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MIDTERM EVALUATION
OF
THE QUALITY ASSURANCE PROJECT
(Cooperative Agreement No. DPE-5992-A-00-0050)

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LIST OF ACRONYMS AND ABBREVIATIONS

AED	Academy for Educational Development
AMPRA	American Medical Peer Review Association
AMRRC	American Medical Review Research Center
APHA	American Public Health Association
BASICS	Basic Support for Institutionalization of Child Survival Project
CA	Comparative Analysis
CO/QAP	Central Office/Quality Assurance Project
CHS	Center for Human Services
COTR	Contracting Officer's Technical Representative
CQI	Continuous Quality Improvement
CRHP	Cost Recovery Health Project
DANIDA	Danish International Development Agency
EPI	Expanded Programme on Immunization
ISQA	International Society on Quality Assurance
HCFA	Health Care Financing Administration
HS	Health Services
INCLEN	International Clinical Epidemiology Network
JCAHO	Joint Commission on the Accreditation of Health Care Organizations
JHU	The Johns Hopkins University
LDC	Less Developed Country
MOH	Ministry of Health
NCIH	National Council for International Health
NIS	Newly Independent States
OR	Operations Research
PAHO	Pan American Health Organization
PHC	Primary Health Care
PRICOR	Primary Health Care Operations Research Project
RA	Resident Advisor
QA	Quality Assurance
QAP	Quality Assurance Project
QI	Quality Improvement
TA	Technical Assistance
TQM	Total Quality Management
URC	University Research Corporation
USAID	United States Agency for International Development
WHO	World Health Organization

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EXECUTIVE SUMMARY

A mid-term review of the Quality Assurance Project (QAP) was carried out in June 1994 by a four-person team. The methodology included presentations by project staff, review of documents, interviews with project staff and USAID officials in Washington, and site visits in Chile, Egypt, Jordan, and Niger. The purpose of the review was both to assess the efforts of the QAP and, more broadly, to provide advice to USAID on the role of quality assurance activities in its health portfolio over the next several years.

The QAP merges two related approaches to dealing with health sector problems, one from the earlier USAID health sector projects PRICOR I & II emphasizing operations research (OR) often by external experts, the other based on the less academic methods of traditional quality assurance (QA) and of Total Quality Management (TQM) which emphasize participation by the whole health team. TQM had its origins in manufacturing, but has become a core element of U.S. health care management. U.S. hospitals are required to have active TQM programs for accreditation; many have reported substantial improvements in the quality of their care as a result. The earlier PRICOR projects had documented major deficiencies in the quality of care being delivered in every developing country health system they had examined. The QA project was an opportunity to test whether the TQM approach emphasizing internal workgroup problem solving could more effectively solve such problems than had the more external and assessment oriented OR approach of the previous PRICOR efforts. Could QA and TQM approaches which worked well in developed countries be effective tools for dealing with the very different problems and environments of developing countries?

The answer to this question, according to the findings of the Evaluation Team, is yes: TQM implemented as QA by the QA project appears to have been highly effective in a range of developing country settings and in dealing with widely varying types of problems. The QA approach itself appears to motivate health workers and institutions to tackle difficult problems. Its methods led to effective data based analysis of problems, and in many cases to the generation of workable solutions and policy changes. QA appeared to have been particularly effective in maximizing health benefits in situations of very limited resources available for health activities. While some major activities of the QAP are still in mid-course, and while some projects have experienced problems resulting in lesser achievements, the Evaluation Team was nevertheless impressed favorably about the QAP and about the QA/TQM method as an effective management and quality improvement approach. The Team concluded that the QA approach appears to be particularly relevant to the needs of developing country health systems, and should be given greater prominence and support in USAID and other donor health development activities over the next few years.

The original project conception emphasized research (called **Methodology Refinement**) aimed at adapting QA/TQM methods to developing country settings. QA/TQM programs in institutions or health systems were referred to as "country studies". As the project actually evolved, however, straight QA program or project implementation efforts, called **Institutionalization and Short Term Technical Assistance**, became the major activities of the QAP.

I. INSTITUTIONALIZATION

Major long-term country programs were carried out in five countries: Chile, Egypt, Jordan, Nigeria, and Niger. Representing the most complete implementation of QA principles and techniques in improving health services and health services management, they are the best test of the assumptions and methodology of the QAP.

In general, QAP initiated institutionalization programs with QAP central staff or outside consultants carrying out training programs for local personnel in QA concepts and techniques. Trainees identified critical problems in their institutions or systems, and organized Quality Improvement (QI) teams and projects to analyze them, to identify and implement solutions, and to monitor the improvements which resulted. A local QAP coordinating team, including a full-time QAP representative in all but Chile, coordinated the training and QI project implementation. In Chile, QA implementation has proceeded to the next phase, with training of local trainers and decentralized QA training and QI project implementation and monitoring in all 27 of the country's health services areas.

The five institutionalization projects have varied substantively in scope, from fully national level efforts in Chile, Nigeria, and Jordan, to focused pilot efforts in Niger (in one district), and in Egypt (in a single hospital, with the intention of later expansion).

In the implementation of QA for developing countries, the standard TQM approach and the PRICOR "systems analysis" approach have been modified from their "top-down" emphasis and external identification of problems to a more participatory "bottom up" approach in which local teams identify and prioritize problems. These teams incorporate different levels of health personnel, nurses and clerks as well as doctors and managers. These aspects, the local problem choice and the inclusive team approach, as well as the QA structured approach to problem solving based on objective data, appear to have been critical elements in engendering the remarkable enthusiasm and excitement for the QA efforts that the Evaluation Team encountered in the field.

Country personnel were in general pleased with the performance of the QAP central office team and field representatives in their various supportive roles:

- **Provision of consultants**
- **Support of Resident Advisors**
- **Training and training materials development**
- **Monitoring and responding to requests**
- **Provision of resources**
- **Dissemination of information about QA**
- **Support for travel to outside QA conferences**

The Evaluation Team identified some areas where performance of the QAP could have been improved (e.g., linkages and collaboration with other donor agencies), and noted that non-government health services and facilities have been largely ignored despite their importance in all but Niger. The team concluded broadly, however, that the country projects have been dramatically successful in implanting QA approaches and in stimulating efforts to improve the quality of services into the thinking of health system managers in the chosen countries.

II. SHORT-TERM TECHNICAL ASSISTANCE

The nine short- and medium-term projects developed over the three years of the QAP under this category of efforts varied widely in focus and character, but have generally consisted of intermittent QA technical assistance. The activities have included:

- **Working with five hospitals in Guatemala regarding client satisfaction and cost effectiveness.**
- **Running a national QA course in Costa Rica in preparation for a national program.**
- **Developing QA activities in relationship to cholera control activities in Guatemala, Ecuador, and El Salvador.**
- **Working to improve the quality of Child Survival activities being carried out by community health workers in Malawi.**

- Collaborating with two other USAID central projects in improving measles control in Burkina Faso, Kenya, and Niger.
- Improving child weighing as part of efforts in collaboration with vitamin A work in the Philippines.
- Improving micronutrient related activities in Egypt.
- Improving TB treatment compliance in the Philippines.

The Evaluation Team found these projects to be generally effective and useful, with the exception of one project: in one portion of the measles control program in Niger a lack of coordination interfered with ultimate effectiveness. The Team expressed concern, however, with the proportion of QAP effort being devoted to these less extensive efforts, recognizing the unavoidable competition for QAP staff attention and resources.

III. TRAINING

Training in QA concepts and methods has been a core element in almost all the QAP's projects. Three basic types of training have been carried out:

1. **Awareness training** designed to introduce concepts of quality and quality assurance programs to uninitiated audiences.
2. **QA skills training** in two curricula, the first presenting "Problem Solving Tools" or skills in problem identification, problem analysis, solution development, implementation and evaluation, the second focusing on standards and monitoring.
3. **Component training** which has focused on building skills in coaching and facilitation (in five countries) and supervision (in two countries).

Further, the QAP has collaborated with The Johns Hopkins University (JHU) to develop and teach a course on Quality Assurance at JHU. In addition to these activities, the QAP has worked with the Academy for Educational Development (AED) and JHU to develop and implement a training course on Interpersonal Communication that was carried out in Honduras; and to organize two computer-assisted training packages that guide users through a programmed learning approach to QA concepts and skills.

The Evaluation Team found that the basic training provided in the institutionalization projects led to successful QA activities. The visits by QA staff or country QA team members

to trainees as a routine follow-up to the initial workshop training, however, were critical to the continued success of the QI teams. The importance of this element appears to be a significant advance in understanding made by the QAP and it deserves greater emphasis in the future; planning should include preparation of local counterparts for these follow-up activities. Additional attention to transferring the skills needed to carry out QA workshop training to local counterparts should be part of future planning.

The curricula and materials used in training activities require extensive local adaptation to be effective. As part of putting additional emphasis on transferring training skills to local counterparts, QAP should shift its curriculum adaptation largely to the field, emphasizing extensive collaboration with local staff prior to training workshops. Standardized curricula appear to be unlikely to be effective except as a starting point for local adaptation. Strengthened efforts in evaluation of training, including use of follow-up visits to gather information, will help the QAP to better identify elements in the curricula that can be made more effective for local audiences, and to identify materials best suitable for future training needs.

IV. RESEARCH STRATEGY

Although the QAP is bureaucratically a follow-on project to the two PRICOR projects, its TQM-like approach is substantively different than the "systems analysis" and OR approach of those projects. The Evaluation Team therefore concluded that the inclusion of a research component in the QAP, called **Methodology Refinement** is appropriate in applying the methods of this newer approach to developing country situations and problems. The Methodology Refinement activities of the QAP have aimed to:

- Advance knowledge of how to use QA tools and techniques to improve quality in a less developed country setting
- Modify specific QA tools and techniques so as to make them more effective in the LDC context
- Produce new QA tools and techniques for this purpose
- Advance knowledge of how to transfer this technology to LDC counterparts

Activities in this category have included the preparation of some seven monographs or manuals, and nine planned field studies.

The monographs and manuals have helped to advance thinking in conceptual issues (*Quality Assurance in Developing Countries, Methods of Problem Solution Using Incentives*)

to Promote QA, and Quality/Cost Relationships for Service Delivery in Developing Countries), but are mixed in quality. Some are quite good, but as a group they appear to address very different audiences. Some may be difficult for developing country readers to understand. In at least one case the monograph appears to be primarily opportunistic rather than addressing a high priority need, i.e. an available author was interested in a particular topic. A *Thesaurus of Activities and Indicators for TB Programs* proceeds usefully in the opposite direction, starting not with concepts but with a particular problem, and showing how that particular problem can be solved. Overall, these efforts would benefit from greater systematization of planning to link objectives and target groups to priority needs, and pretesting for readability.

The nine field studies have included comparison of the effectiveness of various approaches to evaluation and to identifying problems in provider performance, field validation of interpersonal communication norms, and evaluation of various interventions such as job aids, a patient-system contract to improve drug-taking compliance, and peer review as a modality for improving care by midwives. The topics appear to be appropriate both to field staff and to the Evaluation Team, although health economics research issues might have received greater emphasis. A tension between implementation of QA as an operational effort versus implementation of research with its additional demands has interfered with the QAP carrying out its research agenda.

V. SERVICE LEVEL OUTCOMES OF QA ACTIVITIES

The Evaluation Team assessed evidence that the QA efforts had actually led to concrete improvements in service quality in specific field settings. Both available written reports and the proactive collection of evidence from the field using a specially designed report form were used. The evidence demonstrated that the QA efforts had indeed led to substantial improvements in quality. Examples included:

- Improvements from 9% to 100% of case records showing correct assessment of respiratory rates in acute respiratory patients in Chile.
- A reduction from 25% to 11% of the rate of infection following Caesarean sections in one Guatemalan hospital.
- A dramatic improvement in the availability of operating vehicles in Niger for use in supervision and other transport needs of service provision.
- An improvement in the stocking of necessary OR supplies in one hospital in Egypt.

- **A reduction in volume of waiting lines and concomitant increase in visitor fee revenue in one hospital in Egypt.**

Additional examples were abundant, including many examples of QA activities in progress and likely to lead to such documented changes.

The Evaluation Team concluded that the QA activities taking place in countries were indeed improving the quality of care and care-related processes, in many cases dramatically. The effort by the Evaluation Team needed to assemble these examples, however, indicated that these quality improvement achievements were not being routinely or adequately reported by Quality Improvement Teams.

VI. DOCUMENTATION, DISSEMINATION, AND ADVOCACY

The problems with documentation of service level outcomes extend to documentation and synthesis of country project activities. The QAP has made repeated efforts to ensure adequate documentation of baseline assessments, the development and use of training materials, project outcomes in the forms of storyboards and standards, and overall project implementation and institutionalization. A July 1993 dissemination plan specified content, target audience, and author of reports, and an October 1993 decision assigned central office staff members to prepare written reports on the countries for which they were responsible. There is also a computer-based documentation file on country activities. So far, however, reports from the field are obtained only with difficulty and vary widely, the centrally produced reports have not been systematically summarized, and country experiences have not been compared. Guidelines for quarterly or annual reports have not been developed, nor have key indicators and methods for monitoring QAP implementation across countries.

Dissemination of QA was considered very important to the project for raising awareness of the importance and effectiveness of quality improvement in PHC, both among those involved with the QAP and in the wider international health community, and as a mechanism to convince program managers and decision makers that QA measures could be feasibly incorporated into existing programs. The project has utilized printed materials and publications, a mailing list of 1,300 names, conference presentations, and interpersonal communications to get the word out. A brochure explaining the project, a biannual newsletter, a series of one-page summaries of field activities, and the products from the research efforts of the project have been produced. A readership survey regarding the newsletter has a very low response rate, but was supportive. Distribution of these materials in countries has been inconsistent, and the feedback mixed, ranging from evidence of receipt and positive comments in Niger, to reports that peripheral QA participants had not received the materials in Chile and Egypt. QAP staff and participants have presented at a number of professional conferences, and

the QAP sponsored a 2-day meeting of developing country representatives involved with QA prior to the annual ISQA conference in June 1993.

Advocacy will become increasingly important to the QAP: even good works of convincing caliber and considerable impact are unlikely to speak for themselves. While the dissemination activities mentioned contribute to marketing the QA concept and its successes to donor organizations and to country officials, no specific budget was identified for these efforts (in particular for the "translation" needed to modify documents to make them more effective for specific target audiences). A range of mechanisms were identified which could enhance the spread and effectiveness of current QAP advocacy efforts for the remainder of the project.

VII. ADMINISTRATION AND MANAGEMENT

The management and administration of the project has been strong and effective. The Evaluation Team was impressed with the high quality, in depth experience and judgment, and field effectiveness of the majority of the QAP staff and consultants. The organization and distribution of responsibility within the project, the planning and tracking of the project both operational and financial, and the management of the two subcontracts appeared to be competent. Areas of concern were a lack of external input into the direction of the project, subproject activity tracking, and the management of reporting and publication of project activities and successes.

VIII. USAID SUPPORT AND MANAGEMENT

The support to the project by the USAID COTR has been exemplary. Delays in the USAID Office of Grants and Contracts have been particularly troublesome, however. These delays have created serious concerns within the project's management as to whether the Cooperative Agreement could be successfully executed, and have caused substantial personal difficulty to personnel kept "on hold" for long periods awaiting contract approval.

IX. SUMMARY OF ISSUES AND RECOMMENDATIONS

Issue 1: The Role of Quality

Recommendation:

Efforts to improve the quality of health services using the QA approach should be given prominence in future health development activities of USAID and other development agencies.

Issue 2: Structure of Future QA Activities

Recommendation:

QA should be continued as a free-standing project for an additional five years, with formal collaborative linkages with other major USAID central development projects.

Issue 3: Focus on the Public Sector

Recommendation:

The QAP should continue to pursue efforts to include secondary and tertiary facilities and providers where appropriate, while continuing to emphasize primary health care. It should develop approaches for dealing with economic aspects of health care and cost-effectiveness, and with private sector health services. It should continue to work in both less developed and middle developed nations, recognizing and learning from the differences in approaches needed.

Issue 4: Training Activities and Materials

Recommendation:

In the remaining project period, the QAP should systematically review and strengthen their approach to training, including both workshop-based activities and field-based follow-up.

Issue 5: Involvement of Top-Level Managers

Recommendation:

The QAP should continue to adapt TQM and other QI models to local situations, while more actively pursuing efforts to enlist senior decision makers in the QA efforts in country programs.

Issue 6: Collaboration

Recommendation:

The QAP should develop a plan for enhancing the interaction with other agencies and projects at country, US, and international levels, having as the target joint planning of activities and approaches. USAID should actively facilitate such collaboration.

Issue 7: Documentation/Dissemination/Advocacy

Recommendation:

The Project should give priority to ensuring active local field information dissemination and advocacy. The Project should extend more effort in the coming year to gather concrete documentation on the outcomes and impact of QA efforts on health care quality, and where possible, morbidity and mortality. It should assist research and project implementers to seek a higher level of publication in appropriate journals.

Issue 8: Evidence of Changes in Service Quality

Recommendation:

The QAP should direct more attention and resources to the documentation of service quality improvements that result from QA activities.

Issue 9: Balance

Recommendation:

Future USAID supported QA activities should concentrate on larger scale, longer-term institutionalization efforts. Short-term QA TA should be used primarily to develop longer-term efforts, particularly in collaboration with other donors and projects.

Issue 10: Research

Recommendation:

While institutionalization should remain the primary focus of current and future QA projects, USAID should ensure that essential health services research on QA effectiveness and costs is conducted in conjunction with QA activities.

Issue 11: USAID Contracting Procedures

Recommendation:

USAID should change their contracting procedures; they have been a serious impediment to Project implementation, have caused hardships among some personnel, and have been a source of consternation among staff.

I. INTRODUCTION

A. PURPOSE

This project is carried out under a cooperative agreement (number DPE-5992-A-00-0050) between the U.S. Agency for International Development (USAID) and the Center for Human Services (CHS) of the University Research Corporation (URC), Bethesda, Maryland. The agreement calls for a mid-term review of the project's activities, including site visits. The purpose of the evaluation is to provide authoritative advice to USAID on the subject of quality of care and the related efforts of the Quality Assurance Project (QAP). The Evaluation Team has been asked to address three overall issues: 1) the performance of the organizations in implementing the project to date, 2) issues and recommendations for implementation priorities and activities during the rest of the project, and 3) the role of quality assurance approaches in USAID's health portfolio in the next several years. To facilitate a complete review, the Team was afforded access to all pertinent information relating to the contractor's processes and products, as well as to field operations in Chile, Egypt, Jordan, and Niger through on-site visits with local staff for a minimum of four days each.

The Team consisted of individuals experienced in quality assurance methodology and organization, the development of nation-wide systems of health care quality assurance, training program development and evaluation, and first-hand experience in developing country health care organization and delivery. Each member brought some experience in at least two of these domains.

B. EVALUATION APPROACH

The Evaluation Team met in Washington in mid-June 1994 to review project documents, to receive briefings from USAID officials and to discuss the methodological approaches and progress with a large number of staff at the CHS. The Team then split, with each member conducting an individual site visit the following week to four of the major country programs: Egypt, Jordan, Niger, and Chile. Annexes I and II record the scope of work and the schedule, and Annex III contains a list of individuals contacted in Washington as well as those contacted in the course of the site visits. It should be noted that time constraints precluded interviewing a wide range of officials or interested parties beyond the project teams and closely involved officials and participants, thus limiting the potential for gathering divergent opinions. None of the Team members interviewed clients of health systems involved in quality improvement, for example. The final report may thus be partially biased due to its limited range of input from other sources.

Mid-Term Evaluation of The Quality Assurance Project

The field visits were conducted explicitly to gather information relative to the quality of the central QAP activities, not to evaluate the field projects themselves. As many of them are early in their implementation processes, such evaluation would be difficult at this stage anyway. The visits in the field did prove to be quite useful in that they provided an excellent opportunity to learn how, or whether, the processes and tools developed in Bethesda were being carried out successfully in the real world environment. The Team members believe that they received an accurate and objective appraisal of the project's goals, activities, and progress as evidenced in the field.

II. BACKGROUND AND DESCRIPTION OF QA PROJECT

The QAP has its origins in a series of evolutionary streams. Very concretely, as a USAID health sector project, it was the appropriate next step following two earlier projects emphasizing Operations Research (OR) in PHC: the PRICOR I and PRICOR II projects, a ten year sequence of activities. Starting from a broad focus on PHC and OR in the earlier PRICOR I project, the PRICOR II project focused more on the development of measurable standards and indicators of quality as represented in the Thesaurus, a detailed, even exhaustive compendium of such indicators. While problem solution generation and testing were part of both PRICOR I and II OR methodology, greater emphasis was placed on assessment, and there was no specific or generic methodology developed for solving problems. PRICOR developed the "systems analysis", a broad assessment of a country's child survival or primary health services carried out based on the Thesaurus. Such a systems analysis would generate an objective identification of the major problems in health care services, both in actual patient care practices of providers (e.g., techniques of physical examination, diagnosis, treatment, and counseling) and in the support services such as drug logistics which provide the foundation needed for quality primary care services. These analyses were carried out in a number of developing countries, and revealed widespread deficiencies in the quality of the performance of primary care in developing countries.

A parallel evolutionary stream was taking place in health care more broadly. A concern for quality of services had led to widespread implementation of medical audit procedures in developed country medical care. Frustration with lack of change in care practices as the result of such "inspection" approaches had led more recently to adoption in the health care sector of the Total Quality Management (TQM) methods well codified in manufacturing management. At the time the QAP was being considered, the Joint Commission on Accreditation of Healthcare Organizations in the United States was in the process of changing its accreditation requirements to require all hospitals to have a TQM program in action. The critical difference between medical audit and TQM was the addition of a set of tools for use by teams of non-specialized personnel aimed at identifying, analyzing, and solving problems.

These two streams merged in the QAP. The TQM methods have been adopted to allow a new and very functional emphasis on problem solving. This is combined with teamwork and participation to provide a new dimension of empowerment to participants. Thus, while the QAP has derived from the OR studies of the two preceding PRICOR projects, it represents a sufficiently divergent approach as to be new, and recognized as new, by the participants in the field. While quality improvement may begin with an assessment of performance according to a set of agreed upon norms and standards, it may also begin with identification of problems according to the perceptions of health workers themselves and of clients of the health care system. From problem identification, indicators of quality and assessment approaches developed by the quality improvement team can emerge. This process is itself an empowering

activity. It can lead to clarification of the problem, generation of solutions, and implementation and monitoring of the improvement gained, all benefitting from the very useful package of tools of the TQM methodology.

The QAP was not designed to implement these approaches alone, however, but included also the objective of improving methods available for this work through further research, called in the project agreement "methodology refinement" studies. While this research objective was stressed early in the project, experience and demand from the field led to a shift in emphasis toward the QA implementation or "institutionalization" activities of the 14 major and minor country projects specified in the agreement. The Evaluation Team, recognizing this evolution in emphasis, examined both elements of the QAP, while putting maximum attention on the QA activity development efforts of the project's country programs.

III. IMPLEMENTATION OF QAP

A. COUNTRY PROGRAMS

The original agreement called for six major country quality programs or "studies", each with a full time Resident Advisor (RA). The five activities which were implemented and classified as full long-term country programs under the agreement -- Chile, Niger, Egypt, Jordan, and Nigeria -- represent the most complete implementation or application of QA principles and techniques to the improvement of health services. As such, their successes and failures, their potential for producing long-term changes in health system management and the quality of health services, are the best test of the assumptions and methodology of the QAP. As the most richly funded, however, they are less useful as tests of the cost-effectiveness of the QA approach to health services improvement.

1. Patterns of Implementation

The countries selected span a wide range of health services and overall economic development, from Chile with an infant mortality rate of 16 per thousand and 99% of births occurring in health facilities, to Niger with an infant mortality rate of greater than 125 per thousand and 77% of women delivering their last baby at home.

The QA programs implemented also range widely in size and coverage, from the Egyptian pilot program so far implemented only in a single hospital, to the Chilean fully-national program with an extensive health professional training program and ongoing quality improvement projects addressing primary health care facilities, hospitals, and regional and national health system management in all 27 health services areas of the country. Between these extremes are: the Nigerian program, national in scope but aimed more at inserting QA activities into other implementation programs rather than direct QA implementation; the Niger program focusing on the Tahoua Regional Directorate of Health, with the potential for involvement in all levels of care and in fundamental health management procedures but with the initial concentration on the major clinical interventions in maternal and child health; and, the Jordan program with both a central MOH component and a pilot demonstration area in the Salt region of the country, and involving both standard QA activities and field research.

The duration of QAP efforts in these programs also varies. The Chilean program arose in the first months of the QAP, and has now been in progress for about three years. The Nigerian project, at the other extreme, has been under active implementation for only a few months, and has been on hold recently pending resumption of USAID development activities overall in that country. The Jordan program began in earnest only in December 1993, although an initial training activity had been conducted in 1992. The other activities are

intermediate in duration, in the range of one to two years, making objective assessment of impact and sustainability difficult at this time.

In all cases but Chile the activities have included a resident QAP-employed advisor, usually an expatriate. These RAs have facilitated and stimulated QA-related activities, served as channels of communication between the country QA program and the QAP in Bethesda, and in some cases provided direct technical assistance and training in QA, depending on their capabilities. In Chile the QA national team, now formally the Unit for Quality and Norms in the Department of Integrated Health Care of the MOH, concentrates full time on quality development activities, and its leader serves as the QAP counterpart. Both she, as a Chilean national, and the formal unit of government for which she works, however, are inevitably more caught up in government politics and unit budgetary and activity constraints (all potential inhibitors to progress), than would be the case with an expatriate. Comparing the Chilean experience with that of the other countries thus provides some opportunity to assess the importance of an expatriate resident advisor to program success, an important determination considering the substantial resource requirements of maintaining a resident expatriate advisor.

The implementation approach has, in general, been similar in the four countries with direct intervention programs, with the exception of Nigeria. Training of local personnel in QA concepts and techniques has coincided with the organization of an implementation team to monitor and support subsequent QA activities. Trainees have organized QI projects involving the cycle of problem identification, problem analysis, solution identification and implementation, and monitoring of improvements. In the Chilean case significant decentralization of QA activities has also taken place, with special training of "monitors" (QA facilitators) in decentralized health services areas who function as local representatives of the national QA Team and carry out training in QA locally as well as supporting and monitoring the implementation of QI projects.

The Evaluation Team was impressed by the degree to which QA activities in Chile incorporated the concerns of consumers/clients/patients in every aspect of quality assessment and improvement. The Team suggests that in the future, this aspect be given far more importance in other country programs.

It is of interest, given the historical evolution of the QAP, that in none of these country programs has there been a formal "systems analysis" or broad assessment of service quality based on standard indicators as an initial step in the implementation process. The emphasis has rather been on identification and prioritization of problems by local teams, a "bottom up" approach, rather than relying upon an external objective assessment as the mechanism for problem identification and prioritization. The trainees, and the QI teams subsequently formed, have drawn on different levels and types of personnel from the health

system, rather than only managers, or only doctors. Participants report this to be a dramatic difference from past approaches. It has been an eye-opening experience as well, exposing problems from the perspective of other health workers of which participants were previously unaware, and providing an opportunity to discuss and work together on teams across levels in the HS hierarchy, a new experience for most. All of these elements, the local problem choice and the inclusive team approach, as well as the QA structured approach to problem solving, appear to have been critical in engendering the remarkable enthusiasm and excitement for the QA efforts that the Evaluation Team encountered in the field. Indeed, the team members, each with considerable work experience in the developing world, noted universally that they had rarely encountered the kind of enthusiasm found in these projects.

In no case has there been appreciable involvement of other donor agencies in the QA program development: each of the programs has been a solo effort by the QAP. Nigeria illustrates the most intense attempt to link the QA efforts with other development programs, particularly with other USAID inputs, working to insert QA activities into the plans and implementation activities of other HS development projects. In Niger the QAP RA has actively sought to maintain contact with other HS development projects and the Peace Corps, primarily lobbying for inputs to the Tahoua Region, although in one case (HKI vitamin A project) collaborating fully in an intervention. In the other countries, however, the QA efforts have been largely independent and, to some extent, isolated. In Egypt, the QA component has developed as an add-on to an existing program designed to improve public sector hospital organization and management. This program, the Cost Recovery Health Project (CRHP) is supported by an arrangement between the local USAID mission and the Ministry of Health.

In every case, with the exception of some involvement with professional associations and an occasional effort by a public sector physician to incorporate quality principles in his private practice, the activities have concentrated on the government health system, and have largely ignored non-government health services and facilities. In the QAP as a whole there does not seem to have been an effort to develop mechanisms for approaching the assessment of the quality of private sector health services or their improvement through MOH mechanisms such as regulation or accreditation, even though in all these countries, Niger excepted, private health care including direct drug sales may constitute a significant proportion of overall health care (in Chile, for example, more than 30% of services).

2. Role of the Quality Assurance Project

The roles of the QAP in supporting these efforts at QA institutionalization include the following:

- **Fielding and support of Resident Advisors**

Mid-Term Evaluation of The Quality Assurance Project

- **Provision of short term consultants for training and other activity support in the field, including the provision of workshop training courses in Quality Assurance awareness and other quality improvement skills**
- **Development and adaptation of training materials**
- **Monitoring activities and responding to requests**
- **Provision of resources for equipment and program operations**
- **Dissemination of QA-related information and materials**
- **Advocacy and facilitation of linkages with government and other agencies**
- **Other support not directly connected with the local implementation plan, e.g., sending persons to international meetings, sponsoring regional workshops or conferences, etc.**

Overall, the Evaluation Team found a high degree of satisfaction among counterpart personnel with the QAP support of these institutionalization activities.

Short-term consultants were considered to be competent and helpful. In one country, however, they were considered to be too numerous, and too often different from one visit to the next. In another country some consultants were less competent than desired with the local language, and some seemed less than adequate in terms of knowledge of the problems in developing countries. Consultants appeared to differ in their QA approaches, leading to disagreements during training courses between consultants: all of this may reflect inadequate preparation of consultants by QAP's staff in Bethesda prior to going to the field.

The training materials and the courses carried out varied in effectiveness and appropriateness. The high level of enthusiasm and activity in all the programs indicates that the courses were successful in conveying QA concepts and stimulating subsequent QA activity felt to be satisfying to the participants. In short, the courses and materials worked. In at least two countries, however, the participants came away from initial training complaining that they did not understand what they were to do, and that the courses had consisted too much of lecturing and not enough of application. Major revision of the activities and course materials by the local team in one country resulted in correction of these deficiencies, but there does not appear to have been a subsequent revision of the generic training materials in Bethesda in response to this field feedback. Another concern was that the materials and training were not adapted sufficiently to local conditions, e.g., using examples from developed countries. In many cases the short-term consultants would appear and immediately begin

teaching the course, rather than spending time adapting materials and curriculum in concert with a local team.

Local counterparts and RAs were very positive about the support they had received from CO/QAP technical and operational backup persons. Requests for materials or other assistance had been promptly and effectively met, and there were no complaints about feeling deserted. However, routine feedback by Bethesda staff on reports submitted from the field has not been provided consistently.

The adequacy of resources provided to the field projects seems to have varied from country to country. In one country, manpower, space, supplies, and equipment needs were met, and there appears to have been no constraints on program activities based on limitations in budget or other resources. In another, just the opposite was the case, with major operational constraints, ranging from lack of a computer for preparation of training materials and reports to inadequate manpower. In another country project, shortage of even basic paper and photocopying facilities were noted. These examples raised concerns in the minds of the Evaluation Team regarding the ability of CO/QAP staff to assess program needs accurately in the field.

QAP reports and information generated in Bethesda appear to have had limited circulation, reaching core project persons and USAID staff, but not reaching persons trained and working on QI teams in the periphery. A major unmet desire for information "from the outside", to validate and inform local efforts, was voiced in the field. In addition, a desire for more effective communication of local efforts among participants was frequently encountered. Universities and peripheral facilitators in Chile expressed the desire for a more complete library of reference materials on quality, statistics, etc, to help with solving QA implementation problems. On the other hand, local communication efforts were seen to be effective in Niger, and are being planned for Jordan, with the publication of a local QA newsletter.

Regarding facilitation of linkages with other agencies and activities, the QAP staff and consultants focused largely on the QA activities, not giving priority during visits to the countries to "making the rounds" of other groups involved with HS development such as the World Health Organization, the World Bank, or even (in one case) with the USAID mission itself.

Support of a pre-ISQA (International Society on Quality Assurance) international meeting for developing country participants, and further support to travel to international meetings by country project personnel, has been provided by QAP. This has been a welcome and effective mechanism for validation, motivation, and provision of information, as well as for dissemination of QAP efforts to a wider audience. As yet, the project has not sponsored

regional meetings or regional conferences. However, in Jordan, the project is planning such a meeting. Regional conferences in local languages were noted as particularly desirable by some of the local institutionalization teams.

3. Accomplishments and Potential for Sustainability

The overall impression of the Evaluation Team is that the projects have been dramatically successful in implanting QA approaches and in enhancing quality concerns into the thinking of health system managers in the chosen countries. Actual service level outcomes are reviewed in section II.E of this report. Process outcomes are similarly dramatic, with powerful commitment by senior level managers as well as line health workers to the quality improvement activities. In Chile, the program with the longest duration, officials at the Undersecretary Department and Division Chief level look to the QA team to facilitate changes much more widely in the MOH. Health services areas, now independent as the result of decentralization, have provided manpower and financial resources from their own budgets to forward QA activities, providing funding for QI projects, for example, and loaning QA facilitators to other HS areas to assist in training. The variety and depth of actual service improvements, combined with the enthusiasm and commitment of the participants and the availability of local resources, makes sustainability of QA efforts in that country very likely. The MOH officials in Jordan expressed their conviction that the QA efforts were the only available way to address the critical cost-efficiency issues of their system. In Jordan, both MOH and USAID assured that both parties were fully committed to continue the process even if the QAP stopped. In a short time, the project had managed to convince the key decision makers of the importance of QAP. In Egypt, immediate success in one hospital with several concurrent projects has infused a high degree of enthusiasm.

4. Constraints and Issues in Institutionalization

A range of constraints has plagued the country programs. Turnover of key health staff in countries makes constant retraining necessary, and impedes progress in QI team activities and leadership. Decentralization to some extent impedes progress by releasing peripheral managers from central imperatives to pursue quality, but has also been a strength where peripheral managers have been brought into the QA movement. On the other hand, failure to enlist key managers, wherever their location, could impose a barrier to progress, and this issue should receive additional attention in the development of specific approaches.

The Resident Advisors have been very effective in the five countries where they have been present, and appear to be critical elements in what success has been achieved. Whether greater capability and previous experience in QA concepts and activities would substantively increase their effectiveness, however, has been questioned. At present they function very effectively as local managers and facilitators, but, for QA theory, they may have to depend

more than would be optimal on outside consultants less familiar with local conditions and problems.

Resource limitations have constrained the level of activity of at least the Chilean program, and, in that instance, threaten long-term institutionalization as the QA team becomes frustrated and discouraged with having to constantly take extraordinary measures to accomplish simple basic routine tasks.

A fundamental constraint across all programs is the availability of indigenous resources to fund basic needs of the health system: where such basic needs are not being met, efforts to achieve quality may be ultimately judged fruitless by participants (e.g., Niger), despite the increased efficiency in the use of resources which can result from improvements in the quality of service processes, as demonstrated repeatedly in Chile and targeted in Jordan. In Niger, this problem has been overcome in the short-term by working with local staff to develop an inventory of the equipment and supplies necessary for basic services, and providing these items using QAP funds. The Jordanian project has carried out an analysis of the minimum requirements (in terms of equipment) needed to ensure good quality PHC.

Limited post-training follow-up in cases where the initial training many have been excellent may leave participants still less than fully competent to apply QA techniques in the solution of complex and dogged problems. This situation may lead to failure of many QI teams to achieve success in problem solving, which may in turn lead to frustration and discarding the QA approach.

5. Lessons Learned

While still early in some programs, experience so far indicates that the QAP approach to institutionalization of QA in developing country health systems appears likely to be successful, both from the perspective of continuation of QA activities, and on the basis of documented changes in the quality of services. Experience suggests that the demanding systems analysis studies of the PRICOR period may not be necessary to launch highly successful QA efforts. Indeed, the empowerment of local health workers to identify their own problems and work on them in mixed teams using the practical tools of the QA approach may be a more convincing way to bring about long-term commitment to improving the quality of health care. While improvements in training are needed, and emphasis on post-training follow-up needs to be stressed, the training activities in their present form have resulted in dramatic changes in attitude about QA and in actual initiation of QA activities. QAP support of country activities has generally been effective, and the use of RAs appears to have been cost-effective. Improvements are needed in dissemination of both international and local QA information and results, and in selection and preparation of short-term consultants. The QAP should take steps to ensure that basic resources to carry out the program activities planned are

available. New emphasis on reaching key decision makers, as well as obtaining support for QA activities from other agencies and donors, is needed.

B. SHORT-TERM TECHNICAL ASSISTANCE

The original project agreement specified a total of nine short- and medium-term quality "studies" or projects over the life of the project. As these have developed during the first three years, they have constituted a wide range of QA-related assistance activities carried out with limited, often short-term mandates. These include:

- Working with five hospitals in Guatemala regarding client satisfaction and cost effectiveness.
- Running a national QA course in Costa Rica in preparation for a national program.
- Developing QA activities in relationship to cholera control activities in Guatemala, Ecuador, and El Salvador.
- Working to improve the quality of child survival activities being carried out by community health workers in Malawi.
- Collaborating with two other USAID central projects in improving measles control in Burkina Faso, Kenya, and Niger.
- Improving child weighing as part of efforts in collaboration with vitamin A work in the Philippines.
- Improving micronutrient related activities in Egypt.
- Improving Tuberculosis treatment compliance in the Philippines.
- Developing the PKMI/family planning program in Indonesia.

The Evaluation Team found that the QAP has responded to the majority of these requests with provision of QA assistance at the local level, but with no long-range commitment. Many of the activities have run very well, although there was one activity in particular which was an obvious exception: in one portion of the measles control program (Niger), lack of coordination interfered with ultimate effectiveness. On the whole, however, QAP inputs appear to have been competent and largely effective.

Despite a general positive impression of these activities, the Evaluation Team questions the long-term effectiveness of such limited commitments. In some of the more advanced countries, such as Costa Rica, limited assistance may be adequate for the completion or further refinement of a complete quality assurance program. In even that well-organized country, however, it appears that political factors at central levels may inhibit further progress in the absence of additional external inputs, despite a successful training program and the initiation of local QI activities. In almost all of these cases, consistent, long-term benefits from the inputs cannot be predicted with any certainty, although the inputs appear to have been of high quality, and a number of locally valuable QI activities have resulted. As such, the Evaluation Team has found it difficult to make a definitive judgment on the value of these shorter-term activities.

Based on the information presented, the Team has concluded that short-term technical assistance in QA in response to ad-hoc requests is a reasonable and appropriate activity within the scope of the Project. There is an impression, however, that more of this is being provided than is optimal, relative to other project priorities and obligations. Therefore, it is recommended that a more rigorous effort be made to screen the requests, setting minimum criteria (such as consistency with QA institutionalization strategy, direct relevance to ongoing QA activities, likelihood of sustained results, demand on resources) for acceptance of short-term activities in a future project. The Team also recommends that the overall proportion of project resources devoted to such shorter-term activities be reduced relative to the larger scale country institutionalization activities.

C. TRAINING

Training is critical to the achievement of the QA project objectives. It has been used effectively by the QAP both as an advocacy tool to increase awareness and enthusiasm for the QA approach, and as a means of transferring knowledge and skills. Three basic types of training have been carried out:

1. **Awareness training**, designed to introduce concepts of quality and quality assurance programs to uninitiated audiences. Curricula in awareness training vary in length, and are often combined with other topics, including basic QA skills. A total of 22 Quality Awareness Workshops have been carried out in 16 countries.
2. **QA skills training** has been divided by the QAP into two curricula. The first ("Problem Solving Tools") presents specific skills in problem identification, analysis, and the development, implementation, and evaluation of solutions. It has been implemented in 11 countries. The

second basic skills curriculum focuses on standards and monitoring, and has been implemented in three countries and in a training course on micronutrient deficiencies in collaboration with Emory University.

3. **Component training** has focused to date on building skills in coaching and facilitation (implemented in five countries) and supervision (implemented in two countries).

In addition, the QAP has collaborated with The Johns Hopkins University (JHU) to develop and teach a course on Quality Assurance, and with the Academy for Educational Development (AED) and JHU to develop and implement a training course on Interpersonal Communication that was carried out in Honduras. Other activities have included training in customer service requested by Egypt and Jordan, training in team building carried out in Jordan, and the initial development of a curriculum on intermediate tools and coaching. The QAP has also developed two computer-assisted training packages that guide users through a programmed learning approach. The first package is a one-hour simulation that puts the user in the position of a health facility director and illustrates basic QA concepts; the second introduces the clinical algorithm for the integrated management of the sick child under development by WHO and UNICEF, and asks users to complete a series of exercises designed to lead to cognitive mastery of the algorithm.

The review of QAP training activities has been divided into five sections. The first four provide general comments across the three major types of training, focusing on 1) training strategy; 2) training materials, methods and resources; 3) implementation of training activities; and 4) training follow-up and evaluation. The fifth section addresses "special" training efforts of the QAP, including the collaborative efforts with JHU and AED and the computer-assisted learning materials.

1. **Training Strategy**

The QAP training strategy has been modified over the course of the project. Initially, the planning team for training in the Bethesda QAP office had hoped to develop a set of standardized curricula that could be adapted for use in particular country contexts. With this in mind, the basic curriculum for awareness training was developed, and a list developed of priority training areas. As project implementation began, however, the demand for training activities quickly outstripped the developmental process in Bethesda, and courses were planned and developed for specific country activities rather than as generic materials. These country-specific curricula were used as the starting point for further development and adaptation. The QAP is now working to organize these materials into standard packages that include a participant handbook, overhead transparencies, and instructor notes. With few exceptions, these materials are not yet complete. Also, it was clear that they could not be used effectively

by an uninitiated trainer. QA field staff report that they would not be able to carry out the "standard" training courses unless assisted by a skilled consultant or member of the central project staff.

QAP field experience indicates that in most settings, workshop-based training must be supplemented by field-based coaching of quality improvement teams if learned QA skills are to be applied. For example, district-level health workers in Niger and Chile report that they left QA training courses run by CO/QAP confused about how to apply in their own facilities what they had learned. The Team received frequent reports that the trainings relied heavily on didactic methods, and that more locally appropriate case examples as well as more practical exercises were needed. Jordanians were somewhat critical of trainers "with too theoretical an approach and lacking medical qualifications." In Chile, the local team made substantial revisions of the generic materials; subsequent participants reported that the courses were effective. In all countries visited, QI team members reported that they found the periodic follow-up visits by QA project staff to be the most important part of the learning experience. In response to these observations, the QAP might explicitly strengthen the emphasis in their training on those QA components, such as coaching and supervision, that are recognized as effective strategies for improving and maintaining health worker performance.

The QAP has not yet systematically emphasized the transfer of skills needed to carry out QA training to local counterparts, and this is not an explicit part of the training strategy. Training of trainers materials or guidelines have not been developed by QAP. QAP staff report that this is due to the developmental need for counterparts to be experienced in the use of QA techniques prior to serving as trainers. At the country level, QA staff often serve as co-trainers, and there have been specific training of trainers (TOT) activities. These efforts are particularly strong in Chile and have also been initiated in Egypt.

The Jordanian project made a bold attempt in skills transfer: the participants to a previous awareness training workshop ran the next one on their own. They seemed to be fully confident with it and the participants to the second workshop accepted them as trainers.

2. Training Materials, Methods and Resources

One benefit of the field-initiated approach to training appears to be that the topics selected for development of standard materials are judged appropriate by field staff. When asked to identify areas of training in which more assistance was needed from the central level, topics identified included indicators, leadership, meeting skills (including how to run a meeting on quality), and the process of writing up and publishing results of QA activities. QAP field staff also emphasized the need for additional materials on training methods. Areas where additional technical support would be useful include:

- The development and refinement of training methods appropriate for conducting effective training in specific cultural settings (e.g., in francophone Africa, where learning styles should explicitly take into account the "lecture-and-take-notes" orientation of the French educational system).
- The process for local adaptation of curricula, including the development of locally-relevant case examples.
- Methods that ensure that new concepts and skills build on the existing experiences of participants.
- More emphasis on training that occurs outside a workshop context.

As described above, training materials have in most cases been adapted from models used in other courses, sometimes collaboratively in the field, but often in Bethesda by consultants prior to going to the field. Field staff uniformly report that this adaptation process is difficult and time-consuming. QAP staff are available to assist in this process if time and circumstances permit. In Chile, the local team has made major modifications in the training materials (and content) provided by the QAP. They have a high level of ownership for these materials and have trained nearly 4,000 health workers.

The Evaluation Team believes that standardized curricula in QA are unlikely to be effective in transferring skills and knowledge in developing country contexts. Information from the field indicates that high quality training efforts require extensive adaptation and translation in the field, using locally appropriate examples in order to be convincing to participants. Such adaptation can best be done in collaboration with local personnel. QAP should consider revising their approach to the support of workshop-based training. One possibility would be the development of a resource bank or library of activities and methods designed to support specific learning objectives. This resource bank or library could then be used as a starting point for local design of training curricula in response to specific needs and cultural factors. A second would be that in planning for future training activities, the QAP

could provide technical assistance in-country for two or three weeks in advance, permitting time for local adaptation and refinements of methods and materials as well as training of local trainers to participate in leading workshop sessions. This approach has been effective in improving the quality of supervision training in Niger.

The QAP has already begun to develop a training resource center. Within each topic area, the center will be organized to provide easy access to the "core content" in a particular area, visual materials in both hard copy and on disk for rapid adaptation, and the materials used in previous courses. When completed, this approach should provide greater flexibility for rapid response to specific training requests.

The project might also consider complementary print-based training methods, including self-study modules or reference books on QA-related topics. The project should consider whether and in what settings the provision of such materials could serve as a useful adjunct to training. These same questions should be addressed to the role of the computer-based programmed instruction under development at CO/QAP.

The adult learning approach that the QAP promotes is not fully reflected in the available training materials, although there are recent efforts to improve them. For example:

- Early training materials did not include specific learning objectives; these appear in later materials but are often limited to cognitive skills (e.g., to understand, to know) rather than behavioral skills (e.g., to apply, to carry out, to supervise).
- Methods, although varied, do not reflect the need for adults to begin with their own experience and learn through doing. Few exercises begin by generating the experiences of participants, or are designed to link new concepts and tools to those already known to participants. Key concepts and issues are listed on finished transparencies, rather than using the overhead projector interactively to generate concepts through participation. Both central and field staff report that there is still a tendency for training to be too didactic.
- Practical exercises (including locally relevant examples and case studies) and supervised practice of new skills with immediate feedback are limited, as is the time allotted for discussion among participants.

In the remaining project period, more intensive work on the quality of training materials and the process of local adaptation should be a QAP priority. Learning objectives should be carefully reviewed, and appropriate exercises and case examples should be developed in collaboration with local QA staff.

3. Implementation of Training Courses

The planning of QAP training activities has been informal until very recently. The Team was not presented with guidelines on the selection of trainees for particular types of courses, although this has been done in selected countries (e.g., Jordan). The selection of trainees can be an important determinant of project sustainability. Training needs have in general been identified either by the RA or through visits to countries by staff or consultants. Available materials have then been reviewed and adapted at either the central or country level, or both. Six months ago, a CO/QAP staff member developed a "Training Assessment Questionnaire" designed to guide field personnel through the process of planning a training course. It has been applied several times to date, and all staff have been encouraged to work with the CO/QAP training staff in using this tool.

In most countries, QA training is conducted by QAP staff or consultants in conjunction with local QA counterparts and RAs (in countries where there is an RA). It is not clear the extent to which this has resulted in increased capacity for QA training among local staff, but such co-training provides an important opportunity for modelling high-level training skills. In at least one report of such co-training, however, participation by local staff was extremely superficial, with co-trainers identified only the night before the session, recruited from among training course participants, provided with overheads and brief instructions, and on little notice asked to give presentations. In such cases, important opportunities for capacity building are missed. In Cote d'Ivoire, all training is now being conducted by the national central quality improvement team itself, or by decentralized QI "monitors."

The training skills of QA staff and consultants are not systematically assessed prior to field activities or evaluated during or after the training. Reports on the quality of the trainers were mixed, both in terms of their training skills and their familiarity with QA concepts and techniques. In a QAP workshop designed to prepare staff to conduct training in coaching, it was reported that QA concepts and techniques were presented (although the time was judged too short to cover the material adequately), but no explicit attention was given to the training methods or skills that would be needed to carry out the training. The central training staff has recently developed a plan to evaluate the training skills of staff and consultants by having them conduct a practice session prior to departure; to date this has been done only once, and may have limited validity as a measure of how the trainer would perform in a developing country context when faced with a group of participants. Field staff report that more trainers with skills in adult (participatory) methods are needed, as well as trainers who are experienced in the conduct of cross-cultural training.

Perhaps due to the minimal level of experience and skill of the trainers, QA courses carried out in the field are often reported to be too ambitious, trying to cover too much in the time available. Unfortunately, the sections that are most often cut short or dropped due to time

constraints are those that include field practice and feedback. Reports by experienced training consultants have suggested that course material be shortened, that the training time be lengthened, or in the case of the awareness course, that the curriculum be altered to separate the awareness and basic skills components. Major curricular changes were also made early in the project by the Chilean local team. The Team was not presented with evidence, however, that these experiences were monitored closely by CO/QAP or that the suggestions were incorporated into later adaptations of the curricula.

It is important to reiterate once again, however, that the training activities carried out by the QAP have been effective in changing attitudes and stimulating vigorous field-level QA programs. In Niger, participants were able to produce the training materials readily when asked, and reported that they found them a valuable resource in carrying out their QA activities. The shortcomings identified by the Evaluation Team should therefore be viewed primarily as opportunities for further strengthening of project operations.

The training component found most useful in the field, as reported above, is the field follow-up (or "coaching") that follows workshop training in the five QAP "institutionalization" countries. In the Measles Initiative project undertaken in Niger, the need for field-based coaching following workshop training has been recognized but not implemented. In Chile, follow-up has occurred, but has been increasingly limited as the program has grown in size, and workshops occupy much of the time of the central QA Team.

4. Training Evaluation

A standardized tool for participant evaluation of training courses is currently being finalized. No formal methods or guidelines for evaluating either the training course itself or the extent to which participants have mastered specific knowledge and/or skills have been developed by CO/QAP. Some attention to the evaluation of training is evident within specific QA projects, however. In one area of Chile, for example, a team has developed and used specific criteria and methods to evaluate the quality of training. This approach includes the percent of training participants who achieve a minimum score on a written test administered at the close of training, and the percent of trainees who applied what they had learned after return to their facility. Future efforts to strengthen training evaluation can build on related QAP operations research conducted in the Philippines and Honduras.

QAP field staff and counterparts also report that valuable information about the effectiveness of training is gathered through follow-up coaching visits, and that they have been able to use this mechanism to identify and address needs for further training.

5. Other Training Activities

The QAP has participated in the development and implementation of a graduate-level course at The Johns Hopkins University (JHU) on "Quality Assurance Management Methods for Developing Countries". The course has now been offered twice. The six course modules cover the principles of QA management, the application of QA in primary health care, and specific QA techniques and tools. The course is taught by JHU faculty, QAP staff, and selected outside speakers. The course has been well-received by students, although at least one student (as well as one faculty member) reported to the Evaluation Team that there continues to be a tendency to overuse lecture methods, and that the full potential to model QA teamwork techniques has not been realized. The course is recognized as an effective advocacy and dissemination activity by both JHU and QAP, because many public health leaders from developing countries attend JHU for graduate study.

The QAP has also collaborated with the AED and JHU in the development of an Interpersonal Communications Course. This combined research and training activity included a baseline assessment of mothers' knowledge, the design and implementation of a training course to improve interpersonal communication skills among health workers, and the development of a "pocket guide" to serve as a handy reference on communication for health workers. As a part of the training, health workers recorded their naturally occurring interactions with patients, and used them as the basis for self-assessment and peer review and feedback. Audiotapes were collected for over 400 patient-health worker interactions. Health workers reported both anecdotally and in a self-assessment that this intervention greatly improved their communication with mothers, and a post-training comparison of trained and untrained workers based on coding of audiotaped encounters documented significant improvements in the performance of interpersonal communication. Although the training curriculum developed through this effort is not significantly different from similar efforts by other organizations, the project reflects the successful combination of a research objective with a field activity. In addition, the results provide convincing evidence that the interpersonal communication skills of health workers could be improved through training in a workshop setting. The technique of having providers tape their own interactions with patients and then use them as the basis for self- and peer-critique is innovative and promising.

Finally, the QAP has explored the potential of computer-based programmed learning. QAP experience with the two computer-based simulations is limited to date. The project considers this an initial exploration of technology that will need to be further developed and adapted to the needs of specific settings prior to formal use. The QA problem-solving simulation is intended as a learning tool by program managers. It was demonstrated to representatives of quality teams in developing countries who attended a two-day international QA meeting in Maastrich, and was well received. Discussions with field staff in Chile, Jordan, Nigeria, and Egypt and with a Costa Rican counterpart indicate that they believe that computer-

based simulations would be a useful adjunct to other training approaches, and would be appropriate for use at this time. In Niger, QA and USAID staff were less positive about the potential of computer-based learning in the near future.

The Evaluation Team does not have sufficient information to be able to judge the potential effectiveness of these tools as learning aids. Certainly, computers are available in most settings where QA is implementing programs (even at the regional level in Niger the project has provided computers and is supporting training in the use of selected software packages). Are these tools appropriate? Are they effective? These questions remain to be answered. It seems clear (and the QAP staff agree) that they should not be used alone, but rather in combination with other, more interactive, teaching approaches. One consultant feels that with modification, the simulation could become a useful pre- and post-training evaluation tool, a kind of practical case-based exam, regarding trainee QA skills. USAID Mission staff in Niger feel that introduction of computer-based learning is inappropriate at this time in Niger, and will remain inappropriate for some time to come. Thus, evidence of effectiveness may be necessary before the approach will be accepted by Missions. At present, the Team believes that the QAP could do much more to improve more training in workshops and through individualized follow-up in the field, and that this should take priority over substantial additional investment in computer simulations.

6. Lessons Learned

The two-stage training approach that has been implemented in many QAP field sites consists of initial knowledge and skills training through workshops, followed by the reinforcement and application of skills through field follow-up using coaching and supervision techniques. The Evaluation Team believes that its success merits recognition and further support, and that it is an important contribution of the QAP.

There are critical issues that should be addressed within both the workshop and follow-up components in the remaining project period. For workshops, the three most important issues include the need to improve and monitor training skills both among QAP staff and local counterparts, the need to rethink the role of standardized curricula in QA training, and alternative means of promoting high-quality training that is adapted to local needs and realities. For field follow up, the Evaluation Team recommends that the QAP systematically examine the relationship between, and relative importance of, workshops and field-based coaching, and explore possible ways to further enhance and extend the effectiveness of the latter.

D. RESEARCH STRATEGY

The methodology refinement component of the Project is based on the assumption that many quality assurance methods already used in developed countries are applicable in developing countries if appropriately modified. The QAP has broadened the scope of methodology refinement and defines it as any systematic activity that:

- Advances our knowledge of how to use QA tools and techniques to help improve quality in an LDC setting.
- Modifies specific QA tools and techniques so as to make them more effective in the LDC context.
- Produces new QA tools and techniques for this purpose.
- Advances our knowledge of how to transfer this technology to LDC counterparts.

Based on this definition, the Project has been engaged in three types of methodology refinement activities. Each is described briefly below, and accompanied by an assessment of QAP activities to date.

1. Advancements in Conceptual Issues

While potentially very important, the five monographs in this series appear to be a "mixed bag". The manuals address different needs and audiences in a somewhat unsystematic way. Some are theoretical treatises on key issues in quality assurance, while others could be considered literature reviews. The intended target groups range from the project team through national health politicians to participants in training courses. Some of them clearly address a major need, but others seem to have emerged on a more opportunistic basis, i.e., there was an author who was interested in a given topic.

The monograph, *Quality Assurance in Developing Countries*, is an early product and was prepared, as the Project readily admits, primarily for internal consumption, to clarify the team's own thinking. Although it is sometimes described as the "bible" of the project, the project team admits that it is now outdated. For example, the ten-step approach to QA portrayed in the monograph implies a rigid linearity, while QAP experience in the field has demonstrated the need for, and advantages of, flexibility in the application of these steps. The monograph emphasizes a top-down approach, while QAP field experience suggests that QA programs can also be successful if begun with a small-scale success in the field. This monograph is also used by the QAP as a marketing document. It is often the first document given to health authorities

and professionals in a country where a field project is being launched. While the Project definitely needs a marketing document, this particular monograph does not adequately serve this purpose. It is too long, too theoretical and uses ponderous language with lots of specific terminology. There are not enough examples to make it relevant for a non-initiated reader.

The monograph, *Methods of Problem Solution*, is a potential best-seller, eagerly awaited by all field projects. (It has just been returned from the printer, and is now ready for dissemination). The current version provides helpful descriptions and applications of problem-solving tools. Unfortunately, field personnel and program managers may find that it is written using rather sophisticated language. Careful field testing of the usefulness of this monograph with representatives of the target population would provide valuable guidance about the levels of complexity and modes of presentation that are most appropriate for country-level QA personnel.

The monograph, *Using Incentives to Promote QA*, is an example of an opportunistic approach that does not fully fit into the series. While the use of incentives is an important issue in the field, this document does not provide the type of guidance and information needed. Its notions, language and examples are far too American to be comprehended in the field.

The manual, *Quality/Cost Relationships for Service Delivery in Developing Countries*, is well written. It is, however, a theoretical overview rather than a manual, and may therefore be of more interest to academics and health politicians than to those implementing QA in the field.

The Evaluation Team recommends that the objectives and target groups be specified for monographs that have not yet been finalized, and that all future documents be carefully pretested for readability and potential usefulness prior to distribution. The QAP would benefit from a systematic analysis of the areas of QA implementation in developing countries where conceptual clarification and guidance are needed, leading to the preparation of a publication plan to meet these needs.

2. Products that Facilitate the Implementation of QA

The QAP has also produced a number of products designed to support QA implementation. Among them are the standardized training curricula described above, most of which are in the final stages of development. In addition, a manual on the institutionalization of QA in developing countries is in progress, and a *Thesaurus of Activities and Indicators for TB Programs* has been completed. The *Thesaurus* is a good and useful document that addresses a very specific need of selling QA by starting from a concrete problem and showing that it can be solved rather than by adhering to the ten-step model with its emphasis on a top-down approach.

3. Field studies

A total of eight planned field studies were able to be identified by the Evaluation Team. They include:

1. Comparative effectiveness of different approaches to evaluating training in oral rehydration therapy (the Philippines).
2. Field validation of interpersonal communication norms (Honduras).
3. Effectiveness of counseling interventions using a validated norm (Trinidad).
4. Evaluation of a job aid to improve provider-patient communication in a TB program (the Philippines).
5. Evaluation of a patient-system contract to improve drug-taking compliance in a TB program (the Philippines).
6. Test of peer review as a modality for improving quality of care by midwives (Indonesia).
7. Comparative effectiveness of various approaches to identifying problems in provider performance (Guatemala).
8. Test of a job aid for supervisors of community health workers (Niger).

QAP staff reported that the priority research issues had been identified through topical working groups in Bethesda. Reports from field staff concerning the relevance of the issues selected were generally positive, and the Evaluation Team considers the emphases to be appropriate given research initiatives by others in related fields.

Unfortunately, few studies have actually been successfully completed and none have been published in a peer-reviewed journal. In some cases protocols were developed but were never able to be incorporated into the country workplans (e.g., #8); in others, the study was well-designed and data collection underway when project circumstances interfered (e.g., #2); in yet others, the study has been completed and includes important results but QAP staff have not had time to prepare manuscripts (e.g., #1).

The QAP reports that they have encountered problems in trying to carry out the research portion of their mandate. Perhaps the most difficult issue has been the tension between implementation and research objectives. This tension is apparent in the reluctance of

USAID Missions (and in many cases, local decision makers) to support projects that will not directly contribute to program development. QAP RAs also report that they often feel torn between the need to meet the immediate needs of project implementation and the demands of field research. While the resulting balance reflects in part the predilections and training of the RAs, in most countries institutionalization has been given priority.

The project also seems to have devoted a great deal of effort to literature reviews and protocol designs, both at CO/QAP and in country programs. Some of this effort might have been avoided had QA staff been active participants in a network of technical research advisors who could offer them guidance and direction. While the collaboration in research with AED and JHU has been positive and productive, the Evaluation Team feels that there might also have been contributions that an independent technical advisory board, rather than subcontractors, might have provided.

4. Research Priorities

The role of research (or methodology refinement) in the QAP to date has been problematic, and not as productive as anticipated. On the other hand, there are good reasons why research on QA should continue to be supported. First, there are important unanswered research questions concerning the implementation and effectiveness of QA techniques in developing country settings. We do not yet understand the determinants of health worker performance, and the relative roles of initial training, follow-up field reinforcement, client response, and a myriad of other factors that may play a determining role. Among those working in child survival and the integrated case management of sick children, research questions that address operational barriers to appropriate case management are near the top of the priority list. For most Ministries of Health in developing countries, new information about the relative effectiveness and costs of different approaches to decentralization are of urgent practical importance. QA offers an unusual opportunity to conduct effectiveness research that should be capitalized on if at all possible.

A second reason for retaining a research component within future QA approaches is that QAP field sites may offer unique field laboratories for small-scale operations research. In fact, the QA process is designed to generate data on the success of interventions. Again this is an opportunity that should not be missed.

Despite these important rationales, the Evaluation Team recognizes the very real difficulties of combining sound research and program implementation. The field staff in Niger have recently had a disappointing experience when they tried to combine training in supervision with a baseline assessment of service quality, and found that neither objective was adequately achieved. The lesson from this experience, however, is not that operations research is not feasible, but that it takes resources, careful planning, and most importantly, time. After a

year-long development process, with careful attention to the needs of the various parties involved, the collaborative QAP/AED/JHU effort to conduct research in conjunction with an interpersonal communication course in Honduras appears to have been very successful.

The Evaluation Team suggests that, while institutionalization should remain the primary focus of the QAP in the remaining project period, small-scale operations research should be continued. To ensure quality and potential for publication, the QAP and future projects should participate actively in the international network of management and social scientists interested in public health effectiveness research. Staff should attend coordinating and priority-setting meetings convened by international agencies in areas related to health worker performance and health systems, although it may be too late in this project to be very useful. In addition, an advisory group that includes independent external experts in small-scale health services research may help to set priorities.

Topical foci in future projects might remain more or less the same, but steps should be taken to ensure that the research issues continue to respond to the challenges faced in the field. Certainly, more attention should be afforded to health economics research issues, and a health economist should be included in the advisory group recommended above. Studies that address issues common to multiple field projects should be given priority over those that address important local issues but have little potential for generalization.

E. SERVICE-LEVEL OUTCOMES OF QA ACTIVITIES

In the scope of work, the Evaluation Team was asked to review and assess the evidence that QA techniques and QAP activities are associated with concrete improvements in service quality in specific field settings. While this is a mid-term evaluation and many anticipated field level results are therefore not yet available, the Team felt it was important to review the information available to date, and to assess the potential of ongoing activities to produce service quality improvements.

Given the emphasis on data-based problem identification and the monitoring of solutions, the Team had expected that there would be many "success stories" supported by quantitative data from individual teams working in the field, particularly in projects that had been underway for 12 or more months. In fact, while available written and verbal reports provided occasional examples of quantitative changes in service quality, they did not provide the volume of case studies of successful, quantitatively documented problem solutions that the Team had expected.

In an effort to fully document such results, the Team developed a brief report form and sent it to all QAP central and field staff, asking for documentation of quantitative changes in service quality as a result of QA activities. Responses were received from five projects in four

countries, and this information has been supplemented with an earlier list of project achievements developed in response to a USAID request.

The material collected through this process has been divided into three general categories:

1. **Activities with quantitatively documented outcome data.**
2. **Activities that show evidence of success but for which quantitatively documented outcome data were not available.**
3. **Activities with reports of process-level success that show promise of eventual outcome improvements in service quality.**

These are summarized in the body of this report, and described in more detail, along with the quantitative evidence where available, in Annex IV.

1. Quantitatively Documented Improvements in Service Quality

The first category of reports provide clear, quantitative evidence of the potential of QA techniques to lead to improvements in service quality. Examples include:

- **Improvements in the effectiveness of communication between health workers and mothers in Niger**
- **Improvements in performance of the steps of growth monitoring in the Philippines**
- **Improved compliance with prenatal care by teenagers in Chile**
- **Improvements from 9% to 100% in case records showing correct assessment of respiratory rates in ARI patients in Chile**
- **A reduction from 25% to 11% in the rate of infection following Caesarean sections in one Guatemalan hospital**
- **Dramatically improved availability of operating vehicles in Niger for use in supervision and other transport needs of service provision**
- **Improvement in stocks of necessary OR supplies in one hospital in Egypt**

- **Reduction in volume of waiting lines and concomitant increase in visitor fee revenue in one hospital in Egypt**
- **Inappropriate use of antibiotics greatly reduced in Salt Hospital (Jordan) after a review**

At present, there are few examples like those above that were available to the Evaluation Team. In some countries, quality teams are only now implementing their first round of solutions, and data are not yet available. In other settings, there are anecdotal reports of successful problem solving and improved service quality, but quantified results either were not collected, were collected but judged to have only limited validity, or were collected and are of good quality but have not been summarized and reported.

2. Non-Quantitatively Documented Improvements

The second category of results illustrates the public health importance of local solutions which cannot be, or have not yet been, quantitatively described. More difficult to capture, and yet immediately evident in the field, is the excitement and motivation engendered by these activities among the health personnel involved in developing and implementing them. Examples include:

- **Reorganization of queuing and patient flow in a clinic in Konni district in Niger leading to calmer and happier patients and staff pride**
- **Reduction of dropouts and better identification of children needing curative care among malnourished children receiving food supplements in the Tahoua regional medical center in Niger**
- **Following documentation of wide variation in clinical practice among physicians meeting at one hospital in Egypt (with concurrent evidence suggesting sub-optimal care in some instances), two complete set of clinical guidelines (OB-GYN and Pediatrics) have been completed, and selected indicators for each set are being included in the medical record**
- **Activities to improve OR nursing skills in one hospital in Egypt have included intensive, hands-on training of twelve OR nurses and the hiring of an OR nurse consultant. As a result, nurses are now implementing basic OR skills, and a policy and procedures manual has been approved**

3. Progress in the Process of Quality Improvement Through QA

A third category of results are those that reflect the process of QA implementation, establishing the foundation for quality improvements such as those reported above. As discussed in Section III.A., there is wide variation in the patterns of implementation of the QA project. In evaluating implementation, the Team gave particular attention to the responsiveness of the QAP to local constraints and opportunities in their efforts to introduce and institutionalize quality assurance, and to available evidence of independent ownership of the activities by local staff. Among the most promising of the approaches reviewed by the Team were:

- In Ecuador and Guatemala, district management teams had neither the knowledge nor technical skill to monitor the quality of health services in their areas. In collaboration with the QAP, and under the supervision of a central-level quality team, a district-level monitoring system has been developed. Components included the definition and selection of quality indicators to be monitored; the development of forms for direct observations, client interviews, and record reviews; a computer-based program to convert raw data into indicator levels; the training of district-level teams; planning for supervisory visits and monthly meetings for review and discussion of these visits and indicator levels; and a revised strategy for supervision extending from the district to the national levels. This system has been implemented in five districts, and is reported to have improved the quality of management. Twenty-four district-level teams are now addressing operational problems that affect service quality, and through the monitoring system will have a means of monitoring and documenting changes that result from their work.
- In Chile, a breast feeding improvement project led to recognition that clinicians were spending only seven minutes with each post-natal patient, while 15 minutes were allotted. The reason was found to be a lack of patient education by the clinician. Steps to improve clinician compliance with standardized care protocols have resulted in clinicians now requesting 20 minutes per patient, in order to complete the tasks effectively. More detailed monitoring is in process.

In addition to these examples of all three types, many more examples of sound implementation of QA approaches at the field level in other projects and in a number of countries, were presented to the Evaluation Team in Bethesda. These multiple reports, coupled with the Evaluation Team's direct observation of QAP activities in the field and discussions with local health personnel, provided convincing evidence to the Team that QAP-supported project activities can be expected to lead to feasible, sustainable solutions to some of the most immediate problems of service quality in developing countries.

This is not to suggest that all work being done by QI teams at national, regional, district, and facility levels is flawless. In some settings teams had focused on problems that seemed relatively unimportant, in others the indicators selected for monitoring solutions were too distant from operational changes to be likely to change in the near future, and in yet others there was evidence of need for further assistance in team building or problem analysis techniques. Some teams show evidence of wanting to move on to a new problem before they have carefully implemented and monitored solutions for the current problem.

On the whole, however, and particularly where adequate coaching was available to teams, process outcomes were very positive. Health workers reported that QA "...has changed my whole approach to my work", and "this project is different than others because it teaches us to do more with what we have."

In the area of service-level outcomes, the QAP needs to do more to encourage documentation of local solutions, both the successes and those that indicate a need for further analysis and problem solving. Increased emphasis on storyboarding (the use of simple posterboards to document the work and results of individual teams) is one promising approach. Others may include the development of more effective routine systems for monitoring service quality, similar to what has been done in Ecuador and Guatemala. There is clearly a tension between the desire for teams to "get on with the work", particularly when the success of solutions is immediately clear to those in service delivery, and the need for careful monitoring and documentation. In this developmental stage of the QA approach, however, the Project has a responsibility to ensure that adequate data are collected and that skills for collecting, analyzing, and interpreting service-level data are effectively transferred to local staff.

In Chile, there were specific requests for assistance in writing up and publishing the results of QA activities. The QAP might consider bringing together several teams who have completed a QA cycle, and work with them to complete the analysis and manuscript preparation process.

F. DOCUMENTATION, DISSEMINATION AND ADVOCACY

1. Documentation

a. Reporting and Synthesis of QAP Activities

The QAP has made repeated efforts over the course of project implementation to ensure that the processes and results of institutionalization activities were documented. For each country with significant QA country activities, a planning tool was developed identifying the expected documentation of:

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- **baseline assessments**
- **the development and use of training materials**
- **project outcomes in the forms of storyboards and standards**
- **overall project implementation and institutionalization**

In July 1993, a dissemination plan was developed that identified what would be written, by whom, and whether the intended target audience was internal (QAP/USAID) or external. Included in this plan were country studies.

In October 1993, the central office staff member responsible for each country was asked to prepare a written report on the documentation of country efforts, both for QA project monitoring and as the basis for future comparative analyses and possible dissemination. The report covered the items listed above, as well as the status of trip reports for all consultant visits to a country. There is also a computer-based documentation file on country activities.

This evidence of the QAP effort to document activities and achievements is important, as it suggests that the "lessons learned" from the project will be formulated and accessible in 1995. At present, however, these reports have not been systematically summarized and country experiences have not been compared. While formal guidelines have been developed to ensure consistency or comparability in trip reports, they appear less explicit in quarterly and annual reports. Key indicators and methods for monitoring QAP implementation across countries have not been developed. Trip and consultant reports are available, and are filed in three ways:

1. **By QAP project (based on budget categories)**
2. **By general topic (e.g., supervision, methodology refinement)**
3. **Chronologically**

To date, however, there have not been systematic efforts to integrate QAP experience across countries.

Field staff report that they have difficulty in finding the time to complete needed documentation. In Niger, the RA has enlisted the assistance of a local editor to help finalize quarterly reports, and a QA staff member prepared the annual report during a consultancy. In Chile, local quality staff report that they are overwhelmed by documentation needs. While this

again reflects the emphasis afforded documentation by the project as a whole, it indicates a need for streamlining and where possible standardizing project reporting requirements.

In the remainder of the QAP, and in future projects, self-monitoring of project activities should be strengthened. A limited number of key indicators should be defined that will assist in tracking project implementation and outcomes, and increase potential comparability among specific project activities and settings.

b. Database

The original project agreement called for the development and maintenance of a database that would include the data files from all systems analyses and key methodology refinement studies conducted under PRICOR II and the QAP. The purpose was to permit meta-analyses of findings from different project sites, the results of which could be used to test hypotheses and set priorities.

To date the QAP has developed a standardized system of disks and coding manuals for the systems analyses conducted under PRICOR II. Related or compatible systems for QAP data have not been developed. Reasons for not investing heavily in this activity include the low demand (no requests for use of the data for secondary analysis or meta-analysis have been received to date) and an increasing awareness that data collected via these methods may not be suitable for systematic meta-analysis. Each systems analysis, baseline assessment, or operations research study is conducted for a specific purpose, and methods have not been sufficiently standardized to ensure comparability. Insistence on standardization might, in fact, run counter to the more important management purposes of conducting such assessments. While multiple, separate data bases might be useful for some purposes (e.g., estimating design effects for surveys based on observations of health worker behavior in which the sampling is based on facilities), it is not clear whether these purposes would justify the resources needed to create a formal database.

Alternative types of databases that could be developed were discussed with QA project staff in both Bethesda and the field sites. All agreed that there was a need for a well-organized resource base that would:

- Summarize the outcomes of specific QA interventions (in both quantitative and qualitative terms)
- Ensure that state-of-the-art information about the process of QA implementation and outcomes in specific settings were readily available, to avoid redundancy

- Provide easy access to full, detailed reports of methods and the process of implementation for specific QA activities and studies
- Include both QA-supported activities and those undertaken by others, including the published literature

There is an existing QAP database that might serve some of these functions, if it continues to be maintained and if further attention is given to promoting its use. Referred to as "QA References", it contains abstracts and full bibliographic references for selected reports and publications related to all aspects of QA, including both Project papers and articles produced or published by others. The computer locating system allows users to search the data base by any keyword of their choice. This permits great flexibility for experienced users but may be difficult for new users to apply effectively.

2. Dissemination

The three goals of QAP dissemination, as stated in a 1991 internal document, include:

1. To raise awareness of the importance of quality improvement in PHC management
2. To demonstrate to program managers and decision makers various approaches for implementing quality assurance measures into an existing program
3. To explain to the international health community the discoveries and advances that the Quality Assurance Project is making in the evolving field of primary health care quality improvement

The dissemination channels that QAP has used to meet these goals include the distribution of printed materials, conference presentations, publications, and interpersonal networking. Training, and particularly the awareness workshops, are not explicitly identified as dissemination activities but have contributed to the achievement of goals one and two above.

To date, printed materials have been sent to individuals and institutions on the mailing list and distributed during field activities. The materials include:

- The *QA brochure*, which includes a brief explanation of the concept of QA and explains how to obtain further information and technical assistance. The first mailing of the brochure targeted USAID health offices and subcontractors both in Washington and the field.

- The *Quality Assurance Brief*, a biannual newsletter that reports on activities of the QA Project, and invites readers to share their experiences. The *Brief* is sent to the entire QAP mailing list, and has been translated into French and Spanish. The QAP conducted a mail survey of English-language recipients of the *Brief* in April 1994, and preliminary results are summarized in Figure 1. Although the response rate was low (65/850) and the results must be treated with caution, they suggest that the *Brief* is being read and appreciated.
- *Quality Assurance Reports*, a series of one-page (double-sided) summaries of field activities and methodology refinement findings, designed to "fill the gaps" between issues of the *Brief*. *Reports* has been translated into French and Spanish and is also sent to all names on the mailing list. The reader survey described above also included questions on *Reports*. As shown in Figure 2, they show a similar positive result but are subject to the same limitations due to size and possible response bias.
- The *Quality Assurance Methodology Refinement Series* has included only one volume to date, "Quality Assurance of Health Care in Developing Countries". This has been translated and sent to a subset of the mailing list that was hand selected by QAP staff. This document is also distributed in countries as an introduction to the project. Future volumes include "Achieving Quality Through Problem Solving and Process Improvement", which has been printed and is awaiting distribution, and "Incentives and Service Quality: An Assessment Guide", which is currently in draft. The usefulness of these documents is assessed in Section III.D. of this report.
- *Country Reports* have been planned as a part of the dissemination strategy but are not yet available.

The QAP-based mailing list is reported to include some 1,300 names. The list was initially developed based on the PRICOR II mailing list, and circulated at QAP and among their major collaborators (AED and JHU) for additions. Any individual or institution who requests a QAP publication is also added to the mailing list. At present, the list is maintained on a computer database that has recently been upgraded. Sublists can now be abstracted based on language, type of organization, or primary interest area (child survival, quality assurance, family planning).

Aside from the recent reader survey, there is only limited information available on the effectiveness of the QAP print dissemination strategy. In Niger, regional- and district-level personnel had received both *QA Reports* and *QA Briefs*; they reported that they found them interesting, and were excited about the possibility of writing up the results of their work and

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having them included in these publications. In both Chile and Egypt, health professionals involved in QA activities had not received these documents.

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Figure 1
Preliminary results of readership survey for "Quality Assurance Brief,"
April 1994
n = 65

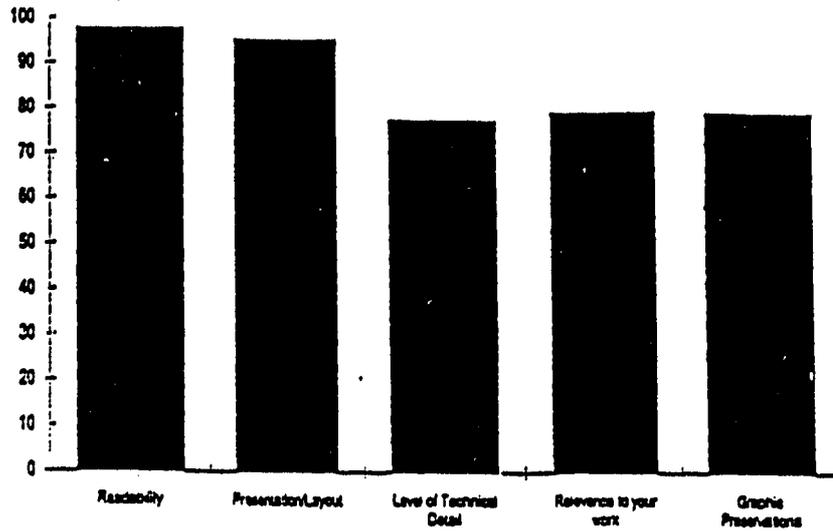
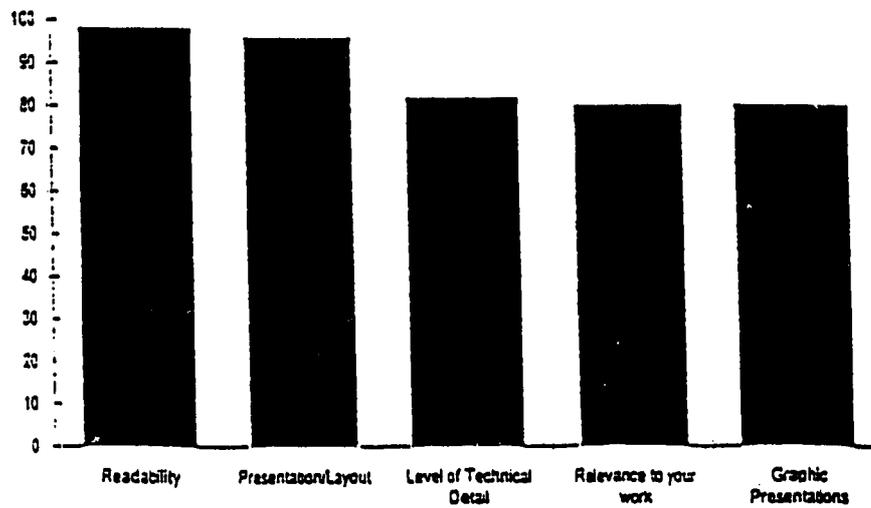


Figure 2
Preliminary results of readership survey for "Quality Assurance Report,"
April 1994
n = 66



Country-level dissemination efforts vary widely from setting to setting. In Niger, a local bulletin has been developed in collaboration with the Tahoua region, and the first newsletter is currently being distributed to district-level managers, other Niger regions, the Ministry of Health, and USAID and other international agencies working in Niger. A newsletter is planned in Jordan. Field distribution of print materials developed in Bethesda may be limited by language. A computer-based mailing list that permits targeting by type of organization and special interests has been developed in Nigeria, and mailings (both of QAP materials and other, quality-related publications) are being sent out at least twice a month.

QAP staff and participating country personnel have presented at a number of professional conferences, including the National Council for International Health (five presentations through 1993), the American Public Health Association (six presentations through 1994), and the International Society on Quality Assurance (ISQA). In June, 1993, a consultative meeting on Quality Assurance in Developing Countries was sponsored by QAP in collaboration with WHO, USAID, and DANIDA. This two-day meeting was held in conjunction with the annual ISQA conference, and representatives from 17 developing countries were invited to share their experiences in quality assurance. Only one report of the experience from a developing country participant was able to be obtained during the evaluation; he reported that his participation was useful, but that future meetings should group participants by region or level of development to allow more effective discussion and sharing of experiences.

The effectiveness of conference presentations and individual networking as dissemination strategies is difficult to assess. The awareness workshop was reported by HKI in Niger to be effective in building excitement about QA approaches.

The QAP has now begun reconsidering their dissemination strategy as the project comes to a close. One activity currently under consideration is a regional dissemination conference for Africa and the Middle East. Preliminary planning focuses on inviting personnel from USAID missions and international organizations; at this time the activity does not target national counterparts. Other proposed activities include: a screen show based on the QA awareness workshop; feedback on the *QA Brief* reader survey described above; an additional series of papers addressing topics related to QA implementation that review cross-country experience of the QAP; and others.

Despite these efforts, the Team believes that the QAP dissemination effort should be strengthened in the remaining project period. For country-level personnel, print materials should focus on local or regional issues and actively encourage the reporting of implementation challenges and outcomes. Address lists locally and internationally should be developed and expanded with clearly defined targeting criteria, rather than merely accrediting names in an ad hoc fashion. Professional associations may also represent an important target group, e.g.

national medical or speciality associations. Experiences from local dissemination efforts in Niger and Nigeria should be monitored as the basis for providing guidance to other country projects. Internationally, dissemination should be viewed as one key element of advocacy, which is reviewed below.

3. Advocacy

To be effective, advocacy must be pursued simultaneously on several fronts: at the level of USAID interactions with a number of international organizations, including WHO, ISQA, the World Bank, UNICEF, DANIDA, PAHO, Project HOPE, INCLEN, NCIH, APHA; at the level of CO/QAP's continuing relations with the same organizations plus the quality assessment and monitoring sections of such domestic organizations as HCFA, JCAHO, AMPRA, AMRROC, and the JCAHO; and finally at the field level, directing particular attention to the Ministry of Health, to the practicing medical community, and to the general public.

The Team members are convinced that this advocacy/marketing effort will become increasingly important. Although good works of convincing caliber and considerable impact are emerging as parts of this project, it is short-sighted to assume that the results will speak for themselves; good works demand good advocacy. While the Team received information on a number of activities relating to international information exchanges (the seminar in Zambia, the pre-conference meeting for LDC's prior to the ISQA meeting in Maastricht in June 1993, the May 1994 WHO Working Group on QA meeting, the awareness seminars in Jordan and Egypt, the collaboration with The World Bank in Indonesia and in Uganda, and active participation in the last four ISQA conferences), they nevertheless were unable to identify a specific budget within USAID or within the QAP dedicated to this marketing function. The monographs, the QA Briefs, and the QA Reports contribute to this end, but they have other purposes. Field or research reports often need substantial modification or "translation" before they are suitable and effective with specific target audiences (e.g., MOH policy makers vs. practitioners). In the field, however, the Team found no evidence of focused activity in this area, and no funds set aside for this effort in the local staff budgets.

The Team therefore recommends that subsequent budget discussions include funds allocated to marketing activities at all three levels. Enough results from the field experiences should soon be available to put together a strong message demonstrating unqualified improvements in a number of clinical/managerial/structural areas. The use of TQM "storyboards" appear to be effective locally in informing staff about progress and delineating further steps. They could be modified and/or translated as an effective marketing tool. The *QAP Briefs* and *QAP Reports* should be distributed to a larger audience, both in the international and the national level in institutionalization countries. Further participation in the planning and delivering of the ISQA conferences should be encouraged and funded. Time and

resources, as well as special training, should be made available to local field staff members to produce and distribute top quality advocacy reports, and/or special consultant resources made available where local field staff members are not able to carry out the modifications needed.

It should be noted again here that personal advocacy by QAP staff to leading figures in countries where QAP activities are taking place is an effective mechanism for advocacy. This approach has also been under-emphasized by QAP central staff during their field visits, and should be strengthened by making regular visits to opinion leaders and policy makers during country visits.

G. ADMINISTRATION AND MANAGEMENT

The key to ultimate success of a technical assistance project such as the QAP is the recruitment and retention of technically competent and experienced personnel, both as permanent staff and as short-term consultants. The Evaluation Team was impressed generally with the high quality, in-depth experience and judgment, and field effectiveness of the QAP staff and consultants. Some instances of language difficulties, lack of facility as trainers, and inconsistency of approach with the QAP model were noted, but these were exceptions rather than the rule. With increased attention to preparation of short-term consultants, most of these problems can be avoided. The QAP is to be commended on its personnel.

The organizational structure of the Project appears effective and functional. Necessary meetings of key management groups occur regularly, and participation of needed staff in ad hoc decision making when necessary is facilitated by the relatively small size of the staff, making informal contact feasible. The mechanisms for incorporation of the two subcontractors, The Johns Hopkins University and the Academy for Educational Development, into the management structure and functioning appear to be working well. The assignment of responsibility for major country programs to a technical and an operational person on the home office staff appears to have been effective, and field Teams report a high degree of responsiveness to requests. Decision making overall appears to be timely and balances appropriately the acceptance of responsibility by top level management with efforts to ensure appropriate participation of involved staff members.

One organizational issue remains, that of inputs to the project from outside the project staff. During its early months, when the priority in the project was still balanced toward methodology refinement, the project organized working groups to guide those activities. A single broader Technical Advisory Group (TAG) meeting was held. The working groups, however, appear to be no longer functioning, and there appears to be no routinely functioning mechanism whereby the project can obtain substantive outside input as to its progress and priorities. Given the flexible nature of a cooperative agreement as compared to a contract and the potential for both useful and wasteful redirection which such flexibility brings, having such

external judgment and guidance, obtained via activities such as working groups or TAGs, would seem to be particularly relevant to this project and useful to USAID as a check on the appropriateness of the use of the provided funds. Such activities have an additional benefit, that of informing key external players about the project and facilitating more substantive collaboration. As such, it is unfortunate that USAID and the QAP have not put more emphasis on maintaining and using effectively the mechanisms to provide external input to the project's direction.

Broad planning for the project appears to be up to date, particularly linkages between subproject operations and budgetary and financial tracking and planning. Senior management appears to be working well with the USAID COTR to shift resource allocations flexibly in response to new requests, delays in field implementation, shifts in priorities, and so on. For example, as the priority given to Methodology Refinement has diminished over the course of the project, resources originally allocated to that area have been reallocated to institutionalization or other interventions in a responsible fashion.

Subproject tracking and management follow-up to ensure completion of planned activities and reports has been less robust. The Evaluation Team received the impression that in the Methodology Refinement area, working groups had functioned intermittently and some subprojects had been postponed indefinitely without a crisp decision having been made to cancel the efforts. In the country programs reporting has been somewhat lax, with field staff failing to complete requested progress reports. The documentation of QI projects and accomplishments so critical to both local and international validation of the QA approach, appears to have been a constant problem for central staff, and the publication of results in international journals, an activity recognized as critical by all, has also been less than desired. While such problems are nearly universal in projects such as this, it does not appear that management has taken a QA problem-solving approach to dealing with the reporting and publication problems. Management is to be commended for its recognition of these problems, and in the final months of project time available should give enhanced priority to solving them. In other sections of this report, the Team has proposed possible mechanisms for facilitating documentation of activities and successes.

From an administrative perspective, the management of the two subcontracts appears to have been satisfactory, with timely production of high quality deliverables from both, and no reported difficulties in accessing subcontractor resources to carry out project tasks.

In summary, management and administration of the project has been generally quite strong and effective. The Evaluation Team recommends additional attention to external input into project direction, subproject activity tracking, and the management of reporting and publication of project activities and successes.

H. USAID PROJECT SUPPORT AND MANAGEMENT

The original Cooperative Agreement between the Office of Health, USAID, and the Center for Human Services called for \$8.5 million for core support, with add-ons of \$4.7 million, resulting in a ceiling of \$13.2 million for the entire QA Project. To date, the Office of Health has provided \$5 million in core funds; \$4.22 million have been provided to date to support add-on projects. A series of budgetary restrictions throughout the Agency has resulted in an estimated shortfall of approximately \$1 million in programmed core support.

Key to the activities of the QAP, as with most other centrally funded health projects, has been the transfer of funds from mission or regional bureau budgets to the QAP as add-ons to the core funding. These add-ons support all the institutionalization projects -- Chile, Egypt, Jordan, Niger, and Nigeria -- as well as the short-term and medium-term projects, including the measles initiatives in Burkina Faso, Kenya, and Niger; the various cholera initiatives in Latin America; and micronutrient initiatives in a number of countries. While defensible from the perspective of maintaining decentralized control over USAID development funds, it has been clear that limitations of funds, e.g., in Chile, has at times hampered the successful implementation of QAP activities.

The Evaluation Team gained the impression that the QAP management had accommodated the \$1 million shortfall into its revised scope of work without major reduction in effectiveness. More bothersome has been the delays in the USAID Office of Grants and Contracts. These delays, often up to several months at a time, have created serious concerns within the QAP management about successful execution of the Agreement, and have caused much consternation among personnel who must be kept "on hold" for prolonged periods of time awaiting official clearance for proceeding with yearly employment contracts with the Project. The Evaluation Team has been impressed by the concerns from all quarters over these contract delays, and therefore makes a strong suggestion to USAID management to do all within its power to reduce these persistent delays in the Office of Grants and Contracts.

At the same time the Evaluation Team commends the USAID COTR James Heiby, M.D., for his effective interaction with the Project, and support of the quality concept and the Project within USAID.

IV. SUMMARY OF ISSUES AND RECOMMENDATIONS

Issue 1: The Role of Quality

Does the pursuit of improved quality of health care by means of quality assurance activities have significant advantages over other approaches to improving health and health services in developing countries?

USAID and other development agencies have utilized various models of health services development in the past and present. Most recently, child survival efforts have focused health service development activities on those diseases which epidemiologically were the most prominent in the morbidity and mortality patterns of developing countries; previously, efforts were aimed more broadly at the improvement of primary health care services, often through development of health infrastructure and management. The efforts were preceded by a hospital focused model of developed country medical care delivery. The dominant pattern in health development, as in other development efforts, has been: cyclical enthusiastic adoption of a particular approach, followed by disillusionment when that approach proved not to be a magical "trick" to eliminate all development obstacles, followed by a shift to a new approach to answer the development challenge.

Is QA the appropriate next approach to follow child survival? Is it a particularly useful management tool which might have an unusually effective ability to deal with problems of health services and thereby be a useful tool in reducing morbidity and mortality? Based on the degree of success that the QA Project has so far gained in highlighting the potential of the QA approach to achieve improvement in health and health services, and the likelihood of continued progress, should this approach be given a position of special prominence in health development portfolios for development agencies such as USAID?

The extensive briefings at the Central Office/Quality Assurance Project, interviews with other agency officials, and interviews and observations in the field, convinced the Evaluation Team of the effectiveness of quality and the QA methodology (as evidenced by this Project) in improving the level of health services and health in developing countries. The Team believes that this approach has special promise as an approach to health development in the majority of developing countries at present. The systematic nature of its problem identification and problem-solving capacity and its emphasis on improvement through collaborative discussion and action give QA particular strength as a development approach in situations where decentralization of services or integration of services are underway. Quality Assurance appeared to the Team to also offer a special potential for enhancing the effectiveness of services in situations of severe resource limitations where cost is a dominant issue.

Quality Assurance, CQI, TQM, or other similar labels and approaches do embody familiar, time-proven management principles: assessment of current situations to identify problems, using objective and if possible quantitative techniques; the identification and application of appropriate solutions or interventions; reassessment to document attributable improvements; and continued monitoring to ensure maintenance of the improvements and detection of new problems. Added to these are also familiar approaches to reaching agreement or consensus on problems and solutions, techniques to identify and analyze patterns as part of problem characterization, and other health services research techniques such as outcomes analysis or cost-effectiveness analysis.

The Team found, however, that the particular combination of these approaches pulled together and applied in the QA activities of the QA Project was remarkably effective, appearing to surpass the potential effectiveness of the individual components or management techniques through synergy and through the empowerment and remarkable enthusiasm of the participants. The evidence for this is described in detail in the body and annexes of this report.

As such, the Team recommends that the pursuit of improved quality of health services through the QA approach be accorded prominence in health development efforts in the immediate future, in particular, in situations where decentralization of decision making, integration of health services (e.g., moving from categorical Child survival programs to an integrated primary health care approach), or efforts to improve the effectiveness of services under severe cost and resource limitations are underway.

Recommendation:

Efforts to improve the quality of health services using the QA approach should be given prominence in future health development activities of USAID and other development agencies.

Issue 2: Structure of Future QA Activities

Should QA activities beyond the current QA Project be continued as a focused free-standing project as at present, or integrated into the activities of other major USAID projects? With the QAP ending in another one and a half years, should the QA activities sponsored by USAID continue in the same structural project format as at present, or a revised format?

Future QA activities within USAID may take three structural forms:

1. Continuation as a free-standing categorical project focused on QA, as in the current QAP
2. Incorporation and integration of quality and QA into the major USAID development projects such as BASICS or the NIS health reform project, perhaps with appointment of a special quality expert within the core Teams of such projects
3. Some combination of these approaches

Categorical child survival activities such as diarrhea disease control and immunization have recently been integrated into a single USAID development project (BASICS), just as in developing countries they are being integrated organizationally and structurally into primary health care or maternal child health units within ministries of health. In the same manner the QA activities now supported technically and with QA-focused country project resources through the QA Project, could be integrated in the future into major projects through which USAID channels the majority of its development funds, rather than continuing as a focused technical project with a few demonstration sites.

The Evaluation Team has concluded, however, that important advantages remain for continuing QA activities as a focused project. While QA does incorporate activities and principles of operations research similar to those in the previous PRICOR projects, the QA package of activities is sufficiently different from the earlier OR approach as to be fundamentally new. Both the field country program experiences and the research-oriented activities to improve the methodologies for quality improvement are early in their developmental course, and will benefit from an additional period of time, for example an additional five years, to gain experience in a wider range of situations, at different levels of health development and in different organizational structures.

What has been missing is evidence of both conceptual and concrete collaborative policy and activity planning between the QAP and the other USAID projects. This would certainly be enhanced by the appointment of specific liaison persons within those projects who can take responsibility for ensuring that quality and QA are incorporated into project plans and activities. In addition, the QAP and these projects should be required to prepare and implement formal plans for collaborative activities and approaches, rather than the current ad hoc and non-structural or conceptual approach to interaction manifested by the measles project, or even the somewhat more effective efforts to study the effectiveness of the sick child protocol.

The Team recommends that USAID's QA activities be continued for another five years as a free-standing QA focused project combining country QA institutionalization projects and

field research activities to solidify the QA methodology most appropriate to developing countries, and that USAID take steps to formalize the interaction between the QA project and the other major USAID development projects.

Recommendation:

QA should be continued as a free-standing project for an additional five years, with formal collaborative linkages with other major USAID central development projects.

Issue 3: Focus on the Public Sector

Should the project continue to emphasize the focus of the original agreement on quality in primary health care and child survival in public sector health systems?

In both its institutionalization and short term technical assistance components, the project has made significant efforts in hospitals. In Egypt and Guatemala, hospitals have been the exclusive focus. In Chile, substantial training of hospital personnel and encouragement of quality projects in hospitals has taken place, and health policy makers point to hospitals as particularly in need of quality improvement efforts. The project has carried out institutionalization activities in Chile, Egypt, and Jordan, three countries with somewhat higher levels of development. In Chile in particular, the infant mortality rate nationally is better than that in some sub-populations of the U.S., making classic child survival interventions such as diarrhea disease control of lower priority. In no case, however, has the project tackled substantively issues of influencing quality in private sector health facilities or practices, either in changing the behavior of private practitioners or developing skills of policy makers in the tools of quality influence in the private sector (such as regulation and certification/accreditation), despite the recognition that the private sector may provide 30% or more of the health care in many countries. Also, with some notable exceptions, there has been a general lack of emphasis on cost and cost-effectiveness in the training and tools provided to country QA participants, despite a growing recognition of the importance of cost containment, either as a force competing with quality, or as a quality indicator itself.

The Evaluation Team found that the nature of many quality problems demands a system-wide approach, which should include those practitioners and institutions to which problems from the primary level are referred. Hospitals function as leaders in health systems and can facilitate adoption of quality activities in PHC systems. By working in a range of countries with different levels of health system development, the QAP can gain experience which will assist less developed countries to prepare for future needs and quality demands. Initiatives within the project dealing with cost and cost-effectiveness should be strengthened,

however, and incorporated more universally into methods and training materials. Similarly the project must take on the challenge of dealing with the private sector from the perspective of public sector responsibility to ensure safe, high quality care to citizens receiving private sector health services.

Recommendation:

The QAP should continue to include efforts aimed at more than the primary health care elements of health systems, including secondary and tertiary facilities and providers where appropriate, while continuing to emphasize primary health care. It should develop approaches for dealing with economic aspects of health care and cost-effectiveness, and with private health services. It should continue to work in both less developed and middle developed nations, recognizing and learning from the differences in approaches needed.

Issue 4: Training Activities and Materials

The long-term success of the QAP will largely be determined by the effectiveness in transferring QA knowledge and skills to health personnel in developing countries. QAP training activities to date have generated much enthusiasm and have been effective in leading participants to apply QA techniques in the field.

The Evaluation Team believes, however, that specific aspects of the training strategy should be reconsidered and strengthened. These include the following:

- The potential usefulness and cost-effectiveness of standardized curricula in QA should be re-examined. The Team believes that standardized curricula are less likely to be useful than packages or libraries of curricular modules including supporting materials such as references. Such libraries of learning activities and practica should be developed and made available to serve as the building blocks for unique country applications of core concepts and methods tailored to the training needs, language, and culture of specific programs.
- The process of training as it is currently carried out by the QAP should also be re-examined. The current approach appears to favor didactic lectures based on packages of overhead transparencies to a degree undesirable in adult learning. Other elements of adult learning should be reviewed, for example, the extent to which learning activities currently begin with assessment of existing knowledge on the part of trainees.

- **The need for approaches to build capacity in QA training (Training of Trainers) in countries and regions is evident, and has been already implemented in Chile. Greater emphasis on this aspect in other country programs and materials is needed.**
- **Strategies for more effectively ensuring that learning objectives, exercises, and practica are culturally appropriate and effective are needed. This objective may be met by a greater emphasis on pre-training workshops with indigenous trainers to both adapt materials and initiate a process of capacity building as trainers.**
- **A more formal emphasis on follow-up monitoring and evaluation of training is needed, particularly in support of trainees in their application of the training as a critical extension of the training beyond the training workshop itself. More formal evaluation of the effectiveness of training activities, both immediately following training, and subsequently, will provide a stronger basis for continuing to improve training effectiveness.**

Recommendation:

In the remaining project period, the QAP should systematically review and strengthen their approach to training, including both workshop-based activities and field-based activities.

Issue 5: Involvement of Top-Level Managers

Should the QAP pay more attention to engaging top-level health system management in QI activities, as per the philosophy of TQM?

The standard TQM approach to QA may be considered to be "top-down" in nature. It puts heavy emphasis on starting efforts at the top by engaging the highest level managers in the quality effort first, in order to ensure a supportive environment for the subsequent activities. In Chile, for example, the Team found that failure to have the support of top management had seriously inhibited QA development in certain areas of the country. Early involvement of top managers, such as the regional leadership in Niger, seemed to have been important in facilitating QA progress, suggesting an advantage to the top-down TQM approach.

The QAP's approach has not been doctrinaire, however. Rather it has begun by engaging lower level health workers where that was the only entry point. In so doing the Project recognized that the achievement of quality improvements by lower level Teams may in turn attract the support of top level managers, a "bottom-up" approach.

The Evaluation Team commends the project on its flexible approach, utilizing and adapting various quality development approaches to the widely varying needs of developing country health systems with administrative structures often quite unlike the large institutions in which TQM has flourished. Field experience has borne out the effectiveness of successful QA projects in convincing senior management of the value of QA. At the same time, the need to gain the support of senior management is clear, and additional emphasis should be given to this target, including regular visits by QAP staff to MOH policy makers when in the field (not currently being consistently done), special training programs, engaging senior management and policy makers in approving quality projects, attending international meetings at which their staff's quality projects will be presented, and so on.

Recommendation:

The QAP should continue to adapt TQM and other QI models to local situations, while more actively pursuing efforts to enlist senior decision makers in the QA efforts in country programs.

Issue 6: Collaboration

Has the QAP adequately sought collaboration with other technical and donor agencies at country level, with other central and country level USAID projects, and internationally?

The Evaluation Team found that QAP central office staff had not emphasized efforts to inform or enlist other agencies, either international or national, regarding QA efforts in country programs, leaving this essentially to the national teams. While some activities with other projects and donors have occurred (WHO in Indonesia, the measles project, interaction with BASICS in Niger, preliminary discussions with World Bank in Costa Rica), this target does not seem to have been a priority for QAP staff. In some cases staff have not routinely "made the rounds" of other agencies or of other divisions within the MOH during country visits, and none of the country institutionalization programs are jointly funded by the QAP with another donor agency. In one country, the WHO resident consultant most involved in QA had never met the QAP officer responsible for that country.

Recognizing the need for long term QA activity to bring about true institutionalization of QA in countries, and the essentially short-term nature of USAID QAP support, developing collaborative linkages with other agencies to support as well as validate QA activities over time should be a priority for the project. If quality efforts are to become an integral part of the new generation of USAID projects such as BASICS or the NIS Health System Reform project, more active planning of joint programming and generic tools at central level will be needed, as

well as field level collaboration. Such inter-project collaboration will be difficult without explicit support from USAID.

Recommendation:

The QAP should develop a plan for enhancing the interaction with other agencies and projects at country, US, and international levels, having as the target joint planning of activities and approaches. USAID should actively facilitate such collaboration.

Issue 7: Documentation/Dissemination/Advocacy

Documentation, dissemination, and advocacy can be viewed as activities of a very similar nature. There exists great differences, however, in the nature and magnitude of these activities appropriate to the central office as compared to the field. In the field, documentation and dissemination are helpful adjuncts to effective improvement in and proper access to services. They also constitute a vital component in local advocacy towards the goal of institutionalization. The Team has noted instances in the field of inadequate budgetary support for such important activities. At the central level, documentation/ /dissemination/advocacy activities are directed to a wider audience, and utilize a more varied set of media.

The Team reviewed a large, impressive array of publications, monographs, newsbriefs, and letters, as well as listings of presentations at international meetings put forth by the QA Project staff. Enhancement of this activity is encouraged. Specially needed over the next year are a series of publications in respected journals on the clinical outcome results of local quality assurance activity. Recognition of the need to "translate" project results into the language of policy makers or consumers is needed. This translation process may require budgetary and expert support.

Recommendation:

The Project should give priority to ensuring active local field information dissemination and advocacy. The Project should extend more effort in the coming year to gather concrete documentation on the outcomes and impact of QA efforts on health care quality, and where possible, morbidity and mortality. It should assist research and project implementers to seek a higher level of publication in appropriate journals.

Issue 8: Evidence of Changes in Service Quality

Demonstrating that QA approaches are associated with improvements in service quality will remain a critically important challenge. In theory, documentation of such improvements should be produced by quality teams as a part of their assessment-problem, analysis-solution, generation-implementation-monitoring cycle, and should not require additional special efforts on the part of the QA staff. Unfortunately, it appears that additional attention and resources will be needed to ensure that such outcome data are produced, summarized, and made available for dissemination and advocacy. This might be accomplished through an increased emphasis on "storyboarding", through more intensive field support for the monitoring and evaluation components of the QA process, or even through the commitment of additional staff time to ensure that valid data on outcomes are collected and summarized.

Recommendation:

The QAP should direct more attention and resources to the documentation of service quality improvements that result from QA activities.

Issue 9: Balance

What balance in the use of resources would be most appropriate for future QA activities?

The Evaluation Team was impressed by the power of the QAP-institutionalization projects to bring about major changes in thinking about health service management as well as problem solving and quality improvement in health services. The larger scale and longer term efforts of the institutionalization component appear to have the greatest potential payoff in development among the various components of the QAP, particularly if limited USAID resources can be used to leverage additional resources from the host country and from other agencies. By developing a critical mass of health workers invested in QA, such efforts would be more likely to be sustained over time. Short-term TA is useful as a mechanism for generating longer-term institutionalization efforts, but in a number of cases did not appear to lead to long term results (e.g., Costa Rica).

Recommendation:

Future USAID supported QA activities should concentrate on larger scale longer-term institutionalization efforts. Short-term QA technical assistance should be used primarily to develop longer-term efforts, particularly in collaboration with other donors and projects.

Issue 10: Research

As originally designed, the QAP project was to have had a heavy research emphasis, focusing on refining QA methods and assessing their effectiveness in developing country contexts. This was an important challenge, but proved difficult to implement. USAID missions were (and are) reluctant to support research unless it holds promise for improving local health systems. The daily demands of project implementation are often more immediate and more closely related to the interests of the Resident Advisor or local QA staff than are research designs, data collection, and manuscript preparation. On the other hand, there are important research questions that remain to be addressed concerning QA effectiveness and cost, and these take on added importance as the evidence mounts that QA "works" on the ground. While institutionalization is appropriate as the primary focus for the current and future QA projects, it is essential that a strategy be defined to permit key effectiveness and cost studies to be conducted in conjunction with QA activities. The design and conduct of these studies should be guided by those with expertise in health systems research, to ensure that the research designs reflect state-of-the-art methodologies rather than attempting to apply more traditional clinical or epidemiological designs across the board. In future projects, new strategies for research organization and administration might also be considered, such as the "linked but independent" arrangement currently in place in Jordan. While good health services research must be integrated with implementation, the two areas do not always draw on the same types of expertise and skill.

Recommendation:

While institutionalization should remain the primary focus of current and future QA projects, USAID should ensure that essential health services research on QA effectiveness and costs is conducted in conjunction with QA activities.

Issue 11: USAID Contracting Procedures

USAID project support and management was reviewed in considerable length by the Evaluation Team. In general, the scope and quality of these activities appear quite adequate. The Team was impressed, however, by the extent of concern from several quarters provoked in a number of instances by long delays in processing attributable to the USAID Office of Grants and Contracts.

Recommendation:

USAID should change their contracting procedures; they have been a serious impediment to Project implementation, have caused hardships among some personnel, and have been a source of consternation among staff.

ANNEX I

SCOPE OF WORK FOR MIDTERM EVALUATION

**SCOPE OF WORK FOR THE QUALITY ASSURANCE PROJECT
MIDTERM EVALUATION TEAM**

A. Introduction: The purpose of this evaluation is to provide authoritative advice to USAID on the subject of quality of care and the related efforts of the Quality Assurance Project (QAP). The team will be asked to address three overall issues: 1) review the performance of the organizations that are implementing the project, compared to the goals of the project; 2) make recommendations for the rest of the project; and 3) discuss the role of quality assurance approaches in USAID's health portfolio in the next several years. The project is carried out under a cooperative agreement (number DPE-5992-A-90-0050) in which the Agency has played an active role in developing strategies and approaches. The evaluation team should assess the activity as a whole, including its underlying assumptions.

B. Background: The QA Project (officially, Applied Research in Child Survival Services, Project 936-5992), began in September, 1990 and will continue through September, 1995. The project builds on an earlier five year operations research project, PRICOR II, and related efforts by other international organizations over the same period. PRICOR II sought to apply operations research to the process of service delivery in child survival programs, an area about which surprisingly little was known in 1985. For the most part, child survival programs had focused on providing the technical training and supplies needed to expand these services to under-served populations. The details of clinical care were poorly studied, and there was little prospect of applying traditional QA techniques based on medical records. In response, PRICOR II developed a strategy based chiefly on direct observation.

The detailed guidelines developed by WHO for training in case management in diarrheal and respiratory diseases provided a model for defining quality of care in objectively measurable terms. With some modifications by program managers, these standards defined what was supposed to take place when, for example, a child presented to a clinic with respiratory symptoms. The model standards are compiled in a uniform format in the PRICOR "Thesaurus". They specify the discrete steps by which the clinician should, according to the best available evidence, evaluate the patient, provide treatment, and arrange for followup.

Once these standards were converted to observation instruments, the project then carried out over 6,000 observations of patient-provider interactions in 12 developing country programs, addressing seven basic health services. To a smaller degree, the activities of support systems, such as supervision and logistics, were also examined like this. Along with similar efforts elsewhere, PRICOR

contributed to a growing body of observation that measured the degree to which service delivery actually reflected the standards these programs had set for themselves. There are a number of technical issues involved in such studies, including an observer effect (generally thought to bias toward better performance). Nevertheless, the overall impression that emerges from these assessments is disturbing.

Even allowing for the resource constraints of developing country programs, actual performance in most service areas fell far short of standards. Further, established management systems appeared to be missing these pronounced quality deficiencies. Consider, for example, the following observations from an assessment in the Philippines, involving five selected activities where the standard was performance in 100% of cases:

<u>Service delivery activity</u>	<u>Level of performance</u>	
	<u>Estimated by Supervisor</u>	<u>Observed</u>
1. Acute respiratory disease		
Counsel about danger signs	66%	1%
Advise to complete antibiotics	82	8
2. Diarrheal diseases		
History of blood in stool	87	28
History of vomiting	82	11
History of previous treatment	88	38

Observed performance in immunizations was notably better than other child survival services, but assessments in different countries and by different investigators were remarkably consistent and similar to those above. Observed performance, when compared to an objective standard, tended to be poor across the range of clinical activities. High- and low-priority activities were equally likely to be neglected. Activities related to patient counselling were, overall, the weakest of the clinical activities studied.

Substantially less was learned about non-clinical activities. In the systems model used extensively in both PRICOR II and QAP, program activities not directly involving patient care are viewed as support activities. Activities that are logically related to one another are considered "systems", such as those for logistics, management information, training, and supervision. The systems model holds that the performance of these systems is an important determinant of how well clinical activities are carried out. However, standards are less well-developed for these activities,

and PRICOR studies made fewer observations in non-clinical areas. As a result, the issues in areas such as supervision and information system management remain relatively undefined. Others, such as training and logistics, appear to have a somewhat stronger theoretical and empirical base.

With few exceptions, policy-level officials were surprisingly willing to accept the findings of PRICOR II studies, and consider what actions might be appropriate. A common reaction was that some level of deficiency was to be expected in resource-poor systems, but that this kind of detailed, quantitative measurement was new.

PRICOR II included a smaller operations research component which supported about 100 small-scale problem-solving studies. As expected, most of the deficiencies studied proved amenable to improvement through modest interventions at little or no cost.

It was with this base of experience that USAID designed the Quality Assurance Project. The QA project builds on the central premise that quality can be viewed as a measurable property of health services, based on the degree of compliance with a detailed standard for how the process is supposed to be carried out. Further, that such standards can be developed for most of the key activities in Agency-supported health programs, both clinical and non-clinical. The wide range of activities carried out under the project should have a logical connection to these underlying ideas. The ability to measure quality implies that programs should do so routinely, and then take action to deal with shortcomings. The development of approaches to improve quality in developing country programs must ultimately be based on empirical data on both effectiveness and cost. The vast experience of developed countries in dealing with quality issues should be reviewed for promising approaches. But the major research challenge for the project is in adapting this experience to LDC needs.

C. Design of the QA Project: The objective of the project is essentially to develop a new field, quality assurance adapted to the needs of developing country health systems. The cooperative agreement sets broad parameters for pursuing this objective, but leaves most of the details to be decided in the course of implementation. Thus, the evaluation team should focus on the overall soundness of the project's approach, rather than an accounting of how closely outputs match the original specifications. Nevertheless, the team may wish to critique these specifications and comment on their influence.

The project's statement of work calls for activities in the following areas:

1. Long-term technical assistance to develop and institutionalize quality assurance programs.

2. Short-term technical assistance to respond to opportunities to develop selected elements of quality assurance, but with no commitment to develop a comprehensive, institutionalized QA program.

3. Policy dialogue to explain to managers the nature of quality issues and QA, and why they should be concerned.

4. Methodology refinement research to adapt QA approaches to the needs of LDC programs on the basis of empirical data.

5. Training to transfer skills and understanding of the field.

6. Development of an information base to make the experience gained through the project accessible to others.

The leitmotif that runs through all of these major activities is an empirical orientation, with QA approaches justified by measurable results in a developing country setting. By implication, the project would not base its approach on a particular school of thought or on the basis of what was successful in the U.S. or Europe. The work statement also extends the scope of the project beyond child survival services, and specifically includes the non-clinical elements of health programs. The discussion of methodology refinement emphasizes the need to improve the standards that define quality, in addition to improving QA approaches per se.

D. Overview of Major Activities: The recipient of the QA Project cooperative agreement is the Center for Human Services, 7200 Wisconsin Ave, Bethesda, MD (telephone: 301-654-8338; fax: 654-5976), with subagreements with Johns Hopkins University and the Academy for Educational Development. The project director is William Jackman, M.D.

1. Constraints Related to Funding: The Office of Health has to date provided \$5 million in core funds to the project. These funds may be applied to any activity consistent with the overall statement of work of the cooperative agreement. Following common practice, the project has also sought and received funding from other sources within the Agency. These funds are subject to additional restrictions on how they may be used. These include:

a. USAID mission "add-ons": USAID missions have contributed an additional \$6 million to the project for specified QA-related activities in Chile, Niger, Malawi, Egypt, Nigeria, and Jordan. For each of these agreements, the QA Project and the mission negotiate the activities to be carried out.

b. Measles Initiative: The project received \$1 million for activities related to reducing mortality from measles in three African countries, as part of a joint program with two other projects. QAP worked chiefly in Niger, with a supporting role in Kenya and Burkina Faso.

c. Cholera Initiative: The project has received \$500,000 for

work in the Latin America Region related to the current cholera epidemic.

d. Micronutrient Initiative: \$1.5 million has been provided to the project over the past three years for addressing issues related to vitamin A, iron, and iodine deficiency.

e. Jointly funded activities: The project has worked jointly with other USAID projects, sharing costs, where there was a common interest in a quality-related matter, in Indonesia, Guatemala, and the Philippines.

The team should weigh the effect of these restrictions in assessing the project's global strategy. As a practical matter, the project has been required to respond to targets of opportunity, and to accommodate the agenda of other projects. The team should also assess the impact of the current shortfall in core funds, and any apparent impact of delays and uncertainty related to the transfer of funds.

2. Activities Planned, Completed or Underway: The team will learn about the project's wide range of activities through formal briefings, discussions with individual staff members, review of documents, and field visits. The major activities include:

a. Monographs: A substantial investment of staff and consultant time has been directed toward technical documents. Each of these is was developed to serve as a reference and educational resource for practical field applications. One of these, Quality Assurance of Health Care In Developing Countries (or "the QA monograph"), presents a summary of the project's overall approach. It is also the project's most widely distributed technical document and is intended to be self-contained. The team should comment on the model of QA presented, and on the effectiveness of the monograph in conveying the model clearly. Specific issues of particular interest include the value of expanding the use of concrete examples of concepts, drawn from LDC experience.

Achieving Quality Through Problem Solving and Process Improvement is a more recent effort which expands on elements of the QA monograph. We ask the team to comment on what is intended as a practical tool for use by developing country counterparts. Comparisons with similar efforts by others would also be useful.

Incentives and Service Quality was prepared by a consultant and is still being reviewed by the staff, but addresses a poorly-developed area where the team may wish to provide guidance. Additional technical documents under development address the institutionalization of QA, patient counselling, and a summary of QA tools and approaches. The team's advice on these documents, and suggestions for areas that should be addressed in the future, is welcome.

b. Training: In response to findings of the PRICOR II evaluation

team, QAP includes a substantial investment in training as a methodology of technology transfer.

(1) Awareness: The agreement calls for development of an introductory workshop of a few days, intended chiefly to present to decision makers the nature of quality issues, outline the experiences of others in quality assurance, and discuss the relevance of these observations to their own program. This "awareness" workshop was also viewed as the basis for an introduction to the QA field for program staff who would go on to training in actually applying QA methodologies.

The content of the awareness workshop parallels that of the QA monograph, but has changed more as the project has evolved, and has been regularly modified for the country where it was being given. The team may wish to comment on use of LDC examples here also, particularly the incorporation of field experiences from the project's technical assistance and research activities. The underlying idea of using a training strategy for building awareness rather than, for example, distribution of a document, also merits comment. The team may also wish to take issue with the assumption that an awareness-building program is needed in the first place.

(2) Skills: The agreement also specifies development of training to convey the basic skills needed to develop a quality assurance program, but does not detail individual courses. In the countries where the project is attempting to institutionalize a formal QA program, it is important that these courses address the most critical training needs. Thus, coordination between the field staff and the training staff should be assessed by the team. This assessment should consider the degree to which the project is able to document field experiences and then incorporate them into the training development process.

The team should examine the content of the courses that are partially or completely developed, to the extent that time permits. The major topics that have been developed include:

- * Quality standards: setting, communicating, and monitoring
- * Coaching and facilitating team problem solving
- * Supervision
- * Problem solving

While not a formal course, the project has also developed and conducted a workshop in planning a QA program. A formal academic course at Johns Hopkins, "Quality Assurance Management Methods for Developing Countries", will be discussed separately.

Under the subagreement, Johns Hopkins has also developed a workshop, "Quality and Costs in Health Care Service Delivery for Developing Countries." This course is outlined in a training manual, which will be provided to the team. The course has not yet

been field tested, but it deals with efficiency issues that cannot be ignored as QA programs expand. The team may wish to comment on the relative priority that this element of QA should receive over the rest of the project, and in the medium term. We also welcome comments on how research in this long-neglected area should be organized to produce useful results quickly, and suggestions for specific research topics that should be given priority.

The team is asked to consider the courses from these perspectives:

1. State-of-the-art: In the areas that they address, these courses should reflect current thinking and relevant field experience.

2. Empirical orientation: If the state-of-the-art is limited for a given LDC application, the trainees should learn these limitations and how to deal with them in the course of developing a program. If a given QA technique works poorly under local conditions, the trainee should be equipped to recognize this and respond.

3. Learning from experience: Course content and training approaches should evolve, based on both formal course evaluations and the project's growing experience in the larger field of QA as applied to LDCs. The team should examine the way courses are evaluated. At the Bethesda office, and in the field, the team should assess the process by which field staff provide materials for the training courses.

We also invite the team's observations regarding the topics selected for these core training courses, which may be taken as an expression of priorities in developing a QA program. We also invite the team to consider the issue of an overall training strategy for a project that works with a highly diverse set of countries, each of which has unique features and priorities. The agreement envisions training courses that would be largely standardized, requiring only limited customization for a given setting. If the customized element is dominant, perhaps a more modular approach would be preferable.

The team may also wish to advise us on the relative place of formal training in the development of QA, in light of experience to date. The staff will provide an overview of where the project has supported training of different types, and how these courses fit into the development of QA activities in the host country. The team should comment on strategies for transferring QA skills and knowledge in the future, assuming that demand for QA continues to expand among developing countries. This discussion should consider the advisability of continuing to develop new training approaches, such as the QA Simulation and that for integrated case management

of the ill child.

c. Methodology refinement: The agreement calls for simultaneous application of QA approaches in LDC health programs, and development of a research program to adapt current tools to the needs of these programs. The rationale for this dual strategy is that quality problems are so pronounced that current QA methodologies have much to offer right now. On the other hand, we have very little direct knowledge about the most cost-effective ways to improve quality in these settings: Thus, we are obligated to test our ideas empirically, and look actively for better or cheaper approaches to QA. Finally, the agreement suggests that many important research questions can be pursued only within an active, large scale QA program.

Like other central projects, most of the project's research agenda must be funded by core Office of Health funds. Missions are traditionally reluctant to support research, except for that directly related to local implementation. The substantial shortfall in core funds for the project has thus impeded the methodology refinement component. Similarly, for issues that require a functioning QA program, opportunities for research are relatively recent, since field activities have expanded only gradually over the project's 3 1/2 years. There also appear to be a number of obstacles to developing a research activity at the same time as the field staff is establishing a new QA program.

Research strategy: We ask the team to consider the role of research broadly, commenting on: (1) work to date, (2) areas that merit emphasis for the rest of the project, and (3) recommendations for a research strategy under future projects. In addition to specific issues, which are discussed below, we ask the team to consider ways in which research could be organized to maximize the project's productivity in this area.

In considering how to make use of limited resources for research, the project staff was confronted with a very broad range of issues relevant to developing QA in developing countries. Many of the studies that seemed to be needed did not fit into traditional research patterns. Comparing the impact of alternative standards, for example, is an issue where there appear to be no recognized models for how to conduct research. To encourage QA-related research by other institutions, the project has sought to provide such models for a wide range of research designs and service delivery issues. In attempting to develop seminal studies in a variety of areas, the project foregoes the opportunity to develop a few areas in depth. The team should critique this overall approach to research, as well as the individual issues chosen, and where applicable, the design of the studies carried out.

The agreement suggests that the problem-solving process itself needs to be examined. This would take the form of quasi-

experimental comparisons of different techniques for assessing a specific service activity, and different approaches to solving the same problem. For example, a study could address the question, what is the best way for a supervisor to monitor counselling in the immunization program? Such studies are expected to be small-scale, rapidly implemented, and the agreement suggests that a given research team, working with a functioning QA program, might carry out a series of studies addressing different issues. This is in effect, a field laboratory strategy. An alternative model might emphasize larger scale, more rigorous studies. The team may wish to propose other models for using research to develop QA.

Proposed research topics: There has been extensive discussion within the project regarding the major research questions implied by the project's mandate. Although most of the research agenda remains to be addressed, the specific priorities chosen offer the team useful insights into all of the other elements of the project. These issues also imply future directions for the project and any other initiatives that might be based on it. In addition to your observations on the issues below, we invite your comments on what it is that we most need to learn in order to make QA work in developing countries.

Methodology refinement (MR) issues raised in the agreement: The agreement describes the research to be carried out as "methodology refinement", emphasizing the focus on improving the methods and approaches of quality assurance activities themselves. The term implies that most of the tools already exist, and need to be refined rather than invented de novo, for use in LDCs. The agreement does not provide a single definition of MR, but rather lists examples of topics of interest. The overall emphasis is on refining techniques for assessing and improving individual performance. The discussion in the agreement is presented in terms of the findings and approaches of PRICOR II, rather than those associated with QA in developed countries.

Many of the issues raised are closely related to established concerns in the field of QA, but developing country health systems also present unique challenges. For example, these systems often include extensive but usually ineffective supervisory systems; the level of compliance with program standards tends to be so low that comparisons with developed country QA programs is problematic; and extreme limitations on resources makes cost-effectiveness a central issue. Examples of the MR issues raised in the agreement include:

1. The relative cost-effectiveness of different techniques for assessing quality: Supervisors could make use of observation, interviewing, record review, and a number of distinct ways of gathering information about provider performance. Different components of service delivery may present very different issues, for example the physical examination of a child with pneumonia (a relatively rare event, and therefore difficult to observe) and

screening children for immunization status. There is almost no empirical evidence to guide supervisors in selecting from available options and, indeed, little to suggest that quality assessment by supervisors can be studied and improved.

2. Stability of performance: Most available information on the quality of care provided in LDC programs is based on a single point in time measurement. Longitudinal observations of the same providers are needed to examine issues such as how consistent are providers from one patient to the next; if performance is at a high level, how soon should it be re-assessed; and what is the sustained impact of training and supervisory interventions.

3. Standards: Detailed process standards, such as the WHO case management protocol for diarrhea, are seen in the agreement as the basis for QA in developing countries. These standards define quality in a way that makes measuring it feasible, and the ability to measure quality makes improvement feasible. For the most part, existing standards reflect a consensus of experts, who in turn, have considered scientific evidence. PRICOR II suggested that in some cases, massive investments might be needed to achieve high levels of compliance with some of these standards. The MR issue is to begin to look at the standards themselves as tools, rather than as a given, dictated by science.

4. Policy and management issues: The agreement does envision applying research strategies to defining the role of managers and higher level supervisors in quality assurance. The chief challenge here is to link initiatives at this organizational level to objective measures of quality and productivity.

5. Validation of process standards: The agreement sees a need to document the relationship between compliance with process standards and measures of effectiveness and health impact. Walker et al (AJPH, 78:2, 149-152) illustrate such validation at the level of case fatality. Validation of this kind has both technical and policy value.

6. Support systems: The agreement views non-clinical functions as potential topics for MR, based on their impact on patient care.

Methodology refinement task forces: One way in which the QA project expressed its priorities for MR was in forming ad hoc groups to develop ideas for how to approach different research areas. Levels of effort varied, but the following task forces were identified by mid-1992:

1. Supervision
2. Tuberculosis
3. Vitamin A (later, micronutrients)
4. Injury control
5. Cholera

6. Counseling (interpersonal communication)
7. Adaptation of Total Quality Management (TQM)
8. Integrated district management
9. Quality, efficiency, and financing.
10. Job aids
11. Training
12. Family planning
13. Problem solving
14. Sampling

Not all of these areas have been developed to the point of field work, and the working group arrangement has been discontinued. Nevertheless, for any of these areas, there are project staff who can discuss the research issues that have been identified, and the degree to which field work has been pursued.

Specific methodology refinement research topics selected: Through an exercise known as affinity analysis, the staff developed a consolidated research agenda from the contributions of the various task force members. The major issues identified included:

1. Define a coherent project approach to the field of QA: This resulted in the QA monograph; the staff classifies the development of technical documents based on existing literature as methodology refinement, along with field studies.

2. TQM: Both the overall approach and specific tools from this field need to be adapted for use in LDCs; TQM ideas about developing a team approach to problem solving should be tested

3. Costs and benefits of quality improvement: rather than blind advocacy of expanding QA activities in general, the project should help develop tools for assessing the costs and benefits of different QA activities; issues include the costs of QA activities themselves, and the cost implications of achieving different levels of quality.

4. Supervision: This area of management sciences has developed independently of the field of QA, but both QA and supervision are in principle associated with problem solving. Some argue that the continuing, widespread weakness of supervisory systems is partially a result of lack of accountability: What supervisors actually do on their visits, and the effectiveness of these interventions are virtually never examined. The supervisor's role in assuring quality is amenable to objective measures of effectiveness, based on process standards. Thus, the project can apply research designs to improving supervisory problem solving. By extension, the effectiveness of those who manage supervisory systems can also be measured, and their performance improved.

5. Management information systems and monitoring: In general, there is a consensus among the project staff that a large scale QA

program will require some kind of organized information system. LDC health programs usually include service statistics systems, with a wide range of content and reliability. Rarely do these systems address health care processes. The accuracy of self-reporting by program staff on quality of care variables is of interest. Research may be useful in testing different strategies for verification of self-reported data, and other ways of encouraging truthful reporting. Often, the burden of reporting is already onerous. It is possible that periodic direct sampling of provider performance, such as the facility survey model, could be streamlined and applied routinely. For the most part, however, specific research topics are yet to be identified in this area.

6. Development and testing of job aids: The body of empirical knowledge in this area appears to be surprisingly small, although job aids like manuals, charts, and structured clinical records are widespread. The evaluation of these aids is commonly neglected, and insights into the properties associated with successful use of a job aid are largely unknown. From the QA perspective, the objective of job aids is improving provider compliance with standards. This kind of objective is well suited to research.

7. Problem solving: Since there are different techniques that could be used to identify or solve most problems, research can be used to learn how to pick the superior techniques, so that programs can solve these problems better and more efficiently.

8. Assessment and problem identification: Both the formal techniques of TQM and the range of supervisory tools for problem identification can be examined for cost-effectiveness in the field.

9. Training: The relationships among training methods, competency test scores, and subsequent performance on the job merit examination, particularly in view of the volume of training in developing countries. Quality of care provides a robust framework for examining these long-standing questions.

10. Managing change: The only concrete issue identified under this broad category concerns testing different systems of incentives for providers, based on quality measures.

11. QA strategies for the private sector: No specific research topics were identified for this topic. Up to now, the project has not pursued issues of certification, licensing, and accreditation. More recent technical assistance to private organizations may have raised some research issues.

12. Client satisfaction, community perspective: The extensive experience of developed countries with measuring satisfaction with services is available for adaption and use in LDCs. Similarly, there is a substantial experience with community organization in

LDCs which could be applied to quality issues. The major challenge probably lies in mobilizing communities to influence health care processes, as distinct from exerting political pressure for more facilities and resources.

13. Development, validation, and communication of performance standards: A number of basic services still lack well-developed standards, and simply providing a model standard would be useful. The process for developing these standards could also benefit from a critical examination, particularly to minimize the production of standards that are (1) widely viewed as unfeasible for the average provider; (2) unclear, out of date, or difficult to use; and (3) not conveniently available. One specific research objective identified had a largely policy objective: Document the impact on performance of simply providing a clear, well-developed standard, an element generally missing from the programs examined under PRICOR.

Implementation of Methodology Refinement Studies: The largest single study addressed patient counseling and related elements of interpersonal communication. This study was conducted by AED in Honduras, which was chosen on the basis of convenience. An examination of the relationship between training variables and subsequent performance was carried out in the Philippines Diarrheal Diseases Program as a joint exercise with PRITECH and WHO/CDR, also as a free-standing activity. The project also conducted a baseline quality assessment in Siaya District, Kenya, to complement a CDC/WHO validation trial of process standards for integrated case management of the ill child. Another baseline quality assessment is under way in Indonesia, where the project is assisting in the preparation of a major World Bank loan which will have a large quality improvement component.

We ask the team to give particular attention to a study of the cost-effectiveness of quality assessment methods. This study was developed initially for use in Jamaica, but is now to be carried out in Guatemala in collaboration with Project Hope. While final results will not be available, please comment on the likely value of this kind of research in developing more cost-effective approaches to QA in developing countries. Other studies have addressed:

1. comparison of different techniques for evaluating training in ORT (Philippines)
2. effectiveness of patient counseling using techniques validated in the Honduras study (Trinidad)
3. evaluation of a job aid to improve patient-provider communication in a tuberculosis control program (Philippines)
4. evaluation of a formal written "contract" to increase

patient compliance with tuberculosis chemotherapy (Philippines)

5. comparison of different supervisor approaches to quality assessment (Malawi)

6. evaluation of supervisor job aids (Niger)

In addition to field studies, the project has produced technical papers on the basis of the current literature. These include a review of the issues in job aids, an overview of interpersonal communication, and those mentioned previously. Other methodology refinement activities include development of standards for tuberculosis case management and related program support, and the development and field testing of standards for injury control in peripheral level hospitals (Trinidad). Computer simulations for training in problem solving and in the sick child algorithm are also considered methodology refinement products, and the team may have suggestions for further development of these initial efforts.

The countries where the project is providing long-term assistance to institutionalize QA provide an important opportunity for methodology refinement research. Through discussions and field visits, the team should assess the studies that have been initiated, and particularly promising opportunities for MR. The overall question is, given a new QA program, and some additional resources earmarked for research, how should we use those resources to improve the way QA is carried out?

As suggested above, one version of such research would be quasi-experimental trials of two or more specific alternatives for assessing a given process, or for solving a particular problem. Another is to carry out external assessments of quality, to measure the impact of whatever the program had been doing. Focus groups might be organized to develop job aids or more useful standards. Surveys could be applied to issues of patient satisfaction or the effectiveness of counselling and referral. The hallmark of MR is that we learn something about quality issues that we would not learn from straightforward implementation of a QA program.

The team may also wish to comment on the policy and demonstration uses of research, as distinct from strictly gaining knowledge. That is, in the course of conducting a study, investigators convey an important but indirect message, that problems can be analyzed and addressed, even in resource-poor programs, and that the field of QA can itself be improved. Research can thus be used to provide early, concrete examples of what QA seeks to produce. Some within the project have argued that early success is important to maintaining the commitment of policymakers, who may otherwise lose interest as endless QA training seems to produce little.

d. Institutionalization of QA: All of the long-term assistance provided by the project includes among its goals the establishment

of a permanent, institutionalized program for quality assurance. Team members will visit Chile, the oldest such activity, which has not had a project-funded resident advisor. The remaining three countries that will be visited have long-term advisors. In Jordan, you will observe the earliest stages of implementation; Egypt and Niger fall in between. Several distinct activities are intended to contribute to the objective of institutionalization of QA. Attempts to synthesize these diverse activities into a coherent project strategy are underway, and will be presented to the team. You should make observations on the overall synthesis, and on individual activities in this area, including:

1. Systems analysis: This is the formal, external quality assessment methodology developed under PRICOR. WHO, CDC, and others have developed similar methodologies, chiefly for use as program evaluation tools. The project collaborated with Aga Khan to simplify and disseminate this technique (the MAP modules), with the objective of making it suitable for more routine use by local managers. Nevertheless, objective data on provider performance, particularly of clinical processes, remain relatively rare. In the absence of such data, project staff see a tendency for local QA efforts to focus on non-clinical problems, which seem to be less threatening to physician-managers.

Since deficiencies in clinical care have been highly prevalent in every assessment to date, should the project try harder to keep local teams focused on patient care, rather than waiting time, etc? In commenting on this issue, you may wish to weigh the observation that, in many health programs, a systems analysis can be expected to produce a long list of deficiencies, which may be overwhelming.

Many perceive a conflict between the systems analysis-type of quality assessment and the overall philosophy of Total Quality Management (TQM), which explicitly seeks to place assessment-like activities in the hands of those who do the work.

The agreement envisioned a wide use of systems analysis to document overall changes in quality, but in several countries, other approaches have been substituted for monitoring and quality assessment. The team may comment on the relative value of different approaches to identifying quality problems, and to measuring the impact of QA activities. You may also wish to address the role of different impact measures in reinforcing support for QA within the health system, and internationally: Have techniques like systems analysis already served their purpose, or is there an ongoing role for them?

2. Training: Transferring skills and knowledge is a major element of the project's effort to institutionalize QA. The team may comment on the overall content of current training courses from this perspective, particularly noting any serious omissions or important areas that appear weak. You may also refer to any other

courses that might complement or duplicate these. A related issue for your attention is the inherently limited ability of the project to provide direct training to substantial numbers of LDC professionals.

In Chile, a cascade training strategy has been tried. You will also see examples of a small initial investment in computer-based training, which is untested. There also have been some efforts to include academic and training institutions along with health program staff, with the expectation that QA will eventually become part of regular professional training. The QA course at Johns Hopkins should also have a growing, long-term influence in this direction. Up to now, the project has not disseminated its training materials to other institutions. Is this a promising strategy for extending QA training to larger numbers of LDC professionals?

3. QA Organization and Planning: The team should comment on the project's approach to the organizational elements of QA, which has varied from country to country. Nevertheless, there are some general ideas, largely drawn from TQM sources, which are common among several countries. Does the emphasis on these generic planning steps, such as developing a vision statement, appear to play a useful role in institutionalizing QA? You may wish to recommend development of a more detailed set of guidelines for planning, based on available models, or is it advisable to wait until we have more direct experience in LDCs? Is planning a QA program so complex and situation-specific that the project should not invest in training courses and written materials addressing this area?

The team should also examine activities directed toward patient satisfaction. While this topic is prominent in the project's overall framework, there have been few field activities. Does this area merit more emphasis, in part to develop more political support for the larger QA program? There is an established tradition in development programs of working with community organizations, but little experience in enlisting such organizations in quality of care issues.

4. Evaluation and research: As suggested previously, one strategy for institutionalizing QA is to show early and convincing evidence that concrete improvements are possible through such a program. How much attention does this strategy merit, compared to the others in this list? In many respects, these activities compete with more straightforward approaches to institutionalization like training and planning. At what stage, in your experience, should the project direct limited resources toward studies and evaluations that document progress?

5. International organizations and QA advocacy: These organizations can support national QA programs financially and technically, and can facilitate exchanges among developing

countries. The team will be briefed on the project's liaison with WHO, ISQA, the World Bank, UNICEF, DANIDA, PAHO, INCLIN, NCIH, APHA, various USAID projects, and others. Considering the influence of these organizations, does this level of effort and overall approach seem appropriate? The team may wish to estimate the extent of the project's influence on these organizations, and suggest strategies for the future.

Is the project playing an effective role in advocating attention to quality? Is it expanding awareness and support for the idea that an organized QA program is an essential component of any health care system? We invite the team to assess the prospects for a long term, sustainable impact from this advocacy. Do you see potential indirect impact in countries where the project has not worked?

e. Short-term Technical Assistance: You will be briefed on a wide range of assistance activities carried out with limited, often short term mandates. For the most part, these activities have been in response to a specific request or opportunity for assistance that is related to quality issues, but with no commitment beyond that. To date, the project has responded to the majority of these requests, which include a wide variety of assistance activities. The agreement anticipates that in some more advanced countries, limited project assistance may be adequate for the development of a complete quality assurance program. Costa Rica appears to be fulfilling this expectation. In other cases, such as the Guatemala, the long term outcome is far less certain.

These field experiences have given the staff a broader exposure to field applications in general, and have probably advanced QA in ways that may be difficult to measure. Do these plausible, but uncertain benefits continue to justify an investment of resources in a short-term assistance activity that chiefly responds to outside requests? As QA becomes more common globally, is this mode of assistance likely to become more or less salient?

f. Information Base and Dissemination: The major dissemination vehicles of the project have been the QA Brief and QA Reports. The team will be able to review a full set of these publications and the mailing list to which they are sent. You will appreciate that these reports distill a wide range of project activities into a few pages. In part, the length reflects the judgement that a general readership will not read lengthy reports. There is also a large staff cost involved in preparing such publications. Weighing such limitations and costs, a central issue for the team is, do these publications adequately convey the project's growing field experiences to the appropriate audience?

Part of this issue involves the field staff, both resident advisors and technical staff who carry out short term assignments. It is these staff who must bear the burden of not only the field work itself, but of its documentation as well. As you review the work

that has been carried out under the project, the team should consider the process by which this work is initially documented and then communicated for the benefit of others. In several countries, project advisors have promoted the use of the TQM "storyboard" widely used in US health care institutions. Is this specific technique one that merits more emphasis?

We also invite the team's comments on the priority that should be given to publication of QAP approaches and findings in the quality assurance literature, and in the broader public health literature. You may also have suggestions for dissemination of the project's various monographs and training materials. The team should also review the brochure developed early in the project to introduce QAP to a broad audience, and a similar introduction to the project's assistance in micronutrients.

The team will be presented with a summary of the wide range of professional meetings at which QAP been represented, and other, less formal venues that have been used to communicate project ideas and activities. You may wish to propose others.

The overall organization of an information base will be summarized for the team, but actual data are for the most part limited to systems analyses done under PRICOR. Thus, we welcome the team's recommendations for developing a data base that will contribute to advancing the field. The agreement anticipates that documentation of quality problems and of efforts to solve them will provide useful lessons for other countries. Examination of the same quality issue in several countries is expected to produce insights that can be applied elsewhere. Does the team agree that a record of ordinary QA activities is potentially useful, and that comparisons among several countries may reveal patterns with practical implications? If you do, you may wish to offer recommendations on priorities and approaches for the data base.

E. General Issues for the Evaluation: In addition to reviewing the specific components of QAP, we ask the team to discuss the underlying proposition that quality of care is an important issue for the developing countries that USAID assists. We also ask you to address the soundness of attempting to adapt and apply quality assurance strategies that have been developed chiefly in industrialized countries. Finally, please comment on the overall approach that QAP has taken to its mandate. Is the general direction being taken by the project one that merits further development within the USAID portfolio; would you recommend a change in the overall strategy that the project has developed, or in components of it? Among the issues of particular interest are the following:

1. Quality assurance model: QAP has attempted to develop a fairly consistent approach to QA that is suitable for the wide range of circumstances under which the project works. This model draws on

several authorities in the field, incorporating more traditional QA thinking and elements of Total Quality Management. Only minimal attention has been directed toward issues of licensing, accreditation, and other regulatory approaches.

Most of the concrete QA techniques promoted by the project were developed in industrial countries to address relatively complex problems. These techniques emphasize a systematic analysis of the problem as the initial step. In many developing countries, there is a network of supervisors assigned responsibility for problem solving. And, as seen in systems analysis findings, these supervisors are confronted by large numbers of problems in the form of low levels of compliance with standards.

To what extent do the problems actually most prevalent in developing country programs require careful analysis? Project staff have observed that sometimes the solution to a problem seems obvious, that some problems are susceptible to an immediate administrative solution. If the effectiveness of such a solution is easy to evaluate, it may be simpler to simply try it than it would be to analyze the underlying causes of the problem. Thus, a clinician may simply have forgotten certain standards, and a simple reminder may be all that is needed. But the implicit message of QA techniques is to collect data and analyze the cause of a problem, potentially discouraging simple, common-sense solutions that might work, while using fewer resources. The team should comment on the place of these less formal approaches.

2. The Empirical Basis of Adapting QA to Developing Countries: The project began with the premise that quality problems in developing country health systems are so serious that current QA knowledge should be applied immediately. In parallel, however, the project also seeks to refine and adapt QA tools from industrialized countries for use in these new settings. Thus, training should increasingly incorporate developing country experiences, applications of various QA tools should be assessed and documented, and more formal research should be applied to further improving QA tools. The team should comment on the degree to which this complex process is taking place within different project components, and make recommendations for future strategies to advance the state of the art.

3. Standards: The role of standards is central to the project's basic concept of QA. Based on largely informal observations, few IDC health programs have developed standards that provide a solid base for QA. The team will be able to review a proposed training course on standards that reflects general principals, largely based on domestic experience. Is the project giving enough attention to this issue in its field activities? In particular, are we learning what distinguishes effective and ineffective standards in a developing country setting?

4. Evaluation of QA Activities: As the project gains experience in working with ongoing QA programs, it is important to consider how program managers should evaluate and manage these complex activities. The team may wish to propose criteria for judging the level of productivity of QA teams, to suggest how the cost-effectiveness of these efforts can be measured and improved.

5. Institutionalization: The ultimate test of the sustainability of QA activities is their continuing effective operation. But we welcome the team's recommendations regarding organizational strategies that seem to be associated with institutionalization of such programs. A component of this issue of particular interest is the role of management information systems in a QA program. You may wish to comment on the role of supervisor reports, the value of routine monitoring of process information, the importance of verifying selected reports, the time cost of reporting, and the need to routinely document QA activities.

6. The Role of Systems Analysis: There is no tradition of this kind of external process evaluation in quality assurance as practiced in industrialized country health systems. The team should consider if the circumstances of developing countries nevertheless justify wide application of such a technique to assess quality. If so, are more efforts needed to simplify and institutionalize systems analysis in these programs? You may wish to specifically comment on the PHC MAP modules, an attempt in this direction.

7. Benchmarking: QAP materials refer to this approach, borrowed from industrial QA, in which the practices of a successful counterpart unit or organization are analyzed and sometimes copied. The project has not yet developed case studies of actual benchmarking in a developing country health system. The team may wish to comment on the potential you see in benchmarking, and consider if this should receive more attention in field activities.

8. Seminal Research: The resources available for research in QA approaches is limited in QAP, and the demands of developing a QA program leave field staff with little time. To make the most of the project's limited capacity for research, some have suggested a "seminal research" strategy.

Such a strategy would attempt to encourage QA-related research by other organizations by providing examples of the kinds of studies that seem to be needed. The underlying premise is that, as a new field, QA in developing countries generally lacks research in several areas, and potential investigators do not have models for the kinds of studies that should be done in fairly large numbers. For example, job aids are frequently identified by QA teams as a potential solution. There is surprisingly little empirical knowledge in this very practical area. One obstacle to learning more about these tools is that local investigators have no basis for designing studies in this area. If at least one published study

were available as an example, more research might follow. On the other hand, a job aids study would probably do little to encourage research in other areas of QA that have been neglected, such as supervisor problem solving.

We ask the team to consider the issue of research in QA broadly. If you support the seminal research strategy, you may wish to identify priority topics. We also welcome your recommendations for organizing a limited research effort to maximize its output. You should also consider future needs in this area, beyond the end of QAP.

9. QA as a strategy: If the team accepts the proposition that the field of quality assurance brings to bear genuinely new approaches to the delivery of health services, then it is reasonable to compare QA with more established forms of assistance. USAID and other donors share the goal of helping countries to achieve integrated, sustainable basic health services that produce documented health benefits. In recent years, development assistance in health has emphasized vertical programs, but many are now questioning the ability of developing countries to sustain such an approach. In part, the vertical program strategy evolved in reaction to the difficulty of showing the health impact of earlier primary health care programs. Is an integrated approach to health service delivery, linked with a QA program, a more promising model?

F. Evaluation Team and Counterparts: This evaluation requires four senior level professionals, representing expertise in quality assurance and in the delivery of health services in developing countries, as follows:

Team leader: This position requires a medical degree, with extensive experience in the issues of quality assurance and epidemiology. The team leader should have direct experience with establishing a QA program in a developing country, as well as established expertise in quality issues in the U.S. health care system. Research and publications in the field of QA are also desirable.

International Quality Assurance Expert: This member should be recognized globally as an expert in quality assurance issues in a variety of countries, with extensive experience in dealing with policy and research issues. The International QA Expert should have a broad range of publications in peer-reviewed journals, and should have experience in assessing the work of other investigators and providing advice in QA-related research, such as through serving on the editorial board of scientific journals.

Social Scientist/Evaluation Specialist: The social scientist must have experience in several developing country health systems involving the evaluation of child survival services. This experience should include assessment of the performance of clinicians compared to a well-defined standard of care. This member

should have expertise in issues of counselling and behavior change. French language capacity is highly desirable.

International Health Expert: The International Health Expert should be a senior physician with extensive experience in multiple countries dealing with one or more areas of child survival. This experience should include direct work with USAID child survival projects. This member should have demonstrated analytical skills, and experience dealing with the performance of staff in both clinical and non-clinical areas. Familiarity with applications of Total Quality Management is highly desirable.

The Cognizant Technical Officer for USAID for the Quality Assurance Project is James Heiby, M.D., M.P.H. His office is located in room 1254 at 1601 N. Kent St., Rosslyn VA, telephone (703) 875-4576, Fax 875-4686.

The Evaluation Coordinator is Ms. Catherine Savino, Director of the Health Technical Services Project (formerly known as the ASSIST Project), room 905, 1611 N. Kent St., Rosslyn VA, telephone (703) 516-9166, fax 516-9188.

The Director of the Quality Assurance Project is William Jackman, M.D., University Research Corporation, Center for Human Services, 7200 Wisconsin Avenue, Bethesda, MD, telephone (301) 654-8338, fax 654-5976. The responsible corporate officer, and previous Project Director, is David Nicholas, M.D., M.P.H. The Administrative Coordinator is Ms. Connie Costa.

G. Evaluation Schedule: The team will have a number of previously arranged appointments with project and USAID staff, and in the second week, the team will visit field sites. Substantial unscheduled time is available to permit the team to interview project staff in depth on topics of interest, and to allow time for reading and discussions among the team. Your counterparts will be pleased to help arrange appointments as the team requests. About one hour should be allowed for travel between Rosslyn and the URC offices in Bethesda, which may be by auto or Metro. The team should feel free to work in subgroups or individually when this is more efficient.

Team members will receive selected documents on the project in advance of the evaluation; preparation time will be considered part of the evaluation.

The overall schedule is as follows:

Monday, June 13, 1994, 9:30 AM-12:30 PM: The team convenes in room 1258, USAID Office of Health, 1601 N. Kent St., Rosslyn, VA. Dr. Heiby will present an overview of the project from the USAID perspective, address issues raised by the evaluation statement of

work, and discuss the details of the evaluation schedule.

2:00-5:00 PM: The team meets in the offices of the Health Technical Services (HTS) Project, approximately 5 minutes by foot from the Office of Health, for administrative and logistical orientation, and team planning.

Tuesday, June 14, 9:00 AM: The team convenes at the URC reception desk, 6th floor, 7200 Wisconsin Ave., for an orientation briefing from the project staff.

Wednesday, June 15-Friday, June 17: Available for interviews and discussions to be scheduled with project staff, and USAID staff (in Rosslyn vicinity.)

June 18-26: Travel to field sites as follows:

The team leader will travel to Cairo, Egypt, where he/she will be met by Dr. Nadwa Rafeh, QAP Resident Advisor.

The social scientist/evaluation specialist will travel to Niamey, Niger, where he/she will be met by Ms. Lauri Winter, who will travel with him/her to the project site in the Department of Tahoua.

The international health expert will travel to Santiago, Chile, where he/she will be met by Dr. Gilda Gnecco, Quality Assurance Coordinator, and by Dr. Jessie Orlich, QAP counterpart in the Costa Rican Social Security Administration, who will precede him/her to Santiago.

The international quality assurance expert will travel to Amman, Jordan, where he/she will be met by Dr. Al-Assaf, QAP resident advisor.

In each field visit, the local USAID mission should be included if a representative is available.

June 27-30: The team will convene in the HTS offices to draft the evaluation report. Any team member who is unable to return to Washington should arrange to provide written input no later than June 29. Project staff will be available for meetings or by telephone as needed to address any issues raised by the field visits. A draft report should be provided to Dr. Heiby by the close of business, June 30.

Friday, July 1: Oral presentations of the team's findings and recommendations will be scheduled for the project staff and, separately, for USAID. Any further revisions of the report will be carried out by mail.

H. Format of the Report: The HTS contract includes a small number of specifications for consultant reports, which will be explained by the HTS staff on the first day of the evaluation. Beyond that, the organization and total length of the report are at the discretion of the team. Final editing will be the responsibility of the Team Leader. An executive summary of about five pages or fewer should be included, along with a list of recommendations for the project staff and for USAID.

The Office of Health appreciates your willingness to participate in this important evaluation, and we look forward to taking action on the basis of your insights and recommendations.

ANNEX II
EVALUATION SCHEDULE

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DRAFT AGENDA FOR MID-TERM EVALUATION WEEK

Tuesday, 6/14	Wednesday, 6/15	Thursday, 6/16	Friday, 6/17
<p>0900 Welcome/Admin Notes (WJ) 0915 Background to ARCSS/QAP (DN) 0930 Project Agreement Overview (SB) 0940 QAP's QA Approach (WJ) 1015 Q&A (Team/Staff) 1045 Break 1100 Institutionalization (LDB) Chile (LDB) Niger (WS) Nigeria (RM) Egypt (NW) Jordan (DN)</p>	<p>0900 Agenda Review/Modif. (WJ) 0915 Training Development (EM) 0945 Introduction to Issues (WJ) 1015 Staff Available to Team</p>	<p>0900 Agenda Review/Modif. (WJ) 0915 Contracting Issues (WJ) 1015 Staff Available to Team</p>	<p>0900 Agenda Review/Modif. (WJ) 0915 Country Briefings Niger (WS) Egypt (NW) Jordan (DN) Chile (LDB) 1100 Individual Country Briefings</p>
<p>1215 Lunch (all)</p>	<p>1200 Working Lunch Nigeria Country Pgm (SG)</p>	<p>1200 Working Lunch JHU QA Course (RM)</p>	<p>1200 Lunch 1300 Team to AID</p>
<p>1315 Meth Refinement (SB) Conceptual Advancements (SB) Products (SB) Studies Interpersonal Communications (BdN) Diarrheal Trng Comp Anaysis (JN) Guat. Comp Prob Ident Methods (JH) Cost and Quality (AW) 1415 Technical Assistance (SB) Guatemala Hospitals (JdA) Malawi Assessment (JN) Costa Rica (TV) Sick Child Algorithm (SB) 1500 Break 1515 Dissemination/Advocacy (DN/JT) 1545 Collab. w/ Other Projs/Orgs (LDB) World Bank/Uganda (RM or GB) World Bank/Indonesia (WS) Ecuador/LAC (LDB) 1615 Q&A (Team/Staff)</p>	<p>1315 QA in Categorical Programs Micronutrients (SB) Egypt (WA) Niger (WS) Philippines (SB) Africa Measles Init. (SB) LA Cholera Initiative (JH) Indonesia Fam Plan (WS) Tuberculosis (SB) Injury Control, Trinl. (RM) 1500 Staff Available to Team</p>	<p>1300 Discussion of Issues (WJ) 1430 Staff Available to Team</p>	

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ANNEX III

LIST OF PERSONS CONTACTED



Appendix III-1

Washington, D.C.

USAID

James Helby	COTR for Project
Robert Clay	Acting Deputy Director
	Office of Health and Nutrition
Robert Wrin	Acting Director
	Office of Health and Nutrition

Other

Nancy Pielemeier	Director, NIS Health Reform Project
Mary Taylor	Student in Johns Hopkins QA course

**Quality Assurance Project/University Research Corporation/
Center for Human Services**

William Jackman	Project Director
David Nicholas	Sr. Technical Program Advisor
Stewart Blumenfeld	Deputy Director
Lori Diprete Brown	Deputy Director
Wayne Stinson	Associate Director
Norma Wilson	Senior Scientist
Richard Morrow	Director, Division of Health Services, JHU Dept. of International Health
Jack Reynolds	Vice President, URC
Jeanne Newman	Sr. Technical Program Advisor
James Heiby	Management Council, USAID
Annemarie Wouters	Economist, Johns Hopkins University, Department of International Health
Tisna Veldhuyzen	Senior Scientist
Maria Francisco	Scientist
Elizabeth Mariani	Training Director
Stella Goings	JHU/Nigeria Resident Advisor
Walid Abubaker	Senior Scientist
Dennis Zaenger	Trainer
Gael Murphy	Scientist

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**Ray Panczyk
Teresa Hatzell
Jorge Hermida**

**Associate Director for Administration
Scientist
Scientist**

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NIGER

Ministry of Health, Niger

Dr. C. Amsagana Maina Boucar, Secretary-General

Tahoua

Dr. Xavier Crespin, Director, Department of Tahoua

Mr. Laouli Moussa, Adjoint, Department of Tahoua

Dr. Djakounda Mariama, Medecin-Chef

Dr. Youssef Mata, Medecin-Chef, CSMI

Ms. Idi Rabi, SFDE, Adjoint, MC/CSMI

Ms. Souley Ai, IDE, Najor, CSMI

Mr. Hassane Abdou, TSAS, Division of Nutrition

Ms. Chitou Roti, TSAS

Illela District

Ms. Laoualy Sama, IDE

Ms. Adama Oumaria, TSSD

Mr. Amadou Gajani, AS

Mr. Chaibou Doubou, IC

Mr. Saidou Boube, IC

Tchintabaraden District

Dr. Abani Maazu, Medecin-Chef

Mr. Mohamed Atta

Ms. Salamatou Alhousseini

Mr. Aziz Malame

Konni District

Dr. Saley Zakari, Medecin-Chef

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CiMeFor

**Dr. Hamidou Miye Hasmi, Director
Dr. Yada Adamou Alzouma**

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Appendix III-3

USAID and Contractors

Dr. Dan Blumhagen, Acting HPN Officer
Ms. Katrina Puffenberger, Child Survival Coordinator, JHU Fellow
Ms. Louise Whorlan, Niger Desk Officer, USAID Washington

URC

Ms. Lauri Winter, Resident Advisor, Quality Assurance Project
Mr. Evariste Midy, Chief of Party, National Family Health and Development Project
Ms. Julie Puyau, Technical Associate

Abt

Dr. Francois Pathe Diop, Technical Advisor for Health Economics, Health Financing and Sustainability Project

BASICS

Dr. Nancy Keith, Technical Officer
Ms. Rebecca Fields, Technical Officer

Helen Keller International, Niger

Ms. Else Sanogo, Country Director
Dr. Ferdows Brah, Coordinator, Vitamin A and Nutrition Communication Projects

World Health Organizaton

Dr. Yankalbe, Representative

UNICEF

Dr. Maximin B. Ouobo, Project Officer - Health

Appendix III-4

EGYPT

Dr. Nadwa Rafeh	Resident Advisor, QAP-Egypt
Dr. Samy S. Gadalla	QA Coordinator, QAP-Egypt, CRHP
Dr. Mona Abdel Moneim Hozaiin	Assistant to QA Coordinator, QAP-Egypt
Rosario Matti-Ong	OR QA Nurse, QAP-Egypt
Dr. Hassan El-Kalla	Director, Cost Recovery of Health Project (CRHP)
Dr. Nihal Hafiz	Asst. Dep. Dir. for Technical Affairs, CRHP
Richard Einsworth	USAID Mission
Dr. Sameh Al-Jayer	USAID Mission
Mrs. Fawzia	USAID Mission
Carl S. Abdon Rahmaan	USAID Mission
Dr. Mahmoud Bahgat	Hospital Director, May 15 Hospital
Members of the QA Committee, and OR Staff Nurses, May 15 Hospital	

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CHILE

QA Team

Dr. Gilda Grecco	QA Team Director, MSH
Ms. Ana Bassi	QA Team Member
Ms. Sonia Lucero	QA Team Member
Ms. Raquel Loncomilla	QA Team Member

Monitors (QA facilitators)

Mr. Lantaro Fernandez	Health Svcs Metropolitan South
Ms. Cecilia Moyer	Health Svcs Metropolitan South
20 additional monitors in large meeting	
Ms. Marcela Gomez	North HSA
Ms. Carmen Fuentes	North HSA
QI team members (60 in large meeting)	East HSA

MOH Officials

Dr. Alfredo Avendano	Director, Division of Peoples Health
Dr. Manuel Ipinza	Director, Department of Integrated Health Services
Mr. Carlos Anriquez	Offical, Operation International Unit

University Professors

Prof. Francisco Mardones	Dr. Gloria Pais
Dr. Adriana Campos	Dr. Sheril Rivera
Dr. Ruth Depaux	Dr. Gonzalo Marin
Dr. Ines Soles	

Other

Mr. Tom Nicastro	USAID Director
Dr. Carlos Azevedo	PAHO Deputy Representative

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Mr. Thomas Bossert
Mr. Roberto Nick Meyer
Ms. Jessie Orlich

USAID Health Project Evaluator
Chilean MOH Evaluator of
USAID Health Project
Costa Rican QA Leader

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JORDAN

A.F. Al-Assaf, MD, CQA
Abed Tayem, MD

Bushra Al-Nimry, MD

Fuad Al-Ayed, MD

Ja'afar Abu Talib, MD

Mr. Hatim El-Shaded
Khaled Al-Jakeed, MD
Mahoud El-Shahed, MD
Ma'amoon Ma'abra, MD
Mr. P.E. BalaKrishnan

Samir Al-Awamlea, MD

Suliman Al-Ghewi, MD

Usama Samawi, MD

Resident Advisor, FHS/QA Project
Acting Health Director, Balqa'a Health
Directorate

Deputy Project Director, FHS/QA
Project

Director of Planning & Project
Management

Assistant General Director, Balqa'a
Health Directorate

Business Manager, FHS/QA Project
General Director, Administrative, MOH
Secretary General, MOH

General Director, Technician, MOH
Director, Office of Health & Population,
USAID/Amman, Jordan

General Health Director, Balqa'a Health
Directorate

Monitoring & Quality Control Director,
MOH

Salt Hospital Director, Salt, Jordan

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ANNEX IV

**·DETAILED REPORTS OF SERVICE-LEVEL OUTCOMES
OF QUALITY ASSURANCE ACTIVITIES**

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Appendix IV-1

**DETAILED REPORTS OF SERVICE-LEVEL OUTCOMES
OF QUALITY ASSURANCE ACTIVITIES**

1. Quantitatively documented improvements

- In Niger, poor interpersonal communication between health workers and mothers was identified as a quality problem. In response, a training curriculum was developed, a training-of-trainers session conducted, health workers trained, and a supervisory checklist designed. Observations of trained and untrained workers documented significantly higher performance among health workers who had been trained (see Figure 1).
- In the Philippines, a team in a rural health unit used data from a quality assurance assessment to determine that health workers could not correctly describe the correct steps in the process of weighing children, calculating their age in months, and determining their nutritional status. After conducting a refresher course, the proportion of health workers reporting correctly how these steps should be performed increased dramatically (see Figure 2).
- In Chile, midwives determined, using QA techniques, that teenagers were confused about appropriate prenatal care procedures and therefore often failed to follow advice provided by the midwife. To increase compliance, they developed a simple orientation card that was given to all clients as they entered the clinic. The results indicated that reported compliance and knowledge of where to seek emergency care and obtain government benefits increased dramatically after this intervention.
- Also in Chile, the quality Team in one area documented that 80% of providers were not routinely recording respiratory rates for patients with acute respiratory infections. To improve documentation, a quality management Team developed a special rubber stamp for ARI case records. The stamp reminded providers of ARI documentation requirements and provided necessary space for recording respiratory rates. The introduction of the stamp led to immediate increases in correct reporting for ARI patients (from 9 to 100% in one clinic; from 40 to 100% in another).
- In one Guatemalan hospital, the infection rate after caesarean sections was reduced from 25 to 11% by carefully analyzing and addressing the common

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causes of infection. these causes included ruptured membranes, length of operating time, and time of day when the surgery was performed. Participants in the QA process developed a standard protocol for caesarean sections to further reduce infection rates.

PH

Appendix IV-2

- **In many developing countries, an important barrier to improving and maintaining health worker performance is the lack of transportation. Vehicle maintenance and repair are reported again and again as one of the most intractable problems facing rural health programs. In the Tahoua region of Niger, the quality improvement Team at the regional level accepted the challenge of developing a workable system for the public health garage. They developed a tracking system for each vehicle, designed an administrative system to monitor and control costs, provided training in vehicle maintenance and repair to all drivers, cleaned and reorganized the regional garage, and developed an inventory system for spare parts. A visit to the garage, and discussions with all those involved in this quality improvement activity, leave no doubt that this is a critical service improvement that will lead to improved service delivery. Preliminary estimates of costs suggest that there have been dramatic savings in the first three months after implementation of the reorganized system (see Figure 3).**
- **In Egypt, the QA Team in one hospital identified the Emergency Operating Room as an area of opportunity for systems improvement. There had been noted a worrisome increase in the number of times that various medical supplies were lacking in the OR. A Team was organized to analyze the problem. One month baseline data were collected to document the daily adequacy of critical supplies. Administrative changes were initiated addressing critical steps in the system of supply maintenance. After these changes were implemented, data collection continued. In contrast to the situation prior to intervention when the log registered shortages in 20 to 40 percent of the critical supplies daily, the post-intervention data revealed a steady decline in shortages each day. Within a month after the intervention, the daily shortage level reached zero, and has remained at that level since. Since the intervention, the hospital has not had to purchase emergency supplies due to a shortage discovered just before or during operations; and no surgeries have been postponed or referred to another hospital due to lack of OR supplies (a disturbing event occurring too frequently prior to the intervention).**
- **In Egypt, at the May 15 Hospital, the staff identified an area of potential improvement associated with patient and visitor traffic. There was no information desk. The first contact for every person visiting the hospital was a single window located at the front gate outside the main building. The long wait in line outside the gate was a source of irritation to patients and families. A process improvement Team was formed to study the problem and to suggest an**

ab

appropriate intervention. The action taken was to assign a qualified trained nurse to serve as a receptionist, and the training of the assigned nurse in Quality Customer Service. Special nurse receptionist uniforms were designed. Nurses subsequently assigned to the new reception/information desk were given special training in Quality Customer Service, and also were sent to a tailored Practical Training course at the Arab Contractors Medical Center in Saudi Arabia.

Documented results after these interventions included: no more waiting lines outside of the hospital; 50% more revenue generated from visitor fees; documentation in one of the popular Egyptian weekly magazines of client's and community's satisfaction over the changes.

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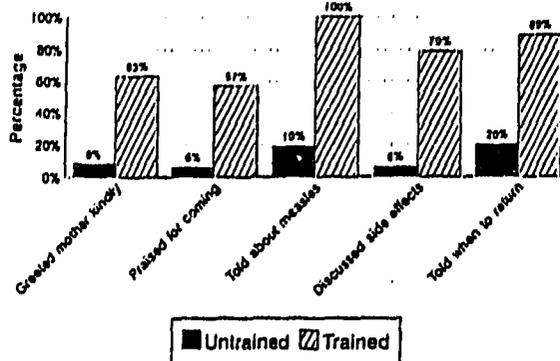
Appendix IV-3

2. Improvements with non-quantitative documentation

- The quality improvement in the Konni district of Niger analyzed the flow of patients through the clinic as a part of an assessment of malaria case management. They found that patients were waiting for services on a bare concrete floor, that they often became anxious because the order in which they were to be seen was not clear, and that there was no private place for physical examinations. The Team addressed these problems immediately, by building benches for the waiting area, issuing numbered slips of paper to patients as they arrived and seeing them in that order, and building a wooden frame draped with sheets to permit privacy during examinations. While there will be not quantitative documentation of these improvements in service quality, the staff report that patients are calmer and happier and that the staff are proud of their accomplishment.
- Also in Niger, but in the Tahoua regional medical center, a quality improvement Team analyzed why malnourished children were not returning to the clinic daily to receive food supplementation. In the process, they also discovered that ill children were not always being identified and referred for curative care during their visits. After working together as a Team to analyze the problem and develop solutions, the center's policy was changed to permit distribution of sufficient food supplements for a one week period (in accordance with national policy), and the reassignment of a nurse to the center intake station to ensure curative needs were identified and met. The Team will be monitoring drop-out nutrition rates, but a general strike has prevented full documentation of success of this effort. In this as in other local solutions, however, the Team reports that quantitative evidence is not needed to convince them that service quality has improved.

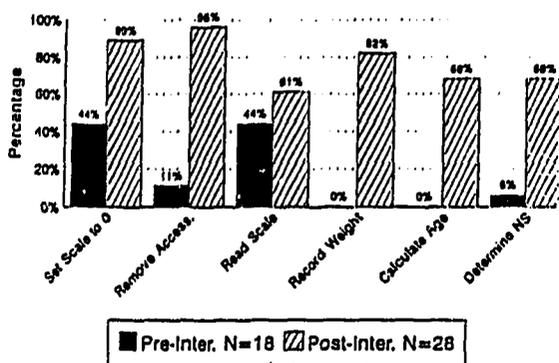
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Figure 1:
Quality of Interpersonal Communication with Mothers
by Trained and Untrained Health Workers



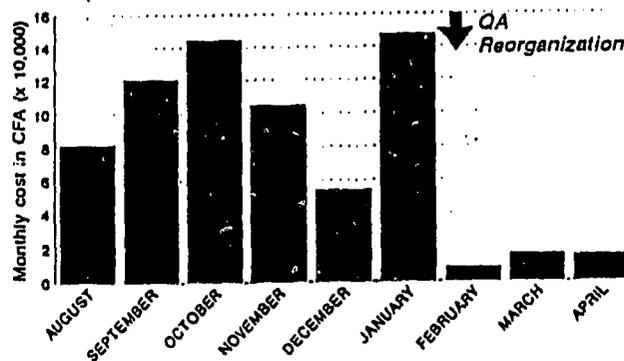
Measles Initiative
Niger, 1993

Figure 2:
Health Workers Reporting Correct Weighing Steps
Before and After Quality Intervention



Tibiao Rural Health Unit
The Philippines, 1994

Figure 3:
Monthly Costs* of Vehicle Maintenance and Repair
Before and After QA Reorganization of Garage



Tahoua Region, Niger

*Costs have been adjusted for devaluation of CFA in Jan '94

ANNEX V

INFORMATION ABOUT EVALUATORS

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Biographical Information about Evaluators

The Evaluation Team consisted of individuals experienced in quality assurance methodology and organization, the development of nation-wide systems of health care quality assurance, training program development and evaluation and first hand experience in developing country health care organization and delivery.

Team members consisted of:

- **Dr. James Hudson, the team leader, is Professor of Epidemiology and Preventive Medicine at the University of Maryland School of Medicine. Dr. Hudson has extensive experience in issues of quality assurance and epidemiology and direct experience in establishing a developing country Quality Assurance program. Dr. Hudson is also recognized as an expert in quality assurance issues in the U.S. health care system with numerous publications and relevant research in the QA field.**
- **Dr. Jennifer Bryce, currently with the World Health Organization Division of Diarrhoeal and Acute Respiratory Disease Control, served as the team's social scientist and evaluation specialist. Dr. Bryce has experience in several developing country health systems involving the evaluation of child survival services. She has expertise in counselling and behavior change.**
- **Dr. Robert Northrup, currently the Director of Primary Care & Health Services at Brown University School of Medicine's International Health Institute, served as the team's international health expert. Dr. Northrup is a senior physician with extensive international experience in child survival issues. He has had direct experience with several USAID child survival projects. Dr. Northrup has relevant expertise in the application of total quality management in both clinical and non-clinical areas.**
- **Dr. Hannu Vuori is currently the World Health Organization Special Representative to Zagreb. Dr. Vuori is recognized globally as an expert in quality assurance issues with extensive experience in policy and research issues. Dr. Vuori serves on the editorial board of nine scientific journals and has conducted numerous evaluations in the QA field. He is an Honorary Member of the International Society for Quality Assurance in Health Care and the Italian Society for Quality Assurance.**

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