

*Quality Assurance Methodology  
Refinement Series*

***Niger Country  
Report: Tahoua  
Project***



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## Preface

**T**he Quality Assurance Project (QAP) was initiated in 1990 to develop and implement sustainable approaches for improving the quality of health care in less developed countries. The project is funded by the U. S. Agency for International Development under Cooperative Agreement Number DPE-5992-A-00-0050-00 with the Center for Human Services. Collaborating with the Center for Human Services on the project are the Johns Hopkins University School of Hygiene and Public Health and the Academy for Educational Development.

This final report describes QAP technical assistance activities in the Tahoua Region of Niger during the period April 1993 through March 1997. It is anticipated that this report will eventually be supplemented by a report on 1997-98 activities, expected to be funded in QAP's second phase under Contract Number HRN-5992-C-00-6013-00.

Quality assurance in Tahoua Region has had dramatic effects on management styles and procedures as well as on the quality of health care services. In a time of generally deteriorating systems, the men and women of the Nigerien Ministry of Health have shown what dedication to clients and to improved health care—coupled with simple problem solving skills—can do to effect a turn around and begin making progress on long-standing problems. The Tahoua experience demonstrates that systems severely deprived of resources can be made to work better and that even individuals with limited professional training and low status within the hierarchy can take ownership for quality and make substantive and meaningful improvements. Improvement activities can continue despite political turmoil and non-payment of salaries. This phenomenon was noted in a recent letter of commendation from Dr. James Heiby, the Contracting Officer's Technical Representative for QAP:

□ □ □ *“When you began in Tahoua, there was no shortage of skeptics who dismissed the idea of improving quality of care in the Nigerien health system. [The QAP resident advisor's] persistence, good judgment and creativity have produced the kind of development achievement that very few of us ever experience. A wide range of fairly jaded development professionals have visited Tahoua, and every one that I talked to recognized something special in the QA activities there.”*

Quality assurance as implemented in Tahoua is now being replicated nationwide and seems likely to make Niger a model for health care in the region and the continent. The World Bank and the World Health Organization are committing funds to quality assurance—an example of successful USAID leveraging for other donors. The USAID Administrator, Brian Atwood, has authorized continued QAP assistance

despite closure of USAID/Niamey so that Tahoua can continue to serve as a regional model. The Tahoua project has brought significant respect for USAID in an often doubtful arena of development assistance. The Quality Assurance Project is proud to have been associated with this effort.

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## List of Acronyms

<b>CHS</b>	Center for Human Services
<b>CiMéFor</b>	Circonscription médicale de formation
<b>DHMT</b>	District Health Management Team
<b>DMO</b>	District Medical Officer
<b>EPI</b>	Expanded Program for Immunization
<b>FP</b>	Family Planning
<b>GM</b>	Growth Monitoring
<b>GTZ</b>	German Technical Cooperation Agency
<b>HKI</b>	Helen Keller International
<b>ISQua</b>	International Society for Quality Assurance in Healthcare
<b>MCH</b>	Maternal and Child Health
<b>QAP</b>	Quality Assurance Project
<b>QC</b>	Quality Council
<b>QIT</b>	Quality Improvement Team
<b>RHD</b>	Regional Health Directorate
<b>SNIS</b>	National Health Information System
<b>TB</b>	Tuberculosis
<b>USAID</b>	U. S. Agency for International Development



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## Executive Summary

**T**he Tahoua Quality Assurance Project has been a four-year collaborative effort between the Ministry of Public Health of Niger and the USAID-funded Quality Assurance Project, to improve the delivery of critical primary health care services by integrating and institutionalizing the quality assurance approach in the primary health care system in one demonstration region. The region of Tahoua, with an estimated population of 1.6 million and severely limited resources to meet the population's primary health care needs, was selected as the intervention site.

During its first phase (April 1993 to March 1997), the project sought to introduce a quality assurance system of management to health care delivery through training, clarifying and communicating clinical and management standards, monitoring, and putting in place a process for preventing and correcting problems. A "minimum package of essential services" was selected to be the focus of concrete efforts to enhance service quality through increased coverage, improved case management, and strengthened support services such as supervision and logistics. A QAP Resident Advisor, Ms. Lauri Winter, directed in-country activities, with technical support from QAP staff based in Bethesda. Ms. Winter worked directly with the Tahoua Regional Health Director, his staff and the district level health care personnel to accomplish project objectives.

The project's first major activity was to train regional directorate staff and teams from each of the region's seven districts in process improvement skills and to help them to launch quality improvement projects. The latter were intended to produce quick results that would generate enthusiasm for quality assurance and reveal deficiencies in the health management infrastructure underlying service quality deficiencies. These weak components would then become the targets for Tahoua Project support.

The project trained 76 health workers in quality assurance skills during the first two and half years. An additional 168 health personnel from all over the region were trained in May and June 1996, using a cascade training strategy. To date, over 60 quality improvement teams have been formed, achieving significant improvements in service quality and program management in Tahoua in areas such as growth monitoring, nutritional rehabilitation, tuberculosis treatment, family planning, malaria case management, prenatal care, family planning, supervision, and cold chain maintenance.

Six months after project start-up, the regional Quality Council (QC) was formalized to promote the regional vision and mission for a quality health care system, support and oversee the quality improvement activities in the districts, and ensure integration

of quality assurance in the overall primary health care system. Beginning as district level quality improvement teams, district management teams have since taken on permanent performance review and quality monitoring functions similar to those of the regional QC.

The Quality Council identified supervision as the main vehicle for introducing quality assurance and for preventing and correcting errors in quality of care. Analysis of the supervision system revealed significant gaps, such that the QC decided to redesign the entire system. A new supervision policy was instituted, creating a regional supervision team and integrated district level supervision teams which now play key roles in monitoring and improving the quality of service delivery.

To address the lack of clear clinical and managerial guidelines, the project assisted the Regional Health Directorate to develop a manual of norms and standards for vaccinations and for administrative functions. Job aids for tuberculosis and malaria case management were also created. Sufficient copies of existing clinical standards were reproduced and distributed to every health center.

Dissemination activities were emphasized throughout the project, as a means to both document progress and evaluate results. The primary vehicles for disseminating findings have included regular and special publications, international and in-country conferences, seminars and routine meetings. After two and a half years of experience and results in the field, the project organized in December 1995 a three-day national conference to disseminate among national and donor officials the Tahoua experience with quality improvement, quality-oriented supervision, and the use of norms and data to monitor gains in service quality.

Though contributing to the decentralization process was not an explicit objective of the Tahoua project, quality assurance has served to operationalize the goals of decentralization in the Tahoua Region by promoting increased responsibility for problem solving at the local level. The focus of quality assurance on systems and processes has enabled district managers to become more aware of how their health care system operates in reality and the ways they may improve it to achieve an effective decentralized system of health services. The attention given to teams by the project has been important because it reflects closely the proposed decentralized health management structure. Problem solving and process improvement efforts undertaken at the district level in Tahoua have strengthened analytical skills and improved action-oriented decision making.

The interest in quality assurance sparked by the national conference continues to present more opportunities to institutionalize quality assurance nationally. Quality assurance is planned to be one of the fundamental elements in the

proposed District Health Management Team curriculum. The Ministry of Public Health has proposed that quality assurance be one of its basic strategies to revitalize primary health care services in Niger, along with an enhanced Bamako Initiative approach emphasizing district organization and Integrated Case Management of Childhood Illness. The World Bank, UNICEF and the World Health Organization have all agreed to finance in 1997 quality assurance activities in the areas that they influence.



# Niger Country Report: Tahoua Project

*This report summarizes the activities and results of the Tahoua Region Quality Assurance Project undertaken by QAP in collaboration with the Ministry of Public Health Regional Health Directorate of Tahoua, Niger from April 1993 to March 1997.*

## I. Introduction

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### A. Project Scope and Objectives

**T**he Tahoua Quality Assurance Project began in April 1993 and continued through the end of March 1997. Through this effort, USAID/Niger sought to provide the Government of Niger with both technical and operational assistance to improve the delivery of critical primary health care services in one demonstration region by integrating and institutionalizing the quality assurance approach in the primary health care system. Tahoua Region, one of eight regions of Niger, was selected as the site for institutionalizing a quality assurance system.

The Tahoua project was designed with four main objectives:

- Identify priority programs and determine the resources necessary to promote improved health status of the population.
- Introduce a quality assurance system of management to health care delivery through quality assurance training, clarifying and communicating clinical and management standards, monitoring, and putting in place a process for preventing and correcting problems.
- Improve family health service quality by strengthening core support services, increasing effective coverage of the population with preventive services, and improving case management of the most prevalent conditions threatening the well-being of women and children.
- Demonstrate the effectiveness and feasibility of quality management strategies [by assessing the application of quality assurance interventions, analyzing impact, and disseminating findings.

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A QAP Resident Advisor, Ms. Lauri Winter, directed in-country activities, with technical support from QAP staff based in Bethesda. Ms. Winter worked directly with the Tahoua Regional Health Director, his staff and the district level health care personnel to accomplish the project objectives.

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## B. Decentralization of Niger's Health System

**A**t the time of the start-up of the quality assurance project, Niger was in the process of implementing a major process of decentralization of management functions from the central level Ministry of Public Health to the regional and local levels, including planning, monitoring, logistics and financial management. Decentralization represented a radical departure from the country's tradition of highly centralized management and decision making, wherein a variety of vertical programs—such as vaccinations, family planning and malaria—were controlled by coordinators in the central Ministry.

Niger's Ministry of Public Health was reorganized to improve the definition of roles and responsibilities at each level of the public health system. However, at the beginning of the Tahoua project, most of the internal mechanisms and systems needed to support changes in behavior and improve communication and feedback had not yet been developed. While regional management structures in the form of Regional Directorates of Health Services did exist, the critical management structures which were envisioned at the district and community levels had not been operationalized.

The Regional Directorates continue to depend on the central Ministry of Public Health for human, technical, and material resources. A number of preventive and curative services continue to function as vertical programs, each with its respective training program, resource distribution system, and technical support. As a consequence, managers and front-line health workers are often burdened by competing demands from these vertical programs while feeling frustrated by the lack of central-level attention and responsiveness to local needs.

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## C. The Tahoua Region

**T**he Region of Tahoua has severely limited resources to meet the population's primary health care needs. The estimated 1.6 million inhabitants are served by one regional hospital, one mission-run hospital, seven medical centers, twelve birth centers, eight maternal and child health centers, and thirty-eight rural dispensaries. Many of these structures are in a state of disrepair, with meager funds for basic maintenance. Access to health services is constrained by geographic dispersion of

the population, harsh terrain and a low provider/client ratio. At the project's inception, only an estimated 24 percent of the Tahoua population lived within a 5 kilometer radius of a health center, though with some infrastructure improvements, this proportion had increased to 34% in 1997. Logistical support for outreach remains scarce, and community involvement in health service management is rare.

At the outset of the Tahoua project, quality deficiencies most commonly cited by health personnel were associated with inadequate resources to maintain the health care structure. Poor care was generally traced to insufficient personnel, drug shortages, inadequate supplies and equipment, and lack of transportation for supervision and outreach. Health personnel typically blamed low coverage rates on the population, whose ignorance or lack of initiative allegedly led them to refrain from seeking modern medical services or to abandon services before completing care.

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#### D. The Quality Assurance Approach

**T**he Quality Assurance Project's fundamental mandate is to institutionalize methods for quality assessment and improvement within the health systems of less developed countries. Yet there had been virtually no experiences by any organization worldwide of introducing quality assurance mechanisms into a health infrastructure as weak as that of Niger. QAP accepted the challenge given the region's dire need for improvement and also accepted the opportunity to learn collaboratively how to adapt quality improvement methods in even the most resource-limited health systems.

The QAP methodology blends traditional quality assurance methods, which emphasize standard setting and performance monitoring, with a more comprehensive management approach to quality improvement which aims to create the systems, behaviors, and attitudes that favor continuous improvement. Key elements in QAP's approach are a focus on client needs, thorough examination of systems and processes, reliance on actual data about problems and improvements, and fostering of team work and participation in quality improvement. It was recognized in the Tahoua project's design that to promote institutionalization of methods for quality assessment and problem solving, the project would need to address fundamental management processes at the regional and district levels.



## II. Steps Toward Institutionalization

### A. Identification of Priority Services and Quality Problems

**A**s a first step, the Tahoua Regional Health Director, his staff, and Ms. Winter reviewed the major health risks threatening mothers and children and took inventory of the primary health care services offered in response. From this analysis, they selected clinical interventions to be included in the “package of minimum services” to be targeted for Tahoua project support. These services included: family planning; prenatal care; nutrition; immunization; and case management of diarrhea, malaria, tuberculosis, and acute respiratory infection. The Regional Health Director and Ms. Winter then established a preliminary work plan with strategies corresponding to the project objectives.

To address service quality deficiencies, the Tahoua project developed the following strategic interventions through which quality assurance techniques would be promoted:

- Training and supporting quality improvement teams,
- Strengthening the supervision system,
- Improving management, communication and information systems (through training and systems development), and
- Adapting and communicating clinical and managerial norms and standards.

The project’s first major activity was to train personnel in process improvement skills and to help them to launch quality improvement projects. The latter were intended to produce quick results that would generate enthusiasm for quality assurance and to reveal deficiencies in the health management infrastructure underlying service quality problems. These weak components would then become the targets for Tahoua project support.

Once the process improvement projects were initiated, Ms. Winter and her regional counterparts began gathering information about the health system infrastructure. It did not take long to discover weaknesses in nearly all management systems that support service delivery: standard setting, supervision, monitoring, human resource management, medical supply distribution and maintenance, transportation, and administrative communication.

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## B. Development of a Structure for Quality Assurance

**T**he institutional framework developed to support quality assurance in Tahoua Region made use of existing organizational structures by imbuing them with new functions and providing training and technical support to strengthen managerial capabilities.

Six months after project start-up, the Quality Council (QC) was formalized to promote the regional vision and mission for a quality health care system, oversee the implementation of project activities, and ensure integration of quality assurance in the overall primary health care system. The Tahoua QC is comprised of the Regional Health Director, two district medical officers and two other regional staff elected by their peers, and Ms. Winter. Meeting monthly, the QC uses quality of care and other indicators to review system performance and set priorities.

Quality improvement teams (QITs) were established in each of Tahoua's seven districts, based in the district medical centers. The District QITs are responsible for initiating quality improvement activities within the district and assisting with facility-level process improvement efforts.

On a quarterly basis, regional managers and representatives from the district level teams meet to share experiences, review progress of the QITs, and discuss issues of mutual concern.

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## C. Training and Support of Quality Improvement Teams

**T**raining was a central strategy in Tahoua to enable health personnel to apply quality assurance concepts and methods. The first major training activity launched quality improvement teams for process improvement and problem solving at the Regional Health Directorate level and at the seven district medical centers. Training gave participants a framework and skills to systematically solve quality-related problems as a team, using methods and tools adapted to local conditions. During the training workshops, participants chose a problem, drafted a definition statement and began preliminary analysis before leaving training.

The project trained 76 health workers in quality assurance skills during the first two and half years. Participants in the project's December 1995 dissemination conference recommended that all health center personnel in Tahoua be trained in the quality assurance problem solving approach, in order to sustain gains amidst frequent personnel moves. An additional 168 health personnel from all over the region were trained in May and June 1996, using a cascade training strategy.

Personnel trained prior to December 1995 formed 25 QITs and worked through 30 problem resolution cycles, 70 percent of them producing concrete improvements. An additional 39 teams began work in 1996, but those trained through the cascade approach were somewhat slower in developing activities.

Quality improvement teams were initially given technical support and coaching by Ms. Winter, who visited quality improvement teams every six weeks or so to motivate and help them apply the quality assurance methodology. The Regional Health Director also made site visits. Intense follow-up was found to be essential because quality assurance techniques and tools required very different attitudes and skills than what health workers were accustomed to.

QAP trained other regional staff to serve as coaches or facilitators to the QITs in May 1995 and again in October 1996. The role of the facilitators was to ensure correct application of problem solving tools, oversee teaming arrangements and activities, and provide other technical support. The second event trained district management teams to integrate coaching into the regular supervision system.

Appendix A summarizes the problems addressed and results of the initial cohort of QITs. Appendix B provides an inventory of training activities conducted by the Tahoua Quality Assurance Project.

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## D. Strengthening of Supervision and Management Systems

**T**he Quality Council identified supervision as the main vehicle for introducing quality assurance and for preventing and correcting errors in quality of care. Analysis of the supervision system revealed significant gaps, however, due in part to the lack of time and resources on the part of the district medical officers. To address these underlying constraints on supervision, the QC decided to redesign the entire system.

A new policy was developed which created a regional and integrated district level supervision teams and which detailed their organization, roles, responsibilities, methods, frequency, and reporting requirements. The district supervision teams predated official constitution of the district health management teams in July 1996 and gave their members a head start in grappling with the management needs of running a district.

With assistance from Circonscription médicale de formation (CiMéFor), Ms. Winter had trained the seven district supervision teams in quality assurance and basic supervision techniques by early 1994. A second more advanced supervision course

held in January 1995 emphasized norms and standards, data analysis, quality assurance and leadership. The supervisory reporting system was streamlined to reduce paper work and provide appropriate analysis and feedback to supervisees and to the regional level. Checklists for quality monitoring were reintroduced to emphasize clinical and management of the “minimum package of essential services.”

The project introduced improvements in other management systems by analyzing existing processes, identifying ways to strengthen them, and then developing norms and standards to communicate the improved procedures. Key areas of management strengthening addressed by the project were personnel management, equipment inventory and distribution, and garage maintenance.

The project sponsored the Regional Administrator to attend short courses in financial and personnel management. The new Regional Health Director assigned in February 1996 was sent to Morocco for initial training in the quality assurance approach.

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## E. Adaption and Communication of Norms and Standards

**T**o address the lack of clear clinical and managerial guidelines, the project assisted the Regional Health Directorate to develop a manual of norms and standards for vaccinations and job aids for tuberculosis and malaria case management. Sufficient copies of existing clinical standards were reproduced and distributed to every health center.

A gap in the availability of norms and standards for management and administrative functions was identified by supervisors. A multidisciplinary, multilevel team was convened to develop a Standard Operating Procedures Manual for the Managerial and Administrative Procedures in health centers and districts, including personnel management, equipment inventory and vehicle maintenance. The manual was finished in September 1996 and disseminated through the district-level quarterly meetings.

The quality improvements initiated in the districts helped focus attention on services for which norms or standards were not clear. Needs were identified for training in several areas, including clinical nutrition, the 8 month tuberculosis treatment, use of basic laboratory tests and microscopes, and management training for the district health teams. The project helped develop the corresponding training curricula (*see Appendix B for more details*).

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## F. Dissemination

**D**issemination activities were emphasized throughout the project, as a means both to document progress and to evaluate results. The primary vehicles for disseminating findings have included regular and special publications, international and in-country conferences, seminars and routine meetings. Appendix C gives a brief summary of Tahoua project dissemination activities during 1993-1997.

The project's primary means for internal dissemination is the quarterly bulletin entitled "ADER SANTE INFO" which is written, edited, designed and distributed by the Regional Health Directorate staff. Unsolicited articles have been submitted by quality improvement teams, describing problem solving activities and addressing general concerns of the health staff. Responses to the publication from the field have been positive, and interest in continuing the ADER remains high.

After two and a half years of experience and results in the field, the project organized in December 1995 a three-day national conference to disseminate the Tahoua experience with quality improvement, quality-oriented supervision, and the use of norms and data to monitor improvements in service quality. The approximately 120 participants were drawn from the central and regional units of the Ministry of Public Health, major donor agencies, and non-governmental organizations active in the health sector. Participants made a series of recommendations on how to extend and sustain the quality assurance approach in Niger. Based on the results in Tahoua, the conference participants endorsed the quality assurance methodology as an effective tool for improving the quality of clinical and support services at all levels of the Nigerien health system and called for inclusion of quality assurance training in basic and in-service training for all health providers. Appendix D presents the complete list of participant recommendations.

The Tahoua Quality Assurance Project has become well known in the Sahel and more widely, with the World Health Organization, the World Bank and others expressing strong interest in replication. Project counterparts from the Regional Health Directorate and the districts have made numerous presentations in country and internationally, including to the International Society for Quality Assurance in Health (ISQua), the Greater Horn of Africa Quality of Care Conference, and an Africa regional meeting of the World Health Organization.

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## G. Collaboration

**Q**uality assurance efforts in Tahoua have, since their inception, always endeavored to complement resources and collaborate with other health interventions, whether initiated by the Ministry of Public Health or by other donor projects. The project sought particularly to collaborate with other USAID-funded health

interventions, as evidenced by QAP's strong coordination with BASICS in Niger. A good example of this collaboration is the project's consistent use of data from the national health information system in problem identification and analysis processes, effectively illustrating its utility in local level decision-making processes. Other opportunities, such as adapting the Ministry financial management system regionally and eventually in the districts, were cut short by the change in Niger's political process.

Other examples of collaboration with the Ministry of Public Health have been the creation of the clinical nutrition curriculum (which was developed in collaboration with Helen Keller International), the training and testing of the 8 month tuberculosis treatment regime, and participation in the national workshops on supervision. The Tahoua QAP team worked with CiMÉFor on development of their supervision curriculum and has since shared it with CARE/Zinder, the Guinea Worm Eradication program and Helen Keller International. Together with ALAFIA and the GTZ family health intervention in Tahoua district, QAP co-sponsored the initiation of a data collection process to help define future referral procedures between districts and secondary level facilities.



### III. Results

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#### A. Institutionalization of Quality Management

**T**he project succeeded in creating an effective structure to regularly monitor quality at all levels in the region’s primary health care system through the Quality Council. Beginning as district level quality improvement teams, district management teams have since taken on permanent performance review and quality monitoring functions similar to those of the regional QC.

Integrated district supervision teams were constituted and now play key roles in monitoring and improving the quality of service delivery. Comprised of the District Medical Officer (DMO), the senior nurse, a nurse-midwife and a statistician, teams visit dispensaries at least every quarter, observe services as they are delivered, discuss any problems, and assist quality improvement teams.

Quality improvement teams are constituted to resolve specific problems and then disbanded or re-focused onto other problems. QIT membership has often crossed organizational levels, as needed for specific processes, contributing to a sense of broad ownership and participation. Quality improvement teams have more recently included community representatives in addition to health personnel.

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#### B. Improved Management and Service Quality

**T**he Tahoua Quality Assurance Project achieved significant improvements in the quality of service delivery and program management, as detailed in Appendix A. One or more quality improvement teams worked on growth monitoring, nutritional rehabilitation, tuberculosis treatment, malaria case management, prenatal care, and family planning. While some results applied only to specific clinics, the problems addressed almost certainly occurred elsewhere as well. Others—primarily management improvements—applied to the region as a whole and produced secondary effects.

Table 1 shows certain coverage and utilization statistics for Tahoua, in relation to regional objectives. Most indicators document significant improvements between 1995 and 1996 and show results close to or better than regional objectives.

Table 1: Selected Service Monitoring Indicators			
Percent Coverage of Population 0-5 km = Pop. within 5 km. of health facilities Total = Total population in the region	1995	1996	Regional Target
Utilization of curative consultation (0-5 km)	11%	33%	
Utilization of growth monitoring (0-5 km)	69%	88%	85%
Utilization of growth monitoring (total)	29%	36%	
Utilization of prenatal consultation (0-5 km)	70%	85%	85%
Utilization of prenatal consultation (total)	32%	40%	
Rate of high risk pregnancies detected (0-5 km)	6%	7%	
Family planning drop-out rate (0-5 km)	14%	11%	
BCG coverage 0-11 months (0-5 km)	87%	107%	90%
BCG coverage 0-11 months (total)	38%	70%	40%
Measles vaccination coverage 0-11 months (0-5 km)	61%	83%	80%
Measles vaccination coverage 0-11 months (total)	35%	54%	30%
DPT/Polio coverage 0-11 months (0-5 km)	52%	69%	80%
DPT/Polio 3 rate of return 0-11 months (0-5 km)	62%	66%	90%
Tetanus 2 coverage of pregnant women (0-5 km)	28%	35%	90%
Tetanus 2 rate of return (0-5 km)	80%	65%	90%

Quality-oriented supervision became a regular activity in the districts of Tahoua. Many of the quality improvements accomplished by QITs resulted from the identification of problems during supervision. Coaching of specific problem solving activities has become a routine part of supervision visits.

Quarterly regional and district meetings initiated by the project have provided a forum to monitor the performance of the health system based on service statistics and the progress of QITs. The teams analyze feedback from the supervision system, discuss issues and problems identified during the quarter, and establish priorities for further analysis. Regional and district meetings often led to the creation of cross functional teams to deal with multiple level problems. They also contributed to participatory decision-making on management of the health care system at each of the levels.

A good example of the quality monitoring function that supervision has assumed in Tahoua is the case of the Ibohamane health center, where staff, through a quality improvement process, increased participation in growth monitoring services from 5% to 60% by improving health education messages to mothers, involving village health workers, and making services available on a daily basis. Staff maintained these rates for about a year, until new personnel were assigned to the facility. During a follow-up visit, a supervisor discovered that coverage had fallen back to 20%, prompting a renewed problem-solving effort. The new staff analyzed the problem, and previous gains were quickly restored.

Regional staff made substantial improvements in transport and logistics. These in turn permitted more frequent supervision and greater reliability in the vaccine cold chain. Supervisors became much more adept at monitoring quality, supporting problem solving and providing feedback and using data.

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### C. Tahoua Experience Documented and Disseminated

**T**he synergy created since the national dissemination conference in December 1995 continues to present more opportunities to institutionalize quality assurance nationally. QAP has already had influence on the proposed District Health Management Team curriculum. It has been recommended that the quality assurance methodology and approach be one of the fundamental elements in that training.

The collaboration with BASICS has put Ms. Winter in touch with more national level efforts. During UNICEF and WHO's first francophone country orientation for the integrated case management of childhood illnesses, held in Niger in August 1996, the BASICS field experience in Niger was presented along with the introduction of quality assurance as a way to improve the implementation of the suggested protocol in the field.

The Ministry of Public Health's interest in creating a central level quality improvement team to focus on supervision and coordination issues for the central level demonstrates the tangible role quality assurance can play. Continued project participation in numerous workshops has led to quality assurance being one of the strategies proposed to revitalize primary health care services in Niger, along with an enhanced Bamako Initiative approach emphasizing district organization and Integrated Case Management of Childhood Illness. The World Bank, UNICEF and the World Health Organization have all agreed to finance in 1997 quality assurance activities in the areas that they influence.



## IV. Lessons Learned

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### A. Factors Contributing to Success

**T**he Tahoua Quality Assurance Project succeeded because of many factors but there were two particularly significant development efforts which coincided. The first and undoubtedly most important was the Ministry of Public Health's effort to decentralize health care management, initially from Niamey to the regions and later from regions to districts. This opened the door for staff to suggest new ideas and to take the initiative for change. Niger's declining economy during this period was in some respects a blessing in disguise: The national government clearly could not solve problems for regions and thus districts took responsibility for improvements themselves. Decentralization is not a prerequisite for successful quality assurance, but local participation in designing structures and processes probably is—and decentralization is thus made more likely.

The second supportive event—and one for which USAID and the Quality Assurance Project can claim credit—was the introduction and careful nurturing of modern quality management techniques. These techniques favor team responsibility and continuous quality improvement by emphasizing:

- A focus on clients' needs and rights as the ultimate guide for program changes.
- A focus on processes and on the improved use of existing resources rather than on unrealistic hopes for new inputs.
- Use of teams—participation of staff at all levels and of clients—to analyze and resolve problems.
- Use of data rather than guesswork to identify deficiencies and develop improvements.

These principles reinforced decentralization by conveying specific skills to enable personnel to assume newly assigned responsibilities. They drove home the point that district and regional teams themselves must be responsible for quality, for more effective use of existing resources rather than solely rely on the central government or outside donors. They encouraged a refocus away from needs of vertical systems towards the needs of clients. Quality assurance took hold in Tahoua because existing systems were receptive to change and because enthusiasm was generated early on and was harnessed to motivate change.

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## B. Constraints

**D**espite the contributions that quality assurance has made toward the effective decentralization of health care in Tahoua, there remain some constraints to fully realizing local empowerment and greater willingness to associate the population in decisions.

First, the excessive mobility of personnel has placed a significant constraint on project implementation, creating the need for frequent retraining and hampering progress of quality improvement teams.

Second, there is a significant need to upgrade pre-service training to prepare health staff to contribute fully to quality improvement efforts.

Real integration of programs and services is also hampered by lack of donor coordination within the health sector which perpetuates central level programming and thereby ignores the internal priorities and schedules of the region and the periphery.

Finally, another challenge to surmount before the quality assurance approach or decentralization can be fully realized is the strong fatalistic attitude which permeates the society in which the health care system operates. The current reliance on outside assistance tends to reinforce this attitude that change is beyond the control of local managers and providers. In a health care system that experiences chronic shortages of all kinds, it is not surprising that one who works in this system would feel discouraged. However, by working in teams colleagues remind one another of the positive changes that have occurred, inspiring continuous efforts.

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## C. Lessons for Future Quality Assurance Activities

**T**he Tahoua experience offers a number of lessons for the rest of Niger and other countries facing similar health sector challenges:

- Quality assurance can succeed even when resources are severely constrained. Indeed, success may be more likely when self-reliance and change are unavoidable.
- Even an approach intended to empower workers may be introduced from the top down. Such hierarchical processes as supervision may be useful for initiating bottom-up change.
- The presence and technical support of a long term resident advisor assured local adaptation of training content and strategies, maintained respect for a collaboratively established calendar of activities, assisted in the coordination of resources, and helped focus priorities.

- Starting small at the health facility level helped obtain tangible results, giving workers confidence. Solving problems locally with local resources became the slogan of ownership in the process. Not surprisingly, as one problem was tackled many other problems simultaneously found solutions. Being able to see positive results from their own efforts motivated teams.
- Tahoua was a modestly funded project but had flexibility in determining use of funds. The provision of resources to support quality improvement was predicated on analysis of need and commitment to follow up on use. This enabled limited resources to be used to maximal effect without undermining local self-reliance.



## V. Conclusions

While the impetus for quality assurance in Niger was a top-down decision, introduced from outside the system, once the process was initiated through the training and formation of quality improvement teams, the process converted to a bottom-up one in which problems were identified and solved at the district and peripheral levels. Indeed, it was in the first follow-up coaching visits by Ms. Winter and the newly appointed Regional Health Director that an interpretation of the quality assurance approach specific to Tahoua was articulated:

□ □ □ *“The point of quality assurance is to find local solutions to your problems by working with your colleagues and your population; once solutions have been implemented at your level and you still have problems you should bring them to the RHD attention; only if the solution is then beyond the RHD’s ability to solve will the RHD then ask the central level or the Tahoua Quality Assurance Project to help solve it.”*

This statement aptly reflects how quality assurance has served to operationalize the goals of decentralization in the Tahoua Region. Although the institutionalization of quality assurance methods in Tahoua was not intended as a deliberate decentralization design, the manner in which decisions are now being made and the way systems are set up to implement these decisions have promoted increased responsibility at the local level.

The collaboration between the Tahoua regional and district health services and the Quality Assurance Project has brought to light many of the requirements and challenges of decentralization in the Nigerien context. The focus of quality assurance on systems and processes has enabled district managers to become aware of the way their health care system operates in reality and the ways they may improve it to achieve an effective decentralized system of health services. The attention given to teams by the project has been important because it reflects closely the proposed decentralized health management structure. Problem solving and process improvement efforts undertaken at the district level in Tahoua have strengthened analytical skills and improved action-oriented decision making. All of these are critical to effective decentralization.

## Appendix A: Results of Quality Improvement Team Problem Solving Processes

Team	Problem to be Solved	Tools Used in Analysis Problem	Principal Causes Identified	Solutions	Results	Comments
District: Birni/Konni Medical Center QIT	Incorrect treatment of malaria (source: brainstormed priority of staff)	<ul style="list-style-type: none"> <li>▪ Flow chart</li> <li>▪ Observations</li> <li>▪ Treatment register analysis</li> </ul>	Provider ignorance	<ul style="list-style-type: none"> <li>▪ In-service training</li> <li>▪ Posting of job aide</li> <li>▪ Improved patient flow</li> <li>▪ Systematic taking of vital signs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Correctly treated malaria cases increased from 25% to 75%</li> </ul>	Patients and clients satisfied with new patient flow
Dispensary Malbaza	Non-satisfaction of clients in their reception and comfort for prenatal care and growth monitoring (source: brainstormed priority of staff)	<ul style="list-style-type: none"> <li>▪ Cause-effect diagram</li> <li>▪ Interview of clients</li> </ul>	Lack of space to sit and wait	<ul style="list-style-type: none"> <li>▪ Provision of drinking water for client use</li> <li>▪ Build shed for shade</li> <li>▪ Place more benches</li> </ul>	<ul style="list-style-type: none"> <li>▪ Successfully recruited community support</li> <li>▪ Village chief will build shed for shade</li> <li>▪ District supervision &amp; village chief supplied hose &amp; barrel for water supply</li> <li>▪ Clients will supply drinking cups</li> <li>▪ QAP is financing benches</li> </ul>	
Dispensary at Guidan Idder	Low measles vaccination coverage (source: SNIS service statistics)	<ul style="list-style-type: none"> <li>▪ Cause-effect diagram</li> <li>▪ Flow charts</li> <li>▪ Analysis of vaccination register</li> </ul>	Assumed population not aware of vaccination schedule of availability	<ul style="list-style-type: none"> <li>▪ Changed prevention service schedule to more efficiently rotate village &amp; neighborhoods</li> <li>▪ Publicity of new schedule with health education in villages &amp; neighborhoods</li> <li>▪ Taking names of dropouts &amp; following up through village health volunteers</li> </ul>	<ul style="list-style-type: none"> <li>▪ Measles dropout decreased 60% to 30%</li> <li>▪ good increase (18% to 83%) measles coverage for 0-11 mo. age group</li> <li>▪ 80% of 9-11 age group identified in villages came to center for vaccination</li> </ul>	

## Appendix A: (cont.)

Team	Problem to be Solved	Tools Used in Analysis Problem	Principal Causes Identified	Solutions	Results	Comments
District: Tahoua Medical Center MCH Center	1. Only 6% of children enrolled in CRENA and 36% dropout rate from CRENA (source: SNIS stats brainstormed priority of staff)	<ul style="list-style-type: none"> <li>▪ Flow chart</li> <li>▪ Observation checklist based on norms of service</li> </ul>	<ul style="list-style-type: none"> <li>▪ Expectation of daily attendance, which is beyond norm</li> <li>▪ Non-comprehension of what service was about</li> <li>▪ Perception that children not getting better</li> </ul>	<ul style="list-style-type: none"> <li>▪ Reorganized flow of patients through the clinic service</li> <li>▪ Integrated a nurse for curative treatment of this service</li> <li>▪ Reorganized schedule of service according to norms</li> </ul>	<ul style="list-style-type: none"> <li>▪ Reduced waiting time from 3-4 hours to 45 mins.</li> <li>▪ Increased counseling time from 1 min. to 3 mins.</li> <li>▪ Assessed &amp; treated 100% of ill children</li> <li>▪ Decreased dropout from 40% to 18%</li> <li>▪ Increased recuperation rate</li> </ul>	
	2. Low rate of third trimester prenatal care visits (source: SNIS)	<ul style="list-style-type: none"> <li>▪ Flow chart</li> <li>▪ Interviews with clients</li> </ul>	non-comprehension of importance of 9th month visit and poor reception in clinic	<ul style="list-style-type: none"> <li>▪ reorganized flow of patients through clinic service</li> </ul>	<ul style="list-style-type: none"> <li>▪ Decreased waiting time and increased counseling time</li> <li>▪ Increased 9th month visit rate from 30% to 40% (approx.)</li> </ul>	
District: Illela Medical Center	1. Mortality of Children under age 5 due to diarrhea (source: service stats SNIS)	<ul style="list-style-type: none"> <li>▪ Flow chart</li> <li>▪ Checklist for observation of norms &amp; standards application</li> </ul>	poor follow-up & surveillance of patient	<ul style="list-style-type: none"> <li>▪ use of observation checklist when assessing &amp; treating hospitalized children</li> <li>▪ in-service refresher</li> </ul>	<ul style="list-style-type: none"> <li>▪ Reduced mortality due to diarrhea in children under 5 during 6 mo. period</li> </ul>	Follow through difficult due to unstable staffing
	2. Only 18% of the 0-11 mos. age group are immunized for measles (source: SNIS service stats)	<ul style="list-style-type: none"> <li>▪ Flow chart</li> <li>▪ Cause-effect diagram vaccination register analysis</li> </ul>	irregular schedule of vaccination and ignorance of mothers	<ul style="list-style-type: none"> <li>▪ integration of services to decrease lost opportunities for vaccination</li> <li>▪ establish a community publicity campaign for integrated services</li> <li>▪ home visits on dropouts</li> </ul>	<ul style="list-style-type: none"> <li>▪ Integration of services has doubled overall utilization of MCH services</li> <li>▪ 50% dropouts visited returned to center</li> <li>▪ Rate of measles immunization coverage grown from 30% in 1994 to 70% of the third trimester of 1995</li> </ul>	

## Appendix A: (cont.)

Team	Problem to be Solved	Tools Used in Analysis Problem	Principal Causes Identified	Solutions	Results	Comments
Dispensary at Yama	Low utilization rate of growth monitoring services (source: SNIS service stats)	Flow chart	<ul style="list-style-type: none"> <li>▪ Irregular schedules (due to strikes)</li> <li>▪ Lack of information of population</li> <li>▪ Lack of vaccines due to lack of refrigeration</li> </ul>	<ul style="list-style-type: none"> <li>▪ Community meetings to inform population of schedule &amp; importance of growth monitoring</li> <li>▪ Repair refrigerator for vaccine stock</li> </ul>	Since community meetings, participation has increased from 18% in 4th qtr. 94 to 68% in 2nd qtr. 95	<ul style="list-style-type: none"> <li>▪ Vaccination coverage still low due to non functioning refrigerator</li> </ul>
Cross-functional: (regional coordinators and district medical officers)	Improving vaccination coverage (source: priority of regional quality council)	<ul style="list-style-type: none"> <li>▪ Interviews</li> <li>▪ Observation survey</li> <li>▪ Flow chart</li> </ul>	An assessment showed health providers well trained in vaccination but reason for low coverage related to systems issues: cold chain ruptures, irregular gas supply, dysfunctional refrigerator & organizing to increase opportunities for vaccination	<ul style="list-style-type: none"> <li>▪ Gas bottle management system</li> <li>▪ Increase the reserve stock (buffer stock) of gas bottles at regional level and in dispensaries</li> <li>▪ A quick reference guide for EPI norms</li> <li>▪ Recommend that EPI be integrated into all other services</li> </ul>	<ul style="list-style-type: none"> <li>▪ In first 6 months of gas bottle management system (196 bottles) only 2 centers were out of stock &amp; only 4 bottles were lost</li> <li>▪ Buffer stocks were critical to success of management system</li> <li>▪ EPI guide is drafted &amp; awaiting approval at central level before being distributed to each EPI center</li> <li>▪ Integration of EPI into daily activities has been successfully initiated in 10 out of 55 centers; EPI sessions have been increased to 3 times a week in about 20 out of 55 centers, while the rest of centers vaccinate only once or twice a week</li> </ul>	<p>This team is continuing to refine the gas bottle management system while tackling the next priority problem of refrigerator repair.</p> <p>Integration remains a priority. While there are some personnel capacity problems a very frequently cited cause for not increasing vaccination sessions is the lack of capacity in rural dispensary refrigerators to freeze dry ice.</p> <p>Family planning services have also been part of the integration of services.</p>
District: Tchintabaraden Medical Center	1. Low recuperation rate of malnourished children (source: brainstormed priority of staff)	<ul style="list-style-type: none"> <li>▪ Flow chart</li> <li>▪ Observation checklist</li> </ul>	<ul style="list-style-type: none"> <li>▪ Non-treatment of associated illnesses</li> <li>▪ Non-comprehension of the value of the service by mothers</li> <li>▪ Mobility of population and provider</li> </ul>	<ul style="list-style-type: none"> <li>▪ Establishment of an intensive recuperation center with treatments &amp; supplementation</li> <li>▪ Reorganized flow of patients through clinic &amp; calendar of services</li> <li>▪ Corrected providers' misunderstanding of entry &amp; exit criteria into the nutritional rehabilitation program</li> <li>▪ Training of providers</li> </ul>	<ul style="list-style-type: none"> <li>▪ Recuperation increased from 5% to 25% (approx.)</li> <li>▪ Dropout rate decreased from 30% to 20% (approx.)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lack of supplements &amp; pediatric medications cut short the continuity of the intensive treatment</li> <li>▪ Provider in-service training has been delayed due to conflicting schedules</li> </ul>

## Appendix A: (cont.)

Team	Problem to be Solved	Tools Used in Analysis Problem	Principal Causes Identified	Solutions	Results	Comments
District: Keita Medical Center	1. High non-compliance with TB treatment (low regularity of patients receiving treatment) (source: brainstormed priority of staff)	<ul style="list-style-type: none"> <li>▪ Flow chart</li> <li>▪ Survey of non-compliant patients</li> </ul>	<ul style="list-style-type: none"> <li>▪ Anti-TB drug out of stock</li> <li>▪ Non-comprehension of TB patients of their disease &amp; importance of treatment</li> <li>▪ Lack of follow-up on defaulting patients</li> </ul>	<ul style="list-style-type: none"> <li>▪ Established better connection with drug supplier by direct provision of reports</li> <li>▪ Improved filing of patient records</li> <li>▪ Follow up of patients through rural dispensaries</li> <li>▪ Improved patient education during hospitalization period</li> <li>▪ Training for involved providers</li> </ul>	<ul style="list-style-type: none"> <li>▪ No drug stockouts in 18 months</li> <li>▪ Regularity of patient treatment increased from 60% to 85% (approx.)</li> </ul>	
	2. Low utilization rate of growth monitoring services <ul style="list-style-type: none"> <li>▪ Low measles vaccination coverage (source: SNIS)</li> </ul>	Flow chart	Lack of understanding of services by the health providers	<ul style="list-style-type: none"> <li>▪ Reorganized flow of MCH services</li> <li>▪ Integrated GM and vaccination services into daily schedule</li> <li>▪ Referral of children who came to dispensary to GM &amp; vaccination</li> </ul>	<ul style="list-style-type: none"> <li>▪ Increased utilization of GM from approx. 30% to 70%</li> <li>▪ Increased vaccination coverage (measles) from 20% to 50%</li> </ul>	
Dispensary at Ibohamane	Low utilization rate of growth monitoring service (GM) (source: SNIS)	<ul style="list-style-type: none"> <li>▪ Flow chart</li> <li>▪ Cause-effect diagram</li> </ul>	Non-comprehension by health providers of the importance of GM and vaccinations	<ul style="list-style-type: none"> <li>▪ Integrate GM into everyday activities</li> <li>▪ Include the matrons in community education and follow up on dropouts</li> <li>▪ Refresher course for matrons</li> </ul>	<ul style="list-style-type: none"> <li>▪ Increased utilization of GM from 5% to 60% (approx.)</li> <li>▪ Measles vaccination coverage increased from 10% to 50%</li> </ul>	
Dispensary at Tamaske	Low utilization rate of vaccination, growth monitoring and family planning services (source: brainstormed priority of staff)	<ul style="list-style-type: none"> <li>▪ Flow chart</li> <li>▪ Cause-effect diagram</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lack of information to population</li> <li>▪ Lack of follow up when clients default</li> </ul>	<ul style="list-style-type: none"> <li>▪ Integrate/offer vaccination and FP services everyday</li> <li>▪ Community education calendar</li> <li>▪ Follow up and home visit system</li> </ul>	<ul style="list-style-type: none"> <li>▪ Increased participation in GM from 40% to 55%; in vaccination from 20% to 50%; in family planning from 5% to 7% (approx.)</li> </ul>	

## Appendix A: (cont.)

Team	Problem to be Solved	Tools Used in Analysis Problem	Principal Causes Identified	Solutions	Results	Comments
District: Bouza Medical Center	High irregularity of TB patients receiving treatment (source: brainstormed priority of staff)	<ul style="list-style-type: none"> <li>▪ Flow chart</li> <li>▪ Observation with checklist</li> <li>▪ Survey of defaulting their patients</li> </ul>	Patient lack of knowledge and understanding of disease	<ul style="list-style-type: none"> <li>▪ Integrated patient critical points education messages at 3 in treatment process</li> <li>▪ Identified providers responsible for transmitting the messages</li> <li>▪ Included defaulting TB patients in social workers home visit caseload</li> </ul>	<ul style="list-style-type: none"> <li>▪ Increased regularity of patients in TB treatment from 57% to 91% (now sustained over 1 year)</li> </ul>	
Dispensary at Gradoume	Low rate of early prenatal consultation (source: brainstormed priority of staff)	<ul style="list-style-type: none"> <li>▪ Flow chart</li> <li>▪ Interview of women clients and matrons</li> </ul>	Lack of understanding importance of early prenatal care on part of women and social taboo to publicly acknowledge pregnancy	<ul style="list-style-type: none"> <li>▪ Integrated prenatal care into daily activities</li> <li>▪ Community and dispensary health education sessions</li> </ul>	<ul style="list-style-type: none"> <li>▪ 3rd and 4th month prenatal care visits increased on average fourfold</li> </ul>	
Dispensary at Babamkatami	Low utilization of growth monitoring services (source: SNIS)	Flow chart	Lack of knowledge & understanding on part of health providers	<ul style="list-style-type: none"> <li>▪ Integrated GM into daily activity</li> <li>▪ Community education and follow up visits with matron</li> </ul>	<ul style="list-style-type: none"> <li>▪ Increased GM utilization from 31% to approx. 85% for children 0-11 months old</li> </ul>	
District: Madaoua Medical Center	High dropout from nutritional rehabilitation services (source: brainstormed priority of staff)	<ul style="list-style-type: none"> <li>▪ Flow chart</li> <li>▪ Cause-effect diagram</li> <li>▪ Interview of mothers with irregular attendance</li> <li>▪ Client satisfaction survey</li> <li>▪ Provider satisfaction survey</li> <li>▪ Observations</li> </ul>	<ul style="list-style-type: none"> <li>▪ Distance from health center</li> <li>▪ Lack of means to come center</li> </ul>	<ul style="list-style-type: none"> <li>▪ Integration of all MCH services into daily services</li> <li>▪ Creation of separate service station for malnourished children</li> <li>▪ Reorganized flow</li> </ul>	<ul style="list-style-type: none"> <li>▪ Reduced waiting time from 4 hours to 45 minutes for malnourished children (and 20 minutes for regular GM)</li> <li>▪ Client &amp; provider satisfaction with integrated system of services</li> <li>▪ Without publicity for new system center has maintained utilization rate for all MCH services</li> <li>▪ Reduction of GM dropout rate from 42% to 10%</li> </ul>	

## Appendix A: (cont.)

Team	Problem to be Solved	Tools Used in Analysis Problem	Principal Causes Identified	Solutions	Results	Comments
Dispensary at Arzerazi	Low acceptance rate of family planning services (source: SNIS)	<ul style="list-style-type: none"> <li>▪ Flow chart</li> <li>▪ Community interviews</li> <li>▪ Cause-effect diagram</li> </ul>	Lack of community information about the availability of family planning services	<ul style="list-style-type: none"> <li>▪ Offer integrated family planning everyday, all day</li> <li>▪ Targeting community education to religious leaders and men</li> <li>▪ Health provider to do on-the-job training with midwife at medical center</li> </ul>	<ul style="list-style-type: none"> <li>▪ Increased acceptance from 2% to 5% in 3 months</li> </ul>	
Dispensary at Manzou	Low utilization of growth monitoring service (GM) (source: SNIS)	<ul style="list-style-type: none"> <li>▪ Flow chart</li> <li>▪ Review of norms for GM</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lack of accessibility to services</li> <li>▪ Lack of knowledge of GM norms by health providers</li> </ul>	<ul style="list-style-type: none"> <li>▪ Reorganized schedule of community awareness to permit every neighborhood the opportunity to come to GM once a month</li> <li>▪ Integrated GM and vaccination into daily schedule</li> </ul>	<ul style="list-style-type: none"> <li>▪ Increased participation from 33% in 1994 in same period to 62% in 1995 for 0-11 month olds</li> <li>▪ Measles vaccination coverage went from 24% to 51%</li> </ul>	
Cross-functional: (regional coordinators and district medical officers)	The irregularity & quality of supervision visits (source: brainstormed priority of regional & district staff)	<ul style="list-style-type: none"> <li>▪ Interviews with supervisors &amp; supervisees</li> <li>▪ Observation checklists based on norms &amp; training</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lack of time, fuel, vehicles &amp; training</li> </ul>	<ul style="list-style-type: none"> <li>▪ Design policy for supervision</li> <li>▪ Train supervisors</li> <li>▪ Improve logistics</li> <li>▪ Train teams of supervisors</li> <li>▪ Repair vehicles</li> <li>▪ Provide fuel for supervision visits</li> </ul>	<ul style="list-style-type: none"> <li>▪ Overall doubling of supervision visits at peripheral level</li> <li>▪ Improved quality of feedback and problem solving</li> <li>▪ All districts had at least one operational vehicle at all times</li> <li>▪ Delegation of supervision to other team members</li> </ul>	Once system was designed and in place, secondary problems identified were the burdensome reporting system and lack of feedback from the regional level. The reporting system was then streamlined and 3 coordinators identified at regional level to receive and respond to district reports.

Appendix A: (cont.)

Team	Problem to be Solved	Tools Used in Analysis Problem	Principal Causes Identified	Solutions	Results	Comments
Cross-functional: (regional coordinators and district medical officers)	Lack of small medical equipment and a system of inventory tracking for distribution and supply needs (source: project priority)	<ul style="list-style-type: none"> <li>▪ Checklists of minimal equipment needs at different facility level</li> <li>▪ Consensus of team on supply quantities</li> <li>▪ Prioritization of this minimal list into vital, essential and non-essential equipment</li> </ul>	Lack of ability to predict need or supplies	<ul style="list-style-type: none"> <li>▪ Establishment of a warehouse tracking and distribution system at the store level</li> <li>▪ Order vital equipment through project</li> <li>▪ Repair storeroom and install shelves</li> </ul>	<ul style="list-style-type: none"> <li>▪ Ability to report on available supplies at regional level</li> <li>▪ Ability to track distribution of equipment</li> </ul>	
Cross-functional: (regional coordinators and district medical officers)	<ul style="list-style-type: none"> <li>▪ All outreach and supervision activities depend on vehicles and they were not being done due to frequent breakdowns</li> <li>▪ Out of control costs in garage</li> <li>▪ Repeated repairs on some vehicles</li> <li>▪ Lack of maintenance schedules</li> </ul>	None	Preliminary analysis of data showed: <ul style="list-style-type: none"> <li>▪ The average age of vehicles in the motor pool is 8 yrs</li> <li>▪ Poor quality or lack of spare parts</li> <li>▪ Lack of technical competence to repair diesel vehicles</li> </ul>	<ul style="list-style-type: none"> <li>▪ Regional car pool designed a cost control system</li> <li>▪ Instituted a maintenance schedule</li> <li>▪ Trained 32 drivers in basic maintenance troubleshooting and defensive driving</li> <li>▪ Created a database on the motor pool</li> </ul>	The cost control system has curbed abuses in the purchasing of spare parts. Initially it also seemed to help cut costs dramatically. However further analysis shows that the vehicle problem is multifaceted. Costs are in fact controlled by the amount of a credit the government allows. The system to increase accountability of drivers is being reviewed.	

## Appendix B: Quality Assurance Training Activities, April 1993 - March 1997

Topic/Purpose	Participants	Dates
Quality Assurance Awareness (introduction of quality assurance, formulation of vision/mission statements and creation of initial quality improvement teams)	Medical officers, their assistants, district midwives, and regional health program coordinators for Tahoua	May 1993 July 1993 November 1993
Quality Assurance Awareness (introduce quality assurance concepts and tools and problem solving methodology)	Tahoua rural dispensary staff DHMT, supporting regional staff	February 1995 October-November 1995
	Cascade training of all Tahoua peripheral workers	March-June 1996 May 1996 (Morocco)
	Regional Health Director Boboye District (with BASICS)	July 1996 March-June 1996
Supervision (introduce supervision concepts and tools in the context of Tahoua Region)	HKI and central level supervisors Regional and district level supervisors	November 1993 February 1994
Advanced Supervision Skills	Integrated district supervision teams, Tahoua staff	December 1994 January 1995
Monitoring	District medical officers and clinical managers	September- November 1995
Coaching and Team Building (training of trainers for quality assurance)	District supervisor from each district plus 4 regional staff	April-May 1995
	Prepared 20 trainers (one in each of 16 districts and 4 regional); each district trainer trained 2 in each dispensary and district staff	April 1996
	2-3 members of DMT from each district	October 1996
Use of Lab Tests and Microscopes		
Nutrition	Head nurses of rural dispensaries	August 1995
Tuberculosis	3 district medical center staff from each district	September 1995
	Lab technicians and head nurse from each district	October 1995
Human Resource Management and Databases	QAP administrator and regional health officer	January 1996
TB Treatment Protocol	District supervision teams	January 1996
Management Training (financial management, quality supervision, personnel management, accounting/credit mechanisms)	District health management teams (2 sessions)	August 1996

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## Appendix C: Tahoua Quality Assurance Project Dissemination Activities

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Publications	<ol style="list-style-type: none"> <li>1. Quarterly Activity Reports by Resident Advisor.</li> <li>2. Quarterly "ADER SANTE INFO" bulletin by Regional Health Office staff</li> <li>3. National Community Health Publication Article proposing the linkage between quality assurance and cost recovery being proposed in Niger.</li> <li>4. RHD/Zinder bulletin article introducing the concept of quality.</li> </ol>
International Conferences	<ol style="list-style-type: none"> <li>1. International Society of Quality Assurance (ISQA), June 1993. Maastricht, the Netherlands. "Problem Solving" prize winning paper presented.</li> <li>2. International Society of Quality Assurance (ISQA), June 1995. Newfoundland, Canada. "How Quality Assurance Facilitates Decentralization in the Primary Health Care system: The case of Niger" paper presented. "Role of Supervision in Institutionalizing QA Methods into the Regional Healthcare System" prize winning poster.</li> <li>3. REDSO/East Quality of Care meeting, October 1996. Mount Kenya, Kenya.</li> <li>4. World Bank Conference on Quality Assurance: November/December 1996. Brazzaville, Congo.</li> <li>5. Meeting on revision of reproductive health curriculums for medical and other health schools in Burkina Faso, September 1996. Attended by representatives from 18 francophone African countries.</li> <li>6. American Public Health Association, November 1996. New York, NY.</li> </ol>
Regional/District Level Quarterly Meetings	<ol style="list-style-type: none"> <li>1. Regional level Quarterly meetings  Regular attendees: regional managers, district medical officers and Quality Improvement Teams (QITs), QA Resident Advisor, coaches, or 1 other member of district health management team.  Invitees: 1 from central level, 1 from another region and 1 from another project.  Purpose: to share experiences, exchange ideas, present progress of key health service indicators, present problem analyses by QITs. Serves to create a team spirit and stimulate region-wide enthusiasm for quality improvement.  Results: Quality Council created and members elected. Four work groups formed to collect data, and develop and revise policies, strategies, and guidelines around an issue assigned to each group. Issues addressed included supervision, norms and standards of Maternal and Child Health Services, needed medical equipment, drug delivery systems, and EPI. Issues from regional operation research, development of regional Health Services Plan, and development of strategies for response and control of epidemics in the region have also been addressed. EPI committee established. Some issues are on-going such as supervision and norms and standards.</li> </ol>

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## Appendix C: (cont.)

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### 2. Quality Council

Attendees: two district medical officers, two regional level program coordinators, the Regional Health Director, and the Resident Advisor.

Purpose: aids institutionalization of quality assurance by creating formal mechanism at one level to oversee and coordinate health activities and encourage quality improvement.

Results: Creation of regular quarterly district level meetings in addition to the regional ones. Meetings permit District Medical Officer to relay information about regional policies and programs, including the quality improvement initiative, to the rural dispensary heads.

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## Seminars

### 1. Central level Quality Awareness/Results Conference, December 11-13, 1995.

Attendees: Niger Ministry of Public Health central and regional officials, USAID officials, QITs, Tahoua Regional Health office staff, Resident Advisor, other donor projects, totalling 120.

Purpose: National conference to present results achieved in Tahoua through the quality assurance approach in primary health care services and health care service organization and management. QITs formally presented results achieved using problem solving methodology. Participants made several recommendations for strengthening the institutionalization of quality assurance in Niger (see Appendix D).

### 2. National level Quality Awareness Workshop, February 12-15, 1997.

Attendees: Niger Ministry of Public Health central officials and regional directors, medical and nursing school faculty, donor agency representatives, private sector institutions, totalling 88.

Purpose: Present the concepts of quality assurance to the heads of all directorates and vertical programs in the Ministry of Public Health and regional heads, present the experience and results of the Tahoua project and other QAP country experiences, develop an action plan for generalize quality assurance through all Ministry of Health programs, and propose a quality assurance structure for the Nigerien health sector as a whole.

### 3. Zinder Quality Assurance Seminar, June 1996.

Attendees: DMO, district health workers.

Purpose: Tahoua DMO trained in quality assurance at request of CARE and RHD Zinder.

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## In-country meetings

### 1. Second annual meeting of CiMÇFor alumnae, October 1993.

Attendees: CiMéFor alumnae.

Purpose: provided opportunity to discuss constraints and strategies for creating and implementing a development plan for the health district. Also served to discuss the accomplishments, constraints and recommendations of applying tools and methods taught at CiMÇFor. A final recommendation resulting from the meeting was the need to create guidelines for Niger's health care delivery system. Nigerien counterparts presented.

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## Appendix C: (cont.)

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2. Quality Awareness Workshop by CARE International in Zinder, October 1994.  
Purpose: Introduce quality assurance using QAP materials. Nigerien counterparts and consultant with QAP experience, Marcelle Chevalier, presented.
  3. National Integration Workshop for the Malaria Program, the Acute Respiratory Infection Program and the Diarrheal Disease Program, sponsored by BASICS, November 1994.  
Nigerien counterparts presented.
  4. Regional UNICEF planning workshop, November 1994.  
Nigerien counterparts presented.
  5. National Forum on District Health Management Team Development.  
Attendees: WHO consultant, RHD, Tahoua DMOs, QAP Resident Advisor.  
Purpose: Konni DMO built consensus for developing district management teams curriculum by presenting the Tahoua experience of district supervision and quality improvement teams evolving into the district management teams.
  6. Peace Corps in-service training.  
Attendees: QAP Resident Advisor, Peace Corps volunteers and their counterparts.  
Purpose: Mid-service training to make volunteers aware of quality assurance approach as Peace Corps changes emphasis to helping villages organize for developing health huts.
  7. National Workshop to Revitalize Primary Health Care Services, November 1996.  
Result: Recommendation was to generalize Bamako Initiative with certain enhancements: 1) work with district models including district hospital, 2) include quality assurance, and 3) include Integrated Case Management model.
  8. Orientation Meeting for Integrated Case Management Protocol for Niger, August 1996.
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## Appendix D: Participant Recommendations from the 1995 Tahoua Quality Assurance Project National Dissemination Conference

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### Recommendations to the Ministry of Public Health

Coordinate the various and different experiences in the improvement of quality in health care and services in Niger.

Integrate training in quality assurance into continuing education programs (such as CiMÇFor and CNDS).

Put in place support mechanisms for the Tahoua RHD to continue and conserve improvements (such as the stability of personnel and the granting of resources).

Put in place a national policy for supervision.

Put in place the district health management teams composed of polyvalent personnel.

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### Recommendations to the Regional Health Directorate of Tahoua

Support the consolidation and sustainability of the quality assurance work in the region.

Disseminate the Tahoua quality assurance results.

Consolidate and extend the quality assurance activities to all health care facilities in Tahoua.

Train community organizations in the methods and tools of quality assurance.

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### Recommendations to USAID

Support the consolidation of the gains made during the project.

Support the implementation of public health policy focused on developing the health district.

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### Recommendations to the Quality Assurance Project

Continue the training of personnel and extending activities throughout the Tahoua Region.

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