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THE NIGER QAP/BASIC JOINT PROJECT: AN EVALUATION OF QA ACTIVITIES TWO YEARS LATER

QUALITY ASSURANCE PROJECT

OPERATIONS RESEARCH RESULTS

FEBRUARY 2007
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Sabou Djibrina
Wendy Newcomer Edson
Maina Boucar
Adamou Diogou
Issa Moussa Hama

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EXECUTIVE SUMMARY

The Tahoua (Niger) Quality Assurance/BASICS Joint Project was completed in December 31, 1998. The project had provided technical and operational support to basic health services in order to improve their quality through training, supervision, meetings, operational research, and provision of limited equipment.

This study was designed to assess the continuation of quality assurance (QA) activities in Tahoua, two years after the close of the QAP/BASICS joint project and to compare selected healthcare activities in the departments of Tahoua and Maradi, also in Niger.

The study was conducted in eight districts of Tahoua and four districts of Maradi. Interviews with 96 Niger Ministry of Public Health (MOH) personnel were conducted at all levels of the health system, and documents were reviewed at 15 MOH office sites. Healthcare workers were observed to determine their compliance with the Integrated Management of Childhood Illness (IMCI) standards during consultations with sick children: 88 observations occurred in Tahoua and 38 in Maradi. Exit interviews were conducted with mothers or caretakers after the observed consultation: 86 in Tahoua and 38 in Maradi.

The study sought to answer the following research questions:

- What political, health policy, and health financing influences may have affected QA activities in Niger during 1999 and 2000 and in the Tahoua and Maradi Regions in particular?
- How do the QA activities that took place in 1999 and 2000 in the Tahoua region after the project ended compare with the QA activities at the end of the project in 1998?
- How do other activities in 1999 and 2000, such as supervision, quarterly meetings, standards development, and compliance with IMCI standards in the Tahoua region compare with the Maradi region?
- What factors contributed to sustaining project achievements?
- What recommendations can be made to ensure the sustainability of project achievements?

Political events in Niger significantly influenced the sustainability of the Tahoua QA project. A military coup at the national level disrupted foreign aid and led to destabilizing elections. The new leadership reassigned health personnel at all levels, resulting in a devastating impact on the sustainability of QA in Tahoua: QA-trained health professionals were sent to other departments, and incoming personnel had neither training in nor exposure to QA.

QA activities were supported at a reduced level by funds from the World Health Organization (WHO) during 1999 and 2000 in Tahoua. Supervisory visits, quarterly coordination meetings, and the number of quality improvement (QI) cycles all decreased in frequency in 1999 and 2000, well below the median frequency for the activity that was attained during the project. However, despite the lack of full funding for QA activities in Tahoua, supervision visits continued to follow the systematic approach developed during the project: comprehensive, two- to three-day quarterly meetings continued and were attended by a broad spectrum of personnel.

In order to compare health worker performance over time, we repeated in 2001 a study originally conducted in Tahoua in December 1998, in the same health centers. The results show a decrease in all but one performance item, with significant decreases in “whether nutritional status was checked” (47.0% in 1998 to 5.4% in 2001), “whether the child was checked for two or more danger signs” (63.5% in 1998 to 26.3% in 2001) and “whether the mother was counseled about the child’s treatment” (62.8% in 1998 to 10.7% in 2001). We then compared health worker performance in 2001 in Tahoua with performance in Maradi. There were no significant differences in performance between the two regions, although “whether nutritional status of a child was checked” was greater in Maradi (26.7%) than in Tahoua (5.4%). Even though none of the health workers in Tahoua seeing patients was trained in IMCI, those in the district of Guidan Roumdji in Maradi had recently received IMCI training.

The evaluation sought to measure the sustainability of QA in Tahoua, where several political and other events had combined to undermine QA efforts. Nevertheless, discussions with staff indicated good team spirit and communications at all levels, better supervision mechanisms (although frequency of supervision declined), and ongoing team activities targeting improved health outcomes (e.g., prenatal care, infant counseling, nutrition, etc.). Importantly from a quality assurance perspective, facilities that retained less than four QA-trained staff seemed unable to sustain team-based QI efforts.

We specifically examined various QA activities (definition of quality standards, measurement of compliance with standards, quality improvement, documentation/communication, and capacity building) to assess which had continued for the two years following the project's completion. Several activities had been discontinued, largely because of funding shortages and/or staff transfers, including some aspects of coaching and supervision, information sharing between districts, and QA training. Still extant, however, were activities to set and review standards, QI teamwork (where teams of four or more remained in a facility), intra-team knowledge sharing, data-based decision making, and training in clinical care.

Certainly funding from the World Bank and WHO contributed to sustainability. The MOH decision to spread QA throughout the country through staff transfers from Tahoua to other areas reduced QA activities in Tahoua but may have stimulated or fostered QA in other regions. Opportunities to share knowledge (such as supervisory visits and quarterly meetings) contribute to sustainability, but they require funding, and Tahoua, which is geographically disparate, would require more funding for this activity than Maradi.

Supervisory visits declined in frequency after the project ended but continued at a reduced level with UNICEF funding. Our comparison of supervisory visits between Tahoua and Maradi suggests that Tahoua was able to maintain supervisory visits despite funding and logistics difficulties because supervision was well organized, comprehensive, used trained supervisors, and underwent continuous improvement. Other elements that would indicate and ensure sustainability fared less well after the project ended, as detailed in the full report.

ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
BASICS	Basic Support for Institutionalizing Child Survival
IMCI	Integrated Management of Childhood Illnesses
MOH	Ministry of Public Health, Niger
QA	Quality assurance
QAP	Quality Assurance Project
QI	Quality improvement
RAHWP	Rapid Assessment of Health Worker Performance
RHA	Regional Health Administration
UNICEF	United Nations Children's Fund
USAID	U.S. Agency for International Development
WHO	World Health Organization

I. BACKGROUND

The Tahoua (Niger) Quality Assurance Project (QAP), begun in April 1993 by the Center for Human Services under funding from the U.S. Agency for International Development (USAID), was completed on December 31, 1998. The project covered all health facilities in the Department of Tahoua. In 1997, the project merged with the BASICS Project to become the Niger Quality Assurance/BASICS Joint Project, which focused its interventions on the health districts of Konni and Illéla in the Department of Tahoua and Boboye District in the Department of Dosso. The project also continued support for some activities in the other districts of Tahoua. The project's aim was to provide technical and operational support to basic health services in order to improve their quality through training, supervision, meetings, operational research, and the purchase of small equipment.

Encouraging results were achieved in the improvement of healthcare and services during the implementation of this project (please see Legros et al. 2000a for the end-of-project evaluation). By the end of the project, 100% of the senior staff at the Tahoua Regional Health Administration, 90% of the district health teams, and 85% of health workers were trained in basic quality assurance (QA) skills, and 92% of health centers in the project area had at least one operational quality improvement (QI) team. All supervisors in the department had been trained in facilitative supervision, and 70% of them received training in coaching skills. Of note, among other things, was the development of increased team spirit through the involvement of the regional quality council and periodic meetings bringing together staff at all levels of the health sector in the region. In addition, there was a better understanding of health system processes and standards, better organization of services, and improved health indicators in Tahoua. It was assumed that accomplishments could be self-sustaining, as they had become an integral part of the regional system. Based on this assumption, we conducted this study to assess the continuation of QA activities and the level of QA institutionalization two years after the completion of the project.

A. Institutionalization of QA Activities

Institutionalization is an ongoing process in which a set of activities, structures, and values becomes an integral and sustainable part of an organization. Institutionalization of QA occurs when QA activities are formally and functionally incorporated into the structure of a health system (or organization), consistently implemented, and supported by a culture of quality, as reflected in organizational values and policies that advocate quality care (Franco et al. 2002).

The essential elements for QA institutionalization operate within the organization's sphere of influence (see Figure 1). They can be divided into three categories: support functions, structure, and internal enabling environment. Support functions are formal, ongoing processes for developing and maintaining the staff's capacity to implement QA activities, for disseminating QA information, and for rewarding quality. These processes include capacity building of staff in QA, communicating and disseminating information about QA activities, and using incentives and recognition to reward quality work. Structure is the clear delineation of roles, responsibilities, and accountability for the implementation of QA activities. The internal enabling environment is an environment conducive to initiating, expanding, and sustaining QA. This includes written policies that support quality, leaders who work directly and openly to improve quality, organizational values that emphasize quality care and continuous improvement of services, and sufficient allocation of human and material resources. Evaluating the extent to which these essential elements are present in a QA program will provide information on the process of institutionalization of QA within the healthcare organization.

Figure 1: Institutionalization of Quality Assurance

B. Evaluation Framework

The QA program framework (Table 1) developed by QAP for the evaluation of the national QA program in Chile (Catsambas et al. 2002; Legros et al. 2000b) was utilized for this evaluation. Elements of the framework include the political and health policy environment within which the project took place; dissemination and communication of project results; the organizational structure and management of QA, including QI teams, supervision, and quarterly meetings; training in QA; utilization of monitoring data; compliance with the Integrated Management of Childhood Illness (IMCI) standards; and cost of sustaining QA activities in the project region.

Table 1: QA Program Framework

Functional Area	Key Topics Addressed by the Evaluation
Environment	Health reform Key health sector policies Country culture
Overall QA program	Description of QA activities within the health sector History of the QA program QA policies
QA support functions	Management and supervision of QA Training QA research Dissemination and communication Organizational culture
QA activities	Quality assessment and monitoring Quality design Quality improvement Standards Accreditation and licensing

II. PURPOSE OF THE STUDY

The aim of the study was to assess the continuation of quality assurance activities in Tahoua two years after the close of the QAP/BASICS joint project, to describe factors that have contributed to the sustainability of QA activities in Tahoua, and to compare selected healthcare activities in Tahoua with those in Maradi.

The study was conducted in all eight districts in Tahoua and all four in Maradi, as well as the Tahoua and Maradi Regional Health Administrations. The study included interviews and document review at the national, departmental, district, and health center levels.

The research questions were:

1. What political, health policy, and health financing influences may have affected QA activities in Niger during 1999 and 2000 and in the Tahoua and Maradi Regions in particular?
2. How do the QA activities that took place in 1999 and 2000 in the Tahoua Region after the project ended compare with the QA activities at the end of the project in 1998?
3. How do other activities in 1999 and 2000, such as supervision, quarterly meetings, standards development, and compliance with IMCI standards in the Tahoua Region compare with the Maradi Region?
4. What factors contributed to sustaining project achievements?
5. What recommendations can be made to ensure the sustainability of project achievements?

III. METHODOLOGY

A. Research Design

In order to assess the sustainability of QA activities after the project close in December of 1998, a retrospective, descriptive study of ongoing QA activities in Tahoua in 1999 and in 2000 was combined where possible with a comparison of QA activities across time and across geographical areas. The comparison across time compared QA activities during the project with activities after the project closed. The comparison across geographic areas compared activities in Tahoua in 2000 with those in Maradi in 2000. Maradi was selected as the comparison area in part because it did not have a QA program. The assessed activities included supervision, utilization of data, and performance according to IMCI standards. The Maradi region, in January 2001, had not implemented any activities in a planned QA extension project funded by the World Bank. The study was conducted from January to March 2001.

B. Study Sample

In Tahoua and Maradi, 96 Ministry of Public Health (MOH) personnel were interviewed at the national, regional, district, and health center levels. Open-ended questions eliciting information on replication of the Tahoua project and institutionalization of QA in Niger were asked of all study participants. Documents were reviewed at the same levels. All eight districts in Tahoua were included in the study as were all four districts in Maradi. A sample of eight health centers was selected in Tahoua, one in each district, and four in Maradi, also one in each district. At each health center MOH personnel were interviewed and documents reviewed. At the departmental level, the study included all staff members present at the time of the study, as all were involved in the implementation of QA activities.

Observations of clinical care were conducted at 16 health centers in two districts of Tahoua and in eight health centers in two districts of Maradi. This sample included health workers conducting consultations, health center managers, and children and their mothers or caretakers. Ten consultations of children per health center were observed. Children were included if they were under five years of age, seen on an

outpatient basis, and had new diagnoses of diarrhea, cough or respiratory problems, or fever. Exit interviews of mothers/caretakers of all children observed after the consultation were conducted if they (mothers/caretakers) were at least 16 years old and had been living with the child for at least 15 days.

C. Study Variables

Table 2 outlines the study's evaluation framework by functional area, geographic area, research objective, and data source.

Table 2: Niger Evaluation Framework

Functional Area	Geographic Area	Research Objective	Data Source
Environment	Niger, Tahoua, and Maradi regions	Describe the political and health policies during 1999 and 2000	Interviews, documents
Organizational structure and management of QA: • Quality improvement teams	Tahoua region	Compare the number of QI teams functioning and number of completed QI cycles between Tahoua in 1998 and Tahoua in 2000	Meeting reports, interviews with health workers
• Quarterly meetings	Tahoua region	Compare the percentage of completed/planned quarterly meetings between Tahoua in 1998 and Tahoua in 2000 and between Tahoua and Maradi in 2000	Meeting reports, interviews with health workers
• Supervision	Tahoua and Maradi regions	Compare the percentage of completed/planned supervisory visits between Tahoua in 1998 and Tahoua in 2000, and between Tahoua and Maradi in 2000	Interviews with health workers, supervision records
Training in QA	Tahoua region	Compare the number of people trained in QA between Tahoua in 1998 and Tahoua in 2000	Interviews with health workers, training records
Utilization of monitoring data	Tahoua and Maradi regions	Describe the use of monitoring data by health centers	Interviews with health workers
Compliance with IMCI standards	Tahoua region: Konni and Illéla Maradi region: G. Roumdji and Mayahi	Compare compliance with IMCI standards at health centers between Tahoua in 1998 and 2000 and between Tahoua and Maradi in 2000	Observation of health workers, exit interviews of mothers, interviews of health managers
Dissemination and communication	Niger, West Africa, globally	Describe publications, reports, and missions within Niger and throughout West Africa	Document review

D. Study Instruments

The four methods of data collection (health worker interviews, document review, observations of health workers, and interviews with mothers) were conducted at three different levels within the MOH, requiring instruments tailored for each level. The interview and document review guides were adapted from those used in prior QA evaluations. The interview guide solicited information about the healthcare environment, functioning of QA structures (QI teams, supervision, quarterly meetings), QA training, dissemination and communication, and utilization of monitoring data. A questionnaire on supervision and utilization of data developed for the study was administered to health center directors. A self-administered questionnaire, the QI Team Member Self-Assessment tool, was given to the QI team members to measure the effectiveness of the QI teams. QAP had developed this tool and used it in previous studies of QI teams in Morocco and Kenya. The document review guide was used to review correspondence, supervision reports, and minutes of meetings relating to QA activities. These

instruments were pre-tested during a one-day workshop with the four MOH surveyors from the national level and two departments other than Tahoua and Maradi.

The observation checklist used to collect data on healthcare workers' performance in treating a sick child and consulting with his or her mother was the Rapid Assessment of Health Worker Performance (RAHWP), which had been pre-tested in previous research in Tahoua. This instrument was developed during the QAP/BASICS joint project (BASICS I Country Program: Niger 2002). The interviews with the mothers/caretakers of observed children were conducted using the RAHWP instrument for clients.

English translations of the instruments used in the study are presented in the Appendix.

E. Data Collection Procedures

Data were collected by four MOH surveyors (two from the national and two from the departmental levels) during a five-week period in January and February 2001. Data were collected in two teams of two surveyors each. The two teams began in Tahoua for two weeks then spent a week in Maradi. They began at the department headquarters, interviewing staff and reviewing documents, then traveled to each district headquarters conducting interviews and document reviews. They then visited one health center in each district to conduct interviews and document review. These districts were selected according to proximity to the district office location or en route to the next district. After these data were collected, the observation of health workers and exit interviews of mothers occurred. A team of providers from Tahoua who had conducted these observations in the past was oriented to the study and retrained in one day. This team traveled to the 24 sites where data were collected during a two-week period. Finally, national level MOH personnel were interviewed in the capital, Niamey, by the two surveyors from the national level.

A total of 96 MOH personnel were interviewed: 1 at the national level, 6 each at the departmental level in Tahoua and Maradi, 28 at the district level in Tahoua, 17 at the district level in Maradi, and 34 at Tahoua health centers and 4 at Maradi health centers. Documents were reviewed at 15 MOH office sites.

Observations of health workers and exit interviews of mothers occurred at 16 clinics in Tahoua and 8 in Maradi. A total of 126 observations were performed: 88 in Tahoua and 38 in Maradi, and 124 mothers were interviewed: 86 in Tahoua and 38 in Maradi.

F. Data Analysis

The guided interview and document review data were transcribed into Microsoft Word and grouped according to question. The qualitative data were analyzed by reviewing the responses and identifying themes and categories of similar responses. The quantitative data were analyzed in a yearly run chart format where trends are noted in relation to the median. Where possible, the analysis included a comparison between Tahoua and Maradi.

The observation checklist and client interview data were keyed and analyzed using EPI-Info. Selected indicators were analyzed using proportions in order to assess changes that occurred in Tahoua since the completion of the project and to compare with Maradi.

We compared the behaviors of health workers in Tahoua and Maradi by developing facility-level averages for the 24 clinics of the proportion of health workers who were scored with a "Yes" on an item. Using the facility-level average, we compared the Tahoua clinics over time and the Tahoua and Maradi clinics using t-tests. A difference was judged significant if the probability of the t value was less than .05.

A preliminary report was submitted for review by representatives of each group involved in the study during a one-day workshop in June 2001, in order to allow them to make contributions to the final report. These contributions were then incorporated into the final report.

IV. RESULTS

A. Research Question Number 1

What political, health policy, and health financing influences may have affected QA activities in Niger during 1999 and 2000 and in the Tahoua and Maradi Regions in particular?

Although both regions were affected by disease outbreaks, disruptions in food, and floods, the most important influence during the 1999–2000 period was political. A military coup at the national level disrupted foreign aid. Political turmoil surrounding elections further destabilized the situation. As a result of the change in political power, health personnel at all levels of the MOH were reassigned to different posts in different locales. In Tahoua, this had a devastating impact on the sustainability of QA as the health professionals trained in QA during the project were sent to other departments outside Tahoua. The incoming workers replacing Tahoua's QA-trained ones had neither training nor exposure to QA and consequently focused on other activities that they deemed more important. These and other key events are summarized in Table 3.

Table 3: Major Events Influencing the Political and Healthcare Environments, 1999–2000

National	Tahoua	Maradi
• A military coup influenced foreign (bilateral) cooperation • Food deficit • Meningitis epidemic • Electoral turmoil	• Meningitis and cholera outbreaks • Drought, lack of pasture, food deficit • Insecurity (vehicle thefts) • Floods • Massive exodus and massive return of people from exodus • Islamist religious events	• Cholera, measles, meningitis outbreaks • Food deficit • Floods • Change of government officials • Islamist religious events

Similarly, health policy priorities at the national and regional levels also strongly affected activities in the health facilities. IMCI in Tahoua started at Konni under the auspices of the QAP, but during the two years after the end of the project, all IMCI-trained personnel were moved to other regions. IMCI supervisory visits continued, but no IMCI-trained personnel worked at the health centers. There was no financial support of IMCI in Tahoua after QAP ceased in Niger. However, IMCI expansion, supported by WHO, occurred in Maradi during this time period. The national and regional health policy priorities are outlined in Table 4.

Table 4: Health Policy Priorities, 1999–2000

National	Tahoua	Maradi
• Adjustment of reproductive health strategies • Hygiene/sanitation • IMCI expansion to four new districts (WHO financing) • QA extension in Zinder, Tillaberi, and Diffa through a World Bank project • 1000 community health facilities (presidential commitment)	• Integrated Basic Health Services (UNICEF) • Consolidation of cost-recovery management tools • Decentralization • Integrating QA activities in the Minimal/ Essential Health Package • Expanded Program of Immunizations support project • Existing malaria and AIDS programs re-emphasized by the President of Niger	• Integrated Basic Health Services (UNICEF) • IMCI • Permeated mosquito nets • Breast-feeding promotion • Acute flaccid paralysis • Integrated Epidemiology Surveillance Program • Health districts operation

In one district in Tahoua and in two districts in Maradi, new health policies included the integrated basic service (UNICEF) activities in health centers and the community. More political support of pre-existing malaria and AIDS programs occurred in Tahoua but was not accompanied by supplemental resources. Again in Tahoua, several cost-recovery tools in use were consolidated into a single, more efficient one. In general, new health initiatives in Tahoua decreased during the two years after the project closed. In contrast, five new health initiatives began in Maradi during the same period.

As seen in Table 5, Tahoua lost funding from eight agencies in comparison to none lost in Maradi, although UNICEF ceased operations in two of six districts in Maradi. Tahoua gained only three new donors while Maradi gained seven. Overall, Tahoua saw a marked decrease in international donors for health initiatives. At the national level, most bilateral funding left Niger during this period, although UNICEF, WHO, and the World Bank remained.

Table 5: Donor Status by Region, 2000

National	Tahoua	Maradi
• **New:** Cuban Cooperation • **Ongoing:** World Bank, UNICEF, WHO • **Disengaged:** French Cooperation, Netherlands Voluntary Service, USAID	• **New:** Health Project II, WHO, Italian Fund for Agricultural Development • **Ongoing:** UNICEF, Lux Développement (in some districts), Development Program for Rural Zones • **Disengaged:** QAP/BASICS, Pharmaciens Sans Frontières, German Cooperation, Italian Cooperation, Helen Keller International, Tarka Project, Lux Développement (in some districts), Cospe NGO	• **New:** Lux Développement, Japanese International Cooperation Agency, Reproductive Health and Family Planning, World Vision, Integrated Epidemiology Surveillance Program, UNICEF in some districts, African Development Bank • **Ongoing:** UNICEF in 4 districts • **Disengaged:** UNICEF in 2 of 6 districts

B. Research Question Number 2

How do the QA activities that took place in 1999 and 2000 in the Tahoua Region after the project ended compare with the QA activities at the end of the project in 1998?

The QA structure established by the project in Tahoua included quality improvement teams in the health centers, supervision and coaching from the department to districts and from districts to health centers, and quarterly coordination meetings at the department and district levels.

1. Resources for Continuing QA Work in Tahoua

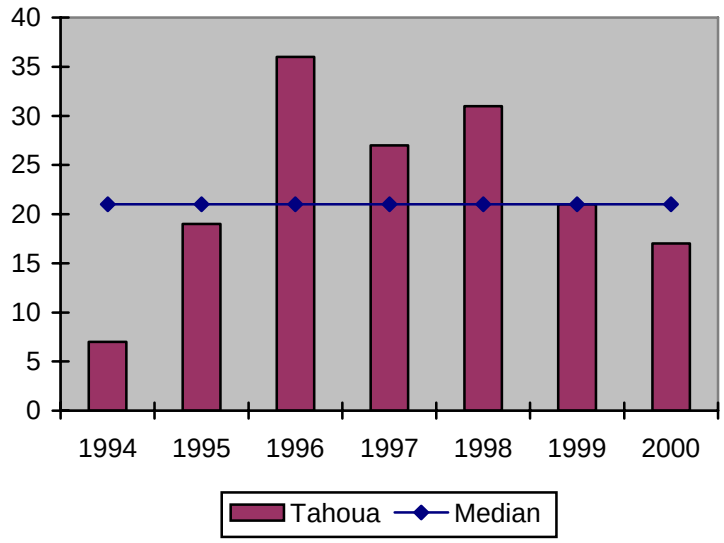
At the end of the QAP/BASICS project, the MOH was committed to expanding QA into all departments of Niger. In order to fund this, it supported a World Bank loan to fund a QA extension program. As a result, some QA activities were supported at a reduced level by funds from the World Bank and WHO during 1999 and 2000 in Tahoua. WHO provided support for QA training in Tahoua for health workers at the district and health center levels and for supervision from the central to the regional level. The World Bank provided support for quarterly meetings in districts and for supervision from the region to districts and from districts to health centers.

2. Quality Improvement Teams

Quality improvement teams were established at all health centers during the QAP/BASICS project. They usually comprised health center staff or district hospital functional units. Their composition and number differed, depending on the district, but included an average of five members, including community participation of, primarily, matrons and community leaders.

QI teams still existed at most health centers in the Tahoua region after the project, but in 1999 and 2000 the numbers of active teams and completed "cycles" decreased. (A cycle is the identification of an improvement project and the implementation and evaluation of the solutions for the improvement project.) As Figure 2 shows, the number of completed QI cycles declined from 31 in 1998 to 21 in 1999 and to 17 in 2000. Topics for improvement projects in 1999 and 2000 were prenatal care (seven), unassisted deliveries (five), vaccinations (three), family planning (seven), nutrition education (five), and infant consultation (three). These teams received coaching sessions during supervision visits. Asked in early 2001 when they had last met, half responded that they had met in the last three months and the other half in the last six months.

Figure 2: Number of Completed QI Team Cycles by Calendar Year, Tahoua



The impact of this work, according to study respondents, was shown through improved health indicators, improved communications with clients, increased community involvement and initiatives, increased utilization of services (prenatal care, infant counseling, nutrition, family planning), fewer deliveries at home, and increased screening for protein energy malnutrition. See Table 6 for a summary of the health indicators for Tahoua from before the QAP project began in 1993 until the project's close in 1998 and for the next two years through 2000. Virtually all health indicators decreased in 1999 with the exception of TB vaccine coverage, which showed a modest increase in 1999.

During the project, QI teams had been the basis for most of the QA work in the region, with increasing numbers of teams forming each year during the five years of the project; by the end of the project some teams had been functioning for five years whereas others had functioned for less. This may explain why some teams continued to function after the project whereas others did not. Another explanation for fewer teams after the project may be that the size of most teams was very small: two or three people. So, when healthcare workers were transferred to other facilities, the team no longer existed and the QI work stopped. During the project, teams were motivated to work because they would present their experiences and results at quarterly meetings and would compete with their peers to see which work was best. (There was no financial reward for making improvements.) However, after the project ended, both supervisory

Table 6: Health Indicators, Tahoua, 1993–2000

Health Indicators	1993	1994	1995	1996	1997	1998	1999	2000
Rate (of total population) using curative services	30	28	37	33	30	23	24	16
Growth monitoring clinic coverage rate (0–5 km.)	58	57	69	89	76	67	63	16
Prenatal consultation coverage rate (0–5 km.)	63	70	70	85	77	62	62	16
Ambulatory nutritional counseling recovery rate	14	19	15	14	25	37	35	29
Ambulatory nutritional counseling drop-out rate	15	17	14	11	16	28	11	14
Family planning utilization rate	5	5	7	11	14	NA*	1	1
Tuberculosis vaccine coverage (0–11 months)	35	60	87	107	76	72	79	17
Coverage rate for measles vaccine (0–11 months)	24	37	61	83	55	78	66	10
Coverage rate for diphtheria, tetanus, pertussis/3rd dose (0–11 months)	63	59	62	66	68	67	52	11
Coverage rate for anti-tetanus 2	74	58	80	65	73	74	69	69

* NA = not available.

visits and quarterly meetings decreased, so teams did not get the feedback, support, and motivation that they had during the project. Teams may not be sustainable after a project stops, or if they are, they may continue at a lower level of intensity unless there is a strong commitment from leadership and management at all levels. There was no funding earmarked specifically for QI teams after the project.

In order to assess the effectiveness of the teams, we conducted a confidential team self-evaluation of 26 team members from eight teams at health centers in Tahoua using the QI Team Member Self-assessment tool. The tool consists of a series of structured questions regarding team meetings, leadership, accomplishments, and working environment with a rating scale from 1 to 3, with 1 being "False" and 3 being "Generally True." Some questions were reverse scored. The highest possible score for each team dimension was 312. The dimension with the lowest score was "Positive Criticism," which assessed the manner in which criticisms were conveyed and perceived. The dimension with the highest score was "Effective Meetings," closely followed by "Positive Atmosphere" and "Team Accomplishments." A summary of the scores is presented in Table 7.

Table 7: Self-evaluation Score for QI Teams by Team Dimension

Team Dimension	Score	Percentage
Effective meetings	235	75
Effective leadership	227	73
Positive criticism	200	64
Creativity	219	70
Positive atmosphere	234	75
Team accomplishments	234	75
Average rating	225	72

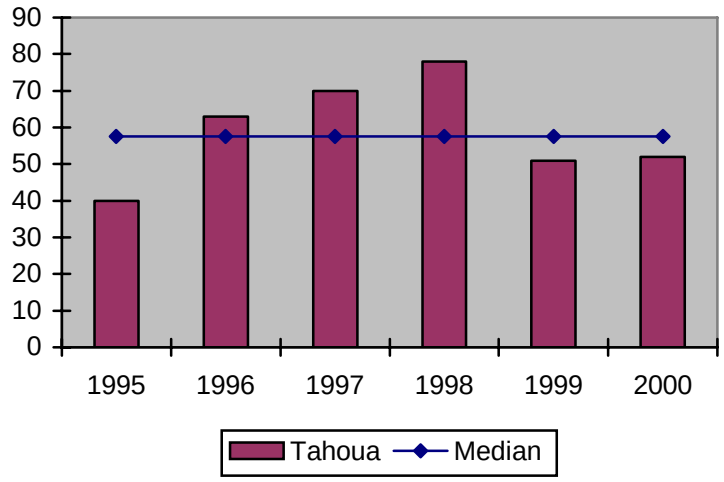
3. Supervision

During the project, improving the supervision of health workers was a major focus. Even in 2000, some 90% of supervisors had been trained in facilitative supervision techniques. Much of this training occurred during the project from 1994 to 1996 and in 1998. Some medical officers received their supervision training through a management short course taught at the district development center. The project trained

teams of supervisors for each district in facilitative supervision techniques. This training was then incorporated into the national district team training curriculum in 1998. Also, a district-level supervisory team was established and a supervisory checklist developed during the project. In 1999 and 2000 the supervision checklist was still being used by Tahoua supervisors. Topics on the supervision checklist identified the main problems, which are listed below.

As shown in Figure 3, the percentage of planned supervisory visits that were completed in Tahoua during 1999 and 2000 (51% and 52%) had fallen below the median of 57.5%, showing a downward trend compared to supervisory visits completed in the last two years of the project (70% and 78%).

Figure 3: Percentage of Planned District Level Supervisory Visits Actually Completed, Tahoua



The main problems noted during supervision visits to clinics during 1999 and 2000 were failure to comply with the Standard Treatment Guidelines/Protocols, input shortages (forms, essential drugs, personnel, equipment), poorly kept Health Management Information System and cost-recovery records, poor inter-personal communication, and non-integration of activities. Positive points were compliance with IMCI standards and the Standard Treatment Guidelines/Protocols; improved availability of some drugs, lab supplies, etc.; integration of activities; well-kept supervision records and health indicator data; and extending a welcome to patients arriving at the clinics. While some clinics had problems complying with the Standard Treatment Guidelines/Protocols, others complied very well.

Having trained supervisors use a checklist to review records and data is a project result that has lasted, although frequency did decrease after the project. The long distances between clinics and the poor roads make it very difficult logistically to complete a supervisory visit in the Tahoua region. During the project, QAP provided fuel and per diem for quarterly supervision, and after the project World Bank funds took over the support of supervision. While the procurement procedures during the project were easy and direct since the project was based in the region, the World Bank had much more laborious procurement procedures. These differences may account for a decrease in supervision, despite continued funding. Another reason that supervisory visits decreased may be that working vehicles were unavailable. During the project, the MOH often used QAP vehicles for supervisory visits. In addition, the World Bank did not require that supervisory reports be presented and discussed at quarterly meetings as QAP had. With the advent of cost recovery, planning and budgeting for supervision were to have been a priority in the district budget.

4. Quarterly Meetings

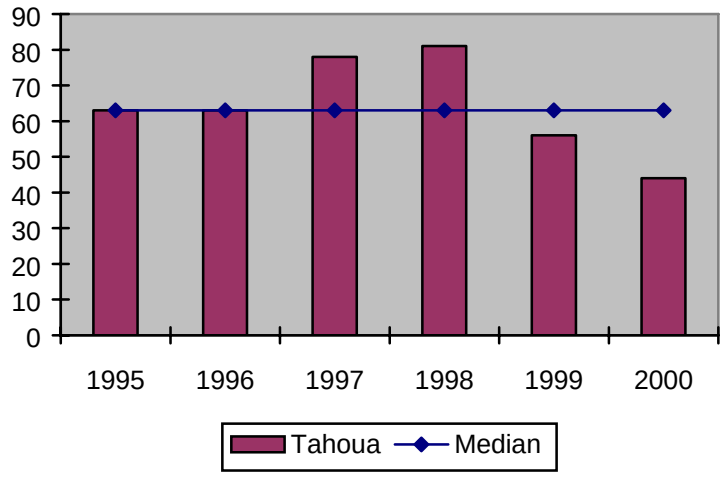
During the project, two- to three-day quarterly meetings were held at the district level and attended by workers from all of the health centers in the district, community representatives, and representatives of

NGOs and other organizations working in the community. They served to address district-wide issues and were a forum where supervisory reports and QI projects were presented and discussed. Like supervision and health center QI teams, they were a key QA activity during the project.

Quarterly meetings continued in 1999 and 2000, but their frequency declined (Figure 4). The number of quarterly coordination meetings at the district level in Tahoua fell from project levels of 78% and 81% to 56% and 44% after the project, well below the median of 63%. All districts in Tahoua had quarterly meetings except Illéla. At the Tahoua regional office only 50% of planned meetings were held in 1999 and 2000. Topics covered during the quarterly meetings during 1999 and 2000 were health indicators, cost recovery, essential drug stock-outs, refrigeration, and QA work.

Despite World Bank funds slated to support quarterly meetings, they occurred at reduced levels. Funding was necessary to sustain the meetings, as participants needed per diems, transportation, food, and lodging for the days-long meetings. The regularity of these meetings was key to maintaining the structure and organization of the region's QA efforts as they gave continuity to the operational QA activities. Because they occurred less frequently, their effect on institutionalizing QA activities decreased. The lower frequency may have been the result of the same logistical difficulties as noted above in the Supervision section.

Figure 4: Percentage of Planned District Level Quarterly Meetings Actually Held, Tahoua



5. QA Training

During the project, 430 MOH personnel at the regional, district, and health center levels were trained in QA, coaching, and supervision. In 1999 the QA training and reference manual was reviewed and modified, resulting in a shortened history of QA section, clarification of the monitoring content, addition of a short section on management, and a review and adaptation of the QA tools to reflect the local context. The revised training was also lengthened to 6–10 days. QA training, funded by the World Bank's QA extension effort, continued after the project closed in other regions of Niger but not in Tahoua.

6. Dissemination and Communication

The QA work in Tahoua was disseminated widely after the project end. Presentations were given at international meetings; study tours were conducted for delegations from five countries and reports; and journal articles were written. The following list summarizes these activities:

- Presentations at international conferences: International Society for Quality in Health Care 2000, Niger 2000, Cameroon 2000;
- Study tours to Tahoua from Rwanda, Mali, Ivory Coast, Burkina Faso, and Guinea; and
- Written reports: Bulletin "Oumani-Info Sante," The Niger QAP/BASICS Joint Project Final Evaluation, and an ISQua journal article (Catsambas et al. 2002).

C. Research Question Number 3

How do other activities in 1999 and 2000, such as supervision, quarterly meetings, standards development, and compliance with IMCI standards in the Tahoua region compare with the Maradi region?

1. Development and Communication of Standards

During the QAP/BASICS project, standards were developed on the essential aspects of healthcare service delivery, such as administration, finance, standards, relationships with the community, healthcare organization, and health policy in Niger. The communication of standards occurred during quarterly meetings.

In Tahoua, more standards were revised during 1999 and 2000 than in Maradi (four versus two). The following list summarizes those standards.

Tahoua:
- Growth monitoring standards
- Pharmacy organization and management
- Maternal child care and family planning at the district level
- Cost-recovery management tools at the district hospital

Maradi:
- Development of a health clinic supervision chart based on MOH guidelines
- Supervision of community health workers by health clinic workers

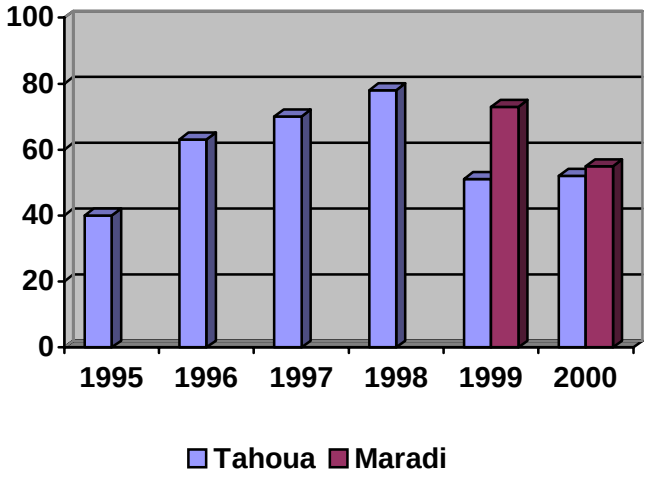
The topics for supervision standards in Maradi had already been addressed in Tahoua during the project.

2. Supervision

The percentage of planned supervisory visits that were completed in Tahoua was not significantly different than those in Maradi in 1999 (51% versus 73%) and in 2000 (52% versus 55%) (see Figure 5). In Tahoua a supervisory visit to one health center took a day to complete, whereas in Maradi supervisors would visit more than one center in a day.

In Maradi 60% of the supervisors had been trained in supervision, compared to 90% in Tahoua. The main problems found during supervision in Maradi were similar to those in Tahoua and are discussed in the above Supervision section: poorly kept records for the Health Management Information System and cost recovery, failure to observe clinical standards, input shortages, poor management of drugs and personnel, poor financial management of cost recovery, poor integration of activities, and patients found the clinics non-welcoming. Positive points found during supervision were improvement in compliance with IMCI standards and improved financial management of cost recovery. The problems noted by supervisors in Maradi, such as poor integration of activities and poor patient reception in clinics, were areas that had received attention during the QAP project in Tahoua and were no longer cited as problems in supervision reports there.

Figure 5: Percentage of Planned Supervisory Visits from District to Health Center Actually Completed, Tahoua and Maradi



During 1999 and 2000, Maradi received increased funding for supervision through UNICEF. Every district was able to purchase a four-wheel drive vehicle from UNICEF. This may have been the cause for an increase in the number of supervisory visits in Maradi during 1999. The proportion of completed supervisory visits in Tahoua declined after the project ended even though there were funds earmarked for supervision. From the standpoint of logistics, supervision is easier in Maradi as the districts are geographically smaller than those in Tahoua. The roughly similar rates of completion of supervisory visits between Tahoua and Maradi, despite the logistical and funding constraints in Tahoua, may have been due to the fact that supervision in Tahoua was viewed as a system and was consequently more organized, comprehensive, and based on trained supervisors. The system was "designed" by the district and regional staff. It was improved continuously through the revision of schedules, expanding the numbers of supervisors by training already-experienced clinicians (including nurses), modifying reporting requirements, and developing a supervisory checklist and guidelines for its use. Supervision was also linked to the quarterly meeting system where district supervisors were expected to report on their supervision findings.

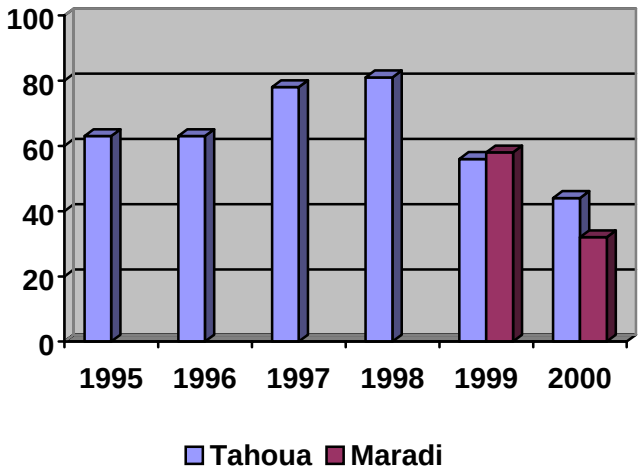
3. Quarterly Meetings

As seen in Figure 6, the percentage of planned quarterly coordination meetings actually held in Tahoua at the district and regional levels in 1999 and 2000, respectively, was not significantly different from the proportion held in Maradi in 1999 (56% versus 58%) and in 2000 (44% versus 32%).

Topics covered during the quarterly meetings were a review of activities conducted during the previous period, community participation, IMCI, and the development of the Annual District Implementation Plan. In Tessaoua, one of the meetings informed participants of the QA approach. This was due to the fact that the district medical officer had been transferred to Tessaoua from Tahoua. This individual trained his staff in QA and fashioned the supervisory system and quarterly meetings after the Tahoua approach.

However, it is hard to compare quarterly meetings in Maradi with those in Tahoua as they are quite different. In Tahoua, these meetings are two to three days long and attended by all healthcare workers in the district, as well as representatives of the community and NGOs working in the community. They address district-wide issues and are a forum where supervisory reports and QI projects are presented and discussed. In Maradi, by contrast, quarterly meetings are one day long and attended only by the medical officers. They are a forum where only reports for UNICEF activities are presented without the discussion of other ongoing health activities.

Figure 6: Percentage of Planned Quarterly Meetings Held at District and Regional Levels, Tahoua and Maradi



4. Utilization of Data

During the QAP/BASICS project, QI teams at the health centers were trained to base decisions on data and used health information system data to monitor the progress of their QI efforts. In order to measure utilization of monitoring data, a questionnaire was administered to the health center director at all 12 centers in the study. At all of the health centers, the most recent report had been completed. Ninety-one percent of the health centers used the data in their work and over half conducted their own analysis of the data. The differences between the health centers in Tahoua and Maradi are displayed in Table 8. As the sample of health centers is small, it is difficult to draw any conclusions on the effect of the project on utilization of data.

Table 8: Utilization of Data by Health Centers, Tahoua and Maradi (Percentage of Affirmative Responses)

	Tahoua n = 8	Maradi n = 4
Is your last Health Information System Report done?	75	100
Do you use the information in the report for your work?	75	100
• Ordering medication and supplies	50	50
• Evaluating priorities	38	25
• Planning	25	75
• Epidemiological surveillance	25	25
• Educating community	50	100
• Education clinic personnel	50	50
• Seeking financial resources	0	25
Do you receive feedback on your reports from the Health Information Office (during supervision, quarterly meetings, visits)?	88	25
Do you make graphic presentations of your data?	50	50
Do you conduct or request specific analysis of your data?	75	25
Do you have a monitoring system?	63	50
Do you have a forum where you can discuss indicators with other health center workers?	63	75
Do you have a forum where you can discuss indicators with the district health team?	100	100
Do you receive the bulletin, "Santé-Info" from the Health Information Office?	50	75
Do you receive the monthly bulletin from the Health Information Office?	0	50

5. Compliance with IMCI Standards

While the QAP/BASICS project funded IMCI training in Tahoua's Konni District, no such training had been done in Illéla District. The December 1998 end-of-project evaluation had compared these districts in terms of health worker performance. The study used the Rapid Assessment of Health Worker Performance and involved observing health workers and interviewing caretakers after a child was treated.

In order to compare health worker performance over time, we repeated this study in January 2001, at the same health centers as in 1998. The results are in Table 9, which uses a t test to show the significance of differences between Tahoua in 1998 and 2001, and between Tahoua and Maradi in 2001. After the project close, in 1999, all IMCI-trained workers in Konni were transferred to other regions outside Tahoua. Only the supervisors were trained in IMCI, not the health workers seeing patients. The results show a decrease in all but one performance item in Tahoua between 1998 and 2001. Significant decreases sere seen in "whether nutritional status was checked" (47.0% in 1998 to 5.4% in 2001), "whether the child was checked for two or more danger signs" (63.5% in 1998 to 26.3% in 2001), and "whether the mother was counseled about the child's treatment" (62.8% in 1998 to 10.7% in 2001).

Although none of the health workers in Tahoua seeing patients was trained in IMCI, those in Guidan Roumdji in the Maradi region had recently received IMCI training. There were no significant differences in performance between the two regions, although "whether nutritional status was checked" was greater in Maradi (26.7%) than in Tahoua (5.4%). This could be the result of the emphasis that the UNICEF project in Maradi placed on nutritional assessment.

Table 9: Percentage of Correct Performance of Health Workers According to IMCI Guidelines, Tahoua 1998 vs. Tahoua 2001 and Tahoua 2001 vs. Maradi 2001

Health Worker Performance Indicators	Tahoua 1998 n = 16	Test of Significance	Tahoua 2001 n = 16	Test of Significance	Maradi 2001 n = 8
Nutritional status checked	47.0	p<.001	5.4*	NS	26.7
Child correctly examined	37.3	NS	29.8	NS	31.7
Child checked for two danger signs	63.5	p=.01	26.3	NS	12.1
Child correctly treated	76.2	NS	78.9	NS	70.7
Mother counseled about child's treatment	62.8	p<.001	10.7	NS	12.5
Mother counseled on when to bring child back	47.8	NS	32.8	NS	48.8

Notes: * Sample size was 14 for Tahoua 2001question on nutritional status checked; NS = not significant.

The performance assessment also examined maternal knowledge and suggestions for improving services through exit interviews (see Table 10). There were no significant differences between 1998 and 2001 in maternal knowledge or improvement ideas. When comparing Tahoua and Maradi, only one item was significantly different: "mothers who had suggestions on improvement" (44.0% in Tahoua versus 14.2% in Maradi, p = 0.02). This difference may reflect the QA focus on client satisfaction in Tahoua.

Table 10: Percentage of Affirmative Responses from Mothers, Tahoua 1998 vs. Tahoua 2001 and Tahoua 2001 vs. Maradi 2001

Maternal Indicators	Tahoua 1998 n = 16	Test of Significance	Tahoua 2001 n = 16	Test of Significance	Maradi 2001 n = 8
Mothers who had suggestions on improvement	39.5	NS	44.0	p=0.02	14.2
Mothers who know how to give medication	75.0	NS	64.4	NS	55.7
Mothers who know at least 2 danger signs	53.8	NS	68.5	NS	68.8

Note: NS = not significant.

D. Research Question Number 4

What factors have sustained project achievements in Tahoua in 1999 and 2000?

Thirty-four MOH personnel in Tahoua had an opportunity to respond to several open-ended questions related to the sustainability of the QA effort in Tahoua. The questions focused on the major accomplishments of the QAP/BASICS project (Table 11), their perception of what QA elements and activities were still ongoing in January 2001 (Table 12), and their perception of what factors had assisted or hindered QA activities (Table 13).

Table 11 Major Accomplishments of the Quality Assurance/BASICS Project as Perceived by Study Participants

Structure	Process	Outcome
• Renovation of Tahoua Regional Health Administration • Provision of technical equipment and logistics support to the Tahoua RHA and to health districts • Training received on QA approach, coverage of different areas, and supervisory skills using a checklist • Enhancing staff knowledge of the health system • Supervision structure	• Initiating and regularly convening the different coordination and review meetings • Improvements in maternal child care and family planning standards review process, development of supervision checklist facilitating district supervision of health centers • Setting up QI teams • Processes for data control, collection, and use • Operations research and surveys during QI team cycles • Integration of QA activities at all levels • Decision making based on data	• Team spirit at all levels and good communication • Presentations at national and international conferences • Tahoua became a model for QA and a national resource for QA trainers • An increase in the region's honor and credibility (Tahoua is always cited as an example.) • The pursuit, timeliness, and quality of meetings and supervision • The improvement of staff performance through local management of issues first and the provision of documents/ materials • Staff pride, increased motivation, and inspired creativity

Table 12: Continuing and Discontinued QA Activities in January 2001 as Perceived by Study Participants

QA Element	Continuing QA Activities	Discontinued QA Activities
Quality definition	• Setting and reviewing clinical standards, managerial capacity, and implementing QA approach	• Regularity of QA activities • Some maintenance of equipment for districts with no donors (Illéla, Keita)
Quality measurement	• Continuous evaluation of activities (supervision integrated into coaching and monitoring)	• Some coaching and monitoring
Quality improvement	• The work of QI teams, exchanges through meetings, monitoring indicators, and competitiveness between teams	• Coaching of teams
QA principles	• Teamwork during meetings of the quality council, coaching sessions, and quarterly meetings still being held • Decision making based on data	• Some quality councils • Some regular quarterly coordination meetings
Documentation/ communication	• QI team supervision and documentation continue at health clinics and district hospitals	• Regular supervision in some districts • Exchange between districts • Field trips and conferences • *Ader Santé Info* newsletter
Capacity building	• Training in clinical care/coverage to strengthen compliance with standards	• Training sessions

Respondents noted that the regularity of quarterly meetings and supervision had decreased, although the quality of the supervision and meetings was still high. They also noted a lack of coaching of the QI teams and a discontinuation of the regional quality council, which had overseen QA program implementation. Respondents reported several ways that QA activities had either been helped or hindered. These ways were analyzed and categorized into the following topics: resource availability, motivation, results of the QAP/BASICS project, technical support, and personnel. They are summarized in Table 13.

Table 13: Factors that Assisted or Hindered the Sustainability of Project Accomplishments as Perceived by Study Participants

Factors Assisting Sustainability	Description	Factors Hindering Sustainability	Description
Resource availability	• The Regional Health Administration's commitment to seek funding and support from some donors (WHO for QA activities and Health Project II; World Bank for supervision) • The availability of trained staff and the appointment of a QA officer at the Regional Health Administration	Resource availability	• Resource shortages or lack of funding • Reduction of project benefits for staff (training, equipment/ materials, per diem) • Project's disengagement without closing notice (project closed when people were not ready to sustain project activities)
Motivation	• Influence of external visitors • Results obtained during the project • Support from MOH and other donors • Staff motivation and commitment • Field trips outside the project • District Health Management Team's stability	Motivation	• Decreased Regional Health Administration motivation and interest • Lack of initiative in identifying new strategies for improving problems • QA project close reduced staff's motivation because it closed suddenly and no other assistance (training, equipment) supplanted it • No conferences due to lack of funds
Results of the QAP/BASICS Project	• Required integration of QA into basic package of clinic services • Monitoring and follow-up by coaches • Presence of community workers at the grassroots level • Tangible results obtained	Technical support	• All necessary support documentation not provided to the region • Lack of close coaching • Supervision does not always integrate QA • Lack of timely or realistic planning
		Personnel	• Lack of QA training opportunities for new staff • Sluggishness within the QI teams • Staff instability/mobility • Lack of will from staff, who consider QA as additional workload • Lack of time • No QA representative

Respondents in Tahoua felt that the major accomplishments of the QAP/BASICS project could be summed up as a reinforcement of human resources capacity building, the institutionalization of some QA

practices, an improvement in physical assets, and an improvement in the performance of the regional health system.

E. Research Question Number 5

An open-ended question asking for input on strengthening and sustaining QA accomplishments resulted in approximately 31 different responses. These recommendations were analyzed and categorized into the three elements of institutionalization: (a) internal enabling environment (policies, leadership, core organizational values, and adequate resources); (b) support functions (capacity building, communication and dissemination, and incentives and recognition); and (c) organizing for quality (structure to support QA implementation (delineation of roles, responsibilities, and accountability for the implementation of QA activities). They are presented in Table 14.

Table 14: Suggestions by Study Participants for Strengthening the Institutionalization of Quality Assurance Project Accomplishments

Elements of Institutionalization	Suggestions
Internal enabling environment (policies, leadership, core organizational values, adequate resources)	1. Create a budget line item for QA at the national level and fund the action plan 2. Adopt a national QA program involving beneficiaries 3. Ask partners to include QA in their projects 4. Urge donors to show interest for QA and to fund QA activities 5. Increase political will 6. Increase MOH involvement 7. Provide the minimum resources in order to inculcate QA to new staff members 8. Make resources available 9. Re-establish QAP to give a new push 10. Monitor and fund QA activities regardless of integration 11. Provide material resources (such as flipcharts, etc.) 12. Provide government funding for activities 13. Put into place a QA sustaining mechanism at the Regional Health Administration or materialize institutionalization 14. Continue to provide funding for regional and/or district action plans for the implementation of activities scheduled in the context of QA
Support (capacity building, communication and dissemination, incentives and recognition)	1. Integrate QA in the training curriculum in basic education schools 2. Accelerate QA training and QA extension in the country 3. Provide a QA training and refresher course for Tahoua staff 4. Reduce personnel mobility 5. Hold a round table of district managers on the sustainability of QA 6. Sensitize staff on maintaining QA activities 7. Conduct field trips to Tahoua and other QA sites
Structure (delineation of roles, responsibilities and accountability for the implementation of QA activities)	1. Create a QA focus point at the district level 2. Integrate QA into the basic package of health services 3. Organize regular coordination meetings 4. Standardize results of completed QI cycles for replication elsewhere 5. Coordinate donor interventions 6. Continue quality council meetings on a regular basis 7. Provide QA coaching from the regional level 8. Focus on QA during supervision visits and coordination meetings 9. Integrate QA into Health Management Information System aids 10. Involve community in QA activities

Note: Numbering is to facilitate discussion and does not imply priority order.

An open-ended question asking for suggestions that could be made to others before they replicate the Tahoua QA experience elicited approximately 40 recommendations. These recommendations were analyzed and reviewed for common themes based on similar intentions and internal cohesion of the theme. The resulting six categories of similar ideas were constructed: policy and planning, funding and resource allocation, structure, capacity building, training implementation, necessary attitudes. The policy and funding categories were then grouped together, for the sake of presentation, making five categories (see Table 15).

V. CONCLUSIONS AND RECOMMENDATIONS

A. Discussion of Findings

Our findings suggest that although essential QA activities in Tahoua continued in 1999 and 2000 after the project close in 1998, their frequency decreased. This was true for supervision, quarterly coordination meetings, and quality improvement teams. The quality of care provided to patients at Tahoua health centers in 2001 declined for all but one performance item, and declined significantly for some key items, including checking a child for two or more danger signs and counseling mothers on the child's treatment.

Many factors can be identified as possible causes for the decline in QA activities and health worker performance in Tahoua. Two key factors are the transfer of staff and decreased resources. Staff transfer may be linked to both a change in the political party and a desire by the Niger MOH to extend the benefits of the Tahoua QA experience to other regions. To this end, the MOH identified, before the project close, funds to continue key QA activities in Tahoua as well as to extend QA to other regions. However, this lower level of funding was not enough to sustain QA activities at project levels, as seen with our results.

Was Tahoua any different than other regions two years after the project closed? Based on our study findings, we can say that Tahoua did have an advantage over Maradi two years after the project ended. Tahoua had a more structured and comprehensive supervision system than Maradi, although the percentage of supervisory visits completed in 2000 was no different between the two regions. Quarterly coordination meetings were longer and more comprehensive in Tahoua than in Maradi but held with equal or slightly greater frequency. Standards that Tahoua had addressed during the project were only now being addressed in Maradi, and performance of health workers in Maradi was no different than in Tahoua—despite recent IMCI training in Maradi and a transfer of all IMCI-trained workers out of Tahoua. So, although the frequency of QA activities had decreased in Tahoua in 1999 and 2000, the quality of supervision, standards development, and quarterly coordination meetings was better than in Maradi.

Some valuable lessons can be learned from the Tahoua experience after the end of the project. Not only must attention be paid to continued funding to ensure sustainability, but accountability for QA activities needs to be maintained through a strong QA management component. The suspension of the regional quality council must be seen as a constraining factor on the enabling environment for QA after the project ended. In addition, the dilution of trained health workers and supervisors in Tahoua led to a decrease in that region's capacity to sustain QA, without necessarily leading to a spread of QA into areas that received these trained personnel. Anecdotal reports from transplanted personnel indicate that they faced sometimes insurmountable difficulties trying to start QI teams at facilities with no previous exposure to them. Any transfer of personnel must be accompanied by a planned extension of QA activities to that region so that those personnel are supported in their efforts to initiate QA activities.

Finally, the strategy of generating ideas for improvements in QI teams that was implemented in Tahoua will not lead to sustained improvement if these teams cease to function. Instead, a better approach may be to link improvements with standards development and quality assessment, which has been implemented in other QAP country programs. Addressing gaps in performance through QA/QI methods will then lead to improvements in the system of care.

Table 15: Recommendations for Replicating the Tahoua Experience

Category	Recommendations
Policy and planning; Funding and resource allocation	1. Collaborate with those who show interest 2. Conduct a field visit to Tahoua and take advantage of the experience there 3. Conduct a thorough analysis of the situation in order to identify the real problems 4. Do not put money as the ultimate factor of motivation and operation 5. Establish a personnel management plan in order to reduce mobility (3 years minimum per trained worker) 6. Favor local funding of communities, cities, etc. 7. Identify a credible partner/ donor 8. Identify partners/ donors who agree to fund the QA approach 9. Make a solid action plan 10. Obtain starting resources 11. Provide incentives for staff performance 12. Select pilot health centers before extension activities 13. Take into account Tahoua's shortcomings and provide solutions 14. Use internal resources to conduct QA 15. Visit places where QA works well
Structure	1. Create working groups (teams) at all levels 2. Find persuasive strategies for motivation with regard to projected results and their impact on community health 3. Follow the teams and assign responsibilities at the regional level 4. Organize monitoring in all health centers 5. Reduce staff mobility
Capacity building	1. Appraise existing skills/ competence (surveys) 2. Begin with something concrete 3. Conduct concrete activities in the field 4. Identify motivated workers to train 5. Integrate QA in schools 6. Region needs to understand its population and epidemic data 7. Train District Health Management Teams to ensure supervision
Training implementation	1. Begin staff training from the bottom up 2. Call upon coaches who understand the training 3. Continuously review training modules according to acquired experiences 4. Implement QA right after training 5. Improve the quality of staff training 6. Let the first groups of trained staff work with those untrained before moving to another group 7. Make a prioritized training plan 8. Method requires executive training supported by documents/ materials 9. Train health workers by increasing duration 10. Use Tahoua trainers for training sessions
Necessary attitudes	1. Be patient in this process 2. Be as participative as possible 3. Convince staff on new QA policy 4. Discard the "project" aspect while introducing the approach 5. Don't prejudge before starting 6. Further sensitize community leaders 7. Inform everyone involved about the approach 8. Make QA everybody's business 9. Organize community sensitization sessions 10. QA needs to start from the Ministry and run through the whole system 11. Raise staff awareness of QA 12. Sensitize staff on the importance of integrating QA into the basic health package 13. Use necessary resources to change people's behavior

Note: Numbering is to facilitate discussion and does not imply priority order.

B. Presentation of Results at Workshop in Niger

These results were presented at a workshop in Konni, Niger, on June 27, 2001. The 25 workshop participants included MOH personnel from the national, regional, district, and health center levels of Tahoua and Maradi. Deficiencies that were noted in the study results were addressed by three break-out groups. Their suggestions for increasing the regularity of supervision and quarterly meetings were to better coordinate the quarterly meetings between the regional and district offices, to find the necessary resources, and to scrupulously keep to the proposed schedule.

As a result of the workshop, the following recommendations were made to the Niger MOH:

1. Prioritize at the national level the resources and organizations needed when planning QA activities.
2. Organize a one-day retreat in Tahoua on QA.
3. Enlarge the role of the quality council in Tahoua to include the diffusion and spread of best practices.
4. Diffuse the work of the QI teams throughout both regions.
5. Help the health workers in Tahoua to adhere to QA norms.
6. Decentralize team coaching in Tahoua to experienced personnel.
7. Introduce QA into Maradi.

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APPENDIX

Please note that the survey instruments have been modified for presentation here: All instruments were translated to English from their original versions in French, and space allowing respondent replies was eliminated to minimize the number of pages.

Study instruments:

A1. Guide for Document Review at the Department Level

A2. Interview with Staff of the Tahoua Regional Health Administration Re: Supervision of Teams

A3. QI Team Member Self-Assessment

A4. Interview with Health Center Manager

A5. Rapid Assessment of Health Worker Performance—Health Worker Observation

A6. Rapid Assessment of Health Worker Performance—Interview with the Mother Following IMCI Consultation

A1. Guide for Document Review at the Department Level

I. Standards

1. Please list the activities at the health center and district for which new standards were developed:

Health center level:
District level:

2. Describe the processes for developing these new standards for each of the activities:

Activities	Development Processes

3. List the activities at the district and/or health center level for which out-of-date standards were revised/adapted:

District level:
Health center level:

4. Describe the processes that were used to revise/adapt the old standards for each of these activities:

Activities	Revision Processes

5. List the standards put in place (functionally), whether old or new, by activity:

Activities	Standards

II. Supervision

6. How many supervision visits were conducted by the department per year and per district in 1999 and 2000?

Districts	1999		2000		Percentage Held
	Planned	Conducted	Planned	Held	

7a. Supervision costs in 1999

District	Average per Diem: Supervisors	Average per Diem: Drivers	Average Distance per Visit	Average Time Required for Each Visit (Person-Days)

7b. Supervision costs in 2000

District	Average per Diem: Supervisors	Average per Diem: Drivers	Average Distance per Visit	Average Time Required for Each Visit (Person-Days)

8. Indicate the supervised aspects by activity:

Activities	Supervised Aspects (Provide Details)

9. Indicate the implementation rate of recommendations made in various chronological supervision reports:

	Report 1	Report 2	Report 3	Report 4	Report 5
Number of recommendations					
Number of recommendations implemented					
Percentage implemented					

10. What were the five main problems encountered during supervision visits? Provide the most frequent (recurring) or the most serious.

11. Indicate the number of active supervisors in the department: _____

Number trained in supervisory methods: _____ Percentage of supervisors trained: _____

12. Please indicate whether a regional analysis of the results of the supervisions exists: _____

If so, for which periods: _____

For how many districts? _____

Positive Points	Negative Points

III. Meetings

13. How many meetings were held during 1999 and 2000?

Type of Meeting	1999		2000		Percentage Held
	Planned	Held	Planned	Held	
Staff					
Regional quality council					
Regional meeting of managers					
Coaches					
Partners					

14. List the quarterly meetings held indicating place, number of participants, type, and length from 1999 to 2000.

Date Meeting Was Held	Location	Number of Participants	Type of Meeting	Length
1.				
2.				
3.				
4.				

15a. The cost of quarterly meetings held in 1999

Type of Cost	Meeting 1	Meeting 2	Meeting 3	Meeting 4
Per Diem				
Refreshments				
Photocopying				
Transportation				
Lodging				
Other				
Total				

15b. The cost of quarterly meetings held in 2000

Type of Cost	Meeting 5	Meeting 6	Meeting 7	Meeting 8
Per Diem				
Refreshments				
Photocopying				
Transportation				
Lodging				
Other				
Total				

16. For each quarterly meeting held, indicate:

Date	Objectives	Problems Identified	Solutions/ Recommendations	System for Follow up	Implementation of Recommendations
1.					
2.					

IV. Training in Quality Assurance

17. For each QA training held, please indicate (and specify whether any training was not held):

QA Training Date	Length in Days	Number of staff trained	Level/ Category	Number of Trainers	Home Base of Trainers
1.					
2.					

18. Cost of training:

Type of Cost	Training #1	Training #2	Training #3	Training # 4	Training #5
Per diem					
Honoria					
Training documents					
Transportation					
Training materials/supplies					
Lodging					
Refreshments					
Other					
Total					

V. IMCI

19. List the districts implementing IMCI.

20. Indicate the number of staff trained in IMCI by year and by district.

District	1999	2000
Konni		
Illéla		
Tahoua		
Madaoua		
Bouza		
Keita		
Abalak		
Tchinta		

21. Analyze the IMCI supervision reports at the central level: What percentage adhere to standards?

Indicator	Supervision Level 1	Supervision Level 2	Supervision Level 3

What were the significant gaps in the area of IMCI?

What knowledge was acquired in the area of IMCI?

22. What types of problems were identified regarding IMCI and resolved by using QA tools and principles?

VI. Dissemination

23. Analysis of outside visits from trip reports and information bulletins

24a. Visits from outsiders:

Dates	Outsider	Place Visited	Objective

24b. Regarding visits made to other facilities

Dates	Who Participated	Place Visited	Objective

24c. Dissemination workshops

Dates	Place	Who?	Why?

24d. Information bulletins and published articles:

VII. Costs

25. Analysis of the annual action plans regarding costs related to the following activities:

1999

Activity	Funding Source	Level	Percentage
Trainings			
Supervision			
Meetings			
Resolution of problems			
Coaching			
Other			

2000

Activity	Funding Source	Level	Percentage
Trainings			
Supervision			
Meetings			
Resolution of problems			
Coaching			
Other			

26. Analysis of the financial reports of QA trainings to determine and compare the expected versus actual costs

QA Training	Expected Costs	Actual Costs	Difference

VIII. Department-Level Indicators (Health Information Management System)

Indicators	Years			Departmental Objective
	1998	1999	2000	
Rate (of total population) using curative services				
Coverage rate for infant consultations (0–5 km.)				
Coverage rate for prenatal consultations (0–5 km)				
Recovery rate: ambulatory nutritional counseling				
Drop-out rate: ambulatory nutritional counseling				
Family planning utilization rate (of the total population)				
Tuberculosis vaccine coverage rate (0–11 months)				
Measles vaccine coverage rate (0–11 months)				
Diphtheria-tetanus-pertussis/3rd dose coverage rate (0-11 months)				
Anti-tetanus 2 coverage rate				

IX. Documentation System Analysis

27a. Presence of documents: List the documents analyzed.

27b. Completeness of documents.

To what extent were the documents completely filled out (in terms of content)?

27c. Coherence of documents

1	2	3	4	5
Little				A lot

Describe storage system for documents.

A2. Interview with Staff of the Tahoua Regional Health Administration

RE: SUPERVISION OF TEAMS

Data Collector: ___/__/__/__ Date:_____

Respondent: _____ Title/position: _____

Months/years in this position: _____

Environment

1. During the last two years, have public events affected your work (for example, drought, flood, epidemic, religious)? If so, please describe.
2. Were new health policies introduced? If so, please describe.
3. Who were the new partners during the last two years?
   Who were the partners who stopped participating?

Implementation/Revision of Standards

1. Based on your experience, did the lessons learned from the project have an effect on clinical norms and the delivery of the Basic Package of Services? If not, why?
2. If so, what was done to develop/adapt new standards at the:

   a) District level? (If anything, review documents)

   Develop new standards
   Adapt new standards

   b) Health center level? (If anything, review documents)

   Develop new standards
   Adapt new standards
3. What was done to revise/adapt outdated norms at the:

   a) District level? (If anything, review documents)

   Develop new standards
   Adapt new standards

   b) Health center level? (If anything, review documents)

   Develop new standards
   Adapt new standards
4. Were new/revised standards communicated to personnel in charge of implementation?
   (If anything, review documents)
5. If so, what strategies were used to communicate the standards: a) training, b) supervision, c) memos, d) meetings, and/or e) other? (If anything, review documents)

Supervision

1. Have you led activities on supervision strategies? If not, why?
2. If so, what issues did you address: a) supervision policy, b) supervision by the departmental level of the district level, c) supervision by the district level of the health center level, d) frequency of supervision, e) tools to use during supervision, f) financial policy, and/or g) other?
   (Review documents)

3. What is the staff position of supervisors at the departmental level: a) all department staff, b) department chief, c) deputy director of the health department, d) program manager, and/or e) other?
4. Is supervision integrated into the work routine? (Review documents) If not, why not?
5. What tools do you use during supervision: a) supervision checklist developed in Tahoua, b) supervision guide from the MOH, c) other, or d) none?
6. If not the Tahoua checklist, please indicate why: a) inappropriate, b) difficult to follow, or c) other.

QA Structures

1. Is the quality council still functioning? If not, why not? If so, how many meetings were held: In 1999? _____. In 2000? _____
2. How many health centers have operational QI teams? Number of centers _____. Number with functioning teams _____.
3. How many QI cycles were completed in 1999? _____. In 2000? _____.
4. What was the impact of the cycles on the regional indicators?
5. Was coaching integrated into supervision visits? If so, review documents. If not, why?

Meetings

1. Are coordination meetings held? (Review documents) If not, why?
2. If so, what is their frequency: a) monthly, b) quarterly, c) semi-annually, d) occasionally, or e) other?
3. Where are meetings held: a) department headquarters, b) rotated among districts, or c) other?
4. What positions do the participants hold: a) department staff, b) certified medical staff (Departmental Hospital Center, maternity), c) laborer, d) medical chief of district, e) district epidemiologist, f) other district supervision team members, g) MSP representative, h) other departmental representative, i) partners, and/or j) others?
5. Who prepares the agenda: a) MOH, b) the department, c) department staff, d) medical chief of district, e) previous meeting, f) other?
6. What types of problems were addressed during the past two years? What activities did they relate to? What were the solutions? (Review documents)
7. Was there a mechanism for following up the recommendations issued at quarterly meetings? If so, what was it? If not, why?

QA Training

1. Have you revised the QA reference manual? If not, why?
2. If so, what changes were made? (Review document)
3. Have you provided training sessions in basic QA? If not, why?
4. If so, how many training sessions were held, what was the number of staff attending, their position, and level? (Review training guide)

IMCI

1. Did you train staff in IMCI? If so, how many? If not, why?
2. Did you expand IMCI into other new districts? If not, why? If so, which ones? What were the funding sources?

3. Have you provided supervision specifically in IMCI? If not, why? If so, how many supervision visits did you make?

4. Did you administer the Rapid Assessment of Health Worker Performance at the district level?

Other Training Sponsored by MOH

1. Did you provide other training sponsored by the MOH or other partners? If so, training in what? If not, why?

Dissemination of QA Experiences

1. What channels do you use to disseminate QA experiences: (Review communications plan): a) publication/bulletin, b) meeting, c) study tour, and/or d) other?

2. What were the main achievements? (Review documentation) If no achievements were made, why was that?

Costs

1. Did you research funding for QA activities?

2. If so, were they recorded in the annual action plan?

3. Was there funding? If so, what were the funding sources: a) state, b) community, c) NGO (name), d) other? If not, what did you do?

4. What areas were financed: a) norms and standard, b) measuring quality, c) quality improvement, and/or d) other?

5. What was the cost of the following main activities: a) basic QA training, b) training of trainers in QA, c) supervision visits, d) coaching, e) quarterly meetings? (Review documentation)

Institutionalization and Incorporation of QA Knowledge

1. In your opinion and based on your experience in Tahoua, what were the most significant accomplishments or lessons learned from QAP/BASICS?

2. To the extent lessons were learned, what do you think were the measurable improvements that had long-term impact on the department?

3. What elements could have been maintained during the two years after the project?

4. What factors supported such maintenance?

5. What factors hindered maintenance?

6. What elements could not be sustained? Why?

7. What suggestions do you have to improve or strengthen the institutionalization and community knowledge of the quality assurance project

8. What recommendations can you make for a region that would like to replicate Tahoua's quality assurance project experience?

A3. QI Team Member Self-Assessment

Health center: _____ Date: _____

Cadre: _____ Sex: _____

Month/year team was formed: ___/____

Estimated number of team meetings you attended: _____. Date of the last team meeting: _____

Please answer each question as honestly as possible. Indicate whether you believe the statement is generally true, partly true, or false. Your answers will be kept confidential.

1. Effective meetings
   a. We don't make much progress in team meetings.
   b. We seem to reach an impasse when a problem is discussed in team meetings.
   c. We follow team ground rules in our meetings.
   d. We don't have difficulties making decisions during team meetings.
   e. Meeting minutes accurately reflect decisions made.
   f. Team members don't complete their assignments between meetings.
2. Effective team leadership
   a. The team leader is disinclined to accept new ideas.
   b. The team leader makes decisions without first discussing them with team members.
   c. The team leader asks for suggestions before expressing his/her own views.
   d. The team members choose only the facility director as team leader.
   e. The leader ensures that team meetings are held regularly.
   f. The leader encourages team members to speak openly and share responsibilities.
3. Positive feedback
   a. When team members are criticized, they think they are no longer respected.
   b. Our team leader encourages positive feedback.
   c. In our teamwork, we draw lessons from our mistakes and try not to repeat them.
   d. Little time is devoted to reviewing what the team is doing, how it functions, or how to improve it.
   e. Team members aren't defensive when they are criticized.
   f. Team members are reluctant to express criticism.
4. Team creativity
   a. This team generates many new ideas.
   b. The team members are reluctant to suggest new ideas.
   c. The team members actively listen to new ideas.
   d. Good ideas are lost.
   e. Creative ideas are followed by real measures.
   f. Only certain members suggest new ideas.
5. Positive environment
   a. Team members don't say what they really think.
   b. Team members are not determined to see the team succeed.
   c. Team members are sufficiently at ease to talk openly at meetings, even if they disagree with one another.
   d. The team members care about each other, and don't criticize each other unconstructively.
   e. Team members don't really trust each other.
   f. Our team is energetic and stimulating.

6. Team accomplishments
    a. Our team wastes time with unproductive activities.
    b. Our accomplishments are too insignificant to justify the time we devoted to solving problems.
    c. We generally achieve our objectives.
    d. Team members seem to look for ways to keep up appearances rather than achieve our objectives.
    e. Our activities have contributed to improving the quality of healthcare in our center.
    f. I am proud to belong to this team.

7a. What I liked about teamwork:

7b. What I ultimately didn't like about team work:

8. Our team had difficulty with the following steps:
    a. Identifying and prioritizing the possible improvements
    b. Defining the problem
    c. Identifying the staff who would work on the problem
    d. Analyzing and studying the problem
    e. Choosing and developing a solution
    f. Implementing the solution
    g. Measuring the impact of the solution
    h. Starting on new problems

9. My role on the team was (please choose one): team leader, reporter, timekeeper, or member.
    How were you picked: volunteered, chosen by other members, or assigned?

10. With regard to the following tools and methods, indicate whether you could easily use them, could not use them, or are not familiar with the tool/method:
    a. Brainstorming
    b. Drawing flowcharts
    c. Drawing cause-and-effect diagrams (fishbone diagrams)
    d. Decision matrix

11. Our facilitator/supervisor (Please indicate yes or no):
    a. Helped us develop and follow ground rules for working on the team
    b. Encouraged active participation by everyone
    c. Helped the team make decisions
    d. Stayed neutral during conflicts and didn't interfere in the arguments/discussions
    e. Helped the team stay on track
    f. Provided advice and training
    g. Other (describe)

12. Was the team's performance limited by any of the following factors? (Please indicate whether the following statements are very true, partially true, or not true.)
    a. The team is not sufficiently familiar with the tools for solving problems.
    b. Team members don't attend meetings.
    c. Team members don't take responsibility for their actions.
    d. Time for teamwork is not available.
    e. The team lacks motivation.
    f. The team met.
    g. The leader is not effective.
    h. People make assumptions without having appropriate information.
    i. The problem is too difficult.
    j. Other (describe)

A4. Interview with Health Center Manager

Data Collector:___/__/__/__ Date:_____

Respondent: _____ Title/position: _____

Note: If the respondent indicates "Yes," mark 1; if "No," mark 0; if "Partly true," mark 2; and if "I don't know," mark 3.

	Supervision		
1	How long have your worked in this facility?	_____ (months)	
2	Do you have a written job description?	1	0
3	If so, is it easily available?	1	0
4	Do you have a calendar that shows your supervisor's visits?	1	0
5	Did you have a supervision visit from the district level during the last six months of 2000? If not, proceed to Question 7.	1	0
6	If so, how many supervision visits did you had?	_____(number)	
7	If not, how long has it been since the last supervision visit from the district?	_____ (days)	
8	During the last visit, did your supervisor use a supervision checklist?	1	0
9	Were you told in advance that the supervisor was coming? If not, proceed to Question 11.	1	0
10	If so, how were you informed?		
	a) Through a pre-existing calendar?	1	0
	b) By letter?	1	0
	c) By telephone/radio?	1	0
	d) Another way? (Please specify)	1	0
11	Were you informed of the objectives and content of the supervision visit?	1	0
12	Were other healthcare providers informed of the visit?	1	0
13	If so, by whom?		
14	Did you prepare before the supervisor's arrival?	1	0
15	What did the supervisor do?		
	a) Observed healthcare providers provide services?	1	0
	b) Reviewed documents?	1	0
	c) Interviewed healthcare providers?	1	0
	d) Interviewed clients?	1	0
	e) Anything else? (Please specify)	1	0
16	What do you think of the length of the supervision visit?		
	a) Short?	1	0
	b) Acceptable?	1	0
	c) Long?	1	0
17	Are you involved in the decision making regarding supervision?	1	0
18	If so, please comment?		
19	During the last visit, what activities did your supervisor ask about?		
	a) Malaria	1	0
	b) Curative care	1	0
	c) Preventive care	1	0

	d) Rehabilitation	1	0
	e) Nutritional counseling	1	0
	f) Infant counseling	1	0
	g) Family planning	1	0
	h) QA work	1	0
	i) Other (Please specify):	1	0
20	Have you received feedback from the last supervision visit? If so, in what form?	1	0
	a) Written report	1	0
	b) Verbal report	1	0
	c) Other (Please specify)	1	0
21	What has your supervisor done to help you maintain your skills?		
	a) Nothing	1	0
	b) Just-in-time training as the need arises	1	0
	c) Workshops/seminars	1	0
	d) Forwarding documented information	1	0
	e) Other (Please specify)	1	0
22	Do you have a supervision logbook? (If so, review)	1	0

Utilization of Data			
23	Are you required to submit reports for the Health Information Management System? If not, proceed to Question 33.	1	0
24	Did you report for the last quarter of 2000? (Review if available)	1	0
25	Do you use the information in these reports to help you in your work?	1	0
26	If so, how do you use it (Choose a response):		
	a) Order medications/ supplies	1	0
	b) Setting priorities	1	0
	c) Planning	1	0
	d) Disease surveillance	1	0
	e) Community awareness	1	0
	f) Staff awareness	1	0
	g) Research for seeking financial assistance	1	0
	h) Other (Please specify)	1	0
27	If not, why?		
28	Give two examples of decisions you took in the final quarter of 2000 that were based on data		
29	Have you received feedback from the Health Management Information System that you have discussed with your supervisor? If not, please proceed to Question 33.		
30	If so, what feedback did you get from your supervisor?		
	a) Discussion	1	0
	b) Written report	1	0
	c) Other (Specify)	1	0
31	In what setting was this feedback provided?		

	a) Supervision	1	0
	b) Quarterly meeting	1	0
	c) Supervision visit	1	0
	d) Other (Please specify)	1	0
32	Did you make a graphical presentation of your data? (Review) If so, were they:	1	0
	a) Up-to-date?	1	0
	b) Correct?	1	0
	c) Posters?	1	0
33	If not, why?		
34	Did you make recommendations to the district based on your specific analyses of your data?	1	0
35	If so, please provide examples.		
36	If not, why?		
37	Do you have a monitoring system?	1	0
38	If so, who calculates and analyzes the data at the health center level?		
	a) Health center manager?	1	0
	b) All healthcare providers?	1	0
	c) Both of the above?	1	0
	d) A monitoring team?	1	0
	e) Others?	1	0
39	Do you have a forum for discussing improvement indicators with the healthcare providers at your health center?	1	0
40	Do you have a way to share your improvement indicators with the district level??	1	0
41	If so, what is it?		
42	Do you receive the Santé Info bulletin from the Health Management Information System?	1	0
43	Do you receive the monthly Health Management Information System bulletin?	1	0

44. What in your opinion are the positive aspects of the following systems?

    a) Monitoring?

    b) Supervision?

45. Based on your experiences, what are the weaknesses of the following systems?

    a) Monitoring?

    b) Supervision?

46. What suggestions do you have for making the monitoring system more effective in your health center?

47. What suggestions do you have for making the supervision system more effective?

A5. Rapid Assessment of Health Worker Performance—Health Worker Observation

OBSERVATION OF HEALTH PERSONNEL FOR CASE MANAGEMENT OF A SICK CHILD

District : _____ Date:___/___/___
Investigator's Number:_____
Health Facility Name:_____
Health Worker: Type: [ ]Senior Nurse [ ]Regular Nurse [ ]Midwife [ ]Junior Nurse
Child: Age in months:_____ (documented, if possible) Child's Number:_____
Gender: ___ 1=Male; 2=Female Relationship of accompanying person: _____

Note the beginning time of survey: Hour_____ Min_____

WELCOME

- Were greetings exchanged between the health worker and the mother/accompanying person? Yes No
- Did the health worker invite the mother to have a seat? Yes No

The welcome was proper (proper if both responses are "Yes")	**Yes**	**No**

1. What reasons did the mother give for the consultation? **(Check all relevant answers**)
   _____Fever _____Cough/Difficulty in breathing
   _____Diarrhea _____Ear Ache
   _____Other (Specify)_____

Is the following information on the child available to the health personnel at the time of the consultation? (Ascertained by him/her or by someone else before the consultation and entered into the child's record)

2. Health or care card Yes No
3. Age, given by mother Yes No
4. Weight Yes No
   If yes**,** did health provider verify nutritional status by using the Weight/Age Indicator? Yes No
5. Temperature: By thermometer Yes No
   By touching the child Yes No

GENERAL EVALUATION

Did the health worker look for danger signs:	**Looked**		**Found**	
6. Child unable to drink or breastfeed	Yes	No	Yes	No
7. Child vomits all that is ingested	Yes	No	Yes	No
8. Child had convulsions/coma	Yes	No	Yes	No
9. Child is drowsy/difficult to rouse	Yes	No	Yes	No

The health worker looked for at least **2 signs** of danger	Yes	No
The health worker looked for all **4 signs** of danger	Yes	No

10.	Did the health worker inquire about all the main symptoms (diarrhea, cough/difficulty breathing, fever, ear ache)?	Yes	No
Complaint of diarrhea		Yes	No
If no, go to complaint of cough/difficulty breathing			
Did the health worker ask about:			
11.	The onset/duration of sickness?	Yes	No
12.	The presence of blood in the stools?	Yes	No
Did the health worker look for the following signs of dehydration:			
13.	Lethargy/unconsciousness/irritability?	Yes	No
14.	Thirst?	Yes	No
15.	Tenting of the skin?	Yes	No
16.	Sunken eyes/tears/dry tongue?	Yes	No

Was the child correctly examined for diarrhea	**Yes**	**No**
(correct if the three key signs (13-14-15) were inquired about)		

Complaint of cough/difficulty breathing		Yes	No
If no, go to complaint of fever			
Did the health worker ask about:			
17.	The onset/duration of sickness?	Yes	No
Did the health worker look for:			
18.	Frequency of breathing?	Yes	No
19.	Chest indrawing?	Yes	No
20.	Stridor/wheezing?	Yes	No

Child was correctly examined for cough	**Yes**	**No**
(correct if the three responses (18-19-20) are "Yes")		

Complaint of fever		Yes	No
If no, go to complaint of ear ache			
Did the health worker ask about:			
21.	The onset/duration of sickness?	Yes	No
22.	Previous history of measles?	Yes	No
Did the health worker look for:			
23.	Stiff neck/floppy neck in infants?	Yes	No
24.	Signs of measles: generalized skin eruptions, cough, nasal discharge, conjunctivitis?	Yes	No
25.	Throat infection/oral ulcerations ?	Yes	No

The child was correctly examined for fever	**Yes**	**No**
(Correct if answers 23 and 24 are "YES")		

Complaint of ear ache	Yes	No
If no, go to question 29		
Did the health worker ask about:		
26. The onset/duration of sickness?	Yes	No
Did the health worker look for:		
27. Infection of the auditory ducts?	Yes	No
28. Tumefaction behind the ear?	Yes	No

The child was correctly examined for ear ache	**Yes**	**No**
(Correct if 2 responses (27-28) are correct		

REFERRAL:

29. Did the health worker find one or more signs of danger?	**Yes**	**No**
30. If yes, was the child referred to another level of care?	**Yes**	**No**
If not, why not? _____		

VACCINATION STATUS:

Did the health worker:

31. Ask whether the mother has the child's health/care card with her?	Yes	No	
32. Determine the vaccination status of the child? (Either by asking or by looking at the health card) If no, go to question 35	Yes	No	
33. Establish that the child requires vaccination?	Yes	No	
34. Refer the child for vaccination?	Yes	No	
35. Determine the vaccination status of the mother/accompanying person? (Either by asking or by looking at the health card) If no, go to question 38	Yes	No	NA
36. Establish that the mother/accompanying person needs vaccination?	Yes	No	NA
37. Refer the mother/accompanying person for vaccination?	Yes	No	

Correct determination of the vaccination status of mother/child	**Yes**	**No**	**NA**
(Correct if 32 and 35 = "Yes")			

38. **If the mother is not in possession of the health card, did the health worker:**

- Criticize the mother?	Yes	No
- Ask the mother to return with the health card/vaccination card?	Yes	No
- Make an appointment?	Yes	No
- Say nothing?	Yes	No

DIAGNOSIS

39. **Did the health worker make a diagnosis?**	**Yes**	**No**
If «Yes», which? :		
40. Simple diarrhea	Yes	No
41. Diarrhea with dehydration	Yes	No

If yes, is it: ___1.moderate (Level B) __2. serious (Level C) __3. not specified

42. Dysentery/bloody diarrhea Yes No

43. Cough/cold Yes No

44. Pneumonia Yes No

If yes, is it: ___simple ___severe _____unspecified

45. Ear ache (otitis) Yes No

If yes, is it ____average _____acute _____chronic

46. Malaria Yes No

If yes, is it ___simple ___ severe ___ unspecified

47. Fever of other, unidentified origin Yes No

48. Measles Yes No

If yes, is it ___simple ___with complications ___unspecified

49. Malnutrition Yes No

If yes, is it ___simple ____ severe ____ unspecified

50. Other diagnosis Yes No

If yes, specify:_____

TREATMENT

What did the health personnel administer or prescribe for the child?

(Check all pertinent answers)		Treatment Received	Prescription
51.	Quinine injection	____	____
52.	Chloroquine tablets/syrup	____	____
53.	Aspirin/Paracetamol	____	____
54.	Bathe child/lukewarm compresses	____	____
55.	Antibiotic injection Specify_____	____	____
56.	Antibiotic tablets/syrup Specify _____	____	____
57.	Vitamin A or other vitamins	____	____
58.	Iron/ Folic Acid	____	____
59.	Oral Rehydration Solution (ORS)/ Sugar & Salt Solution (SSS)	____	____
60.	Infusion (Ringers' lactate solution, normal saline solution)	____	____
61.	5% glucose (dextrose) solution	____	____
62.	Metronidazole tablets/syrup	____	____
63.	Dietary advice/referral to CRENA (Ambulatory nutritional rehabilitation centers)	Yes	No
64.	Other (specify _____)	____	____

Complete at end of observation period

65. List the different diagnoses made by the health worker (see above)_____
_____

Case of simple diarrhea treated with ORS/SSS without antibiotics?	**N/A**	**Yes**	**No**
Case of dysentery treated with an appropriate antibiotic?	**N/A**	**Yes**	**No**
(Appropriate antibiotics = Ampicillin or Co-trimoxazole)			
Case of simple malaria treated with an appropriate medication?	**N/A**	**Yes**	**No**
(Appropriate = Chloroquine)			
Case of severe malaria treated with an appropriate medication?	**N/A**	**Yes**	**No**
(Appropriate = Quinine)			
Case of cough/cold treated without antibiotic	**N/A**	**Yes**	**No**
Case of simple pneumonia treated with an appropriate medication?	**N/A**	**Yes**	**No**
(Appropriate = Co-trimoxazole)			
Case of severe pneumonia treated with an appropriate medication?	**N/A**	**Yes**	**No**
(Appropriate = injectable antibiotic/referral)			
Case of acute Otitis media treated with an appropriate antibiotic?	**N/A**	**Yes**	**No**
(Appropriate = Penicillin G or Peniprocaine or injectable Ampicillin or syrup or Co-trimoxazole or Amoxicillin)			
Case of chronic otitis media treated without antibiotic?	**N/A**	**Yes**	**No**
Case of malnutrition received appropriate advice?	**N/A**	**Yes**	**No**
TREATMENT IS APPROPRIATE FOR THE DIAGNOSIS?		**Yes**	**No**

INTERPERSONAL COMMUNICATION

Did the health worker:

66. Explain how to administer the oral medications (tablets, syrup)?	Yes	No	NA
67. Demonstrate how to administer the oral medications (tablets, syrup)?	Yes	No	NA
68. Ascertain that the mother understands?	Yes	No	NA
Counseling for the treatment is correct? (if 66-68 = "Yes")	**Yes**	**No**	**NA**
69. Encourage continuation of feeding/breast/bottle feeding?	Yes	No	NA
70. Encourage an increase in liquids?	Yes	No	NA
71. Explain to the mother when to return for follow-up for the child?	Yes	No	NA
72. Tell the mother to bring back the child for the following symptoms?	Yes	No	NA
a) The child does not drink or drinks very little	Yes	No	NA
b) The child refuses to eat or to suck milk	Yes	No	NA
c) The child's condition worsens	Yes	No	NA
d) The child has a high/persistent fever	Yes	No	NA
e) The child breathes very rapidly or with difficulty	Yes	No	NA
f) The child has bloody stools	Yes	No	NA
At least 2 danger signs checked "Yes"	**Yes**	**No**	

73. Did the health worker ask an open-ended question to verify that the mother fully understands when to come back with the child? Yes No NA

Were ORS/SSS given or prescribed to the child? Yes No

If no, go to question 77

If yes, did the health worker:

74. Explain how to prepare the ORS/SSS? Yes No
75. Explain to the mother how to administer the ORS/SSS? Yes No
76. Establish that mother understands preparation, administration of ORS/SSS? Yes No

Did the health worker:

77. Ask the mother open-ended questions to see whether she fully understands? Yes No NA
78. Correct any errors/congratulate the mother? Yes No NA
79. Ask the mother whether she has any questions? Yes No NA

The health worker uses effective interpersonal communication	**Yes**	**No**	**NA**
Correct if all three responses (77, 78, 79) are "yes"			

NOTE THE TIME WHEN THE MOTHER LEAVES

TIME WHEN THE INTERVIEW ENDS: Hour_____ Minutes_____

LENGTH OF THE INTERVIEW: _____ minutes

END OF THE OBSERVATION OF HEALTH WORKER

At the end of the consultation for the child, if the health worker did not verbally give the diagnosis for the child, interviewer should ask him/her and complete this form.

A6. Rapid Assessment of Health Worker Performance—Interview with the Mother Following IMCI Consultation

INTERVIEW WITH THE MOTHER AT THE END OF THE IMCI CONSULTATION

District : _____ Date:___/___/___
Investigator's Number:_____
Health Facility Name:_____
Health Worker: Type: [ ]Senior Nurse [ ]Regular Nurse [ ]Midwife [ ]Junior Nurse
Child: Age in months:_____ (documented if possible) Child's number: _____
Sex : ____ (1 = Male ; 2 = Female) Status of the accompanying person _____
Mother: Age (in years) _____

Greet the mother or accompanying person and tell her/him that you would like to ask a few questions today's visit to the health facility.

Indicate the hour when interview begins: Hour_____ Min_____

If the accompanying person is not the mother, go to question 3

SOCIOECONOMIC INFORMATION

1. What is your marital status? _____Married _____Divorced _____Single _____Widowed
2. Have you attended school? ____ French School ____Literacy school ___Koranic ____None
   If French school, for how many years? _____Year(s)

AVAILABILITY AND ACCESSIBILITY

3. Which village or district do you come from?_____(write the name in capital letters)
4. What means of transportation did you use to come here today?
   _____Walking _____Cart _____Vehicle/motorbike
   _____Private car _____Other (specify): _____
5. If you did not walk, how much did transportation cost you? _____francs CFA
6. How much did you pay for healthcare? _____francs CFA
7. Besides travel and care expenses, did you spend money for food or drink during your visit to the health center? Yes No
   If yes, approximately how much ? _____francs CFA

8a. Did you have problems getting here today? Yes No

If yes, what was the main problem? (Check only one response)

_____It takes too much time to get here
_____Had to find someone to take care of the children at home
_____Had to miss work
_____No money
_____The health facility hours are not convenient
_____Other (specify)_____

8b. At what time of day do you think that care is available at this center?
_____Morning _____Afternoon _____Any time

MOTHER'S BEHAVIOR IN RESPONSE TO CHILD'S ILLNESS

9. How long has your child been ill?
   _____Today _____Number of days _____Do not know

10. Did you take your child for care elsewhere before bringing him/her to this health facility? Yes No

If yes, where did you bring him/her? (Check all applicable responses)

_____Other Health Center _____Hospital _____Private Clinic/office _____Traditional Healer

_____Pharmacist/Drug vendor ____Community Health Worker ___Other (Specify_____

If the child was taken elsewhere, how much did you pay for care? _____francs CFA

11. When the child is sick, who makes the decision to bring the child to the health center?

_____Herself _____Husband _____Other (specify)_____

12. CHILD HAS DIARRHEA? Yes No

If no, go to question 15

If yes:

13. Did you do something to treat the diarrhea at home? Yes No

If yes, what did you do (Check all applicable responses)

_____Gave ORS

_____Gve SSS

_____Gave herb tea/ traditional medicine

_____Gave other treatment (specify)_____

14a. Had you ever heard of ORS/SSS for diarrhea? Yes No

If no, go to question 15

If yes: Why does one give ORS/SSS to children with diarrhea? (check all applicable responses)

_____To prevent dehydration (replace lost water/keep child from getting tired)

_____To stop diarrhea _____Other (specify)_____ _____Does not know

14b. Had you already been shown how to prepare ORS? Yes No

If no, go to question 15

14c. How do you prepare ORS?

_____Correct (mix one liter of water with a packet of rehydration salts)

_____Incorrect _____Does not know

14d. How do you prepare SSS ?

_____Correct (mix one liter of water with 8 cubes of sugar and 2 pinches of salt using 3 fingers)

_____Incorrect _____ Does not know

15 CHILD HAS FEVER? Yes No

If no, go to question 17

If yes:

16. Did you do something to treat the fever at home? Yes No

If yes, what did you do? (Check all applicable responses)

____Gave aspirin/paracetamol

____Gave chloroquine/other anti-malarial

____Gave antibiotics/capsules bought in the market

____Bathed child/wrapped child in moist cloth

____Removed child's clothes

____Gave herbal tea/traditional medicine

____Gave other treatment (specify)_____

17. CHILD HAS COUGH OR DIFFICULTY BREATHING? Yes No

If no, go to question 19

If yes :

18. Have you done something to treat the child at home? Yes No

If yes: What did you do? (Check all applicable responses)

_____Gave paracetamol/aspirin _____Gave antibiotics/capsules

_____Gave an herbal tea/traditional medicine _____Gave a rub-down

_____Gave cough syrup _____Gave other treatment (specify)_____

19. CHILD HAS EAR ACHE? Yes No

If no, go to question 21

If yes :

20. Have you done something to treat the child at home? Yes No

_____Gave paracetamol/aspirin _____Gave antibiotics/capsules

_____Put a product in the ear _____Dried the ear with a clean cloth/cotton

_____Other (specify)_____

KNOWLEDGE ABOUT CASE MANAGEMENT AT HOME

21a. Did the health worker _____give or ____ prescribe medication today?

If medications were given to the mother, fill in the table below. If not, go to question 21b.

For each ORAL medication mentioned by the mother, fill in the table below by asking the following questions (compare mother's responses with the health worker's prescription):

WHAT QUANTITY of tablets/capsules/spoonfuls will you give to the child for each dose?

HOW MANY TIMES EACH DAY will you give this dose to the child?

FOR HOW MANY DAYS will you give this treatment to the child?

List the medications given to the mother_____

Medication	**Dosage (Quantity of tablets/capsules/spoonfuls)**	**Number of times/day**	**Number of days**
Chloroquine tablet/syrup	Yes No N/A	Yes No N/A	Yes No N/A
Antibiotic tablet/syrup	Yes No N/A	Yes No N/A	Yes No N/A
Paracetamol tablet/syrup	Yes No N/A	Yes No N/A	Yes No N/A
Aspirin tablet/syrup	Yes No N/A	Yes No N/A	Yes No N/A
ORS/SSS	Yes No N/A	Yes No N/A	Yes No N/A

Did the mother or accompanying person know how to administer correctly all the medications provided? Yes No

21b. If medications were prescribed, did the health worker ask the woman to return for explanations?

Yes No

22. Check below the complaint given by the mother (refer to questions 12/15/17/19):

The child has: ____Diarrhea ____Fever/malaria ____Cough/difficulty breathing ____Ear ache

22a. What will you do for the child after you return home? (Check all applicable responses)

In general:

___Continue to feed the child ____Complete the full treatment

___Don't know ____Nothing

___Continue to give milk to the child ____Bring the child back if his/her condition worsens

___Give more liquids ____Return for the appointment given by the health worker

Specifically:

Diarrhea

___Give ORS/SSS ____Give drink after each stool/vomiting ___Nothing ___NA

Acute Respiratory Infection

___Give antibiotics ____Give a cough remedy ___Nothing ____NA

Fever/malaria

____Give an anti-malarial ____Give aspirin/paracetamol _____Tepid bath ___Nothing ___NA

Ear Ache

____Give antibiotics ____Give aspirin/paracetamol ____Dry the ear with a clean cloth/cotton ____Nothing ____NA

Does the mother/accompanying person know at least 2 practices for home-based case management?	Yes	No

22b. How will you know that the child's condition has worsened? (Check all applicable responses)

_____Fever appears or does not go away _____Vomiting begins or persists

_____Child is unable to eat _____Child is unable to drink

_____Diarrhea persists _____Child experiences convulsions

_____Child's chest caves in with each breath _____Other (Specify)_____

The mother knows at least 2 signs of severity to look for at home?	**Yes**	**No**

KNOWLEDGE ABOUT VACCINATIONS:

23. Do you have the child's health card/vaccination card with you? Yes No

If the mother has the card, look at the dates of ALL VACCINATIONS ADMINISTERED from birth until today, and complete the table below. If not, go to 24b.

Date of birth:___/___/___/ and Age/_____months

CHILDHOOD VACCINATIONS (Dates)	**RECEIVED**	
BCG/ Polio-O(at birth)	Yes	No
DPT-1	Yes	No
DPT-2	Yes	No
DPT-3	Yes	No
Measles	Yes	No

Does the child require vaccination?	**Yes**	**No**
Did the child receive a vaccination today?	**Yes**	**No**

24a. When will you return with the child to the health facility for the next vaccination?

_____Knows _____Does not know _____NA

24b. Do you have your vaccination card with you? Yes No

If not, go to question 30

25. If yes, copy down, in the table below, the tetanus vaccinations received by the mother.

MOTHER'S VACCINATIONS	**RECEIVED**	
Anti-tetanus-1	Yes	No
Anti-tetanus-2	Yes	No
Anti-tetanus-3	Yes	No
Anti-tetanus-4	Yes	No
Anti-tetanus-5	Yes	No

Does the mother require vaccination?	Yes	No
Did the mother receive a vaccination today?	Yes	No

MOTHER'S SUGGESTIONS TO IMPROVE THE HEALTH SYSTEM:

30. Is there anything that could improve the provision of health services that you received this morning?

Yes No

31. If yes, do have any suggestions? (Note the suggestions given by the mother or accompanying person)

_____

_____

_____

END OF THE INTERVIEW

Indicate the hour of the end of the interview: Hour:_____ Minutes:_____

Duration of the interview:_____

Thank the woman for having answered your questions and ask her if she has any questions to ask of you.

Check that she knows:

- how to prepare ORS/SSS for a child with diarrhea;
- when to return for the next vaccination;
- how to administer the prescribed medications;
- when to return if the child's condition worsens;

And if appropriate, correct the mother's knowledge gaps or errors.

QUALITY ASSURANCE PROJECT
University Research Co., LLC
7200 Wisconsin Avenue, Suite 600
Bethesda, MD 20814

Tel: (301) 654-8338
Fax: (301) 941-8427
www.qaproject.org