areas where they excel and addressing areas where the community has suggested improvement.

EngenderHealth, formerly AVSC International, provides technical assistance to reproductive health programs in more than 30 countries.



⁴ P. Lynam, L. McNeil Rabinovitz, and M. Shobowale. 1993. *Using self-assessment to improve the quality of family planning clinic services*. *Studies in Family Planning* 24(4):252–60.

⁵ AVSC International. 1999. *COPE Self-Assessment Guides for Reproductive Health Services, Work in Progress*. New York: AVSC International.

⁶ AVSC International. 1999. *COPE for Child Health: A Process and Tools for Improving the Quality of Child Health Services, Draft*. New York: AVSC International.



Facilitating Accreditation: The South African Experience

Stuart Whittaker, Managing Director, The Council for Health Services Accreditation of South Africa

THE seven-year-old Council for Health Service Accreditation of Southern Africa (COHSASA) is a not-for-profit company that has been working in more than 230 health facilities (public and private sector hospitals and clinics) on the subcontinent. It recently developed a facilitated accreditation program to assist hospitals in meeting accreditation standards and thus expedite the introduction of an accreditation system in some provinces.

The evolution and development of the facilitated accreditation program (FAP) was undertaken as a result of the difficulty that healthcare facilities experienced in attempting to meet the standards set by medical, nursing, and other healthcare professional representative associations. The standards define systems and processes designed to help healthcare services and departments within healthcare facilities provide quality care in a safe, legal, effective, and efficient environment.

The first step in assisting hospitals to meet the standards was to devise a process to record, measure, and report on the degree to which a facility meets the standards based on the findings of surveyors. A decision was made to develop an instrument that could provide both qualitative and quantitative information. A computerized information system was developed to score the standards based on the degree of compliance, and scores were weighted according to the impact of any improvement on patient care and/or the operation of the facility.

In addition to providing a scoring system, the information system also captured and processed the reasons for non-conformance to the standards and criteria. This made it possible to produce reports assessing the degree of compliance of all services (clinical, support, and management services), and to

list reasons for non-compliance categorized in terms of the seriousness of non-compliance and how urgently it needed to be addressed.

The data and information generated in these processes were found to be of fundamental and far-reaching value not only in the standard assessment process, but also in the management of a facility. The reports, for example, could be used to identify deficiencies and to monitor interventions that addressed problem areas at facility, district, regional, and national levels.

COHSASA's Facilitated Accreditation Program is based on the premise that healthcare facilities should perform as integrated, multi-system environments in which all services and departments are, to a lesser or greater degree, interlinked and interdependent. To achieve this integration, the program requires that a multidisciplinary steering committee, with representatives from clinical, non-clinical, and management services, drive and guide the standard implementation phase of the facility improvement process.

The standard improvement process is initiated by assisting the facility in carrying out a hospital-wide self-assessment against the standards. The results are then processed by COHSASA. The detailed reports provided to the facility form the basis of the ongoing quality improvement program, which is then initiated throughout the facility.

A critical component of the facility re-engineering process is the appointment and training of small quality teams within each section/department of the hospital to examine problems and solve them as part of the overall hospital quality improvement program. (The teams are linked through the steering committee.) This has led to a project management approach in which all sections/departments establish a clear



mission and objectives, set priorities, and implement coordinated changes to meet the requirements of the standards. This approach is based on the principles of Continuous Quality Improvement (CQI).

COHSASA's experience has shown that the facilitated accreditation approach needs to be guided by facilitators who visit the hospital at least every six weeks until compliance with the standards has been achieved. Over the years, COHSASA has learned that there are specific areas that require dedicated training to assist hospitals to improve. These include CQI methods, health and safety, infection control, and clinical audits.

More recently, a comprehensive technological audit program has been introduced to help the facility use its technology effectively and efficiently. It is aimed at ensuring that programs for procurement, maintenance, and replacement of equipment are introduced and that training programs for both users and maintenance staff become routine.

COHSASA's experience is that poorly performing hospitals (i.e., lacking in management expertise and leadership and often accompanied by a badly resourced environment) require at least 18 months to two years to bring about the necessary improvements for meeting professional standards. When it is clear that substantial compliance with the standards is being attained, the hospital conducts a second self-evaluation as part of its preparation for an external survey. A team of independent COHSASA surveyors consisting of a doctor, nurse, and an administrator (not linked in any way to the facilitators) carry out an external survey. This survey is an intensive three-day evaluation process of a hospital's performance against the standards.

In an open and transparent validation process, the facility receives a draft report for comment prior to submission of the report to a technical committee. The

technical committee, comprising clinical, nursing, and administration specialists, evaluates the hospital's quantitative and qualitative reports. If it is satisfied that there is no indication of serious risks to patients and/or staff, that legal requirements have been met, and the facility, in general, operates efficiently and effectively, the facility is granted accreditation status for a period of two or three years.

This status is conferred on the facility according to recommendations made by COHSASA's Technical Committee to its Board; this process is defined by COHSASA's structure as a national collaborative effort among the state, private sector, consumers, and health professionals.

After assessing the external survey report of a facility in terms of its compliance with professional standards, the Technical Committee, composed of representatives from the medical, nursing, and pharmaceutical professions and healthcare facility administrators, makes recommendations to the 18-member COHSASA Board. The Board members represent a wide range of interests, including provincial and local health authorities, the private hospital sector, mining hospital groups, managed healthcare organisations, a statutory consumer group, and healthcare funders. In addition to determining overall policy, the Board's most important function is to consider the recommendations of the technical committee and decide whether a healthcare facility merits accreditation or not.

For hospitals that do not initially achieve accreditation, but have made significant strides since baseline and are close to substantially complying with the standards, COHSASA has introduced a Graded Recognition Program. Program criteria define the requirements of each of the two levels of Graded Recognition: Entry Level and Intermediate Level. Facilities achieving these levels are awarded recognition in the form of certification for a defined period and are encouraged and motivated to proceed to higher levels.



Lessons Learned

COHSASA's experience with the facilitated accreditation programme indicates that improved performance appears to be related to several key factors:

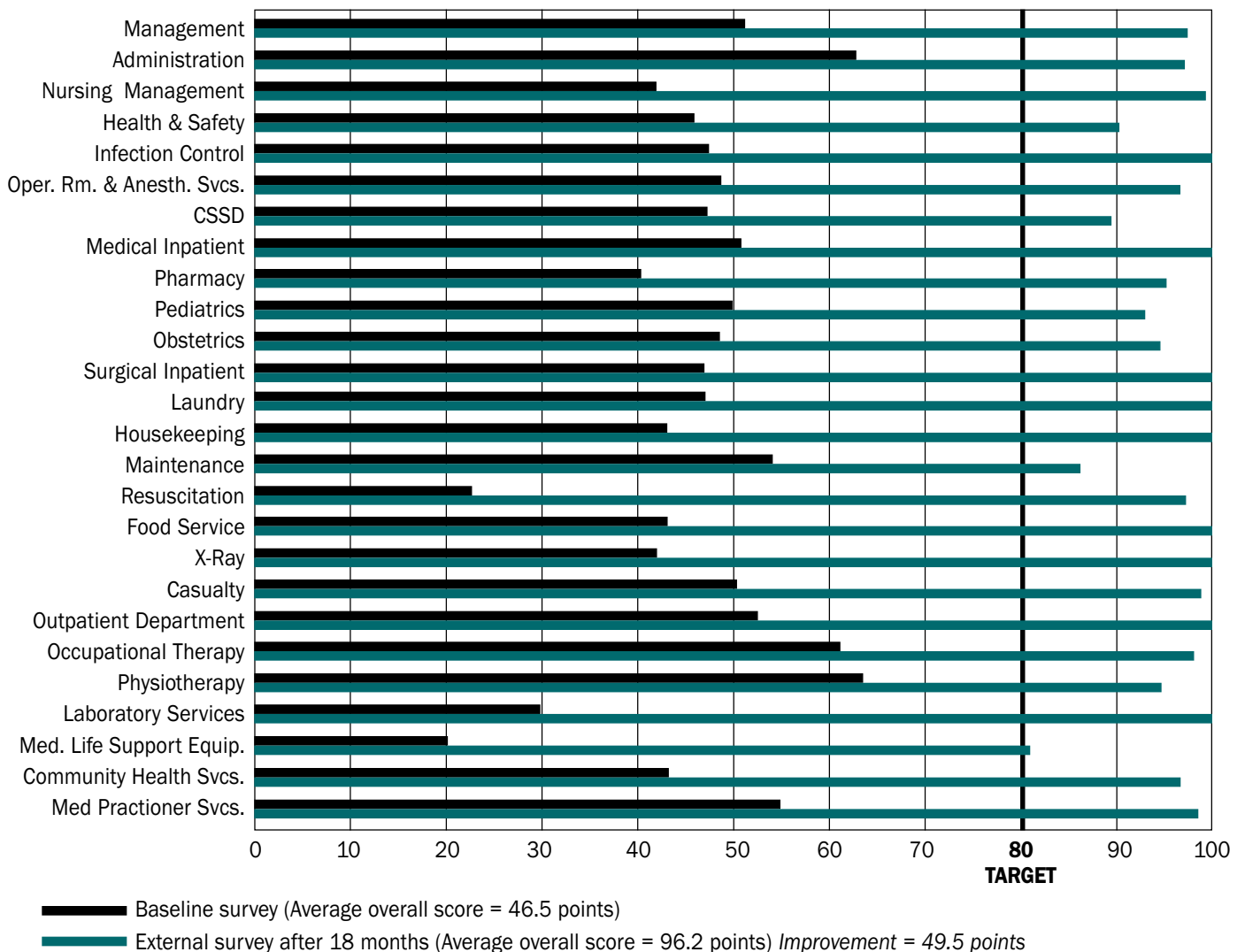
- Staff stability (frequent changes of staff impair the process)
- Commitment of the governing authority to provide resources and support for the process

- Essential gains sustained by means of a systematic a maintenance program
- Advances in quality can frequently be achieved more by reorganization than by extra funding
- Hospital management commitment and effective leadership

In general, the higher the level of commitment, the more likely the hospital will achieve compliance with

Figure 1

Baseline and External (After 18 Months) Survey Scores Compared With Target, Hospital C





standards. Once appropriate organization and leadership has been established, priorities can be objectively set for improvement.

The impact of the facilitated accreditation approach is currently being examined in a collaborative research project conducted by the South African Medical Research Council, the World Health Organisation in Geneva, and the University Research Corporation of the United States of America.

Entitled the South African Accreditation Impact Research Project (SAAIRP), the research is in the form of a randomised control trial in the KwaZulu-Natal Province and involves a group of 10 randomly

selected intervention hospitals that entered the COHSASA program at the onset of the project matched with a group of 10 control hospitals. Results are expected in late 2001.

Figure 1, for example, shows the improvement possible when a high level of commitment to the process of accreditation is present. Unless such commitment is present, lesser gains will be achieved. However, the initial results of the research have shown that even poorly performing hospitals do better than matched control hospitals.





Identifying Root Causes: A Step in the Problem-Solving Process

Djibrina Sabou, MNS, RN, QA Specialist

FOR several years, immunization coverage rates were unsatisfactory in the Rwamagana district of Rwanda. The measles immunization coverage rate, for example, declined from 50 percent in 1998 to 24.4 percent in 1999 among children in the catchment areas. At first, staff at the Mukarange Health Center did not know what to do about it, but with proper training and adequate coaching, a quality assurance team¹ addressed this challenge.

The staff used a simple problem-solving method to increase the measles vaccination coverage rate to as close to the national target of 80 percent as possible. First, the team identified a number of root causes for the low coverage through a population-based survey and the use of simple tools (flowchart and cause-and-effect diagram). The causes included the following:

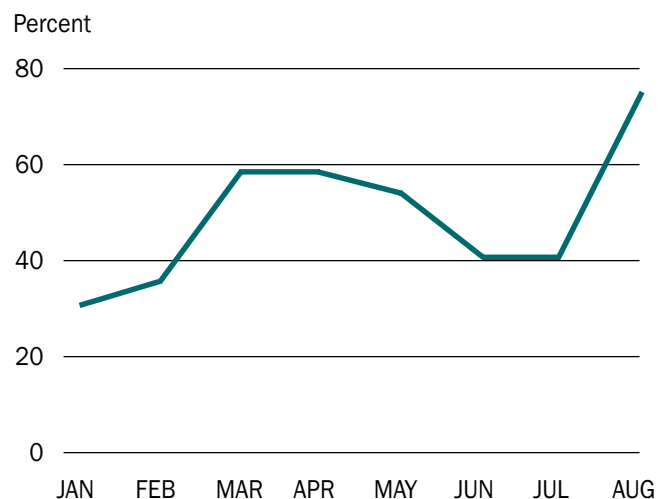
- Missed opportunities because healthcare workers did not systematically check immunization status during curative clinics
- Low awareness of the need for and availability of immunization protection on the part of the mothers
- Poor counseling of mothers on when to bring a child to the clinic
- Limited geographic access to a curative clinic

The team implemented four interventions: (a) training of the staff for systematic checking of the immunization status of every child coming to the health center, (b) sensitization of mothers by community health workers, (c) outreach immunization sessions in villages, and (d) improved counseling of mothers as to


the date the child should be brought back for measles immunization and checking their understanding of this instruction.

The results presented in Figure 1 are typical of the outcomes occurring when basic quality management principles and tools are applied by a team empowered by using a simple QA method. These results are encouraging because it seems that the work of the team resulted in an improvement in vaccination coverage. However, to confirm that systems performance has improved in a sustainable way, one needs to look at data over a longer period of time to account for normal variation.

Figure 1
**Monthly Evolution of the
Measles Immunization Coverage Rate
for Children in 2000**



¹ The local health center team provided the data referenced in this article. The findings represent what a team can achieve despite the constraints of their work environment.



(Re)Designing the System of Care for Neonates Suffering from Respiratory Distress Syndrome in Tver Oblast, Russian Federation

M. Rashad F. Massoud, MD, MPH

Associate QA Project Director, Russia, NIS, Asia, and the Middle East

OVER the past two years, the QA Project has worked collaboratively with Russian counterparts on (re)designing the system of care for neonates suffering from neonatal respiratory distress syndrome (RDS). In the five hospitals where this collaboration took place, there has been a 63 percent decrease in neonatal mortality due to RDS. This article describes the collaboration that led to this achievement.

In 1998, the QA Project embarked on a quality assurance (QA) project in the Russian Federation. The scope of work consisted of:

- Reaching consensus on concepts and terms in healthcare quality and publishing a bilingual glossary of healthcare terminology
- Developing a set of indicators of healthcare quality
- Training a core team of Russian professionals in QA methodology
- Developing demonstration projects in improving quality of care in maternal and child health (MCH) and in primary care
- Publishing a Russian Continuous Quality Improvement Guide
- Disseminating success stories of Russian quality improvements in healthcare

Tver Oblast was chosen as the pilot site for the quality improvement demonstration in MCH. In 1997, RDS in the Tver Oblast was the fourth most frequent cause of newborn morbidity and the most frequent cause of early-newborn mortality (67 percent of premature newborn mortality mostly associated with premature births; which in turn were associated with pregnancy-

induced hypertension). In 1994, mortality of children with RDS was 13 percent; in 1997, it was 20 percent. One problem with treating newborns with RDS is that many die prior to arrival at the hospital for newborns: inadequate care may be provided in the maternity hospital, during transportation to the hospital for newborns, and in the emergency room at the hospital for newborns.

Project Design

Five facilities—three urban (Maternity Hospital #1, Children’s #1 Hospital, and Oblast Children’s Clinical Hospital in Tver City) and two rural (Vishni Voloshek and Torjok Raion Hospitals)—participated in the project, representing all three levels of neonatal care in the Russian Federation. They comprised maternity, general, pediatric, and referral hospitals. Multi-disciplinary teams representing the different staff functions at each of the facilities were established. A Steering Committee was created to oversee the project. This committee was made up of the leaders of the teams in the participating facilities, Oblast senior physicians, and healthcare leaders from Tver Oblast. Technical assistance was provided by the QA Project, consultant neonatologists for the QA Project, the Agency for Health Care Policy Research, MedSocEconInform, and the Moscow Institute of Pediatrics and Children’s Surgery.

Methodology

The quality assurance approach integrates “improvement knowledge,” or quality management, with “content knowledge,” or subject-matter knowledge.



Quality management utilizes the systems approach, a team-based problem-solving methodology, a focus on internal and external customers, and the testing of changes for improvement. Evidence-based medicine is emphasized as the basis of content knowledge and is used to develop updated clinical guidelines. Indicators of quality are defined and measured before, during, and after the introduction of changes.

Key Changes Made to the System of Care for Neonates with RDS in Tver

The new system of care has now been redesigned. A central referral neonatal unit is being set up at Children's Hospital #1 in Tver City. This unit has neonatal ventilation capability. Neonates from all over Tver Oblast who are suffering from respiratory distress and are in need of referral, should be referred to this unit, where the following changes have been made: a neonatal ambulance system consisting of four equipped vehicles has been put in place and neonatal resuscitation training has been conducted for pediatricians, obstetricians, midwives, and nurses outside the neonatal referral unit.

This system will allow neonates suffering from RDS to be resuscitated, stabilized, and transported to the central unit in Tver City. Other key changes made to the system of care for neonates with RDS include the following:

- Clinical guidelines have been developed for all stages of the new system of care
- Existing “directives” and “methodological recommendations” are being changed to facilitate the implementation of the new system
- Necessary reorganization and resource reallocation have been undertaken to equip and staff the new neonatal center in Children's Hospital #1
- A permanent Perinatal Committee has been formed to oversee the continuous improvement of perinatal care services in Tver Oblast

Key Indicators of Quality

The following measures of improvement are currently being tracked in order to demonstrate improvements in the system of care for neonates with RDS in Tver Oblast:

- Successful resuscitations at maternity hospitals in both urban and rural settings
- Successful transportation to the referral neonatal unit
- Fewer complications associated with RDS
- Lower RDS mortality rate

Results

In the five hospitals where the (re)design of the system of care for neonates with RDS has been developed, the following results have been noted.

- A 93 percent increase in the seven-day survival rate after initial resuscitation
- A 46 percent increase in neonates transported to a neonatal intensive care center (NICU) with normal body temperature
- A 63 percent reduction in neonatal mortality due to RDS

Progress to Date and Next Steps

The redesign of the system of care for neonates with RDS was developed together with the new clinical guidelines, and the new system of care was implemented in the five pilot facilities starting September 1999. Tver Oblast Health Authority has been able to utilize its World Bank loan to acquire the required neonatal ambulances, incubators, ventilators, and other essential supplies. Indicators continue to be monitored. The new system of care is currently being expanded to all 42 hospitals providing neonatal care services to the two million people in Tver Oblast.





Quality Improvement Increases Compliance with Standards

Karen Askov, MHS, QA Specialist

IT IS estimated that at least 23,000 women die from pregnancy-related causes each year in Latin America and the Caribbean (LAC).¹ Compared to the United States, a woman born in LAC is 27 times more likely to die during pregnancy than a woman born in the U.S.² These numbers illustrate the need for the prompt access to quality essential obstetrical care (EOC) in Latin America to treat unpredictable complications that occur during pregnancy, labor, and the postpartum period.

A foci of the Latin America Maternal Mortality (LAMM) Initiative³ is to improve the delivery of basic EOC at the first level of care and of comprehensive EOC at referral hospitals in Ecuador, Honduras, and Bolivia. These improvements aim to strengthen the clinical EOC skills of providers while also improving the quality of key EOC services.

One way that the LAMM Initiative is working to improve the quality of EOC services is through multidisciplinary QI teams. This approach has been particularly evident in Ichilo, Bolivia, where the QA Project team established in May 2000 a new approach to quality improvement that focuses on compliance with standards. In a one-day workshop, the team learns about quality improvement methodology,

selects a component of EOC that it believes to be high risk and problem prone, revises standards of care for the selected EOC component, and develops a list of indicators to measure the standards. With this set of indicators, the team then collects the data needed to develop interventions, and then tests and implements those interventions. Table 1 lists the quality improvement teams in each hospital and the areas selected for improvement.

All of the teams have developed and implemented solutions to problems identified through the measurement of compliance with standards for prenatal care or labor and delivery. One example of the application of the QI methodology in Bolivia is the work of the team at Yapacani hospital, which chose to improve compliance with the standards for monitoring patients in labor and delivery. This team identified eight standards (six technical, two administrative) critical to the quality of care during labor and then developed indicators to measure compliance with those standards. Examples of these standards and corresponding indicators are shown in Table 2.

Next, the team collected data to measure the indicators for each of these standards. The baseline measurement of these indicators revealed that:

Note: This article is based on work led by Rosmery Chavez, RN, MPH, QA Project Field Coordinator for the Latin America Maternal Mortality Initiative in Ichilo, Bolivia.

¹ Maternal mortality is “the death of a woman while pregnant or within 42 days of termination of pregnancy, from any cause related to or aggravated by the pregnancy or its management.” (WHO, 1999). Mortality or morbidity may result from complications of pregnancy, labor, or in the postpartum period due to hemorrhage, sepsis, eclampsia, obstructed labor, and complications of unsafe abortion, as well as interventions, omissions, incorrect treatment, or events resulting from any of these. Deaths can also be related to diseases arising during pregnancy, i.e., malaria, anaemia, HIV/AIDS, and cardiovascular disease. (WHO 1992). International Classification of Diseases and Related Health Problems. Tenth Revision. *World Health Organization: Geneva.*

² UNICEF. 1996. Revised 1990 Estimates of Maternal Mortality: A New Approach by WHO and UNICEF. *World Health Organization: Geneva.*

³ The QA Project provides technical assistance to the LAMM Initiative with the support of the Bureau for Latin America and Caribbean at the United States Agency for International Development. The LAMM Initiative also incorporates the technical assistance of the Pan American Health Organization and local nongovernmental organizations.



Table 1

Selected Areas for Improvement

Health Facility Ichilo, Bolivia	Component of EOC
Buena Vista	Prenatal care/labor monitoring
Jampicuna	Prenatal care
Yapacani	Labor monitoring
San Carlos	Prenatal care/labor monitoring

- 67 percent of women in delivery did not receive laboratory tests
- 100 percent of women in labor were not monitored for vital signs or bleeding every 30 minutes during the first two postpartum hours
- 100 percent of women admitted did not receive instructions on respiratory exercises and positioning for delivery

With this data, the Yapacani quality improvement team had substantial information to identify opportunities for improvement in the labor monitoring of obstetric patients. The team decided not to prioritize the problems to address but, rather, to address all of

the problems, either through an individual action or a team-based intervention.

For instance, the data indicated that 100 percent of women in labor were not monitored with a partograph. The team decided that the first step towards improving the lack of compliance with this standard would be for the hospital director to initiate this activity. If compliance did not improve, the team would investigate what other interventions could be developed.

The team decided to tackle the other problems identified: laboratory tests were not conducted, vital signs were not regularly monitored, and patients were not provided with information on respiratory exercises and positioning for labor. The team worked together to analyze these problems, using tools such as the flowchart and the fishbone diagram (see examples on the next page).

This information has helped the Yapacani team to develop interventions that will aim to improve these identified problems. These interventions are:

- Providing practical training for healthcare providers in the medical laboratory every three months

Table 2

Standards and Indicators Chosen by the Labor Monitoring Teams at Yapacani Hospital

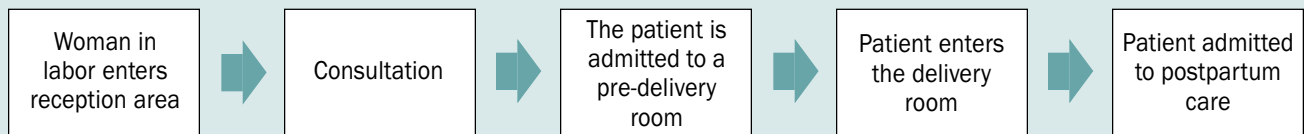
Standard	Indicator
All women in delivery should have the following laboratory exams (Ht, Hb, VDRL, and Rh Group)	Percent of attended deliveries with laboratory exams (Ht, Hb, VDRL, and Rh Group)
All women should be monitored for vital signs and vaginal bleeding every 30 minutes for the first 2 hours of the postpartum period	Percent of women monitored for vital signs and vaginal bleeding every 30 minutes for the first 2 hours of the postpartum period
All women in labor should receive information about the importance of respiratory exercises and the positioning of the mother and child	Percent of women in labor given information about the importance of respiratory exercises and the positioning of the mother and child



Example

Problem: 67 percent of women in labor do not receive laboratory exams during labor and delivery

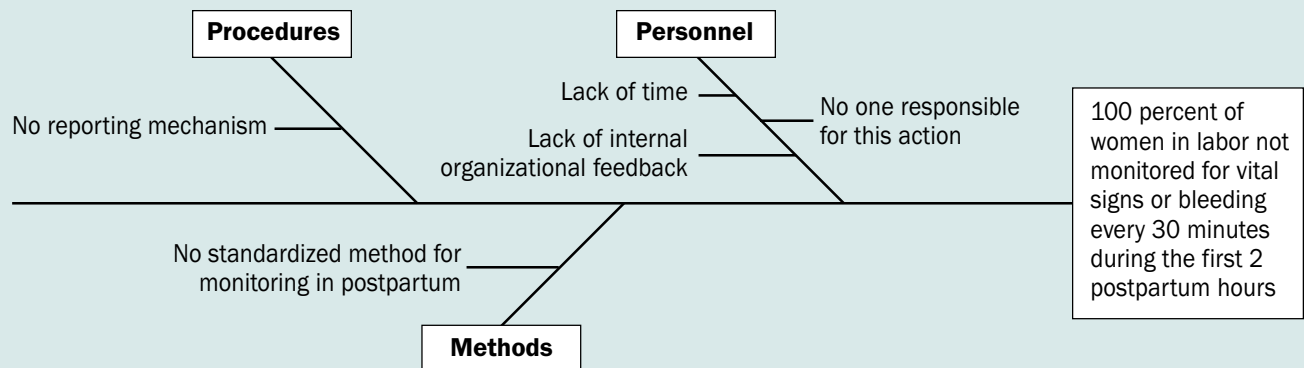
Tool: Flowchart of the process for labor and delivery



Example

Problem: 100 percent of women are not monitored for vital signs or bleeding during the first two postpartum hours

Tool: Fishbone diagram of the potential causes for lack of postpartum monitoring



- Rotating staff so that the vital signs of postpartum patients are continuously monitored
- Providing educational materials (e.g., visual aids, talks) on respiratory exercises for patients
- Carrying out a client satisfaction survey for feedback on educational material

The labor and delivery quality improvement team at Yapacani Hospital has achieved impressive results that

have been widely recognized over the past year. In fact, the Bolivian Ministry of Health recently declared Yapacani Hospital as the fourth best hospital nationwide due to its high quality care and client satisfaction.





Quality Improvement Teams in Guatemala: Working to Improve Healthcare Access and Quality

Joanne Ashton, RN, MN, Senior QA Advisor

Karen Askov, MHS, QA Specialist

THE Quality Assurance Project provided technical assistance in the regions of Quetzaltenango, Chimaltenango, Totonicapán, Sololá, and San Marcos from February 1999 to July 2000 to assist in the implementation of health sector reforms that call for improved access to primary healthcare and improvement in the quality of care. It is by virtue of these health sector reforms that the Guatemalan Ministry of Health contracted non-governmental organizations (NGOs) to reach remote areas with primary healthcare services and refer patients to health centers and hospitals when needed.

This new system of healthcare delivery necessitated coordinated efforts between the NGOs working in communities with the district health centers and satellite health posts. Multidisciplinary quality improvement (QI) teams were initiated with QA Project technical assistance to bring the different stakeholders together to solve problems.

The QA Project initiated work in quality improvement by inviting representatives from NGOs and district health centers from three regions—Sololá, San Marcos, and Chimaltenango—to participate in a three-day workshop to learn QI methodology and form action plans to resolve problems.

Fifteen quality improvement teams decided that each team would address one of three main problems: low vaccination coverage, lack of compliance with standards, and poor collection of community information. These multidisciplinary teams consisted of representatives from the local NGOs; personnel from local health centers and posts; and on some teams, district leaders and community members.

Thus, the quality improvement effort not only provided a tool for improving the quality of services, but also integrating the work of segregated actors in the health system in a healthcare improvement effort. Table 1 highlights some of the solutions developed by problem-solving teams.

The work of the problem-solving teams yielded mixed results. Although one team achieved a 30 percent increase in vaccination rates (see *Case Example*), other teams encountered resistance from leaders and

Case Example

District of Comitancillo, San Marcos

This problem-solving team identified the low vaccination rates, 51 percent for children younger than one year of age and 12 percent for pregnant woman, as an opportunity for improvement. The team brainstormed about possible causes for these low vaccination rates, such as inconvenient hours of services, inadequate technical procedures for vaccination, and a lack of community knowledge about the importance of vaccination. Based on this information, the problem-solving team developed a number of solutions to address these causes, including promoting vaccination services (e.g., through radio spots) in the local language, placing vaccination services in community meeting areas, identifying women and children who had not been vaccinated (through community mapping), and providing monthly follow-up. The team measured several key indicators to determine the effect of these solutions on vaccination rates and noted a 30 percent increase in vaccination coverage in children under the age of five.



Table 1

Problems Identified and Solutions Developed by QI Teams

Problem Identified	Solutions Developed
Low vaccination rates for pregnant women and children under 1 year of age	<ul style="list-style-type: none"> ■ Produce and distribute a family vaccination card; train participants on how to fill out the card ■ Increase the promotion of and information about health services in communities (in local languages) ■ Make schedule of visits more convenient for communities ■ Provide training to collect the data needed to understand the current vaccination coverage for these populations
Lack of compliance with standards	<ul style="list-style-type: none"> ■ Plan discussions based on use of the standards manual and provide incentives for its use ■ Provide a standards manual for service providers and verify that the manual is always readily available ■ Introduce a pocket manual
Incomplete and inaccurate information from monitoring system	<ul style="list-style-type: none"> ■ Plan training sessions in data collection ■ Coach participants in filling out data collection forms at all levels ■ Provide incentives to those community facilitators and volunteers who submit the data forms promptly ■ Hold monthly meetings for analysis of information, decision making, and dissemination of information ■ Create joint planning sessions between the district health facilities, administration, and health personnel

colleagues that delayed the success of their plans. One clear success in the use of the QI methodology was revealed during a focus group discussion on the evaluation of the QA Project/Guatemala in July 2000.

At that time, team members commented that they did not perceive problem solving as extra work; instead they viewed it as an important tool to identify and solve problems. Applying the QI methodology gave team members ownership over problems and the ability to resolve them. Problem solving became engrained as a thought process for many team members.

Several focus group participants stated that because the methodology proved to be so useful for solving problems at work, they had started to use the

methodology to identify and solve problems individually. This response indicates that an important step towards institutionalizing quality assurance has been taken when team members identify problems and take personal responsibility for solving them.

The QA Project decided to extend quality improvement activities within communities by adapting the QI methodology to the format of the agendas for monthly community meetings. Communities with the most complete data were provided with QA Project support when forming problem-solving teams. Data were organized and presented to the community in a way that was easily understood by community members.

Data were also used to identify and to set priorities for problems, as well as to develop and implement solu-



tions to those problems. The problems identified by communities addressed topics such as vaccination coverage, a need for drainage systems, and a need for latrines.

For example, a community in Coatepeque identified the lack of a drainage system as presenting major health threats to their community. The community, initially provided with support and training from the QA Project, is working with the local health committee to raise funds to put in a drainage system. Another community, Hacienda La Zarca, decided to address low vaccination coverage for children under one year of age and for pregnant women. The community, in cooperation with the NGO primary healthcare team, implemented solutions; these included providing advance notice of the vaccination schedule through community health volunteers and educating families about the importance of vaccinations and possible secondary reactions to vaccinations.

In Guatemala, quality improvement was particularly effective in integrating segregated parts of the health system through the use of multidisciplinary teams. These teams promoted cooperation and coordination among communities, NGOs, and district health facilities by working together to address common problems. Community-based problem solving was an unexpected side effect of the work of the district and NGO quality improvement teams.

Qualitative research revealed that the QI methodology was well received in communities where it was adapted to an agenda format following the style of traditional community meetings in Guatemala. These initial experiences in quality improvement provided many lessons learned and opportunities for future growth of quality assurance in Guatemala.



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Community-Based Problem Solving: Improving the Health of Women and Children

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THE Quality Assurance Project was invited to assist the Ministry of Health (MOH) in Guatemala in extending healthcare coverage to underprivileged populations, most particularly indigenous Mayan populations living in remote regions of the Guatemalan highlands. The government designed a new model for healthcare delivery entitled Sistema Integral de Atención en Salud (SIAS).

The new model provided additional primary care services in these communities and included a plan for community involvement in improving healthcare.

Community involvement included forming community health committees and organizing community healthcare personnel, including a community facilitator and volunteers (vigilantes). The overall objective was to apply quality methodology to improve the health of women and children. The

QA Project was responsible for working in the departments of Totonicapán, Quetzaltenango, San Marcos, Sololá, and Chimaltenango.

Problem-solving methodologies were introduced to area healthcare teams by the QA Project through workshops held in October 1999. These teams were successfully implementing their quality improvement action plans. The QA Project then decided to extend

quality activities to the community health committees. A community-based problem-solving methodology was developed in the format of an agenda for application to monthly community meetings.

The QA Project/Guatemala team selected five communities in which to introduce the methodology. The communities were selected based on their interest and motivation to participate in the study, the community organization, and whether community health data had been collected (e.g., vaccination rates, water and

latrine use, mortality and morbidity data).

The members of the QA Project/Guatemala team and a quality advisor from Washington, DC, met with community healthcare leaders (healthcare volunteers, community healthcare facilitator, and midwives) and area healthcare personnel to

review the methodology and teach them how to conduct a meeting using the methodology.

The first step was to review the healthcare data available in the community. Typically these data were displayed in posters on the wall of the healthcare center in a format understood by healthcare workers. However, the general public, most of whom could not read or write, had no idea of what the data meant. The



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participants were asked to be creative in designing new ways to display the data so that the public could understand the information and be able to identify problems.

The participants then developed an agenda for the community meeting. Agendas varied among communities depending on their traditions. The problem-solving methodology, including identifying problems and setting priorities for and seeking causes and solutions to the problems, was introduced into the agenda as agreed by the participants. The end result of the community meeting was development of an action plan based on the problem identified for resolution.

The participants were coached in a practice session on conducting a meeting using the methodology. This first teaching session took approximately three to four hours to complete.

The QA Project/Guatemala team met with each of the communities approximately three times prior to their community meeting to assist them in preparing their data and conducting the meeting. The community health leaders determined the most appropriate means of promoting the event and invited community leaders to participate, including the mayor, area health authorities, religious leaders, etc.

The meeting was held in a location and at a time and date convenient to the community, and it was conducted in the local language. Each meeting was attended by QA Project staff who provided guidance and support. The average meeting lasted three to four hours.

The community-based problem-solving methodology was designed to be simple and easy for the public to understand. It also was designed to correspond with the current structure of community meetings.² Thus, the basic principles of problem solving were incorpo-



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rated into the format of a meeting agenda (Table 1). Each community selected one problem for resolution.

Facilitating and Constraining Factors

The QA Project/Guatemala team met to discuss the factors that facilitated or constrained their ability to implement the community-based problem-solving methodology. Table 2 shows the results of that discussion.

² *Guatemalans conduct meetings in a formal manner.*



In sum, the community-based problem solving approach allowed the community to identify health problems within the community meeting, and the methodology was broken into steps that the community could understand. A key lesson learned from this experience was that participation of both

families and the healthcare teams and presence of local authorities and the MOH contributed to the resounding success of the community meeting.



Table 1

Agenda for Community-Based Problem Solving

Agenda	Presentation Guide
Welcome	Invite a community leader, e.g., mayor, to open the meeting as a means of showing support.
Introduce visitors	The meeting facilitator introduces the community leaders and other visitors present.
Objective of the meeting	An example: “The objective of the meeting is to present the community healthcare data, identify the healthcare problems, and look for solutions. The goal is to have an action plan at the end of the meeting.”
Presentation of the community health information	Review the community health information. <ul style="list-style-type: none"> ■ Census (population, number of houses, families, etc.) ■ Healthcare providers in the community (e.g., health promoters, midwives) ■ Morbidity and mortality (the five most prevalent health problems in the community) ■ Health environment (latrines, water, trash) ■ Vaccination rates (children, pregnant women)
Identification of problems	Ask the participants: “What healthcare problems do we have in our community?” Make a list of the problems identified.
Prioritize the problems	The participants will select one problem to resolve using the following criteria: <ul style="list-style-type: none"> ■ Simple to resolve ■ Can be resolved with few resources ■ Can be resolved rapidly (The manner of voting should be decided prior to the meeting.)
Determine the causes of the selected problem	“What are the causes of this problem?” or “Why do we have this problem in our community?” (A list may be developed or a tree may be used to depict the roots of the problem.)
Select solutions	“What can be done to improve this problem?” Make a list of the potential solutions. “Of this list of potential solutions, which solutions are most likely to resolve the problem, are simple, can be implemented with few resources, and can achieve results rapidly?” A means of selecting the solutions that the group wants to try needs to be established, (e.g., voting).
Develop an action plan	Use a matrix to identify the actions to be taken, the person responsible, and the date of action. Include the next community meeting in the action plan.
Closure	Thank the participants for their participation. If possible, provide refreshments.



Table 2

Factors Influencing Ability to Implement Community-Based Problem-Solving Methodology

Facilitating Factors	Constraining Factors
<p>Leadership of the Institutional and Community Facilitator</p> <ul style="list-style-type: none"> ■ Leadership of the Institutional Facilitator and Community Facilitator, especially if they reside in the community and speak the indigenous language ■ The level of education and experience of the Institutional Facilitator and Community Facilitator 	
<p>Community Factors</p> <ul style="list-style-type: none"> ■ Health information available in the community ■ Time commitment of the community to implement method ■ Positive relationships between the community, healthcare team, community leaders, and authorities 	<p>Community Factors</p> <ul style="list-style-type: none"> ■ Local problems ■ Distance between communities ■ Mountainous terrain ■ Need to work vs. attend meetings ■ Lack of confidence in healthcare due to previous experiences ■ Establishing a date for meetings
<p>Healthcare Team</p> <ul style="list-style-type: none"> ■ Positive attitude and willingness of the healthcare team to participate ■ Good communication between the community healthcare team and the district personnel ■ Participation of the district healthcare personnel 	<p>Healthcare Team</p> <p>Lack of support and integration between the community healthcare team and the district personnel</p>
<p>QA Project Staff</p> <ul style="list-style-type: none"> ■ Good communication and mentoring from the QA Project team ■ Follow through on the timeline ■ Flexibility about the meeting date and time ■ Assistance with materials to make the presentations, e.g., posterboard, markers 	
<p>Promotion</p> <ul style="list-style-type: none"> ■ Written invitations to the local authorities ■ Involving the local authorities, community health committee, and the community healthcare team 	
<p>Methodology</p> <ul style="list-style-type: none"> ■ Problem-solving methodology was simple and offered a step-by-step way to resolve problems ■ Training and practice of the health team in applying the methodology ■ The use of an agenda to apply the method ■ Presenting the information at a level of understanding for the community 	<p>Methodology</p> <p>Preparation time (4-5 visits of 3-4 hours each to prepare the community health leaders to conduct the meeting)</p>
<p>Mayan Culture</p> <ul style="list-style-type: none"> ■ Oral tradition and use of community meetings to resolve problems ■ Involvement of community elders; increased community participation 	

New Computer-Based Learning Tool Available for Improving Healthcare Services Delivery in Developing Countries

Donna Vincent Roa, Ph.D., Director of Communication and Associate Project Director

Cynthia Young, Senior Writer, Quality Assurance Project

MANY organizations worldwide have begun to rely on new technologies, such as computer-based training (CBT) and web-based training (WBT), to support healthcare and to maintain a humanitarian goal of harnessing information technology for a social purpose. CBT courses are being used to train healthcare professionals, build human capacity, guarantee transfer of critical skills, increase access to health information, and address training for health issues that are specific to a particular country or region.

“The new focus on CBT is a smart move,” explains Dr. James Heiby, USAID Project Manager for the Quality Assurance Project (QAP). “Recent research suggests that classroom-based training, the approach typically funded by international health donors, organizations, and ministries, has had limited impact on the quality of care, despite large investments. It is unrealistic to expect donor agencies and developing countries’ health systems to continue to finance the costs of traditional classroom training when a cheaper and more flexible training strategy is available. With computer-based training, the quality of instruction is consistent for all students who use the product and most studies show there is cost savings,” he adds.

To expand the boundaries of health worker training and address the critical skill deficiencies and information access issues, the QA Project, under its contractual mandate to “take advantage of major training interventions and innovative training approaches that offer the potential for improved cost-effectiveness,” is developing, testing, and evaluating a number of CD-

ROM products. In addition to the recently launched Tuberculosis Case Management CD-ROM, the Project has finalized the Quality Assurance Theories & Tools CD-ROM (QA Kit) and is in the early stages of its global launch. Both products are part of the QA Project’s Quality Performance Learning Series, which was developed to strengthen health worker performance and affect health outcomes.

The QA Kit, an interactive, easy-to-use CD-ROM, was designed to give healthcare professionals in Africa, Asia, Latin America, and Eastern Europe a blueprint to evaluate and improve healthcare delivery in low-income countries. The tool provides a step-by-step guide for process and program analysis, redesign,

and evaluation to strengthen competencies and improve organizational performance. “This is the only product designed to be a ‘learning and doing’ tool for quality management,” notes Edward Kelley, Ph.D., one of two Quality Assurance Specialists who developed the QA Kit. “I know of no other product on quality that has been created for developing countries.” The learning-by-doing

approach teaches teams how to define standards, analyze problems, and take steps to improving program performance and effectiveness.

The QA Kit offers ten computerized tools, case studies, and QA training and resources. Features include easy-to-use navigation and instructional presentation; cause-and-effect diagrams; time line and Gantt charts; specialized matrices; and budget, survey, flowchart, and system modelling tools. The product also contains a comprehensive collection of publications and training materials, a built-in interface with direct links to





key QA websites, a glossary of QA terms, and a computer tutorial for new computer users.

The QA Kit can be purchased for \$42.50 (includes shipping and handling). If you are interested in receiving a copy of this product, send an email to qapdissem@urc-chs.com or for more information call 301-941-8524. This pricing applies only to orders from North America and Western Europe. Individuals from Africa, Asia, the Caribbean, Eastern Europe, and Latin America may receive a single copy free upon request. Quantity discounts are available.

The USAID-funded Quality Assurance Project is dedicated to improving the quality of health, population, and nutrition services in more than 30 developing countries through technical support to service delivery institutions, Ministries of Health, USAID Missions, and field-based cooperating agencies. The Quality Assurance Project is a division of the Center for Human Services, the nonprofit affiliate of University Research Co., LLC, in Bethesda, MD.



New Products from the QA Project

Marquez, L. and J. Kolodner. 2001. **Managing Quality through Regulation Conference CD-ROM.**

Proceedings from the first (October 4–5, 2000) global conference to address the regulation of healthcare quality from the perspective of developing and middle-income countries.

This conference, held in Washington, DC, was jointly sponsored by USAID, the QA Project, the Pan American Health Organization, and the World Health Organization. It addressed four major themes: the Regulatory Role of Government, Licensure of Providers and Facilities, Certification, and Accreditation of Health Delivery Institutions. The CD-ROM has summaries of all conference presentations, PowerPoint files, handouts, related website links, sponsor publications, and contact information of speakers and participants.

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Lin, Y. 2000. **Designing Quality Essential Obstetric Care Services in Honduras.** *Quality Design CS.*

All QA Project publications are available by email (write to qapdissem@urc-chs.com) and/or can be downloaded from the QA Project website: www.qaproject.org.

Quality Assurance Project is operated by the Center for Human Services in collaboration with the Joint Commission Resources (formerly known as the Joint Commission International) and Johns Hopkins University (including the School of Hygiene and Public Health, The Center for Communication Programs, and the Johns Hopkins Program for International Education in Reproductive Health). The project is sponsored by the United States Agency for International Development under Contract Number HRN-C-00-96-90013. For additional information please contact:

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C O N T E N T S

<i>QA Project Editorial</i>	
The Future of Evidence-Based Medicine in Developing Countries	1
<i>Feature Article</i>	
A Framework for Clinical Quality Improvement: Integrating Content of Care and Process of Care	4
The Effect of Job Aids on Improving Adherence to Cotrimoxazole for Childhood Pneumonia in Niger	8
Pre-eclampsia in Uganda: Quality Care with a Case Management Map	11
Job Aids Symposium Introduces Innovative Ways to Raise Health Worker Performance	14
Improving Compliance with IMCI Guidelines in Kenya	16
Malawi District Advances Compliance with IMCI Guidelines	18
QA Intervention Improves Malaria Prescribing Practices of Private Outlets in Kenya	19
Quality Design Reduces User Error in Malaria Test Kits	21
Improving Maternal and Child Health Services through COPE®	23
CaliRed: A Performance and Quality Improvement Model for Maternal and Neonatal Health Services Network in Guatemala	26
Applying Modern Quality Improvement Methodology to Maternal and Child Health in Tver Oblast, Russian Federation	28
Team-Based Problem-Solving Improves Coverage of Essential Prenatal Care Services in Rwanda	33
Improving the Quality of Essential Obstetric Care in Bolivia	35
Quality Assurance and Performance Improvement: A Perspective from the PRIME II Project	39
Quality Improvement and Cost	41
Tuberculosis Computer-Based Learning Tool Garners User Acclaim	45
CBT Successfully Teaches the IMCI Approach	47

QA Project Editorial

The Future of Evidence-Based Medicine in Developing Countries

James R. Heiby, MD, MPH
USAID Project Manager

ATTEMPTS to explain evidence-based medicine (EBM) to a layperson typically garner a “don’t you do that already?” response. But even health professionals may be forgiven if they don’t fully appreciate the sweeping implications of this apparently simple idea.

In general terms, healthcare has been based on scientific research and clinical observations for nearly a century. More recently, however, in the US and elsewhere, health services research began to raise new questions about the basis for the healthcare patients actually receive. Studies that are now classics revealed that patients with identical health problems frequently receive widely different care in different locations. Upon closer examination, most of this variability could not be justified. Large numbers of patients were receiving services that were at best sub-optimal and often wasteful.

Ironically, a major factor in variable practices is the explosion of information itself. With tens of thousands of studies published every year, keeping current is just too much for a busy clinician. In response, professional organizations began to develop evidence-based clinical guidelines. These guidelines are designed to distill current evidence on a clinical issue, specifically for application by the busy clinician. To their critics, the guidelines resemble a cookbook: They offer the

continued on page 2

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QA Project Editorial continued from page 1

clinician concise directions on the assessment and treatment of a particular condition. But, with surprisingly little dissent, these guidelines have quickly become a central element of healthcare in industrialized countries. Middle-income countries face similar issues and are developing their own EBGs.

In developing country health systems, EBGs raise different, but hardly less sweeping, issues. These countries appropriately focus on a more narrow range of basic services. But this care also shows variation, with many patients receiving less efficacious and wasteful care. WHO and other international organizations have promoted guidelines covering virtually every basic service, from child illness to prevention of mother-to-child transmission of HIV. But here, the issue is not an explosion in information. Rather, we have learned that most health systems are not equipped to support the use of EBGs. Without new strategies, these guidelines seem to be destined to have limited impact on what providers actually do. Evaluations often find that the care actually received by patients meets guidelines less than half the time. What's the problem?

Some of the symptoms are familiar. Guidelines developed in the capital do not reach the providers who are supposed to follow them; copies of guidelines that do reach the periphery are locked away rather than at the clinician's fingertips. Even providers that have

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received special training and reference materials often show low and declining levels of “compliance.” In fact, these symptoms confirm lessons from earlier experiences in industrialized countries—to change provider behavior, providing the guideline itself and related technical training is necessary, but not sufficient. And, as you will find in this issue of the *QA Brief*, we’ve learned a lot about what more needs to be done.

One set of issues involves the nature of the guideline itself and how it was developed. The evidence base is only part of the picture. Equally important, the guideline should be feasible for ordinary providers to follow and its content should be acceptable to them. These providers, as well as technical experts, have an important role in developing the guidelines they will be expected to carry out.

In some cases, however, feasibility can be addressed by changing the health system rather than the guideline. Like any complex organization, health systems have rules for many administrative and support tasks that must be carried out over and over. The rationale for these rules may be long forgotten, but it can be a serious obstacle implementing new guidelines.

If the relevant parts of a health system were all designed to support EBGs, what would it look like? A well-defined approach is available for this purpose, but it is little known outside industrial country health systems. Articles that follow document the potential of this new approach to guidelines, the systematic re-design of the way services are carried out.

Individual clinicians who wish to follow a given guideline may simply make errors. The more complex the guideline, the more difficult it is to remember its content. If the health worker deals with a given situa-

tion infrequently, performance suffers even more. In many cases, a written job aid can dramatically improve performance. Producing an effective job aid obviously requires expertise in the clinical content. Many health professionals are unaware, however, that there is a distinct state-of-the-art for job aids. The field of human performance technology has produced well-tested principles and methodologies for designing a job aid that works, whatever the topic. These important new methodologies are introduced and illustrated in this issue.

Managers are often puzzled when assessments show that health workers are not following program guide-

lines, despite training and access to the guidelines. Quality improvement methodologies provide a framework for analyzing problems like this and developing promising solutions to test. This general problem-solving approach is a highly promising strategy for supporting implementation of EBGs, but it remains under-

utilized. Concrete examples described in this issue suggest the need for an institutionalized problem-solving capacity.

Not long ago, managers of health programs implicitly assumed that health workers with the appropriate training and supplies would provide acceptable healthcare. Evidence-based clinical guidelines challenge this basic assumption. The logic of the guidelines demands that managers take on new responsibilities for the quality of care in their programs. As the articles that follow will illustrate, robust new tools are needed.

The field of human performance technology has produced well-tested principles and methodologies for designing a job aid that works, whatever the topic.



A Framework for Clinical Quality Improvement: Integrating Content of Care and Process of Care

M. Rashad Massoud, MD, MPH

Associate QA Project Director, Russia, NIS, Asia, and the Middle East

A story that is well known because it is so often encountered is that of physicians, nurses, and health workers who receive training outside their organizations, then return to their organizations keen to implement what they have recently learned. More often than not, they encounter difficulties in trying to implement the new knowledge. Sometimes these difficulties are resolved and all ends well. In other cases, these difficulties are not resolved, or if the initial difficulties are resolved, various other obstacles come up. In such cases, a lot of frustration may be created, and the people who wanted to implement what they learned at the training start to give up, and eventually return to doing what they used to do prior to the training. In many instances, the reason why they could not implement the new knowledge is due to the incompatibility between the new knowledge and the way work is organized in their organizations.

Introduction

This article discusses one of the key frameworks in improving clinical quality, the integration of the content and the process of care. It builds on Paul Batalden's Framework for the Continual Improvement of Healthcare,¹ defines what is meant by the content and the process of care, and explains the importance of integrating content and process of care in order to bring about improvements in healthcare quality.

Background

Much of what is referred to today as healthcare quality improvement methodology is derived from Total Quality Management (TQM), which has been successfully applied in the manufacturing and service industries. The principles and methods that TQM applied in industry form the basis for quality improvement in healthcare. TQM in industry emphasized meeting and exceeding customer needs and expectations, and re-designing processes of service delivery or product manufacturing. This emphasis has been imported to healthcare quality improvement and is a key feature of the methodology. However, one of the important limitations of the TQM industrial model when applied to healthcare is that a critical component of providing quality healthcare—the clinical content of care—is not explicitly addressed in the industrial model. For example, in improving the system of hypertension care, it is not enough to meet or exceed patient needs and expectations, and to improve the way in which the processes of healthcare delivery are organized. It is equally important to ensure that the clinical care being provided through these healthcare processes is the scientifically correct choice and that it is compatible with the currently available medical evidence.² This limitation has often been missed in applying TQM to healthcare.

¹ Paul B. Batalden, MD, Patricia K. Stoltz, PA-C, A Framework for the Continual Improvement of Healthcare: Building and Applying Professional and Improvement Knowledge to Test Changes in Daily Work. *The Joint Commission Journal on Quality Improvement*, Volume 19, Number 10, October 1993.

² Evidence-based medicine can be defined as "The conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients" – source: *British Medical Journal*, 1996; 312:71-72 (13 January).



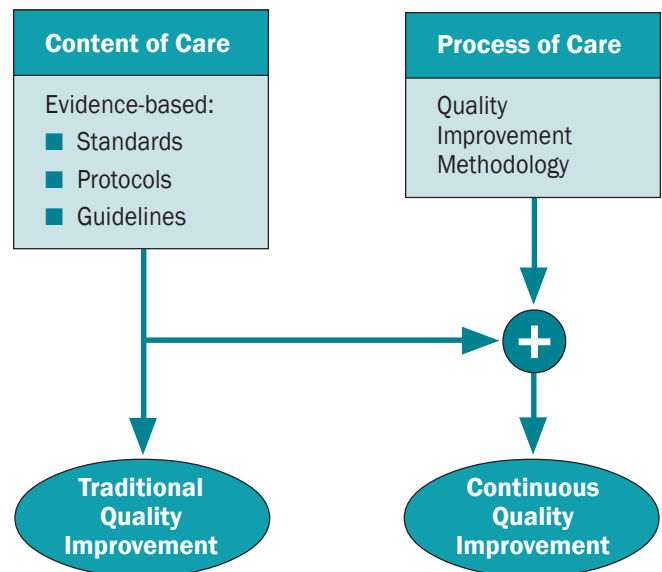
Paul Batalden's *Framework for Continual Improvement in Healthcare*

In their above-referenced article Batalden and Stoltz addressed the limitations in the existing frameworks on how improvement can be achieved in healthcare. The article contrasts traditional and continual improvements in healthcare. Traditional improvement results from advances in professional knowledge, including knowledge of the content of care, or the discipline itself, as well as professional values. Continual improvement in healthcare results from the combination of professional subject matter knowledge and the knowledge of improvement. The knowledge of improvement includes knowledge of systems, variation, psychology of work and change, and the theory of knowledge (how new knowledge is generated). They propose a new approach to improving healthcare quality and describe the elements of a system that is capable of continually improving. The QA Project's understanding of clinical quality improvement, which is described in this article, is based on Batalden's Framework for Continual Improvement in Healthcare.

Integrating the Content and the Process of Care

Over the past decade, the central role of integrating content of care with the process of care has become more evident through field experiences. The provision of healthcare includes two types of components: what is done (clinical content) and how it is done (the processes and systems of healthcare delivery or the way healthcare delivery is organized). Although improvements can be achieved through addressing either of these components on its own, the most powerful impact occurs when both are addressed in an integrated manner. Thus, to maximize clinical quality improvement, it is important to update the clinical content, as well as to enhance the capacity of the systems and

Figure 1
The Framework for Clinical Quality Improvement



Adapted from: Paul Batalden, Patricia Stoltz, A Framework for Continual Improvement in Healthcare, The Joint Commission Journal on Quality Improvement, October 1997

processes of healthcare delivery to enable the implementation of the updated clinical content.

Evidence-Based Medicine as a Basis for the Clinical Content

Improving clinical quality necessarily includes updating the clinical content of care. Much emphasis today is placed on strengthening clinical practices, which are evidence-based, and doing away with practices for which evidence is insufficient. As part of updating clinical content, one may find that there are some aspects of care that are neither supported nor negated by strong evidence. This is a common situation and reflects the state of the art in clinical medicine. Even in such cases, it is important to



acknowledge the levels³ of evidence available and to act accordingly. In making decisions regarding clinical issues, practitioners have no option but to base them on the highest available level of evidence, even if it is not very high. However, it is different when they do so fully conscious of what the level of evidence is. In other words, a physician may opt in a certain situation to carry out a procedure, for which the evidence is not strong, because this is the best available option, but in doing so, he or she should be conscious of this.

Organization of Care

The clinical content of care is delivered to patients through healthcare delivery processes and systems. Every process or system has its characteristic features. It is important to recognize and understand key features of the processes and systems in order to enable the implementation of new content through them.

These features may directly stem from the nature and original design of the process or system itself. Alternatively, they can stem from other processes and systems within or even outside the organization.

For example, in implementing a new system of administering prophylactic antibiotics in surgery, the existing processes and systems did not permit the prophylactic antibiotic to be administered as part of the preoperative medication. Prophylactic antibiotics were being prescribed and their administration started often long before the patient received preoperative medication. The process of prescribing and administering the antibiotics needed to be changed such that the anesthesiologist performed this as part of the pre-

operative medication. This characteristic feature is part of the process of prescribing and administering prophylactic antibiotics itself. However, making these drugs regularly available in the operating theatre so that they are administered as part of the preoperative medication is part of another process: the process of pharmaceutical distribution in the hospital. In designing the new process of prescribing and administering prophylactic antibiotics, the nature of the pharmaceutical distribution process had to be understood and factored in. Part of the new process of prescribing and administering prophylactic antibiotics has characteristic features, which stem from another process, the pharmaceutical distribution process.

The features of a process may exist because they were originally designed that way or alternatively, because they became so by default. Sometimes they can be a mixture of both. Moreover, processes may undergo

subtle changes from their original designs as a result of the influence of various internal and external factors. There is a common myth that if a process was designed in a certain way, it will continue to operate in that way. This is often not the case, because processes and systems may

undergo these subtle changes. For example, it was quite revealing to see that the system of care for neonates with respiratory distress syndrome had over time undergone so many different changes that it became a different process in each of the five facilities. These five facilities originally had the same system and the staff of the five facilities thought that they were all still implementing it according to the original design.

The features of a process may exist because they were originally designed that way or alternatively, because they became so by default.



³ For example the 4 level (including 6 level 2 sublevels) classification of the Levels of Evidence can be the National Health Service Center for Reviews and Dissemination (U.K.): *Undertaking Systematic Reviews of Research on Effectiveness: CRD Guidelines for those Carrying Out or Commissioning Reviews. CRD Report No. 4. York: University of York, 1996.*



In order to make clinical improvements in healthcare, it is important to realize that the design features of the existing processes and systems for all the reasons discussed above may, or may not, enable updated clinical content to be delivered. In some instances where the design features of the processes and systems allow the implementation of new clinical content, they may do so inconsistently or with a high likelihood of error. Therefore, understanding the organization of healthcare delivery and what limitations the existing processes and systems can place on implementing updated or new clinical content is an essential component of clinical quality improvement. Key to successful clinical improvement is not just to understand these limitations, but to re-organize the systems and processes of healthcare delivery to enable the implementation of new clinical content.

Conclusion: The Importance of Integrating the Content and Process of Care

The moral of the story at the start of this article is that in order to make improvement, it is usually not enough to focus on improving the knowledge or skills of individuals through training and development. New, evidence-based, content knowledge should be accompanied by relevant changes in the processes and systems in which this new knowledge will be implemented. These changes will enable individuals to correctly implement their new knowledge and skills in a consistent and reliable fashion.



The Effect of Job Aids on Improving Adherence to Cotrimoxazole for Childhood Pneumonia in Niger

Wendy Newcomer Edson, PhD, MPH, RN, Senior QA Advisor; Maina Boucar, MD, MPH, Associate Director for West and Francophone Africa; Peggy Koniz-Booher, MPS, Senior Technical Advisor; Sabou Djbrina, MHS, Associate Director, West Africa; and Ibrahima Mahamane, BA, Research Coordinator

WE developed a set of client and provider job aids to improve adherence to antibiotic regimens, specifically oral cotrimoxazole, for the outpatient treatment of children with pneumonia in Niger. Job aids have been shown to improve work performance among healthcare providers by enhancing recall and promoting compliance with standards. Child nutrition cards maintained by mothers and instructions for preparation of ORS are examples of client-based job aids.

Using formative research, we developed appropriate messages and strategies for behavior change for caretakers of children with pneumonia. A local artist drew images of mothers giving their children the antibiotic to convey messages on proper administration and storage, and completion of the entire five-day course. These images were displayed on one side of an envelope for the cotrimoxazole, with the reverse side depicting the antibiotic regimen (dose, frequency, and number of days). The images were then repeated on a counseling card and poster for the health worker to use. A large image of good interpersonal communication by the health worker was also depicted on the poster. The Niger Ministry of Public Health developed a training program for health workers on interpersonal communication and use of the medication envelopes, counseling card, and poster.

An efficacy trial was then conducted to test the effectiveness of the job aids. Would there be a difference in adherence to the antibiotic regimen in the experimen-

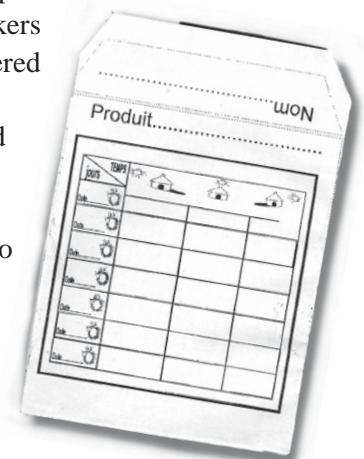
tal sites that used the job aids? Did the job aids make a difference in adherence in some clinics rather than in others, and why? We found that healthcare workers were giving only three days of the recommended five-day course of treatment at the outset of the study, as supplies of the antibiotic were low. Therefore, we provided enough cotrimoxazole so that the full, five-day course could be given. Would there be a difference in adherence if five days of pills were given as compared to three days?

A sample of 675 caretakers of children with pneumonia (348 in the experimental group and 327 in the control group) from eight health centers (four experimental and four control) were visited at home four to five days after the initial consultation. The dependent variable, adherence to the antibiotic regimen, was measured with a pill count on day four or five after the clinic consultation. Two measures were calculated with these data:

- 1) the proportion of caretakers who adhered

to the antibiotic regimen, and 2) a ratio of observed pills to expected pills. A ratio closer to “1.0” indicated greater adherence to the antibiotic regimen.

There were no significant differences between the experimental and control groups for





the children's characteristics (age, birth order, sex) or the mother's characteristics (age, educational level, marital status). However, household characteristics and characteristics of the health center visit did differ significantly. The size of the household was larger in the control group (9.3 versus 7.4 persons) and households in the experimental group had more radios (68% versus 44%). The control group lived farther away from the health center than the experimental group (2.9 versus 2.3 km), and the caretaker stated that improvements were needed in care at the health center more often in the experimental group (75% versus 42%). In addition to cotrimoxazole, more children were prescribed aspirin in the control group (49% versus 36%); however, more children were prescribed chloroquine in the experimental group (93% versus 63%). In the initial results (Table 1), the experimental group had greater adherence to the antibiotic regimen than the control group, even if the full five-day course of medication was dispensed at the initial visit.

Further analysis using a multi-factorial ANOVA design was completed to assess the effect on patient adherence of the interaction between the use of job aids and type of health worker.

We found that adherence was significantly less in caretakers attending clinics staffed with lower-level health workers; however, adherence was better in those clinics staffed with lower-level health workers using the job aids (Adj $R^2 = .101$, $p < .001$.) (Figure 1).

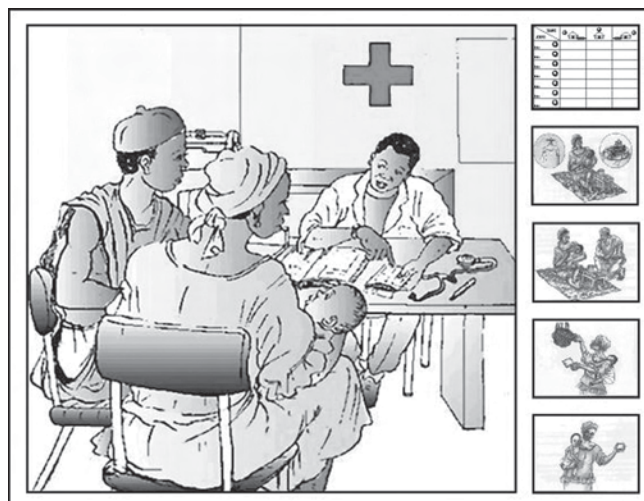


Table 1

Description of Differences in Experimental and Control Group for Dependent Variables*

	Control Group	Experimental Group	Level of Significance
Patient adherence (% who adhered to regimen)	76%	90%	<.001
Patient adherence (ratio of observed to expected pill count)**	.929	.980	< .001
3 days of medication received initially	.920	.980	< .001
5 days of medication received initially	.952	.979	< .001
Kept follow-up appointment (% yes)	58%	79%	< .001
Maternal knowledge (% correct)			
Number of pills	99%	99%	NS
Number of times per day	97%	93%	.01
Number of days	98%	99%	NS
Child's health (mother's perception, % yes)			
Improved completely	35%	47%	.002
Improved a little	65%	53%	.002
Still has a cough	46%	38%	.03
Still has a fever	25%	13%	< .001
Still has nasal discharge	42%	28%	< .001
Medication storage (% correct)	87%	91%	.04
Used clean water to mix medication (% correct)	73%	94%	< .001

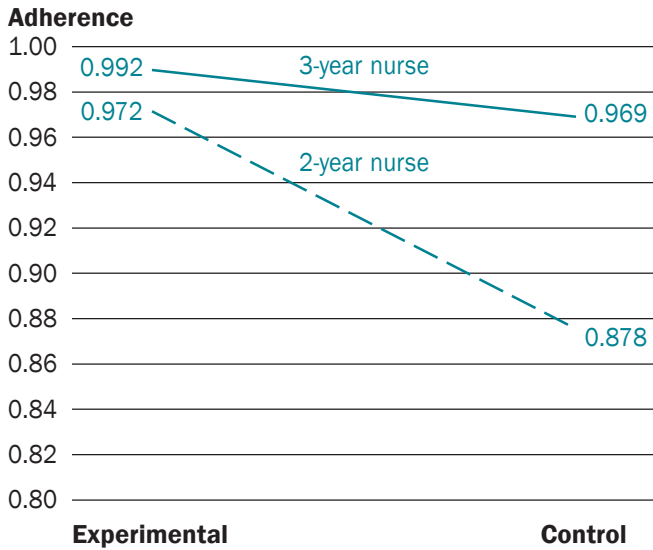
* Patient adherence, follow-up appointment, maternal knowledge, child's health, medication storage, and preparation

** Note: Ratio closer to 1 indicates greater adherence.



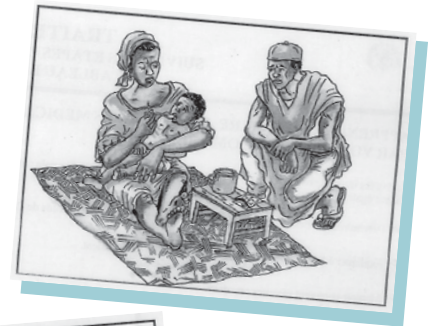
Figure 1

Adherence to Antibiotic Regimen by Type of Healthcare Worker and Study Group



Note: Adherence measured as ratio of observed to expected pill count.

The results indicate that the job aids did have an effect on improving patient adherence, especially when used by lower-level health workers. Country IMCI programs could use a set of job aids for clients and providers, such as those described here, to improve counseling and caretaker adherence to medication regimens.





Pre-eclampsia in Uganda: Quality Care with a Case Management Map

Barbara Kerstiëns,¹ MD, MPH, Technical Advisor and Program Officer, Agence Européenne pour le Développement et la Santé, and Barton R. Burkhalter, PhD, Associate QA Project Director, Operations Research

PRIOR to the introduction of case management maps (CMM), pre-eclampsia was a major problem in the maternity ward of Uganda's Jinja Hospital, located in Jinja District. In the year before CMM, 11 percent of all women admitted with pre-eclampsia, a dangerous complication of pregnancy, progressed to eclampsia, and 38 percent of the births to pre-eclamptic women were stillborn (Table 1).

Preliminary findings of a study by the Quality Assurance (QA) Project and Jinja Hospital indicate that in the 12 months after case management maps for pre-eclampsia were introduced, 8 percent of pre-eclampsia cases progressed to eclampsia, and stillbirths dropped to 18 percent of all births to women admitted with pre-eclampsia.

Pregnancy-induced hypertension (PIH) is a complication of pregnancy always characterized by elevated blood pressure and sometimes by protein in the urine and edema after the 20th week of gestation. During pregnancy, PIH can progress to pre-eclampsia, characterized by headaches, vomiting, impaired vision, abdominal pain, and further increase in blood pressure, urine protein, and edema.

At Jinja, pre-eclampsia was defined as any woman presenting with blood pressure of 140/90 mm mercury or more and/or signs of proteinuria, headache,

or dizziness.² A multidisciplinary team at the hospital developed and implemented the pre-eclampsia CMM with technical assistance from the QA Project. The team reviewed and modified existing case management standards, using the national Uganda PIH and World Health Organization Safe Motherhood guidelines as the basis for the CMM (Figure 1).

To implement the CMM, the team recommended several changes in hospital policies and practices, including standardizing drugs, closely monitoring maternal blood pressure and fetal heart rate, timing convulsions, testing urine protein, and recording and initialing all actions taken. Hospital staff participated in two one-day training sessions. The development and implementation process took three months.

The hospital staff embraced CMM, and used CMM universally almost from the beginning. In the 16 months following its introduction, 63 of the 64 women admitted for pre-eclampsia were managed using the new CMM. A staff survey found very positive attitudes towards the pre-eclampsia CMM. They said it fostered self-confidence (especially in low-level staff) and gave patients confidence. They said it also resulted in improved communication between nurses and patients, improved care because patients in need were easily identified, better management of drugs, and more vigilant attention by the laboratory and pharmacy.

¹ Barbara Kerstiëns, MD, MPH, was the principal investigator for this project and undertook all fieldwork and data analysis, in cooperation with Jinja Hospital team. Dr. Kerstiëns and Barton R. Burkhalter, PhD, wrote this summary of the project. Drs. Agel Akii, Nazarius Mbona, and Abby Zziwwa from the Jinja Hospital Team contributed in major ways to the project, in addition to numerous contributors from Jinja Hospital and the Uganda Ministry of Health.

² In the most severe cases, pre-eclampsia progresses to eclampsia, characterized by convulsions. If untreated, eclampsia could result in death from brain hemorrhage or from failure of the heart, liver, or kidneys. Pre-eclampsia is associated with increased stillbirths, especially if untreated.



Figure 1

Pre-eclampsia Case Management Map Used at Jinja Hospital

Case Management Map (CMM)

Pregnancy Induced Hypertensive Disorders

Identification number _____

Serial / IP number _____ / _____

Name _____

Date of admission ____ / ____ / ____

Referred yes no

Starting Page

	Date ____ / ____ / ____			Date ____ / ____ / ____			Date ____ / ____ / ____			Date ____ / ____ / ____		
	D	E	N	D	E	N	D	E	N	D	E	N
Check 3x/day												
Blood Pressure												
Systolic	200			200			200			200		
	180			180			180			180		
	160			160			160			160		
	140			140			140			140		
	120			120			120			120		
Diastolic	100			100			100			100		
	80			80			80			80		
	60			60			60			60		
Fetal Heart Rate												
	170			170			170			170		
	160			160			160			160		
	150			150			150			150		
	140			140			140			140		
	130			130			130			130		
	120			120			120			120		
	110			110			110			110		
	100			100			100			100		
Convulsions*												
<i>Initials =></i>												
Check 1x/day	Result	Initial	Result	Initial	Result	Initial	Result	Initial	Result	Initial	Result	Initial
Edema					Ed						Ed	
Weight					Wght						Wght	
Hyperreflexia					HypR						HypR	
Proteinuria					Prot						Prot	
Give	Result	Initial	Result	Initial	Result	Initial	Result	Initial	Result	Initial	Result	Initial
Inderal 80 mg BD					Ind						Ind	
Aldomet 250(-500 mg) tds					Ald						Ald	
Diazepam 5 mg tds					Diaz						Diaz	
Counsel	Result	Initial	Result	Initial	Result	Initial	Result	Initial	Result	Initial	Result	Initial
Restricted salt												
Bedrest left side												
Check Newborn Breastfed*					BrF*						BrF*	

* or = Possibility of critical event

Jinja Hospital – Maternity – 1999



Table 1.

Results from Developing and Introducing a Pre-eclampsia CMM in Jinja Hospital

Indicator	Before (6/95-5/99)	After 1 (9/99-8/00)	After 2 (9/00-1/01)
Performance according to standards:			
Check and record blood pressure 3 x day	2.8% (1/36)	78% (39/50)	95% (20/21)
Check and record urine protein daily	5.6% (2/36)	64% (32/50)	86% (18/21)
Patient outcomes:			Odds Ratio
Cases that progressed to eclampsia	11% (4/36)	8% (4/50)	1.4
Stillbirths to women admitted for pre-eclampsia*	38% (8/21)	18% (7/38)	2.1

*Note: For some patients, birth outcome was not noted in the record.

In addition to reduced stillbirths and eclampsia, the pre-post evaluation found that patient monitoring improved dramatically with the new CMM. Correct monitoring of blood pressure jumped from 3 to 78 percent of pre-eclamptic patients, while correct monitoring of urine protein went from 6 percent up to 64 percent after the introduction of the new CMM (Table 1).

These encouraging results were due both to the CMM itself and to the process used to develop and introduce it. Key steps in the development process included:

- Reviewing and modifying existing case management standards at the hospital
- Team-building that generated enthusiasm and ownership, which, along with project resources, helped acquire needed equipment and supplies, reduce medicine stock-outs, and maintain sufficient clinical staff to guarantee proper monitoring.

An important and unanswered question is how much of the development process must be reproduced to achieve the same results when introducing the CMM in another hospital.

The results reported here are preliminary, because they have not yet been tested in other hospitals and because they may have been influenced in part by two other factors not yet analyzed:

- A few patients left the hospital before delivery and are not yet included in the analysis
- The Jinja team started work on another CMM for maternal hemorrhage about five months after introducing the pre-eclampsia CMM, and this may have contributed to the success of the achievements reported here





Job Aids Symposium Introduces Innovative Ways to Raise Health Worker Performance

Jennifer Lahaie, MA, Project Coordinator, Operations Research

THE first conference to exchange views and evidence on the state-of-the-art use of job aids took place at the International Trade Center in Washington, D.C. on May 24, 2001. The conference was jointly sponsored by the Quality Assurance (QA) Project, the U.S. Agency for International Development (USAID), and the Child Survival Collaborations and Resources (CORE) Group. The event shared innovative job aids that have been used successfully as a way to improve health. The symposium also identified future developments to make job aids more useful in the field for international health and child survival. More than 70 participants from 34 different organizations attended, including participants from public sector institutions, non-governmental organizations, professional associations, and donor and cooperating agencies.

The conference technical program addressed success stories, views, and evidence surrounding the use and evaluation of job aids.

The symposium consisted of presentations from a wide range of experts, and included a panel of professionals who shared experiences in the development, application, and evaluation of job aids. In the afternoon, participants had small group discussions focusing on specific applications of job aids across the healthcare field.

The highlight of the symposium included two keynote presentations by Tony Moore, president of Moore Performance Improvement, Inc, and a job aid expert. His first presentation discussed the latest information on job aids, focusing on an exact definition of job aids and the latest information about them.

Moore defined job aids, told participants how to identify them and when they should be used, noting that job aids are tools that should be used by workers every time they perform a specific task that will ensure consistency in performance. “Job aids are used on the

job while performing the task. It tells you when to and when not to take action, and tells how to do it. Job aids are like having a coach...a gentle guide,” he added.

Moore emphasized that job aids may not be appropriate for all situations. For example, some tasks are physically constraining, making using job aids unreasonable or even dangerous for workers. A telephone repairman cannot

safely climb a pole and read a job aid in the form of a manual, Moore explained.

Additionally, in some workplace settings, speed is a crucial element for successful performance. Workers who routinely deal with healthcare emergencies should not rely on job aids to perform emergency tasks. Pilots should not plan to grab a job aid to brush

A successful job aid should reduce reliance on memory, and therefore reduce the guesswork surrounding a process for a worker. Job aids can be a system of conditional formulas, leading the worker through a process to a successful, appropriate end. Not only do job aids tell a worker when to perform a task, they also explain how to perform that task.





up on emergency landing procedures in the event of a crisis. In these instances, training for these emergency situations is more appropriate than job aids.

Leading practitioners in the field also shared their successes at the symposium. Paula Tavrow, PhD, QA Project Deputy Director of Operations Research, discussed the successful use of job aids to improve malaria treatment in Kenya, where the QA Project developed job aids for shopkeepers. The job aids, which explained new malaria guidelines, were distributed to private outlets by wholesale vendors. Shops receiving the job aids were significantly more likely to provide correct anti-malarial treatment information to mystery shoppers posing as customers.

Federico R. Leon, PhD, of the Population Council, discussed his work to improve family planning counseling in Peru. He helped create job aid method cards for counselors and clients for counseling in family planning. “The job aids represented a bridge in the relationship with the clients,” he said.

Wendy Edson, PhD, Senior QA Advisor, Operations Research, discussed how job aids helped improve caretaker adherence with antibiotic treatment for children with pneumonia in Niger. The QA Project developed a package of job aids for caretakers and health workers that included a counseling card, a medication envelope with dosage information, a poster, and a short training course on the job aids.

Linda Bruce, Senior Program Officer, Program for Appropriate Technology in Health (PATH), discussed using a Clean Delivery Kit, a pre-packaged kit of essential hygiene and cord-cutting supplies with pictorial instructions, in delivering a baby. She also discussed the Vaccine Vial Monitor, which contains heat and time-sensitive labels on vaccine bottles that change color when the vaccine can no longer be used. A simple companion job aid accompanying the monitor described the action needed based on the label’s color.



Job aids help improve performance of both health workers and clients.

Adrienne Kols, a consultant to the Johns Hopkins University Center for Communication Programs, discussed the Smart Patient client education project, which increased clients’ participation in family planning in Indonesia. Women in Indonesia are often shy and reluctant to ask questions; the project developed a job aid that encouraged women to express themselves. “The contribution of the job aids helped legitimize clients’ right to speak out,” she said.

Afternoon breakout sessions addressed job aids for non-literate populations, job aids to improve clinical services, scaling up job aids efforts, and electronic job aids. Moore also conducted a short course on how to design a job aid, and covered topics from content and type size to layout. Overall, he said, it is important to understand that not all performance problems can be solved with job aids. They can be useful in healthcare and should be considered a major strategy for improving the quality of healthcare service delivery.





Improving Compliance with IMCI Guidelines in Kenya

Paula Tavrow, PhD, Deputy Director, Operations Research; Lynette Malianga, BNS, RN, Senior QA Advisor; Muthoni Kariuki, PhD, Senior Program Officer, African Medical and Research Foundation; and Cynthia Young, MA, Senior Writer

THE Integrated Management of Childhood Illness (IMCI) guidelines developed by WHO and UNICEF are intended to improve the case management of sick, under-five children in developing countries. The guidelines prescribe a comprehensive assessment of the child's symptoms, a classification of each symptom, a treatment plan, and interactive caretaker counseling.

As part of a pilot program launched in Kenya in 1996, the Centers for Disease Control and Prevention (CDC) and the Government of Kenya trained about 80 health workers in IMCI in two rural districts in Western Province: Bungoma and Vihiga. Although the health workers' performance of IMCI appeared to be high immediately after training, a CDC assessment one year later indicated that performance had deteriorated considerably. In fact, focus group discussions led by the QA Project revealed that many providers had stopped performing IMCI regularly due to lack of support from the facility in-charges and staff, heavy staff workload, lack of IMCI-recommended drugs, and the amount of time needed to perform the IMCI algorithm.

To address these deficiencies in IMCI performance, the QA Project and the African Medical and Research Foundation (AMREF) developed an operations research study in these districts to test whether systematic team problem solving could be a low cost intervention to improve IMCI performance. The study entailed setting up facility-level problem-solving teams that were coached on how to develop, implement, and evaluate solutions to the problems identified in IMCI performance. Two-thirds of the facilities in the two districts were randomly selected to receive

team instruction and coaching. To keep the costs low, the study team did not seek to create a national or district-level quality assurance program. Instead, supervisors were taught to incorporate team coaching into their normal supervisory duties.

The study began with a baseline assessment in May 1998 of 70 IMCI-trained health workers in 35 government health facilities. The assessment revealed serious deficiencies in health workers' compliance with IMCI. Providers did not check for all four general danger signs in more than one-third of the children observed and did not check for all major symptoms in two-thirds of them. Less than 10 percent of the children received a complete assessment, and less than 20 percent of the children were correctly diagnosed. Only 60 percent of sick children received correct treatment.

Providers expressed frustration in performing IMCI. The majority said that IMCI took too long and made their workload too heavy. More than 80 percent complained that IMCI drugs and supplies were often unavailable.

In October 1998, the QA Project conducted a three-week course on quality assurance and team problem solving for 20 IMCI supervisors and district managers from the two districts. The training consisted of two weeks of classroom instruction, followed by one week of practicals in which the supervisors and managers set up teams in two facilities (one in each district). In each facility selected for team activities, the supervisors trained 8 to 12 staff on the facility's premises over five consecutive afternoons. During this training, the selected staff—who included the IMCI-trained providers—received feedback from the baseline



assessment on how well their facility had performed the IMCI algorithm.¹ Over the next six months, the supervisors created teams at 23 facilities and coached them in problem solving.

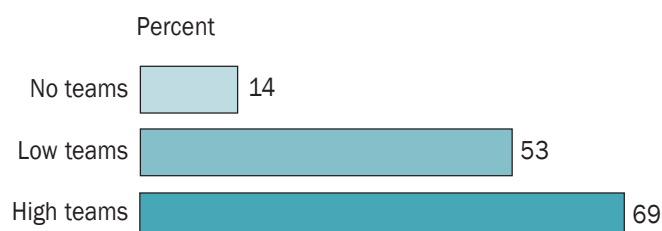
These teams were tasked with the problem of ensuring that all children at the facility received a complete IMCI assessment and classification. Regular practice of IMCI was considered a key step in improving the quality of health worker performance. Each team was coached to analyze why children were not getting the full IMCI assessment, to devise solutions to improve the situation, to implement the solutions, and then to analyze the effects.

In March 2000, a follow-up assessment was conducted to measure the impact of the team problem solving on IMCI performance. Results showed that facilities had implemented about three solutions on average. Facilities with teams had significant improvement in some aspects of IMCI case management when compared to facilities without teams. The difference was greatest among the facilities with teams with high problem-solving ability (as depicted in Figure 1).² These teams performed significantly better on assessment and counseling in comparison to the baseline, but not on treatment and classification.

The cost of setting up teams in facilities and coaching them for a year was about \$425 per facility. As of June 2001, about half of the teams in Bungoma district were still working on IMCI-related challenges, in part because of an ongoing project by AMREF to train providers in IMCI. In Vihiga district, transfers of key personnel and coaches' inability to visit the teams have adversely affected the sustainability of teamwork in the facilities.

Figure 1.

Percentage Point Improvement in IMCI Case Management,* by Existence and Ability of Facility Teams, 1998-2000



* Based on composite of the four IMCI case management aspects: assessment, classification, treatment, and counseling.

Given that the cost of training a provider in IMCI costs between \$250 and \$450, this study indicates that setting up teams and having supervisors coach them during their normal supervisory visits is a worthwhile investment for developing countries. However, such QA teams are most likely to be sustained where there is ongoing interest and support at the district level or they are part of a national/regional QA effort.

For more information, see the *Quality Assessment Case Study* "Assessing Health Worker Performance of IMCI in Kenya." To order the report, please access our Website at <www.qaproject.org> or write to qapdissem@urc-chs.com.



¹ The performance of all IMCI-trained providers at the facility was combined and average scores were developed for assessment, classification, treatment, and counseling.

² During the evaluation, all teams that were visited and interviewed were also asked to complete a 60-minute case study exercise. The six teams that achieved at least 60 percent on the exercise and who had implemented at least two solutions were determined to be "higher problem-solving ability" teams. All other teams were categorized as "lower problem-solving ability" teams.



Malawi District Advances Compliance with IMCI Guidelines

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THE Blantyre District Health Management Team (DHMT) and the Centers for Disease Control and Prevention (CDC) are introducing the Integrated Management of Childhood Illness (IMCI) as the new standard of care for sick children under five. The Quality Assurance (QA) Project has been asked to address system issues that limit the capacity of providers to comply with IMCI. A priority issue for the district was the limited time staff spent seeing patients. The DHMT estimates that IMCI requires at least 15 minutes, whereas contact time between providers and patients was believed to be less than three minutes.

The QA Project designed a quality assurance facility assessment (QAFA) tool that combines client flow analysis and a provider time and motion study. The QA coaches introduced health center staff to the QAFA instruments to measure three kinds of data: 1) patient waiting time, 2) contact time between patient and provider, and 3) the way providers spent their time between patient care (direct or indirect) and administrative activities. The first QAFA survey was conducted at Zingwangwa health center in April 2000. It revealed that the average waiting time for a sick child to see a health worker was 80 minutes and an average contact time of 1.8 minutes.

The Zingwangwa health center team, who were previously trained in QA, used this information to start a rapid problem-solving cycle where many changes in the organization of health services were implemented:

- The flow of patients was redirected, limiting congestion

- Patients were given numbered cards so that they would be seen on a first-come, first-served basis
- One IMCI-trained provider would see children only
- Providers who saw adults and who were also IMCI-trained would start seeing children as soon as finishing with their patients

After the reorganization of services, three more measurements were taken. By July 2001 contact time averaged 7.2 minutes and waiting time 10.2 minutes.

QAFA was replicated in four more health centers and revealed contact times ranging from 3.1 to 5 minutes. The Zingwangwa reorganization interventions were considered best practices by the DHMT, so identical changes were implemented in these centers. Follow-up data are being collected and analyzed.

Has the increase in contact time improved IMCI performance? We believe that reaching a higher level of performance (in this case, increasing contact time) will require other changes, such as additional staff. Because this is unrealistic in Malawi, the QA Project will work with the CDC and the DHMT to analyze IMCI performance during real working conditions. For instance, what components of IMCI do providers use? The QA Project will use this information to develop a job aid to help providers perform “as much IMCI as possible.” We also expect that the continued work to implement IMCI will provide a more in-depth understanding of the system and providers’ issues.





QA Intervention Improves Malaria Prescribing Practices of Private Outlets in Kenya

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At least one million people die each year from malaria, the main cause of death of African children. In Kenya, about 26,000 children die annually from the disease, or about 71 each day.¹ The Bungoma District in Western Province of Kenya is a malaria endemic area. Here, malaria is the leading cause of death and accounts for 39 percent of outpatient visits, 42 percent of hospital inpatient admissions, and 36 percent of inpatient mortality.²

Research has shown that the majority of Africans seek malaria treatment from the nearest private drug outlet, such as a small shop, pharmacy, kiosk, or private clinic, rather than at more distant public clinics.³ Yet these outlets sell a wide variety of malaria drugs, including unapproved or expired medicines, often without dosage information, and in unlabeled containers. Because African governments have trouble regulating these outlets, consumers frequently purchase inefficacious drugs or incorrect doses.

Since 1997, USAID has been assisting the Bungoma district to reduce malaria transmission and improve treatment practices through the African Integrated Malaria Initiative (AIMI). In 1999, the QA Project, in collaboration with the African Medical and Research Foundation (AMREF), received AIMI funds to test whether a low-cost outreach education strategy would increase private drug retailers' knowledge of and com-

pliance with Kenya's national malaria treatment guidelines.

Together with the Bungoma District Health Management Team (DHMT), the QA Project and AMREF developed a new intervention to improve private sector dispensing practices. This intervention, called "Vendor-to-Vendor Education," relied on wholesale drug vendors to communicate the new malaria guidelines to drug retailers. Wholesale drug vendors were either counter attendants from wholesale shops or pharmacies, or mobile drug vendors on motorcycles who sold drugs to small shops and kiosks.

The cornerstone of the intervention was customized shopkeeper job aids (posters) that told retailers which drugs were approved for malaria treatment, showed treatment regimens, and gave advice on how to deal with common treatment situations. Client job aids (posters) were also created, which encouraged clients to demand approved malaria drugs from the outlets. In one-day training workshops, the DHMT trained wholesale drug vendors in the new malaria guidelines. The participants learned about the new guidelines, became familiar with the new job aids, and practiced using the job aids to help explain these new guidelines to shopkeepers.

The wholesale counter attendants and mobile vendors were then asked to distribute job aid posters to shop-

¹ *Quality Assurance Project, Bungoma District Health Management Team, AMREF/Kenya. 2001. "Improving Dispensing Practices of Private Drug Outlets in Bungoma District, Kenya: Results of a Vendor-to-Vendor Education Intervention."* 5-6.

² *Ibid.*, 6.

³ *McCombie, SC. 1996. "Treatment seeking for malaria: A review of recent research." Social Science and Medicine 43 (6): 933-45; Ruebush, TK, MK Kern, CC Campbell, AJ Oloo. 1995. "Self-treatment of malaria in a rural area of Western Kenya." Bulletin of the World Health Organization 73 (2): 229-36.*



keepers and pharmacists from private drug outlets during their normal business transactions. This approach leveraged the drug distribution network to reach a larger number of drug sellers. In the first six months, it is estimated that about 500 outlets were reached.



To evaluate the activity, the research team employed eight mystery shoppers, who posed as a mother or father with a sick child at home. The mystery shoppers asked either for a drug recommendation or for a specific, non-approved drug. Four supervisors, who were members of the DHMT, then followed up with the outlets to check drug stocks, to inquire about the usefulness of the job aids, and to assess the shopkeepers' knowledge.

The results showed a dramatic improvement in shopkeepers' knowledge and compliance with malaria guidelines among outlets that received job aids. Mystery shoppers were nine times more likely to receive the recommended drugs from intervention outlets than from those that had not received job aids (18 versus 2 percent), and more than twice as likely to get correct dosage information (38 versus 15 percent). The research team estimated that 82,000 additional malaria clients were treated properly in the first six months due to this intervention. This activity is also affordable: it cost about \$17 per outlet reached, or \$0.10 per beneficiary.⁴

Because of these promising findings, the team recommended that Kenya's National Malaria Control Program consider rolling out the intervention to all endemic malaria areas, advise pharmaceutical companies to indicate dosages for all age groups on packaging, ensure that unapproved anti-malarial drugs do not reach the market, and address misconceptions about malaria in health education at facilities. The Kenyan government is now considering replicating the activity in one pilot district per province in 2002. The intervention may also be replicated in Uganda.

For more information, see the *Operations Research Results*, "Vendor-to-Vendor Education to Improve Malaria Treatment by Drug Outlets in Kenya" (forthcoming). To order the report, please access our website at <www.qaproject.org> or write to qapdissem@urc-chs.com.



⁴ The cost of replication in another district in Kenya would be about \$8,300.



Quality Design Reduces User Error in Malaria Test Kits

Paula Tavrow, PhD, Deputy Director, Operations Research;

Lynne Cogswell, PhD, Consultant; and Cynthia Young, MA, Senior Writer

MALARIA rapid diagnostic tests (MRDTs) have the potential to significantly improve the diagnosis of malaria in developing countries. Yet, for such tests to be effective, informational inserts and design of MRDT kits must be clearly understood by healthcare providers. Using quality design principles, manufacturers can introduce safer and more acceptable products that are less prone to error and waste.

Malaria is the leading cause of morbidity and mortality in eastern and southern Africa. For decades, developing countries have relied on microscopic analysis of blood smears for malaria diagnosis. Unfortunately, microscopy is time consuming, requires trained personnel and laboratory equipment, and is largely unavailable in small health facilities. Consequently, patients currently are often diagnosed and treated based solely on clinical symptoms.

MRDTs can significantly improve the diagnosis of malaria. The tests use whole blood, take only about 10 minutes, and give accurate diagnoses. However, MRDTs are not effective unless providers perform all procedures correctly, interpret results accurately, and persuade clients to take appropriate actions based on the results.

Quality design research assesses the usability of a product from the end user's viewpoint. It identifies ways to change a product and instructions to reduce

error and increase the likelihood of correct use. In 1998, the Quality Assurance (QA) Project assessed the usability of two MRDTs: PATH's Falciparum Malaria IC Strip Test and OptiMAL® Assay by FLOW, Inc. The QA Project also tested whether quality redesign of the products' instructions could improve the ability of providers to follow the steps correctly.

In a two-phase study, a research team assessed the ability of healthcare providers to use the MRDTs correctly. During the first phase, the team introduced both products to 19 providers from public health centers and mobile clinics in Malawi. Eight received training in using the tests and 11 did not. The research team noted where users seemed to have trouble with the tests and interviewed them about the products and instructions. The team redesigned the instructions, pretested them, and then redesigned them again.

For the second phase, the team selected a new cadre of 20 providers and randomly assigned them to one of the two products, using the redesigned instructions. None of the providers was given training.

During the first phase, just 15 percent of providers used the products without error. Among the eight providers who received training before using the MRDTs, two followed all of the steps correctly; only one in 11 untrained providers did. More than half of the providers missed more than 20 percent of the steps.

The Quality Design Approach¹

Step 1: Set Design Objectives

Step 2: Identify Clients and Determine Their Needs

Step 3: Create Design

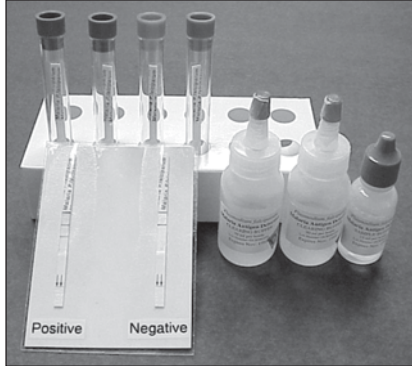
Step 4: Test and Revise

Step 5: Implement and Monitor

¹ These five steps can be viewed as a distillation of the QA Project's 10 Stepwise Methodology. For a more comprehensive approach to quality design that the QA Project developed after this study was completed, see the Quality Design Case Study "Designing Obstetric Services to Reduce Maternal Mortality in Guatemala."



After the instructions were revised, more than 80 percent of the providers were able to use both products without error. Both products yielded similar results.



There was no significant difference by group, and no provider missed more than 20 percent of the steps.

During the study, the researchers noted that providers encountered technical problems in using the kits—such as difficulty collecting blood, labeling speci-

mens, and lacking timing devices and lancets—that could not be rectified with improved instructional inserts. These problems would require redesign of the kits’ equipment, which was beyond the scope of the study.

This research demonstrated that dramatic performance improvements could be achieved by using the quality design approach to change the instructional inserts. Modifying the inserts to meet the providers’ needs seems to have been more effective than training providers in product use. For optimal results, changes should also be made to the equipment in the kits. The QA Project provided both MRDT manufacturers with recommendations to improve their kits before final introduction. Results of the study were also provided to the World Health Organization and the Malawi Ministry of Health.

Figure 1

Use of MRDT Kits before and after Revision of the Instructional Inserts*



* By healthcare providers who used the kits without error.

For more information see the *Operations Research Results* report, “Using Quality Design to Improve Malaria Diagnostics Tests in Malawi.” To order the report, please access our Website at <www.qaproject.org> or write to qapdissem@urcchs.com.





Improving Maternal and Child Health Services through COPE®¹

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Background

COPE stands for “client-oriented, provider-efficient services,”² and is a participatory process and set of tools for healthcare staff to continuously assess and improve the quality of their services. Based on a framework of client rights and staff needs,³ COPE tools include self-assessment guides, client interviews, client flow analysis, and an action plan. Since it was developed for family planning services in 1988, COPE has been used in more than 35 countries, translated into 15 languages, and adapted for a variety of health services, including maternal and child health.

COPE for Maternal Health Services

COPE for Maternal Health services was first adapted in 1997 by EngenderHealth in collaboration with the Ministry of Health (MOH) of Kenya. EngenderHealth, formerly AVSC International, provides technical assistance to reproductive health programs in more than 30 countries. The self-assessment guides were adapted to reflect service standards and guidelines from the World Health Organization (WHO), the Safe Motherhood Initiative, and Family Care International. In 1998, a pilot test of the guides in 13 sites in East Africa produced the results in Table 1.⁴

Client Perspectives

Interviews with clients demonstrated their appreciation of the improvements made.

“I have been to various [healthcare facilities], but this is one among the few that is actually improving.” –
Mother who chose to deliver her baby at the hospital.

COPE for Maternal Care has been revised in 2001 to reflect new evidence and changes in standards over the last two years. The self-assessment guides cover the following services: antenatal care; routine labor and delivery; emergency obstetric care, including post-abortion care and postpartum care, both immediate and follow-up.

COPE for Child Health Services

In 1998, EngenderHealth, with support from the U.S. Agency for International Development (USAID) Africa Bureau, adapted the COPE tools for child health and developed a quasi-experimental evaluation of the impact of COPE on child health services. Agencies collaborating in the adaptation and evaluation design included UNICEF, SARA, MEASURE, BASICS, and WHO. Implementation and evaluation followed in collaboration with the MOH and UNICEF in Kenya and Guinea.

¹ COPE® is a registered trademark.

² AVSC International. 1995. COPE: Client-oriented, provider-efficient services. New York: AVSC International.

³ C. Huezco and S. Diaz. 1993. *Quality of care in family planning: Clients' rights and providers' needs*. Advances in Contraception. 9:129-39.

⁴ *Refinement and publication of the COPE for Maternal Care self-assessment guides are underway through collaboration between EngenderHealth and Family Care International.*



Table 1

Examples of Pilot Test Solutions Implemented

Problem	Solution
Lack of information given to antenatal clients (nutrition, what to expect during labor and delivery, Cesarean sections).	Staff were updated and are now giving information in the antenatal clinic on labor, delivery, and breastfeeding; staff plan to print brochures.
Overcrowding in the maternity ward due to shortage of staff in the ward, resulting in one staff member handling more than one delivery at a time.	Reduced absenteeism by doctors on call in the labor ward and operating theater; clinicians review patients more frequently and then discharge those who are ready to leave.
Severe shortage of delivery packs in a site with an average of 80 deliveries in 24 hours.	Staff procured an additional 42 delivery packs.
Shortage of linens in the maternity wards (not enough gowns for patients); and linens not being decontaminated in wards before being taken to the laundry because ward decontaminating buckets had no lids and chlorine solution was evaporating.	Purchased lids for buckets so that chlorine solution no longer evaporates; proper concentration of chlorine solution ensures that gowns are not disintegrating as quickly as they were before.
Lack of equipment and supplies (working autoclave, gloves, chlorine).	Autoclave machine repaired.

Self-assessment guide questions were adapted to broadly address child health, and to reflect the Integrated Management of Childhood Illness (IMCI) approach.⁵ The questions are designed to communicate standards of care and serve as a support to the IMCI approach, but can be used equally in facilities that are not applying the IMCI approach. The record review tool (part of the self-assessment guide to safe services) was developed for use only in sites where IMCI has been implemented and standard records are kept. The client interview tool was revised so that the parent or caretaker of the child is interviewed, although the child is equally considered a client.

Evaluation Design and Preliminary Results

The COPE for Child Health evaluation involves four

intervention and four non-intervention sites in both Kenya and Guinea. Pre- and post-surveys were conducted, including a facility audit, provider interviews, client exit interviews, and observations of client-provider interactions. Throughout the two years, health service statistics on sickness, immunizations, and antenatal care were collected. Preliminary qualitative findings of sample problems and solutions from the initial implementation are presented in Table 2. Final evaluation results will be forthcoming in early 2002.

Staff Perspectives

Focus groups and interviews with site staff revealed their enthusiasm for the sense of teamwork, empowerment, and concern for their clients brought about through COPE.

⁵ AVSC International. 1999. COPE for Child Health: A Process and Tools for Improving the Quality of Child Health Services, Draft. New York: AVSC International.



Table 2

Examples of Solutions Implemented

Problem	Solution
One health center was closing earlier than it should have, and waiting clients were not served after closing.	Staff agreed to respect normal working hours. A new work schedule was made to ensure providers' availability after 3 p.m.
Delays for EPI clients, since sterilization of EPI materials was being done at the beginning of each day.	Staff began sterilizing materials at the end of the day so that services could begin at the clinic opening each morning.
Some staff could not provide proper information to clients on the management of sick children.	Staff organized updates for their coworkers. For areas where no staff were adequately informed, staff asked the prefecture for help with training, which was provided.
High immunization dropout rates due to poor record keeping. Staff could not identify those needing follow-up.	Improved recording of immunization history; resolved stock-outs of child health cards.
Pregnant women not given malaria prophylaxis because providers did not know MOH guidelines.	Staff informed of MOH policies. Poster on malaria prophylaxis put up in antenatal clinic room. Staff began offering prophylaxis.
Indigent patients not coming to the clinics because local funds under Bamako Initiative were not being designated for indigent care. Staff lacked clear guidelines about which patients are considered indigent and how to ask about their financial situation in a confidential manner.	Health center staff and the health center management committee established new criteria and implemented them at the facility. Involvement of members of the local Bamako health center management committees in the COPE process made the solution easier to accomplish.

“Before [COPE], I came to work as part of a daily routine; now I come to work because I feel that my work is important.” – *President of the COPE Committee in Labe, Guinea*

“[The COPE process] has generated some life in us. Before, problems were someone else’s responsibility. But now we see that we ourselves can solve most of the problems. COPE Child Health makes people see more broadly their responsibilities.” – *District MOH administrator/head of health center, Kenya*

“COPE Child Health has made us see patients as individual persons... [The service provider is] supposed to work for patients. [To do this] we should try to understand the minds of patients and they should be free to express themselves.” – *Nurse, Kenya*

Conclusions

Survey results from nonparticipant observation and further client interviews will provide a more objective view of the changes in services that have resulted. Meanwhile, interim results from informal interviews and discussions with staff show that they have embraced COPE, the process has raised their morale, and they are finding practical solutions to important problems.





CaliRed: A Performance and Quality Improvement Model for Maternal and Neonatal Health Services Network in Guatemala

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THE Maternal and Neonatal Health Program (MNH) is working in collaboration with the Guatemalan Ministry of Health (MOH) to implement a Performance and Quality Improvement (PQI) model in maternal and neonatal health, named CaliRed, in the departments of San Marcos, Quiché, Sololá, Suchitepequez, Totonicapán, Quetzaltenango, and Retalhuleu. The PQI model aims to improve the quality of the maternal and neonatal services network, increase the demand for and use of health facilities by women during pregnancy, labor, delivery, and postpartum periods, and foster household and community participation in addressing problems related to maternal and neonatal health through community mobilization efforts.

In 2000, The MNH Program provided technical assistance to the MOH to develop an assessment tool including “operational standards” to assess the quality of the maternal and neonatal health services in an objective, rapid, and practical way. The assessment tools include standards to define desired performance for maternal and neonatal health services and related support functions in health facilities. These tools also serve to measure current performance and identify gaps that require improvements. The steps for the development of the assessment tool were:

- Identification of the basic functions/services by type of health facility, based on national policies and priorities

- Determination of key (sentinel) standards and indicators (structure, process, and outcomes) based on the national norms and using the WHO Managing Complications of Pregnancy and Childbirth/Integrated Management of Pregnancy and Childbirth Manual as a reference
- Incorporation of provider inputs and perspectives
- Incorporation of client needs and expectations through participatory techniques and interviews with key community representatives and client feedback. The identification of clients’ perceptions and needs begins early on in the process and continuously provides critical input for the development of the tools

The CaliRed assessment tools were developed by each type of health facility, including health posts, health centers without beds, health centers with beds/community maternities, and district hospitals, and include the following areas:

- Clinical services (antenatal care, normal delivery, postpartum and neonatal care, complications)
- Infection prevention
- Support services (laboratory, blood bank, pharmacy)
- IEC and demand promotion
- Human resources, equipment and supplies (including logistics), and physical plant
- Management systems



Starting in March 2001, a baseline was conducted using the assessment tools in seven hospitals, 10 health centers, and 23 health posts in the seven departments in which the MNH Program is working. The baseline was conducted by Quality Improvement Support Teams (QIST), formed by technical and supervisory staff of the MOH central, departmental, and local levels, and representatives of NGOs working in the same geographical area, including CARE, Project Hope, and the local NGOs Arenys Solidari and Vivamos Mejor.

Prior to conducting the baseline, the QIST received training which covered the concepts, process, and tools of the PQI model, and included skills development for promoting and supporting the change process (vision and leadership, team building and teamwork, motivation, change management, and resource mobilization).

The results of the baseline are as follows: hospitals achieved an average of 13 of 77 criteria (11%), health centers eight of 58 criteria (14%), and health posts seven of 44 criteria (15%). Despite the significant gaps identified, all of the health facilities that participated in the baseline felt motivated to participate in the CaliRed process and are eager to improve quality of care at their health facilities.

Led by the QIST, local Quality Improvement teams were organized, grouped by the different areas of the assessment tool, in order to promote and implement the necessary changes and interventions. Each group analyzes the gap in the area under its responsibility and begins to implement changes immediately, beginning with the simplest and easiest things. The underlying idea is that rapid action produces quick results that create momentum for change and increase the staff's sense of empowerment and motivation.

Some of the gaps identified require more structured or complex interventions, particularly when new technical procedures based on scientific evidence are being introduced. Examples of this type of intervention

include: the implementation of the WHO partogram and the CLAP perinatal clinical history; incorporation of new clinical practices such as the active management of the third stage of labor and the restricted use of episiotomy; closer observation during the immediate postpartum period (two hours); routine decontamination of medical instruments using a dilute bleach solution; incorporation of puncture-proof containers for sharps disposal; increased hand-washing; and the adoption of culturally appropriate measures to attract clients, such as the incorporation of traditional birth attendants in hospital-based maternal care.

Some of these interventions have required training (competency-based clinical training has been conducted in the Coatepeque and Malacatán hospitals). Other interventions have necessitated organizational improvements. Most efforts to improve performance and quality have involved a combination of training, organizational improvements, and reinforcement of provider motivation.

The next external assessment is scheduled for February and March 2002, and significant improvements are expected based on observed progress to date. The PQI process will lead to the accreditation of the facilities that achieve a high level of compliance with the quality standards.

Simultaneous to the PQI process, community level activities are being implemented by the MNH Program in Guatemala. Community mobilization strategies are now underway in 30 communities in the priority departments (El Quiché, Sololá, and San Marcos). Community activities aim to enable women, their families, and their communities to identify and act on maternal and neonatal health danger signals, provide support for the rapid access of women and newborns to appropriate health services, and improve the relationship between communities and health facilities.





Applying Modern Quality Improvement Methodology to Maternal and Child Health in Tver Oblast, Russian Federation

M. Rashad F. Massoud, MD, MPH, Associate QA Project Director, Russia, NIS, Asia, and the Middle East

THIS article demonstrates the application of quality assurance methodology in maternal and child health (MCH) in the Russian Federation. It describes the integration of content and improvement knowledge to achieve better outcomes in a clinical system of care.

In 1998, the Quality Assurance (QA) Project was invited to collaborate with our Russian counterparts on developing demonstration projects in the use of modern quality improvement methods in the Russian Federation. It was suggested that one of the two demonstration projects be to improve MCH in Tver Oblast,¹ a region north of Moscow.

The quality improvement methodology, which was used to make improvements in MCH, consists of the four steps shown in Figure 1.

Identify

A planning meeting was convened in Tver Oblast, to choose priority conditions within MCH for the demonstration project. Participants included the leadership of the department of health, maternal and child health services, representatives of Tver State Medical Academy, and representatives of physicians directly involved in the delivery of services. The participants reviewed and discussed the epidemiological data and service statistics for MCH in Tver Oblast. As a result, the participants chose to improve care for women suffering from pregnancy-induced hypertension (PIH)

as their maternal health priority. PIH accounted for seven of the 25 maternal deaths in the preceding three years. In addition, PIH is one of the diseases physicians were having the greatest difficulty managing. Similarly, for child health, participants agreed to focus on improving care for neonates suffering from respiratory distress syndrome (RDS), as, in 1997, it accounted for 66.7 percent of early neonatal mortality.

Project organization was also discussed at the planning meeting. Participants included three hospitals representing the different levels of care, and the urban and rural distribution in the system involved in PIH care in designing the demonstration. In designing the demonstration for RDS, the participants included five hospitals representing the different levels of care, as well as the urban and rural distribution in the system involved in neonatal RDS care. Teams were set up in each of the participating facilities. Each team had a leader and included representatives from the different professional functions involved in the systems of care for PIH and RDS.

Analyze

Members of the PIH and RDS teams were trained in the quality improvement methodology. Following which, they proceeded to analyze the current systems of PIH and RDS care in their own facilities, as well as referrals and interactions with other facilities in the system. As part of this step, they created flowcharts

¹ Tver Oblast is one of the 89 subjects of the Russian Federation. Oblasts are administrative regions and have local governments called governorates. The health system in the Russian Federation has been decentralized to this oblast level. Tver Oblast is located to the north of Moscow en route to St. Petersburg and has a population of 1.6 million.



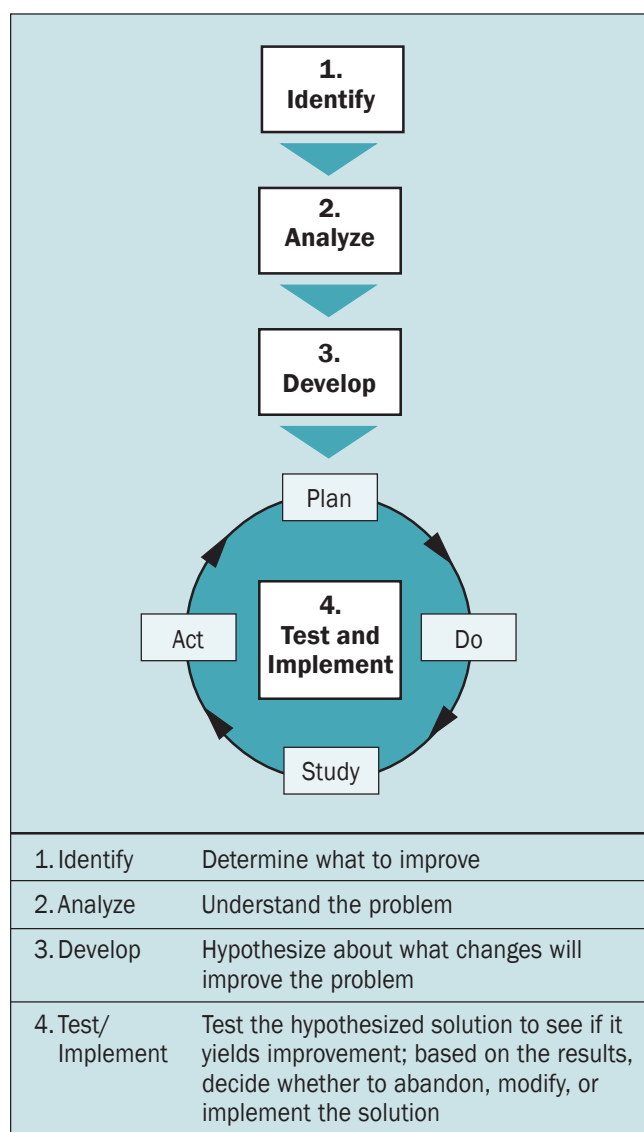
showing how care was provided to women suffering from PIH and to newborns suffering from RDS. These flowcharts showed how care was organized. The teams examined each step in the organization of care and noted what clinical content was provided at each of these steps. This clinical content included diagnostic criteria, referral criteria, medications administered, procedures conducted and their indications, among others. This work resulted in a deeper understanding of the existing systems of care both from the organizational and the clinical perspectives. It was evident from the analysis that both PIH and RDS care were not standardized across the different facilities. There were many points at which team members could not agree on steps in the process or on relevant clinical content. For RDS, it was also evident that the facilities were poorly equipped and staffed. At this stage, the team also developed the first set of quality indicators for the systems of PIH and RDS care.

Develop

Team members received training and up-to-date evidence-based literature on PIH and RDS. They reviewed their current clinical practices in this light and made decisions on changes and standardization needed in their clinical practices. Then, they reviewed the ways that care is organized, to decide what changes they needed to make in organizing care to facilitate implementation of the updated clinical practices. As a result, the teams developed new clinical and organizational guidelines for PIH and RDS.²

The new system of PIH care differed fundamentally from the old one: teams adopted the 10th International Classification of Diseases (ICD-10), which is different from the Russian classification and meant that far fewer women are diagnosed with PIH. For those diagnosed with PIH, eclampsia is prevented through the

Figure 1
Four Steps to Quality Improvement



use of intravenous magnesium sulfate and the pregnant women are prepared for early delivery. The organization of care was also re-designed. The new system

² *Improving Care for Women Suffering from Pregnancy-Induced Hypertension, Russian Federation – United States of America, 2001.* Published by the Quality Assurance Project. Available in English and in Russian.

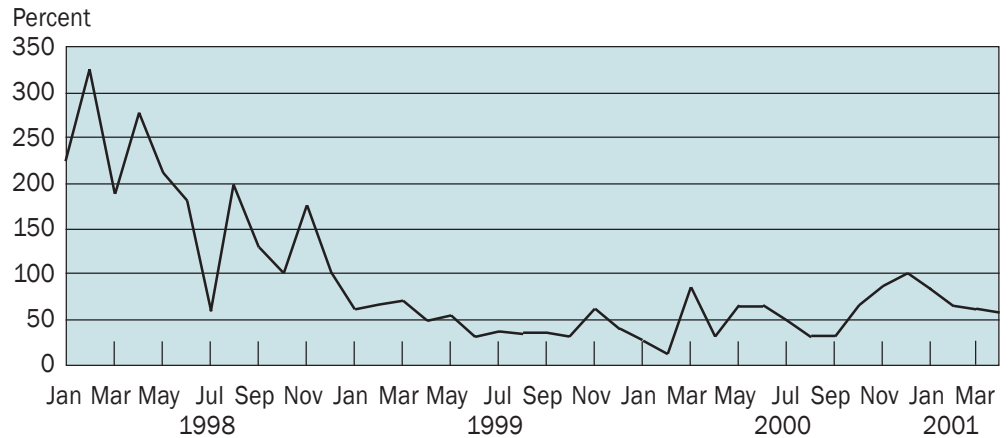


Results

The most recent data (28 months, for the 3 pilot hospitals, number of deliveries 6108), which has been collected from January 1998 – April 2001 and analyzed, shows the following: No deaths or progression to eclampsia in patients managed in the 3 pilot hospitals since the new system was implemented. Additionally, there was a significant and sustained decrease in hospitalizations due to PIH as shown in Figure 2.

Figure 2

Percentage of Women Hospitalized This Month Because of PIH of the Number of Women with PIH Who Delivered This Month



A continued reduction in the incorrect diagnosis of PIH for the 3 hospitals involved in the pilot phase. Since the physicians from pilot phase became trainers for the rest of the organizations in the scale-up, there has been a further reduction in their incorrect diagnosis of PIH.

Figure 3

PIH as a Percentage of All Deliveries

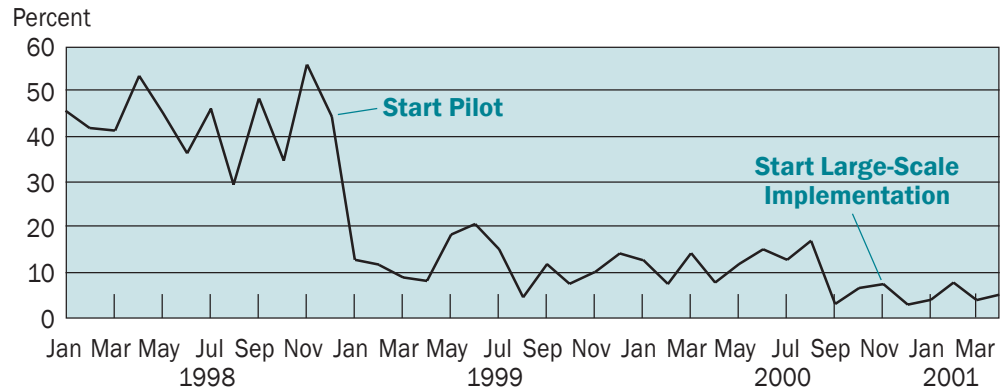
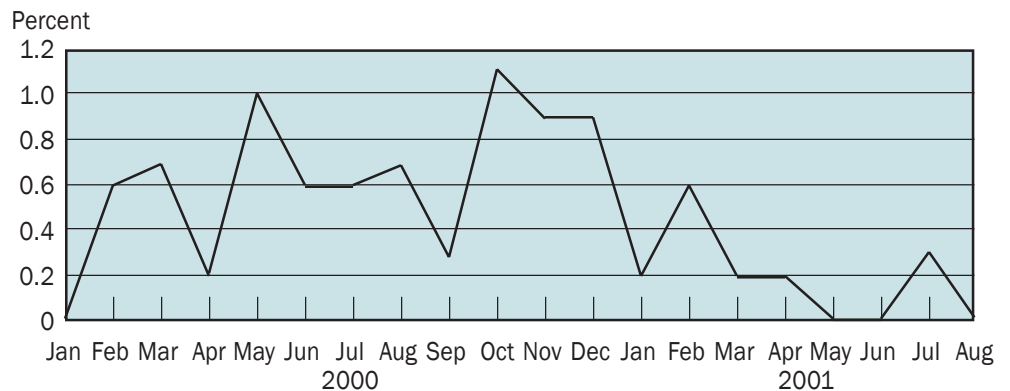


Figure 4

Proportion of Women with Eclampsia Who Delivered This Month

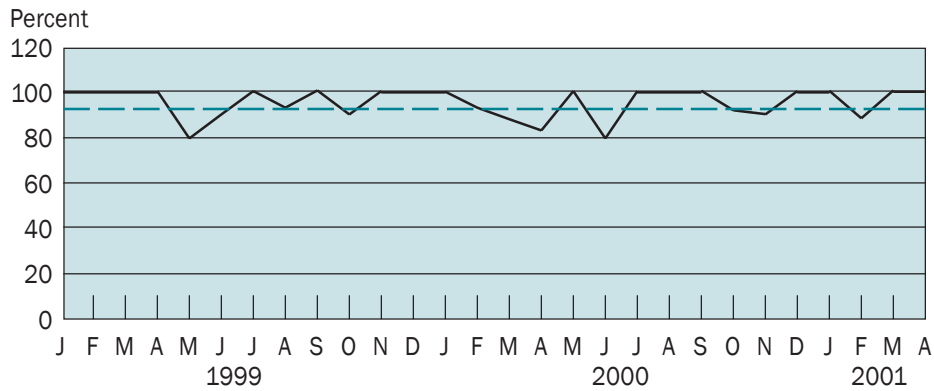


The beginnings of a reduction in the incidence of eclampsia throughout the 42 hospitals in Tver Oblast is seen in Figure 4.



Figure 5

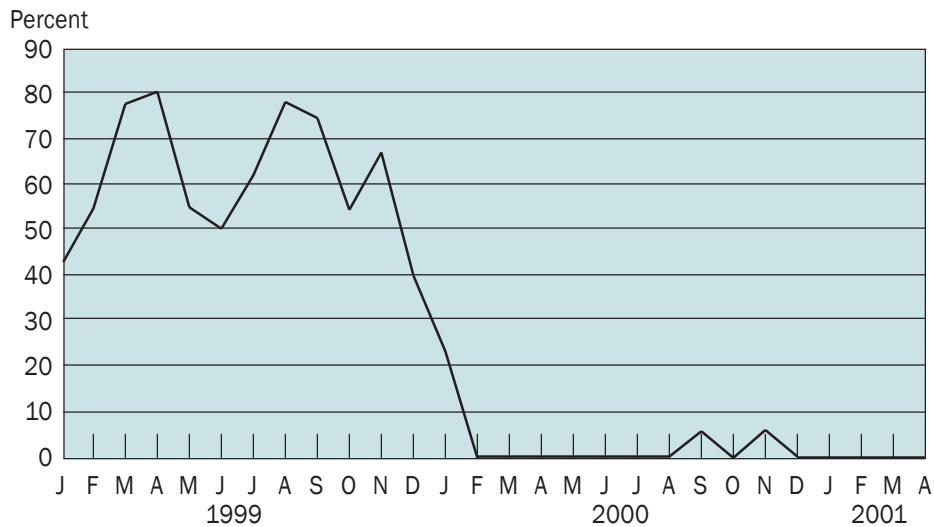
Percentage of Neonates With RDS Who Lived Least Until the 7th Day after Initial Resuscitation



The '7-day after initial resuscitation' survival rate is 93%.

Figure 6

Percentage of Newborns Transported to NICU Who Had a Body Temperature Not within 36.5-37.2 Degrees Celsius



A very significant and sustained decrease in hypothermia occurred in newborns transported to the NICU.

of Neonatal Respiratory Distress Syndrome (NRDS) care comprised three components: a central referral neonatal intensive care unit, equipped for NRDS, neonatal resuscitation at the other facilities, and a neonatal transportation system between the facilities. At this stage, the teams also reviewed the indicators to ensure that they were capable of measuring the effects of the changes introduced to the PIH and RDS care systems.

Test and Implement

The new PIH and RDS care systems were phased in gradually. This was achieved through careful planning of the introduction of the changes, testing all the different components to see whether they yielded improvement, counteracting any errors that arose, and ensuring that the new system functioned as intended.



Based on the success of the demonstration in improving these systems of PIH and RDS care, the participants decided to disseminate it throughout Tver Oblast. To accomplish this, the QA Project is currently collaborating with its Russian counterparts on developing a model for the large-scale implementation of successful pilots. This model adapts ideas and frameworks from quality improvement and diffusion of innovations³ to the Russian organizational culture. These PIH and RDS improvements, originally developed in three and five hospitals, respectively, are being disseminated to all 42 hospitals throughout Tver Oblast.

Acknowledgements:

This work represents the efforts of many professionals and organizations. The Russian counterparts include: the Department of Health, Tver Oblast: Director of

Health, Dr. Alexander Zlobin; Chief of MCH, Dr. Lidia Samoshkina; Chief of Ob-GYN, Dr. Tatiana Gviniashvilli; Chief of Neonatology, Dr. Tatiana Dimitreva; QAP Project Director, Tver Oblast, Dr. Olga Chernobrovkina; The Central Public Health Research Institute in Moscow, Chief of the Methodological Center for Quality Assurance, Dr. Anna Korotkova. QAP/Russia MCH consultants: Professor Patrick Nugent, Pauline Glatleider, Dr. Sudahkar Ezhuthachan, and Christine Newman. Several members of the QA Project in Bethesda, Maryland, also were involved, including Associate QA Project Director for Russia, NIS, Asia, and the Middle East, Dr. M. Rashad Massoud, who led the project.



³ Everett M. Rogers, *Diffusion of Innovations, 4th Edition, Free Press, 1995.*



Team-Based Problem-Solving Improves Coverage of Essential Prenatal Care Services in Rwanda

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THE N'zigé Health Center in rural Rwanda serves a population of 24,000 inhabitants. Census projections estimate that 1,119 pregnancies should be expected per year in this population. Two nurses, out of a staff of 10, were trained in a systematic problem-solving method by the Quality Assurance Project and started a team to address quality of care issues.

Identifying the Opportunity for Improvement

Health center staff selected the low attendance rate for prenatal care services in the first trimester as their priority issue. In the first seven months of 2000, out of 509 prenatal care (PNC) visits, only seven (1.4 percent) took place during the first trimester of pregnancy. Initially, the team aimed to increase the coverage rate of first trimester visits.

Analyzing the Issue and System of Care

When the team analyzed the issue, it ended up with an unclear flowchart of the PNC processes, as well as staff, population, and system-related potential root causes that needed to be further explored. The clinic team then conducted a survey of 60 women attending clinical care services. The traditional birth attendants visited 40 women at home. The in-charge nurse evaluated the performance of PNC services providers against the Ministry of Health standards on a sample of 10 clients. This data collection provided the following information:

- Eighty percent of women misunderstood the benefit of antenatal consultation during the first quarter of pregnancy
- Of 10 patients: one was greeted by the health worker, none had their health cards checked, none was screened for vaccination status, three were referred for vaccination, five were examined for pre-tibial edema, one received routine lab tests, five received iron prescriptions, none received adequate counseling
- Clients complained that the waiting time for prenatal care consultations was too long

Developing and Implementing Solutions

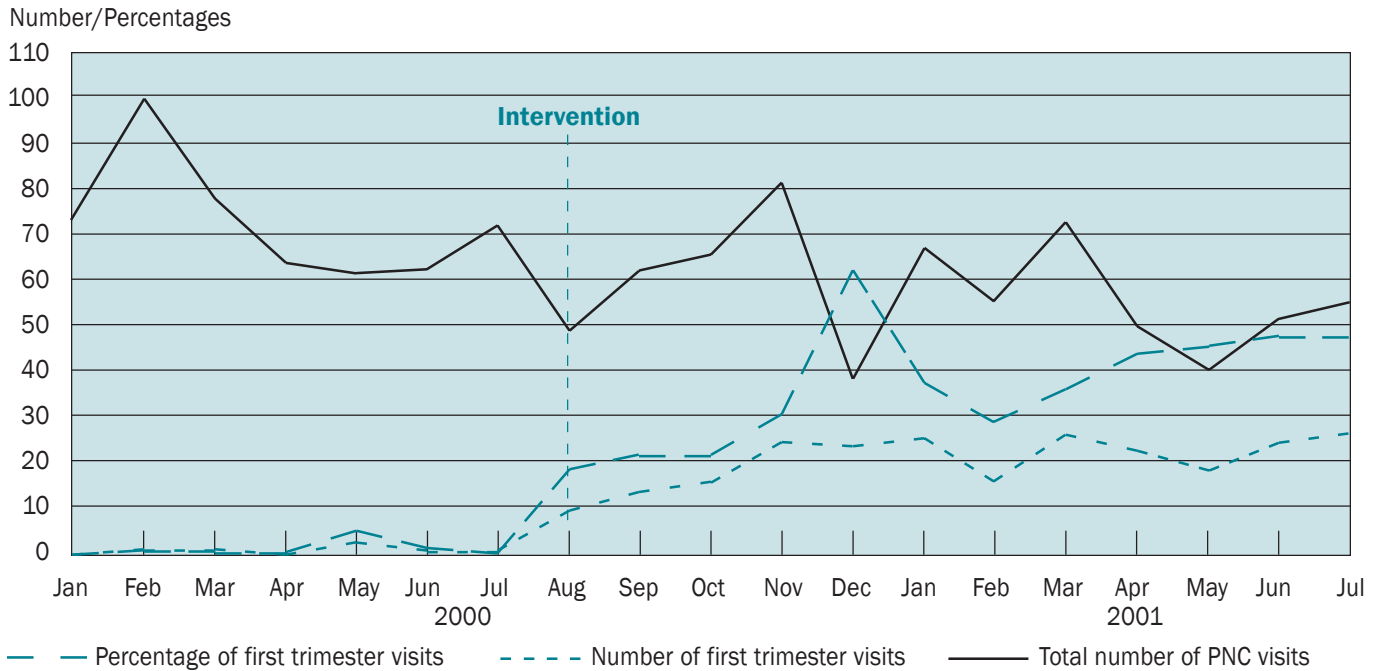
Based on their analysis of the system of care, the team developed and implemented four different solutions or interventions:

1. Sensitizing diverse groups on the importance of PNC during the first trimester: clients, community representatives, traditional midwives, community health promoters, and community members
2. Training staff on antenatal consultation standards
3. Changing the PNC process to include systematic clinical assessment for all clients, systematic lab tests at each visit, and immediate care for clients upon arrival
4. Doubling the number of staff assigned to the PNC clinic to three or four individuals



Figure 1

Trends in Timely Utilization of PNC Visits



Results

Initial implementation of the solutions started in August 2000. Soon after, the number of first trimester PNC visits increased from an average of one per month (before the interventions) to an average of 21 per month over the following 11 months. However, during this interval, without any obvious explanation, the average monthly number of PNC visits decreased slightly from 73 before the interventions to 58 after.

As a result, the monthly average of the proportion of first-trimester visits among all PNC visits increased from 1.5 percent (January–July 2000) to 36 percent (August 2000–July 2001). Figure 1 illustrates the impact of the interventions tried. In addition, the team estimated that waiting time had been reduced from three to four hours to 30 minutes to one hour. The team did not monitor changes in providers' performance.

Lessons Learned

- A simple QA method created a team dynamic which enabled them to recognize and address multiple quality issues that had been neglected for a long time: utilization rate of essential services, staff performance, and client satisfaction
- Including community members in the team efforts facilitated the implementation of community education and sensitization sessions
- The quality and frequency of QA technical assistance to facility teams, especially during the early phase of their improvement efforts, contributed to their success and was particularly important in the development and implementation especially in setting a good performance monitoring system.





Improving the Quality of Essential Obstetric Care in Bolivia

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Quality Improvement Methodology

The LAMM Initiative is being carried out in local demonstration sites in three countries: Bolivia, Ecuador, and Honduras. This article describes experiences, methods used, and some illustrative results obtained in the quality improvement component of the initiative in the district of Ichilo, Bolivia.

The quality improvement (QI) effort began in March 2000 in Ichilo district, department of Santa Cruz, Bolivia. The Ichilo district has three hospitals and one health center. Several approaches were used to improve the quality of essential obstetric care (EOC): (a) clinical training in EOC for doctors, nurses, and auxiliary nurses of every facility in the district, (b) development and communications of EOC standards through problem-based learning, (c) EOC process improvement through quality improvement teams formed in each hospital, (d) a system for ensuring availability of essential EOC drugs and supplies, and (e) monthly monitoring and discussion of EOC quality and coverage indicators.

Quality improvement teams were implemented with the specific objective of monitoring and improving compliance with clinical and administrative standards. This emphasis on compliance with standards aimed to reinforce the clinical skills training in EOC provided by LAMM for nearly 100 percent of the healthcare providers in the district of Ichilo. The quality improvement teams focused on improving processes for prenatal care and labor and delivery and began by agreeing upon key standards of care. These standards actually represented the greatest challenge to compliance from the providers.

The Latin American Maternal Mortality Initiative (LAMM) is a partnership funded by the U.S. Agency for International Development (USAID) and implemented by the Quality Assurance (QA) Project and the Pan American Health Organization (PAHO), with a threefold approach to reducing maternal mortality:

- **Build advocacy for the reduction of maternal mortality through policy and dialogue.** PAHO promotes policies ensuring that access to and quality of Essential Obstetrical Care (EOC) services help to build a policy environment in which the reduction of maternal mortality is a priority.
- **Improve the quality of EOC services.** Many women die from unpredicted complications, sometimes necessitating (and despite) prompt and emergency treatment. The QA Project improves the delivery of basic EOC at the first level of care and comprehensive EOC at referral hospitals by strengthening clinical EOC skills and re-designing and improving key EOC services.
- **Mobilize communities to access services provided by trained attendants.** The QA Project subcontracts nongovernmental organizations (NGOs) to work at the community level to improve the recognition of danger signs and complications, particularly during the intrapartum and immediate postpartum periods when most serious complications occur, and to access 24-hour quality EOC services.



Next, the teams developed indicators to measure compliance with those standards. Using the indicators' results to prioritize the needs, the quality improvement teams applied the QA Project's four-step quality improvement methodology: (1) identify the problem, (2) analyze the problem, (3) develop solutions, and (4) test and implement solutions. The activities carried out during each of these steps are discussed in the sections that follow.

The team applied the Rapid Team Problem-Solving approach. They developed a series of small incremental changes, then tested and implemented them in the system. This approach to quality improvement is considered "rapid" because it is used when team members have insight into the causes of and potential solutions to the problem—thereby minimizing extensive data collection. For example, the teams in Ichilo began to achieve results as soon as one to two months after initiating the quality improvement process. It is important to note, however, that these quality improvement teams were able to apply Rapid Team Problem-Solving because they received on-going support and guidance from facilitators from LAMM and Ministry of Health district and provincial supervisors.

Table 1 illustrates the first step of the QI methodology, choosing key standards of care and the corresponding solutions proposed by the teams.

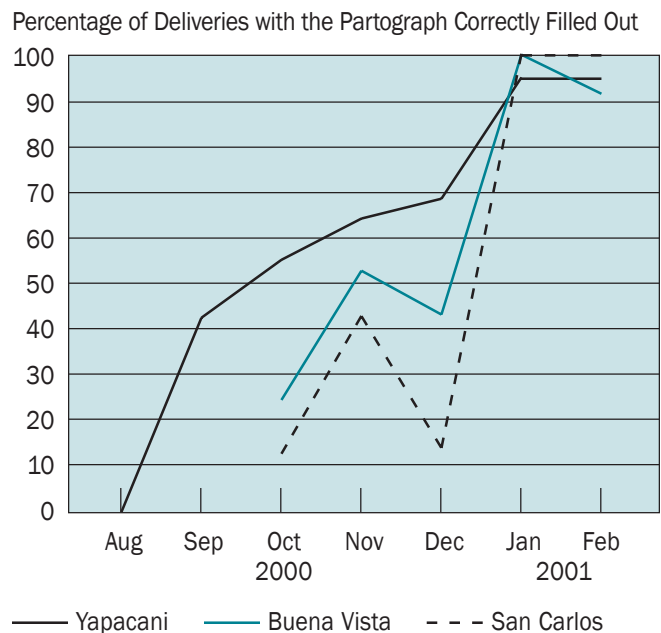
Results of the Quality Improvement Teams

Compliance with EOC standards has greatly improved in Ichilo district in a relatively short time. The teams monitored the impact of their interventions and began to see dramatic improvements within a couple of months.

- The QI teams achieved great improvements in laboratory assessment during labor, climbing from 33 to 88 percent in Yapacani, from 83 to 100 percent in Buena Vista, and from 7 to 80 percent in San Carlos.

- The correct use of the partograph increased from 0 to 95 percent in Yapacani Hospital and from 24 to 92 percent in Buena Vista Hospital; San Carlos Hospital has achieved 100 percent compliance with this standard two months in a row (see Figure 1).

Figure 1
Improvement in the Correct Use of the Partograph



- Buena Vista and Yapacani Hospitals achieved 100 percent compliance with postpartum monitoring for two months in a row, while San Carlos Hospital reached 92 percent compliance with this standard. A recording form developed by the QI team in Yapacani to systematize and record the monitoring of women during the first two hours after delivery is now being implemented in health facilities throughout the district.
- The QI teams in Yapacani and Buena Vista hospitals chose to improve the accurate and thorough



Table 1

Illustrative List of Clinical Standards and Proposed Solutions from Quality Improvement Teams in Ichilo, Bolivia

Clinical Standard	Changes Proposed or Implemented
Every woman during pregnancy should receive the tetanus toxoid vaccine two times	<ul style="list-style-type: none"> ■ Train personnel in the importance and administration of the tetanus toxoid vaccine ■ Establish a mechanism to record the administration of the tetanus toxoid vaccine ■ Implement an inventory system to always have at least 20 needles and sufficient supplies of the tetanus toxoid on stock
Every woman who has antenatal control at this hospital should receive iron tablets, according to gestational age and norms	<ul style="list-style-type: none"> ■ Communicate to staff the importance of iron sulfate supplements during prenatal care ■ Establish accountability for the administration of iron sulfate supplements ■ Record the administration of iron sulfate supplements on the perinatal record
Every mother at delivery will have results of recently performed lab tests: hemoglobin, blood group, Rh factor, syphilis	<ul style="list-style-type: none"> ■ Inform personnel that laboratory tests for women in labor and delivery are a standard of care ■ Hold a half-day practical training in conducting laboratory exams
In every delivery, a perinatal clinical record should be completed	<ul style="list-style-type: none"> ■ Communicate to staff the importance of the perinatal form ■ Organize rapid training sessions on how to complete the form properly ■ Provide forms permanently, avoiding stock-outs of paper
Every delivery at the hospital will be monitored through the use of the partograph	<ul style="list-style-type: none"> ■ A one-day reinforcement course will be provided for all nurses and physicians
During the first two hours after every delivery, the mother will be examined every 30 minutes, checking for standardized tasks: vital signs, bleeding, and uterine status	<ul style="list-style-type: none"> ■ Create a rotation staff schedule so that staff are always present to monitor these key areas ■ Train staff in the monitoring of postpartum patients ■ Create a reporting system to include immediate postpartum monitoring in the clinical record

completion of the perinatal clinical record during pregnancy, delivery, and the postpartum period. The completion of the perinatal clinical record has improved in Yapacani hospital from 15 percent (August 2000) to 98 percent (February 2001). Buena Vista hospital improved its performance from 24 percent (October 2000) to 92 percent (February 2001).

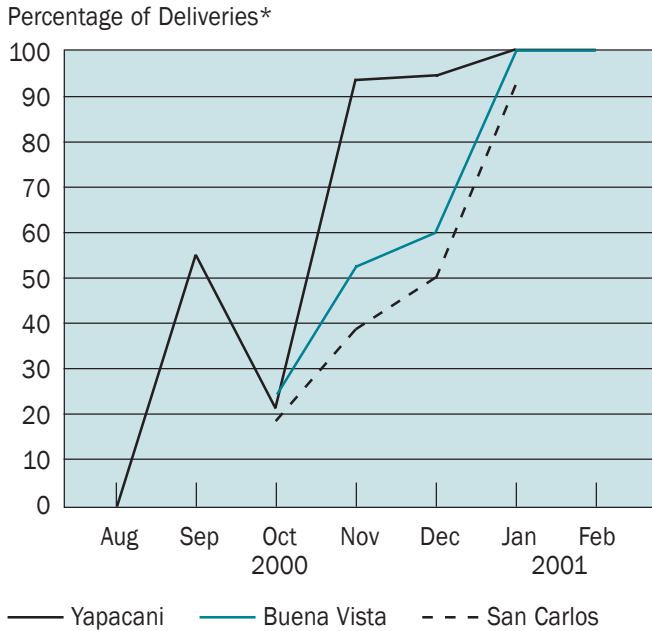
- The QI team in Buena Vista established standards to personalize labor and delivery for clients by allowing women to choose their position during

delivery and permitting a family member to accompany her during delivery. The effects of these changes is illustrated by an example of a woman who decided to deliver her seventh child in Buena Vista hospital instead of at home, where her other children had been delivered by a traditional birth attendant. She chose Buena Vista hospital because she heard that she could choose her position and remain with her husband during delivery.



Figure 2

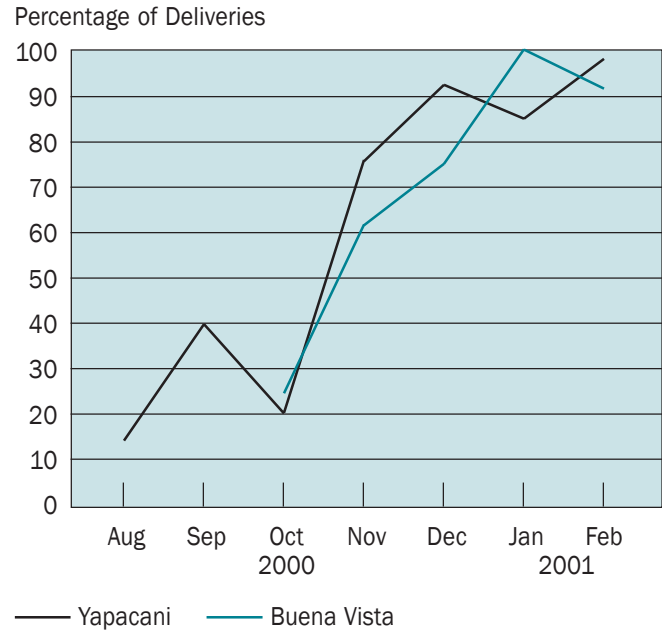
Deliveries Where Standard Clinical Care Was Performed



* In which standard clinical care was performed in the first two hours after delivery

Figure 3

Deliveries with Complete Standard Perinatal Clinical Record



Conclusion

The use of the quality improvement methodology to improve compliance with clinical and administrative standards proved to be so successful in Ichilo, Bolivia, that in 2001 the QA Project initiated the application of this methodology in Honduras and Ecuador. In Honduras in May 2001, eight quality improvement teams were formed throughout the Comayagua region to improve compliance with standards for obstetrical

complications, labor monitoring, prenatal care, administration, medical registers, regional statistics for EOC, human resources, and neonatal care.

In Ecuador, quality improvement teams have been formed and are active in the hospitals of Latacunga, Salcedo and Pujili, in the province of Cotopaxi.





Quality Assurance and Performance Improvement: A Perspective from the PRIME II Project

*Marc Luoma, PRIME II Director of Performance Improvement;
William H. Jansen II, PhD, PRIME II Project Executive Director;
and James McCaffery, PhD, Project Leadership Group, PRIME II Project*

Editor's Note:

The previous issue of the QA Brief presented an article titled "Quality Assurance and Performance Improvement" by Thada Bornstein. We are pleased to publish a perspective on that article, by staff of the PRIME II Project, which compares quality assurance/quality improvement (QA/QI) and performance improvement (PI).

WE read with interest the Spring 2001 issue of *QA Brief*, which framed a comparison of the quality assurance (QA) and performance improvement (PI) approaches. We applaud the effort to identify the similar and distinguishing features of the two. It is important for our colleagues in the fields of international and reproductive health to understand how and when each approach can be used to its full potential.

We would like to add our views on how PI is currently practiced in the field, especially by the PRIME II Project. In doing so, we hope to give the readership of the *QA Brief* additional views of PI so that they can be aware of the full potential that PI represents.

Focus

The opening editorial of the issue states that "PI begins with a focus on the limitations of staff training..." Our PI work, which is consistent with the framework adopted by the PI Consultative Group, begins with the identification of desired performance and its impact. The focus from the beginning is on the results that should be achieved.

Sustainability

The earlier *QA Brief* article states that "PI is usually led by a specialized practitioner while QA and QI have always been intended to be managed by the

health program itself." This statement, and the discussion following, could lead the reader to conclude that the PI approach is less likely to be sustained or continue to have an impact in the healthcare settings where it is applied. Sustainability in PI is a planned outcome of PRIME II work. In fact, both approaches use facilitation to move the process along. In the course of implementing a variety of PI initiatives in the PRIME II Project, we have found that field staff can and do learn the PI process quickly. We also see that healthcare organizations do continue to use the PI approach and its tools after the completion of external technical assistance. Our experience indicates that by making capacity building a specific part of any technical assistance in PI, the ability to build a "leave-behind" capability in PI is greatly enhanced.

Teamwork

Another statement indicates that QA "contrasts with PI, which does not emphasize the use of teams." In the way that the PI approach is practiced in the PRIME II Project, the formalized stakeholder buy-in process demands the participation of rather large teams. Indeed, wide participation in defining desired performance and conducting cause analyses has been pointed out in several published evaluations of our PI projects as strength of the approach. Although counterparts are sometimes interested in reducing the number of individuals participating in the stakeholder



process, we feel that teams are a requirement for wider impact on the service delivery system and to achieve lasting changes in provider performance. All stages of the PI process are carried out by teams that vary in size depending on the amount of input needed to realize the performance improvement objective. Using teams at different stages also helps to ensure that we are working toward the goal of building PI capacity at the local level.

Standards

The article also states that QA/QI's emphasis on standards is "more systematic and comprehensive" than what is normally done in PI. Perhaps the nature of the wide stakeholder involvement in defining desired performance has obscured the common use of clinical or quality standards in the PI process. In PRIME II's PI literature and our normal practice of PI, international (typically from the World Health Organization) and national standards or service delivery guidelines serve as a critical reference in determining desired performance of service providers. We believe that PI's use of standards, while possibly different from QI/QA, is still systematic and comprehensive.

Potential for Success

A concluding comment in the article says, "QI/QA's more comprehensive and systematic process for developing, communicating, and implementing standards around those or similar factors appears more likely to achieve success, and successes are sustained longer if staff retain, refer to, and follow standards." Both approaches and projects strive to improve health worker compliance with standards. The similarities of

the approaches and the variations in the way they are applied in any one particular setting make it unlikely that one could infer that one approach is likely to be more successful than another. Much work remains to be done on making standards clear to providers so standards can serve as performance expectations. The PI approach in the PRIME II Project is being actively used in this endeavor to put standards into practice. Our experience to date is already providing us with impact within service delivery settings and among service providers that we classify as "successes."

Continuing the Dialogue

The commendable effort to illuminate similarities and differences among the various approaches and tools available for improving quality in healthcare will be best served by broadening the dialogue among projects, USAID cooperating agencies, and others. Indeed, PRIME II already is working with EngenderHealth to develop more definitive comparisons between COPE (client-oriented, provider-efficient services) and PI to better advise practitioners and healthcare managers in the field about the tools available to them to help address quality of care issues. We are pleased the PRIME II and the Quality Assurance Projects are planning a continuing dialogue that will result in a new joint publication that should provide a more complete comparison of the PI and QI/QA approaches. We look forward with eager anticipation to this joint publication and urge the readership of *QA Brief* to do so as well.





Quality Improvement and Cost

Hany Abdallah, MA, MHS, QA Project Specialist

FACED with financial constraints, health systems worldwide are looking for ways to control costs while ensuring an acceptable standard of quality for their clients. The issue of cost and quality is an area of focused attention within the Quality Assurance (QA) Project. In fact, over the past few years, the QA Project has coordinated a Cost and Quality Legacy Group devoted to synthesizing the QA Project's research, field experience, and knowledge in this area.

Several important issues arise when dealing with the cost and quality trade-off, including issues related to defining and understanding the nature of the link between quality improvement (QI) and cost. This article summarizes some of the QA Project's experiences in dealing with these issues; details can be found in specific publications or related products from the Legacy Group.

Definition of Quality in Cost Terms

What are we talking about when we talk about cost and quality? One of the objectives in the field of cost and quality is to define the cost of quality. The purpose of this analysis is to manage the trade-off between the cost of investments made in improving quality (e.g., through quality assurance) and the short- and long-term benefits obtained by reducing or eliminating poor quality. In this approach, quality is analyzed in cost terms by making "cost of poor quality" equivalent to the time and money spent on something that fails to help the client, and includes the cost of not doing things right the first time. Wareiss et al.¹ define the costs associated with quality as "those costs that would not be expended if quality was [sic] per-

fect." Tying these definitions to the QA Project's definition of quality ("Quality is compliance with standards"), the cost of quality includes two kinds of costs: (a) costs incurred in achieving/maintaining quality standards, and (b) costs resulting from not achieving/maintaining quality standards.

The challenge then is in defining costs and determining which costs are relevant to arriving at the cost-quality trade-off.² In simple terms, costs are considered as resources expended in providing a service (e.g., cost of medication, infection control practices). If the quality of health delivery is poor, these costs should reflect the cost of correcting errors (e.g., the cost of administering the wrong drug and correcting the error or of treating a patient for nosocomial infections) and the cost of inefficiencies in the process of care (e.g., cost of wasted personnel [and patient] time, repeating a prescription order necessitated by poor provider handwriting on the prescription form, or unnecessary waiting time by personnel because of poor process flow). However, it is also important to bear in mind that some costs associated with poor quality will be more difficult, though not impossible, to delineate (e.g., the cost of restoring a patient's health after initial faulty treatment).

Conceptual Understanding of the Quality Improvement and Cost Relationship

Several theoretical and empirical attempts have been made in the QI field to try to explain the complex relationship between cost and quality. Often, the assumption that improved quality requires additional resources is counterbalanced in several ways. First, additional resources do not guarantee improved qual-

¹ Wareiss, B.J., D.P. Pasternak, H.L. Smith. 1994. *Determining Costs Associated with Quality in Health Care*. Health Care Management Review (19) 3: 52–63.

² Reynolds, J., and K.C. Gaspari. 1986. *Cost-effectiveness Analysis*. PRICOR, Monograph Series, Method Brochure, No. 2.



ity (e.g., an investment in training may be lost if the work environment hampers the use of the newly developed skill). Second, the use of quality standards has the potential to reduce variation. In the QA field, a decrease in this variation is well-recognized as a principal approach to reducing wasted resources and, hence, saving costs. Finally, improved quality often leads to increased efficiency and reduced re-work, which in turn may result in saved resources.

Several theories in quality economics suggest that there is an inverse relationship between cost and quality. This concept relies on the belief that as quality increases, waste declines. This development promotes productivity; and improved productivity, in turn, implies that a product or service can be produced at a lower cost.³ Other theories suggest that the relationship is not just one-sided (i.e., quality controls cost) but is more dynamic and depends on both cost and quality. More specifically, two factors are important: (a) the availability or constraint of resources, and (b) strategies for providing care, i.e., how resources are used to provide care.⁴

This conceptual model embodies an important relationship between cost, quality, and efficiency. In this instance, the “ideal” healthcare provider is defined as one who “selects and implements the strategy of care that maximizes the health status improvement (or quality) without wasted resources.” In real life, where a provider works in a dynamic environment and is faced with daily challenges that affect his or her work, additions in cost can have different effects on quality. If the additional cost is due to a necessary element of care being acquired (e.g., providing a drug that was previously unavailable), the quality of care can be expected to increase. If, however, the additional cost

was spent on a harmful element (e.g., providing the wrong drug), quality may actually decline. Finally, there may be no effect on quality if the additional cost was incurred for something useless (e.g., a diagnostic test that contributes no insight into the patient’s medical condition).

One model for assessing the cost of QI is in net cost terms. This concept is captured in simplified terms in the QA Project Flowchart of Cost Recovery.⁵ The model makes quality improvement central to the design of a sustainable health system, and suggests that improvement in quality generates positive effects on net revenue for a health system both by lowering costs and increasing revenue (Figure 1).

This conceptual model suggests that revenues may be increased as quality of care promotes client (or patient) satisfaction, which, in turn, creates patient loyalty and increases patient willingness to pay (and pay more) for better quality service. The QA Project continues to examine the conditions under which this relationship is sustained. For example, a recent study in Ecuador is showing that improved compliance with technical guidelines may not, in the short run, improve clients’ perception of quality or their satisfaction levels: it may take time until improved compliance with quality standards brings improved outcome and changes in health status that the client can perceive and experience. The model also suggests that costs are reduced as quality increases efficiency through use of more cost-effective standards and through a positive motivation of health staff to “do the right things right the first time.” Understanding this relationship between the cost and benefit of QI has implications for the design of an effective healthcare delivery system in which the supply and demand

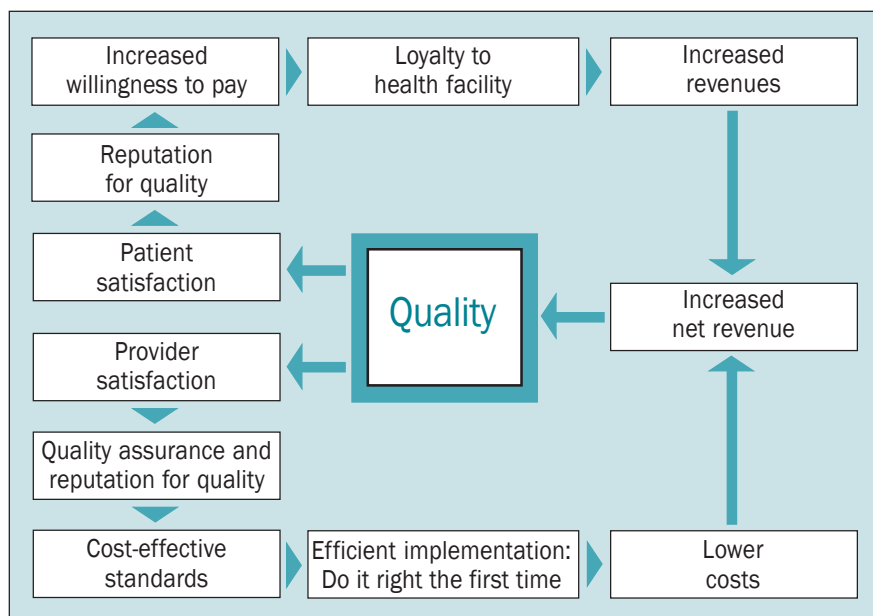
³ Ishikawa, K. 1985. *What is Total Quality Control? Englewood Cliffs, New Jersey: Prentice-Hall.*

⁴ Donabedian, A., J.R.C. Wheeler, and L. Wyszewianski. 1982. *Quality, Cost and Health: An Integrative Model. Medical Care Review 20 (10): 975–92. As quoted in S.T. Fleming. 1990. The Relationship Between Cost and Quality of Hospital Care: A Review of the Literature. Medical Care Review 47 (4): 487–502.*

⁵ Wouters, A. 1993. “*Quality and Costs in Health Care Service Delivery for Developing Countries – A Three-Day Workshop.*” Published for the U.S. Agency for International Development (USAID) by the Quality Assurance Project: Bethesda, Maryland.



Figure 1
The Flowchart of Cost Recovery



forces are optimized to ensure a sustainable high-quality system.

Examples from the Field

The QA Project continues to deepen its understanding of the various aspects of the QI and cost relationship. Results from QA programs and operations research have shown that improving quality can lead to savings of limited resources. One recent operations research study conducted in Tver, Russia, for example, found that significant savings could be captured in the treatment of pregnancy-induced hypertension (PIH) without the additional investment of resources.⁶ The study

was specifically designed to measure the change in hospital care costs that resulted from using new guidelines for managing women with PIH. Changes included a rationalization of drugs and a reduction in hospital length-of-stay; the new system resulted in an 86 percent reduction in the cost of treating these women. This potential saving was achieved while the quality of care for the women was improved. Following the implementation of the new guidelines, none of the cases observed during the pilot progressed to stages of eclampsia, and no maternal deaths were recorded, whereas seven deaths had occurred in the equivalent time period prior to the implementation of guidelines. Benefits

also extended to the babies of the women with PIH, with a 60 percent reduction in complications among the newborns. Another study of providers in Niger using the Integrated Management of Childhood Illness (IMCI) algorithm suggested that the highest levels of compliance with IMCI standards were correlated with a 30 to 60 percent potential cost savings in drugs and personnel time costs.⁷

In the QA program in Malawi, one QI team working in a small rural clinic observed that its QI efforts also had a beneficial impact on resource availability and staff productivity.⁸ To reduce the number of patients with malaria returning within a week for treatment of

⁶ Abdallah, H., O. Chernobrovkina, A. Karatkova, R. Massoud, and M. Scheglova. Forthcoming. *The Impact of New Evidence-Based Clinical Guidelines on the Cost of Managing Pregnancy-Induced Hypertension in Hospitals, Tver, Russia*. Operations Research Results. To be published for the U.S. Agency for International Development (USAID) by the Quality Assurance Project: Bethesda, Maryland.

⁷ Kelley, E., C. Geslin, S. Djibrina, and M. Boucar. 2000. *The Impact of QA Methods on Compliance with the Integrated Management of Childhood Illness Algorithm in Niger*. Operations Research Results 1(2). Published for the U.S. Agency for International Development (USAID) by the Quality Assurance Project: Bethesda, Maryland.

⁸ Shabahang, J. Forthcoming. *Using Team-Based Problem Solving to Improve Compliance with Malaria Treatment Guidelines in Malawi*. Quality Assurance Project Case Study. To be published for the U.S. Agency for International Development (USAID) by the Quality Assurance Project (QAP): Bethesda, Maryland, U.S.A.



the same symptoms (mainly owing to poor compliance to their initial malaria treatment), the team administered the recommended treatment for malaria (sulfadoxine-pyrimethamine or SP) as directly observed therapy (DOT). The intervention resulted in a significant reduction in the number of returning patients as well as up to a \$181 saving in SP doses. With this saving, 2,013 new malaria patients could be treated, or other important supplies or equipment could be purchased by the health center. The DOT intervention also led to savings in health worker time and other benefits related to fewer complications from malaria. By seeing fewer reattendants in the 12-month period following the introduction of DOT, the potential productivity of the health center staff was increased by 235 hours or 29 person-days. It also is expected that the DOT intervention would have a positive effect on patient outcome. A patient who takes his SP dose according to the DOT procedure is more likely to recover from malaria and not suffer complications that can be a result of patients' failing to take the drug or taking an incomplete dose. Fewer complications from malaria mean reduced suffering for patients, as well as savings in the costs associated from lost work time.

The QA Project has also investigated methods for using cost analysis and management tools in guiding QI efforts. For example, in a study in Peru, the project tested an activity-based cost accounting system for allocating costs in a non-governmental healthcare provider operating a network of small clinics.⁹ The method showed the potential for capturing more than \$35,000 in activities that are not considered to add to

the quality of health services delivery (e.g., unnecessary waiting time of staff, repetition of work). In Ecuador, the QA Project also tested the usability of a simple, rapid methodology for measuring the level of inefficiency in the use of laboratory resources in three public hospitals. The measurements uncovered an opportunity to save 20 to 50 percent of laboratory resources by reducing inefficiencies (\$2,600 to \$30,000 depending on the hospital). Important sources of savings included increased productivity of staff, appropriate staffing, monitoring of the high purchase price of test reagents and materials, and rationalizing the use of tests in the clinical management of selected conditions.

Cost and Cost-Effectiveness of Quality Improvement

What, then, is the optimal level of investment in quality improvement? The answer, of course, depends on the particular quality approach or tool used (e.g., training, QI teams, accreditation systems), the specific context in which quality is being improved (e.g., in a hospital, in a clinical-related area, at a regional/national level), and the degree of readiness of the individuals and organization to implement changes to improve quality. Where possible, the QA Project has tried to document this cost, either formally as part of a program evaluation¹⁰ or an operations research investigation,^{7,11} or informally as a way of evaluating the effectiveness of QI interventions in the QA Project programs. The Cost and Quality Legacy Group continues to monitor and synthesize developments in this and other areas in the cost and quality field.

⁹ Waters, H., H. Abdallah, D. Santillán, and P. Richardson. 2000. *Application of activity-based costing (ABC) in a Peruvian NGO health care system*. Operations Research Results 1(3). Published for the U.S. Agency for International Development (USAID) by the Quality Assurance Project (QAP): Bethesda, Maryland.

¹⁰ Legros, S., Y. Tawfik, X. Crespin, M. Djingarey, E. Goodrich, and H. Abdalah. 2000. *The Niger QAP/BASICS Joint Project: Final Evaluation*. Evaluation Report 1(1). Published for the U.S. Agency for International Development (USAID) by the Quality Assurance Project: Bethesda, Maryland.

¹¹ Kim, Y.M., F. Putjuk, A. Kols, and E. Basuki. 2000. *Improving Provider-Client Communication: Reinforcing IPC/C Training in Indonesia with Self-assessment and Peer Review*. Operations Research Results 1(6). Published for the U.S. Agency for International Development (USAID) by the Quality Assurance Project: Bethesda, Maryland.



Tuberculosis Computer-Based Learning Tool Garners User Acclaim

Donna Vincent Roa, PhD, Director of Communication and Associate Project Director, Quality Assurance Project, and Elisa Knebel, MHS, Quality Assurance Specialist

RESULTS of a recent user survey on the Tuberculosis (TB) Case Management CD-ROM administered by the QA Project to 176 customers in over 30 countries have been overwhelmingly positive. Launched in September 2000, this computer-based learning tool created by the QA Project, trains health professionals in preventing, diagnosing, and treating tuberculosis.¹

Of the 10 percent who responded to the survey (mostly medical doctors and TB specialists), a majority was satisfied with the program and found it comprehensive and easy to use. One Zambian lab specialist reported, “I am very satisfied with the quick and easy communication of the material.” Another user, a physician and Russian TB specialist, explained, “It was very easy to use (and included) clear explanations of different issues. It is a new method of education, which is acceptable for participants and (offers the) possibility for self-education and repetition.”

When asked if the TB CD-ROM had contributed to an effective transfer of information, over half of the respondents said yes. Most were pleased with the use of graphics, the user tests, the algorithm of treatment, and the case studies. One respondent noted, “listening to the voice and looking at the pictures...is an effective way of transferring information on TB case management.”

One challenge that program developer Dr. Marina Budeyeva faced in designing the program was making sure the program met the needs of two distinct audiences: novices needing initial training in TB case management and experienced TB professionals desiring a refresher on the topic. Responses from the survey indicate that the product achieved this goal. One physician said that the product “is beneficial for newcomers to TB work and also helps to correct awareness of TB health workers,” and happily, “not even TB professionals can complete all the answers in the test correctly.”

The QA Project is pleased to see both the large number and diversity of users employing and planning to employ the

tool (e.g., medical doctors, nurses, midwives, village doctors, physician’s assistant, health workers, students, health reporters, writers). One TB program manager from China is planning use the program to train over 5,000 public health professionals at varying experience and educational levels. Other notable facts from the survey include the following:

- On average, respondents took 2-4 hours to complete the CD-ROM
- The product was used a stand alone training tool, with facilitation, and as part of pre-service training
- Half of the respondents provided incentives for those completing the CD-ROM



¹ This program uses the WHO Directly Observed Treatment Short course protocol.



- Computer access and appropriate disk space for the program still remains an issue in some places²

Several respondents offered suggestions on how the product could be changed to improve its usability:

- a) include more information on pediatric tuberculosis case management,
- b) provide programming that allows users to “go straight into the test room to test their knowledge without being forced to take the tutorials,”
- c) expand the chapter on epidemiology to include statistics on high burden countries like India, South Africa, Nigeria, and Pakistan,
- d) expand the DOTS chapter with more details of actual field situations,
- e) include more information on the side effects of anti-TB drugs,
- f) conduct another formal study,
- g) provide a video version of the program, and
- h) create a printable certificate for the user who completes the program.

In addition to this positive user feedback, the program has received several industry distinctions, including the 2001 IABC Silver Inkwell Award of Merit for Best

Product Launch, the 2001 Communicator Print Media Crystal Award of Excellence in Computer-Based

Training, the 2000 Learning Software Design Competition Award for Computer-Based Training Design, and the 1999 Gold Cinema in Industry (CINDY) Award.

The Tuberculosis Case Management CD-ROM can be purchased from the QA Project for \$42.50 (includes shipping and handling). If you are interested in receiving a copy of this product, send an e-mail to qadissem@urc-chs.com, or for more information call 301-941-8524. This pricing applies only to orders from North America and Western Europe. Individuals from Africa, Asia, the Caribbean,

Eastern Europe, and Latin America may receive a single copy free upon request. Quantity discounts are available.

Respondents' Position Titles

- Professor and Doctor-in-Chief
- TDR/WHO Project Principal Investigator (TB-Socio-Economic Research)
- Physician - 5
- Public Health Physician - 2
- College Professor
- Chest Physician
- TB Epidemiologist and Research Coordinator of the National TB Control Program
- Biomedical Scientist and Laboratory Specialist
- Medical Doctor, PhD, and TB Specialist
- Centre for Health Policy and Strategic Studies Director and Professor
- Medical Doctor and Chief, Infectious Disease
- Public Health and Nutrition (Program) Advisor



² “...because in my district, only seven of 40 health centers have computers to operate the CD-ROM.” Another respondent explained, “This CD-ROM is an excellent training tool. Unfortunately in India the health worker(s) have no access to computers, and training center classrooms are also without computers. We intend to use it by circulating this CD amongst doctors (about 25% doctors in our state have PCs at home).”



CBT Successfully Teaches the IMCI Approach

Marina Budeyeva, MD, MPH, Senior QA Advisor

Of the 12 million child deaths in developing countries, seven in 10 are caused by acute respiratory infections (mostly pneumonia), diarrhea, measles, malaria, or malnutrition. Usually, sick children present with symptoms of more than one of these conditions. Thus, an integrated approach to managing sick children is needed, as well as a methodology that addresses children's overall health and promotes prevention of childhood illness.

To meet this need, the World Health Organization (WHO), in collaboration with UNICEF, developed the Integrated Management of Childhood Illness (IMCI) strategy that combines improving management of childhood illness with proper nutrition and immunization, prevention of diseases, and promotion of growth and development.

One of the IMCI strategy components is improvement of healthcare providers' case management skills through the use of locally adapted guidelines. In a step-by-step process, these guidelines train health staff in developing countries to assess, classify, and treat sick children, and to counsel caretakers.

With funding assistance from the U.S. Agency for International Development (USAID), the Quality Assurance (QA) Project designed and tested an interactive computer-based training (CBT) product on compact disk to teach these IMCI guidelines. The goals of this CD-ROM are to:

- Shorten the standard in-service IMCI training course
- Provide refresher or pre-service training
- Expand the reach of IMCI training to health professionals who are not typically included in the standard training course

Results from a field test in Uganda indicated no difference, in either knowledge or competence, between those trained in IMCI using the computer-based

training product and those taking the traditional classroom-based course. Furthermore, the CBT course is approximately 20 to 25 percent less expensive, because it requires only nine days (the traditional course takes 11 days) and fewer facilitators.

Currently, work is underway to revise and update the original CD-ROM. The target audience for this computer-based program remains healthcare providers in developing countries who typically have little or no computer experience. The new version includes a more modern interface, additional tutorials, several case studies, additional functionality and interactivity, a glossary, and a library. The new version also will include an underlying structure that will make the production of future versions (in different languages and for different regions) easier and less costly.

In the development of the new version, the QA Project is collaborating closely with WHO's division of Child and Adolescent Health (CAH/WHO). CAH/WHO provides technical content expertise as well as funding assistance. The prototype of the program was tested at the CAH/WHO in 2000. Additional interactive features were added to the program as a result of the feedback received during this testing of the prototype.

Testing of the program will be conducted in India in January and February in 2002. It will include examining the following areas: technical operation, ease of use, navigation, cognitive load, mapping, screen design, information presentation, media integration, instructional design, and attitude. The expected delivery date is May 2002.

Adaptation of the CD-ROM into Spanish (for training in Bolivia) has been planned and funded by USAID. The development of this version will begin the fall of 2001 and is expected to be completed in May 2002.





New Products from the QA Project

QA Monograph Series

Rashad Massoud, Karen Askov, Jolee Reinke, Lynne Miller Franco, Thada Bornstein, Elisa Knebel, and Catherine MacAulay. 2001. **A Modern Paradigm for Improving Healthcare Quality.**

Operations Research Issue Paper Series

Sujata Bose, Elizabeth Oliveras, and Wendy Newcomer Edson. 2001. **How Can Self-Assessment Improve the Quality of Healthcare?**

Lani Marquez. 2001. **Helping Healthcare Providers Perform According to Standards.**

Elisa Knebel. 2001. **The Use and Effect of Distance Education in Healthcare: What Do We Know?**

Neeraj Kak, Bart Burkhalter, and Merri-Ann Cooper. 2001. **Measuring the Competence of Healthcare Providers.**

All QA Project publications are published for the U. S. Agency for International Development (USAID). They can be downloaded from the QA Project website: <www.qaproject.org>.

Documents that are not "website only" are available in hard copy: write to <qapdissem@urc-chs.com>.

Quality Assurance Project Case Study Series

Ya-Shin Lin and Lynne Miller Franco. 2000. **Assessing Malaria Treatment and Control at Peer Facilities in Malawi.** (Website only)

H. Durán and S. Fuentes S. 2000. **Designing Obstetric Services to Reduce Maternal Mortality in Guatemala.** (Now available in Spanish, website only)

Quality Assurance Project. 2000. **Designing and Integrating Quality Family Health Services at the Salt Model Center in Jordan.** (Website only)

Ya-Shin Lin and Lynne Miller Franco. 2000. **Assessing the Quality of Facility-Level Family Planning Services in Malawi.** (Website only)

Quality Assurance Project. **Assessing Quality of Healthcare at the District Level in Rwanda.**

Ya-Shin Lin. 2000. **Using Screening Data to Improve Hypertension Care in Russia.** (Website only)

Project Report Series

Catherine MacAuley and Mahadeo P. Verma. 2001. **The Global Polio Laboratory Network: A Model for Good Laboratory Practice.** (Website only)

Anbarasi Edward Raj. 2001. **Strengthening the Capacity of African Institutions for Improving the Quality of Nutrition Programs: Final Report of the Greater Horn of Africa Initiative.** (Website only)

Quality Assurance Project is operated by the Center for Human Services in collaboration with the Joint Commission Resources (formerly known as the Joint Commission International) and Johns Hopkins University (including the School of Hygiene and Public Health, The Center for Communication Programs, and the Johns Hopkins Program for International Education in Reproductive Health). The project is sponsored by the United States Agency for International Development under Contract Number HRN-C-00-96-90013. For additional information please contact:

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