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**LESSONS LEARNED FROM APPROACHES
TO IMPROVE THE CASE
MANAGEMENT OF SICK CHILDREN IN A
QUALITY ASSURANCE ENVIRONMENT IN NIGER**

Niger

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ACRONYMS

ARI	Acute Respiratory Infection
BASICS	Basic Support for Institutionalizing Child Survival
CDD	Center for Disease Control
DHMT	District Health Management Team
HIS	Health Information System
HMIS	Health Management Information System
HW	Health Worker
IMCI	Integrated Management of Childhood Illness
LQAS	Lot Quality Assurance Sampling
PVO	Private Voluntary Organization
QA	Quality Assurance
QAP	Quality Assurance Project
REDSO	Regional Economic Development Support Office
RPA	Rapid Performance Assessment
STD	Sexually Transmitted Disease
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

EXECUTIVE SUMMARY

This document describes the lessons learned from approaches to improve health worker performance in a quality assurance environment in Niger. Qualitative as well as quantitative information was collected to show how the combination of general quality assurance principles with systematic monitoring of technical and managerial competence leads to better program outcomes. Based on these lessons learned are recommendations for routine monitoring through supervision using a checklist with valid and reliable indicators. Immediate problem solving at the facility level is the primary purpose of the checklist, but the information is also useful for district health teams to monitor service quality and to conduct participatory reviews and activity planning. While Niger faces very special environmental and structural challenges, it also shares many problems and solutions with other countries in Africa that try to improve services quality and access. The capacity built in Niger could serve as a regional training site to train health managers and trainers from other countries in quality assurance techniques and in the adaptation and use of tools including supervision checklists and surveys.

BACKGROUND

According to United Nations reports, Niger has some of the lowest socioeconomic indicators in Africa and a high infant mortality rate with 123 per 1000 live births. The country's generally poor health status indicators seem largely due to poor access to and utilization of essential health services, such as immunization, which does not even reach 50 percent coverage in most communities. Annual epidemics of measles with thousands of reported cases and about 40 percent malnutrition in children under 5 years of age have become a fact of life.

Niger is one of the countries where the integrated management of childhood illnesses (IMCI) approach will be introduced, starting sometime during 1998. Experience with IMCI elsewhere has shown that its successful implementation will depend on systematic monitoring and evaluation following the initial training of health workers. Information about technical and managerial capacity is essential to assure the quality in the three areas targeted by IMCI: improved clinical skills of health workers, improved health systems, and improved family and community practices.

Even before IMCI will be introduced in Niger, improving health workers' ability to manage sick children appropriately has been the focus of many activities that included training, routine monitoring and evaluation of health worker performance. Improved case management has been supported by BASICS in the Boboye and Say Districts since 1994 and jointly with the Quality Assurance Project (QAP) in the Tahoua Department since 1997. These services are part of the minimum package of service activities that every primary care facility in Niger is supposed to offer. The minimum package includes maternal and child health, pre-, peri- and postnatal care, nutrition, immunization, infectious disease control (tuberculosis), and family planning.

This document describes the lessons learned from approaches to improve health worker performance in a quality assurance environment in Niger. Findings and recommendations are based on a review of project documents, data from several studies and assessments and from the national health information system, and on interviews with key informants from two health centers and district health management teams (DHMT) in Birni Konni and Illéla (documents only for the latter). Several aspects of quality improvement were evaluated, such as how health worker teams identify problems and develop solutions, and how district teams use supervision and surveys as external means. The questionnaire is shown in Appendix A.

THE QUALITY ASSURANCE PROCESS

Health workers and district health teams have been trained in quality assurance (QA) methods by QAP since 1993 and have complete ownership of the process. Each facility has at least one quality assurance team which completed one or two problem solving cycles successfully over the past two to three years. These cycles consist of about 10 steps ¹ beginning with the setting and communication of standards for specific services and monitoring performance. Following these initial steps, quality assurance teams take responsibility for identifying and solving problems with service delivery. QA teams follow each step of the problem solving cycle meticulously which takes between three to twelve months to complete ² or sometimes even longer. Even though in identifying and prioritizing problems and solutions QA teams use available information, subjective elements play a major role in making these decisions.

In the Konni and Illéla districts QA teams addressed very similar health service problems with solutions limited in most cases to the facility. The degree of involvement of the community is less clear. Based on key informant interviews, four problem areas dominate the QA process and show district-specific preferences:

- Clinical care and general patient satisfaction (8 of 28 problems, mostly Konni);
- Utilization and discontinuation of family planning (6 of 28, mostly Illéla);
- Vaccination coverage and dropout rates (5 of 28, mostly Illéla); and
- Utilization, dropout and success rates for nutritional surveillance (4 of 28, Konni only).

Prenatal care and infant care issues were selected only by a few teams (5 of 28 problems). A project report provides a detailed description of many quality assurance cycles through 1997 ³. Most teams identified indicators to monitor progress of the problem solving process. Unfortunately many of these indicators are based on very inaccurate population denominators that make measurements unreliable. This seems to be one reason that the success of the QA process is difficult to quantify.

The QA process is implemented through week-long training of all QA team members every year. QA teams are supported by QA coaches who visit facilities anywhere between once per month or quarter and help in the accomplishment of all problem solving steps. A regional quality council

provides overall guidance. QA training is mainly provided by project staff assisted by external consultants. Quarterly supervision visits to all health centers are the norm, but they happen less frequent in reality and have been independent of the visits made by QA coaches. Quarterly staff meetings at regional and district levels allow for an exchange of experience and the opportunity to learn from peers.

Training, staff meetings and coaching account for most of the total annual operating costs of about \$65,000⁴ or less than \$10,000 per district per year. One supervision visit to a health center per quarter costs about \$30, and one quarterly district or département meeting costs about \$200. While these are not a large amounts it will require the implementation of several strategies to become sustainable with local (district, regional, and national) means. Cost recovery following the Bamako Initiative approach might be a future option, but its feasibility as a funding source for recurrent costs needs to be evaluated. One important cost saver is the combination of coaching with supervision activities of the DHMT which is already being implemented.

THE RAPID HEALTH WORKER PERFORMANCE ASSESSMENT

Case management standards following WHO guidelines for diarrhea, ARI, malaria, and malnutrition were not only communicated through clinical training in Niger, but also through facility assessments and supervision that are based on these standards, for example:

- Facility baseline survey in 1995 and follow-up in 1996 with data dissemination workshops in Boboye and Say Districts (Départements Dosso and Tillabéri);
- Structured supervision with checklists in Boboye and Say Districts;
- Client follow-up study in three districts (Konni, Guidan-Roumji, Maradi) in May and dissemination workshop in June 1997; and
- Rapid health worker performance assessment and data dissemination in October/November 1997 in Konni and Illéla (Département Tahoua).

All these methods share common elements, such as the direct observation of health worker practices including counseling, an assessment of the managerial and structural capacity of the facility, and an exit interview with clients. Health worker performance relates to the assessment, classification, and treatment of sick children under the age of 5. Because of the small number of facilities in a district, a census is taken rather than a sample of units.

The first surveys and the client follow-up study were carried out with substantial external technical assistance and costs beyond the means of the Ministry of Health in Niamey. However, the information collected with these different instruments was very useful for program managers and service providers and was desired on a more frequent basis. For these reasons the rapid health worker performance assessment (RPA) was developed and tested, which retains the essential elements of facility surveys, but is more streamlined and simpler to implement. This

also served as a test of the capacity of DHMTs to implement necessary activities without external assistance, including instrument design, training, implementation, and data analysis.

LESSONS LEARNED

The lessons learned in Niger are based on achievements of both programs, QAP and BASICS, because their activities complement each other in their goal to improve the quality of services. QAP provides a broad foundation for quality assurance and BASICS contributes specific technical standards or child survival services. Key stakeholders from the département, district and facility levels who were interviewed consistently cited the positive impact quality assurance and child survival activities had on their work. The responses by the director of the Département Tahoua and many others sum up the achievement of the Quality Assurance Program to successfully instill a general QA mentality that permeates all health services.

Question: What has changed as a result of Quality Assurance?

Answers: The general work attitude is very positive. If something needs to be done now then it gets done. People are very willing to do their best.

We have become more effective and action oriented. We all share the same information now, regardless of our place in the health system hierarchy, and we work in teams. When I am out on official business I can be confident that someone else is competent to run the office.

People have learned to accept criticism as a way to improve their performance, assuming that it is made in a constructive way.

I can see the difference that QA made not only over time by comparing it to the work environment that I experienced several years ago, but also when I compare workers' attitude in Tahoua with other departments.

With the quality assurance process well established in Tahoua, BASICS introduced new standards for child survival services and approaches to monitor and evaluate health worker performance against these standards. Several comments show that health workers not only perceive a great need for clear service standards, but also welcome the monitoring of technical and managerial competence as an important means to improve service quality.

Question: What difference has the rapid performance assessment made in providing health services?

Answers: The assessment is an important instrument to improve the quality of care, and it should be used routinely during supervision. Using this assessment will help us to do as well as other districts. (*Illéla district health team requesting the assessment tool which they will adapt and use on their own*)

The rapid assessment is more objective in measuring performance, and I felt very much at ease during the process. It also showed that services in Konni were better, something we should be proud of. This means that we can improve our work with the means we have, if given the appropriate guidance.

We (health workers) know already standards of care, but the assessment reminds us how to do it right.

The following describes specific lessons learned from the combined implementation of quality assurance and child survival case management standards.

Quality Assurance Combined with a Structured Monitoring Approach Contributes to Improved Case Management by Communicating Standards of Care

Data from two recent assessments were used to compare changes in health workers' performance over a roughly six months period in Konni district: the client follow-up study in May 1997⁵ and the RPA in October 1997⁶. The frequency distribution of principal complaints were very similar, lead by fever with about 70 percent. Seventy percent of all children had two or more complaints in both assessments. As Table 1 shows, most indicators improved substantially in Konni District between the May and October assessments, specifically the evaluation of nutritional and vaccination status, appropriate counseling of caretakers, and caretakers' knowledge of correct case management at home. Performance in Konni district is also substantially greater compared to Illéla District, which had no prior RPA conducted. Health workers in neither district received any training in case management. In cases where confidence intervals do not overlap, differences between proportions are statistically significant at the 95 percent level (see Figures 1-9).

A strong correlation existed between variables indicating whether the QA problem that was addressed by the facility was related to nutrition and the proportion of health workers who correctly evaluated the nutritional status of a child. All health workers who were working on a nutrition-related problem solving cycle assessed nutritional status correctly in over 50 percent of the children seen, but only 20 percent of those working on an unrelated QA topic (see Table 2). The probability to observe such a difference just by chance alone is less than 0.01. Because

health workers had to know the standard practice in the first place, this suggests a synergy between quality assurance activities and the improvement of case management.

Why could the communication of case management standards through performance assessments have improved health worker performance? Several factors play a role: health workers' awareness about quality and their ownership of problem solving are high because of the quality assurance program; health workers are used to training in standards of care, but had no follow-up to reinforce the knowledge; and child survival case management standards communicated through the assessment focus on a few key tasks with every step spelled out. Table 3 provides some indication that training might have a positive effect on performance. Those trained in ARI examined children more correctly. Other types of training did not show such a strong relationship, possibly due to the small numbers of health workers involved.

Additional questions that address the validity of the rapid assessment and the effectiveness of a combined quality assurance and communication of case management standards approach are shown in Appendix B.

An Assessment Instrument that Uses Explicit Performance Standards Helps Health Workers and Supervisors to Apply a Quality Assurance Concept

Supervisors have a general idea about quality of services, including technical competence and client satisfaction. However, often the appropriate standards are not clearly defined, or at least not presented in sufficient detail, or data sources are insufficient to assess the current level of quality. The RPA adds exactly the specificity needed by supervisors, but also by health workers, to measure and improve performance through specific actions.

There was consensus that an instrument such as the RPA brings objectivity to the supervision process that tends to be often unfocussed and subjective. Results are available in a timely (rapid) manner and can be acted upon immediately at the facility and also at the district level as part of the problem solving cycle that often takes too long just to identify a problem. The district QA team felt that their qualitative perception of health worker performance was mostly confirmed by the results from the RPA. Interviewees judged the supervision experience similar to an earlier assessment ⁷.

Besides clinical training, the RPA and quality assurance help health workers and support staff to internalize the importance of quality and to appreciate the need for standards of care. The RPA is an important tool and process to follow up after health workers have been trained in case management (and other tasks if used in an integrated approach). It not only measures performance improvement after such a training, but it also shows whether performance is maintained over time.

The National Health Information System (HIS) Is a Vital Data Source for the Quality Assurance Process and for Monitoring Its Effectiveness

HIS data have been used virtually by all health workers and district-level support staff for planning and evaluating the success of quality improvement activities. There is an urgent need to continue the assistance that USAID has provided on the national level to improve the reliability and usefulness of HIS data at facility and district levels. Large databases of longitudinal and cross-sectional data allow national institutions and donors trend analyses of epidemiologic as well as service developments. Through consistent and high quality technical support from Tulane University and funding from USAID, a reliable system is in place where benefits for Niger and US institutions materialize now and in future years. Continued support of this system on a district/regional level is necessary to meet the needs of the quality program and of BASICS' efforts to improve case management and to assure that these benefits will be available to US institutions to train public health professionals.

A Task-based Checklist for Monitoring and Supervision Identifies Specific Service Problems and Needs and Is an Important Data Source for the QA Problem Solving Process and a Necessary Complement of HIS Data

While the national HIS provides important information about coverage, it contains little information related to the quality of services. The RPA meets the information needs about quality on several levels and answers questions that are relevant to care providers and managers:

- Health worker - How well does a HW comply with standards of care, and how can these standards be implemented under field conditions?
How well (or badly) does a facility do compared to others?
- Supervisor - What is performance in quantitative terms, and do the numbers confirm impressions about quality? What actions can be taken immediately by the health worker or supervisor?
- District QA team - What are specific weaknesses and what are their causes? What training needs are there?
How do facilities perform on average, and is there an improvement over time? Who are the outliers?
What is different in facilities that do well and how can others learn from it? (Positive deviance)
- Dép. QA team - How do districts perform, do they improve over time, what are their weaknesses, what are the training needs, and what lessons learned can be transferred to other districts?
- National - What policy changes are needed at the national level?
What are the lessons learned that should be implemented nationally?

Sufficient anecdotal evidence exists that the RPA results were used up to the Département level to answer these key questions. Health workers especially asked for a detailed presentation of data facility by facility when shown the aggregate data of the first RPA for the district only. In the two health centers visited health workers were very eager to know what their performance was and what needed to be improved and how. Much assistance is needed from district QA teams to find and implement solutions that address important public health issues.

A Quality Assurance Mentality Combined with a Task-based Checklist for Monitoring and Supervision Leads to Action

Results from RPA and prior surveys have been reviewed during quarterly staff meetings at the district and département levels (Geslin, January 1998). The use of the RPA has already resulted in concrete actions. Based on RPA data the annual action plan of Konni district was revised: QA and supervision will be integrated into one monitoring and quality improvement activity; case management training will be organized to address specific weaknesses; movements of certain supplies and essential drugs will be monitored more closely to reduce the number of stock-outs; and specific improvements will be made to the cold chain at centers with low vaccination activity. The team from the Département Tahoua as well as the PVO Hellen Keller International have already and will assume responsibilities for some training and the improvement of supplies and the cold chain (health centers: Yama, Bagaroua, Bada-Guiduri).

Since the results of the RPA became available district and département teams have recognized the importance of taking a more integrated approach to service delivery by combining some preventive aspects of care with curative services. For example, staff interviewed felt an urgent need to reduce missed opportunities related to immunization of women to reduce neonatal tetanus; they also wanted to improve the low coverage of children's immunization (below 20 percent for measles in many communities), and to nutritional surveillance and counseling. Appropriate activities were incorporated into this year's action plan.

Specific actions that have been taken between 1993 and 1997 as a result of the QA process are, for example:

- Setting clear practice standards for admitting to and discharging malnourished children from recovery programs;
- Integration of nutritional surveillance with immunization activities and care for malnourished children with curative services, same for family planning;
- Follow-up of clients and defaulters through community volunteers;
- Improving service hours to provide better access to these services;
- Reorganizing clinic operations to shorten waiting times;
- Organizing refresher courses for nurse-midwives in nutritional surveillance;
- Repairing a refrigerator to provide immunization services;
- Organizing meetings with the community to inform people about nutritional surveillance; and

- Including all health workers of a health center in working with a community.

Even though health centers and district health facilities report dramatic improvements in coverage and service utilization following these actions, not enough data are available to substantiate these claims. Inaccurate population data and probably changing definitions of target populations require that the magnitude of improvements is verified by using more accurate data sources.

Rapid Assessments Used during Routine Supervision and QA Coaching Can Be Fully Developed and Implemented with Local Resources

The RPA was largely developed and implemented with human and financial resources available to the districts with some support, especially during training from the Health Office of the Département Tahoua and the joint project with QAP and BASICS. The two district health teams took early ownership of the assessment design based on facility surveys. Simple data analysis was already built into the implementation by calculating totals and proportions with a special daily tally sheet. These basic statistics were produced by district staff without outside assistance and required only a simple calculator and paper forms.

The fact that the district health team of Illéla has taken the initiative to adapt the RPA as a supervision checklist proves that this approach is accepted and affordable. These observations are consistent with a general improvement of the regularity and quality of supervision (Karki, November 1997). Supervision of health centers has improved between 1993 and 1996 in six of eight districts. It has become more regular and more problem and solution focused.

The Rapid Performance Assessment for Case Management of Sick Children Serves as a Prototype for an Integrated Monitoring and Supervision Approach that Covers the Minimum Package of Essential Services in Niger

While RPA addresses only case management of sick children, it can be easily adapted to cover other services provided by primary care facilities. By adding task-based lists for pre-, peri-, and postnatal care, immunization, infectious diseases (STD, tuberculosis), and others the RPA could serve as an integrated monitoring tool for the successful implementation of a minimum package of essential services. All these areas would benefit from stricter and more explicit standards. However, expanding the technical focus of the instrument will require a revision of the implementation process, because not everything can be assessed at the same time. Supervisors need guidance on how to set priorities and when to focus on certain technical aspects of preventive and curative services. Experience with integrated supervision approaches in Madagascar (supported by BASICS) and Zambia (supported by BASICS and QAP) could be valuable to Niger in converting RPA into a district supervision and quality monitoring and improvement tool.

The Implementation of Performance Standards and Quality Assurance are “Best Practice” Examples for Africa

Based on the successful combination of quality assurance with the implementation of case management standards and the substantial technical capacity available in Niger, the Département Tahoua could serve as a regional training center for other countries in West Africa and French-speaking countries in other parts. Benin, Togo and Guinea seem to deal with issues very similar to those addressed in Niger. The need in Mali, Senegal, Burkina Faso, and Ivory Coast should be evaluated. Most of these countries have similarly organized health systems and monitoring needs.

Besides training in QA methods, health professionals could learn how to adapt and implement rapid assessments for problem solving and performance monitoring and as an intermediate evaluation tool that makes the frequent use of expensive surveys unnecessary. The use of this information and other data sources in the problem solving process should receive special attention. In Niger data are used successfully for program reviews during regular staff meetings at district and département levels.

While the communication of case management standards through monitoring approaches cannot replace clinical training, quality assurance and the implementation of case management standards have prepared health workers and supervisors for more rigorous training in IMCI. Teamwork is well established, and professionals appreciate the need for standards and their implementation. Based on the experience with RPA, the Département Tahoua is prepared to follow up IMCI training on a regular basis and to assure that an acceptable level of performance is maintained.

RECOMMENDATIONS

Overall the lessons learned for the combined quality assurance and implementation of case management standards approach have been very positive. However, there are also several areas where the feasibility and effectiveness of the processes and tools can be improved.

- Niger has adopted a minimum package of essential services. Therefore, districts need an integrated supervision instrument. This might also help to reduce the amount of time spent on individual problems that dominate the current QA process. An integrated supervision and monitoring tool will provide an overview of the problems facing first level health services and help health workers and supervisors to prioritize which problems can be resolved fast and which need to follow a thorough QA cycle. It could also make the steps in the problem solving cycle faster by defining problems more clearly. It might also allow teams to address multiple problems by involving more partners, such as communities, in the solution.

While an integrated approach is developed, which would require the input from all programs that constitute the minimum package of services, the RPA could be repeated as it is to monitor performance in Konni and Illéla and to establish a baseline for child health services in other districts. This would take advantage of an existing cadre of staff trained in the use of the assessment. If Boboye is included as well, this would make an interesting comparison with earlier facility surveys.

- Surveys and assessments like the RPA are usually more rigorous in their design and implementation. Because rapid assessments do not validate health worker competence through re-examination, one cannot assume that the adaptation as a supervision checklist will provide the same quality of data as facility surveys. Therefore a validation of the supervision instrument seems to be necessary where data from surveys are compared to those from supervision.
- Operational processes to implement an integrated supervision approach need to be established, such as district workplans with precise supervision schedules, resource requirements and responsibilities. While the lessons learned produced some qualitative evidence that the approach seems to be cost-effective, additional costs analyses should be carried out to gather more precise data and to assess the sustainability of the approach in more quantifiable terms.
- HIS data are used extensively, but their value in the quality assurance process is limited for two main reasons. The system must be adapted to meet the data needs of QA and standard case management. Secondly, coverage indicators should be validated with small sample household assessments using LQAS and with settlement density information from satellite photos that are available from AGRIMET. Population data currently used by health services seem to be outdated and to produce extremely unreliable coverage estimates. Coverage surveys that use the 30 cluster sample technique would only provide district estimates, but no valid data for areas covered by a single health facility. Because of large geographic variations, small area estimates would be more desirable for the QA process.

Assistance to improve HMIS data, especially at district and département levels, would also help to verify reports by some health centers and districts that immunization coverage and the utilization of antenatal and infant care services have increased dramatically in a three to six month time period (e.g., tripled or even risen twelve-fold). While substantial improvements might well have resulted from the QA process, more precise information about service volume and population targeted could only increase the credibility of such results.

- QAP and BASICS should carry out a considerable amount of research, monitoring and evaluation activities. The ability to find associations between program interventions and outcomes increases as data sources are linked rather than analyzed in isolation. It would

be beneficial if monitoring and evaluation activities are coordinated (i.e., take place in the same geographic areas and within a similar time frame). One interesting question is whether client satisfaction is related to both quality of services and progress of the QA process as assessed with the RPA or with a supervision checklist.

- The quality assurance program has focused on processes to establish a conducive quality environment and has allowed health workers and QA teams to spend a considerable amount of time on issues that might improve the satisfaction of current users of health services. It will be increasingly important to guide this process and to also implement effective solutions that address major public health concerns, such as low coverage indicated by essential maternal and child health indicators. Access to services needs to be acknowledged as a key problem with feasible solutions that produce changes in the indicators selected by QA teams to monitor the effectiveness of interventions.
- Some health worker practices, especially related to appropriate treatment, could have shown greater improvement, if decision makers resolve the issue of conflicting messages through training in different standards (case management, SPT, other training). Donors and government institutions have to play an active role to coordinate the introduction of standards of care and to assure the quality of training.
- The Niger experience should be advocated with a combination of quality assurance and case management standards as a “best practice” example for the West Africa region by communicating these results to other USAID-funded projects and to WHO, UNICEF, regional institutions (e.g., CESAG, CERPOD and others) and bilateral donors. Other countries should be persuaded to adapt and replicate the combined approach by organizing a regional workshop and by providing technical assistance to countries that adopt quality assurance and systematic supervision to improve quality, access and sustainability.

The Internet has become an increasingly important vehicle for distributing information fast and to a wide audience. Disseminating lessons learned experiences, either electronically or using other communication means, through regional health networks would give key stakeholders in Africa access to the latest experiences in health policy, management and service administration. Such networks exist in West Africa (REDSO/BASICS) and East Africa (REDSO/BASICS). Recently an Internet list server has been established to share experiences and to discuss issues related to supervision of population programs.

The spontaneous and very positive feedback from health workers, district and département teams could provide enough material for a video that shows how and why quality assurance combined with case management standards have improved service delivery in Niger. Adding feedback from patients about their perceptions about how service quality has changed would make such a presentation even more appealing to

decision makers in other regions of Niger as well as in other countries. Professional expertise could be found in West Africa (Abidjan or Dakar) to write a script and to film on location. Such a documentary could also be a powerful tool during workshops and training activities to show that quality assurance and technical standards are not just theoretical concepts, but concepts that work and make a difference in the real world. Patients are better off with it than without it.

APPENDIXES

APPENDIX A
Tables and Charts

Table 1. HEALTH FACILITY ASSESSMENT RESULTS from TWO DISTRICTS in NIGER in 1997

Shown are Total Number of Units/Cases and Percent Meeting a Criterion

Performance Indicator	Konni May-97		Konni Oct-97		Illéla Oct-97	
1. Nutritional Status Assessed	136	7%	78	92%	81	6%
2. Vaccination status checked	138	41%	34	79%	31	29%
3. HW checked at least one danger sign	138	54%	78	81%	81	57%
4. Caretakers counseled on increasing liquids	138	28%	77	66%	80	30%
5. Caretakers counseled on correct feeding practices	138	36%	77	84%	80	54%
6. Caretakers counseled on correct treatment	138	70%	77	52%	80	50%
7. Caretakers know the correct treatment with oral medications	137	88%	77	73%	80	40%
8. Caretakers counseled to return if danger signs	138	38%	77	75%	80	33%
9. Caretakers knowing at least 2 signs for seeking care immediately (May Survey 1 sign only)	126	90%	77	43%	80	79%

Table 2. Testing Relationships Between Program Characteristics and Health Worker Performance with Chi-Square Statistics

Relationship between QA topic and correct assessment of malnutrition							
50% or more examined correctly	6	2	100.0%	20.0%	#DIV/0!	9.60	sig 0.01
Less than 50% examined correctly	0	8	0.0%	80.0%			

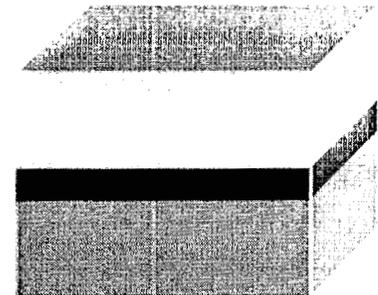
Table 3. Testing Relationships Between Program Characteristics and Health Worker Performance with Chi-Square Statistics

Item	Responses by Item				OR	chi-square	Level Of Signif.
	Trained	Not Trained	Yes Col %	No Col %			
Relationship between ARI training and correct case assessment							
50% or more examined correctly	5	0	45.5%	0.0%	#DIV/0!	3.31	sig 0.10
Less than 50% examined correctly	6	5	54.5%	100.0%			
Relationship between CDD training and correct case assessment							
50% or more examined correctly	1	6	50.0%	46.2%	1.17	0.01	not sig
Less than 50% examined correctly	1	7	50.0%	53.8%			
Relationship between Malaria training and correct case assessment							
50% or more examined correctly	1	2	33.3%	15.4%	2.75	0.52	not sig
Less than 50% examined correctly	2	11	66.7%	84.6%			

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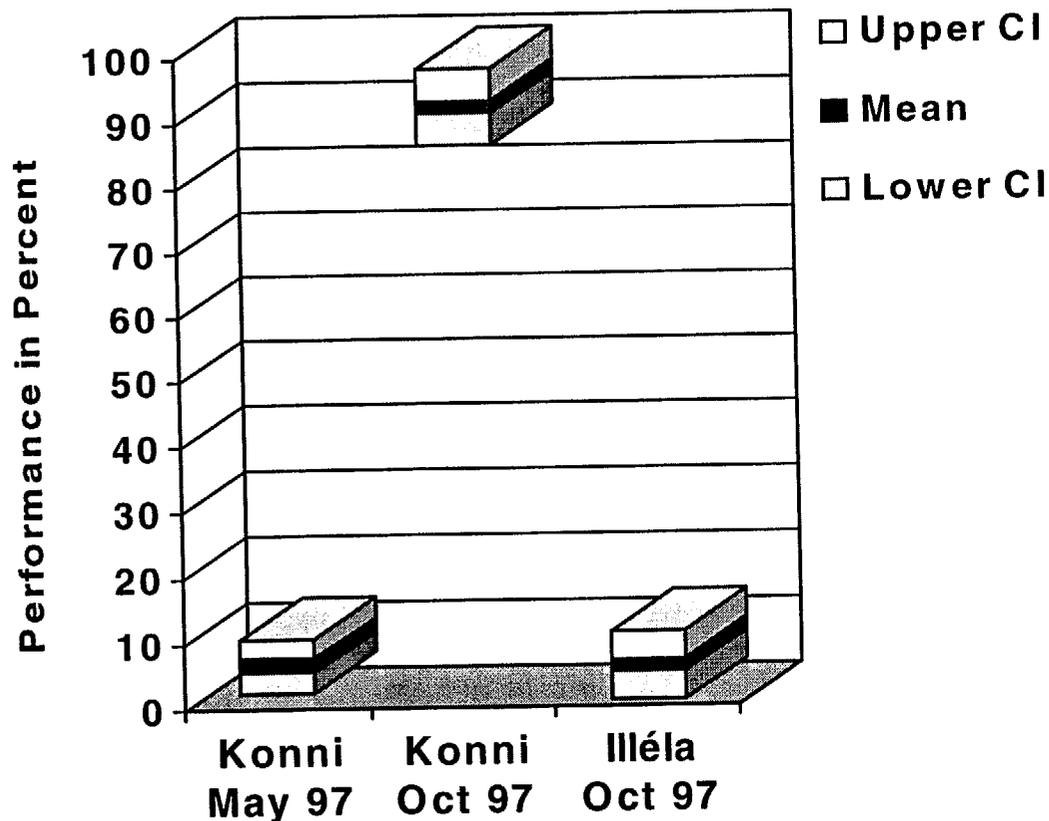
Comparison of 3 Scenarios In a QA Environment

- Pre-dissemination of case management standards
→ Birni N'Konni Compliance Study in May 97
- Post-dissemination of case management standards
→ Birni N'Konni Rapid Performance Assessment October 97
- Pre-dissemination of case management standards
→ Illéla Rapid Performance Assessment in October 97
- Average Percent Performance and
95% Confidence Interval



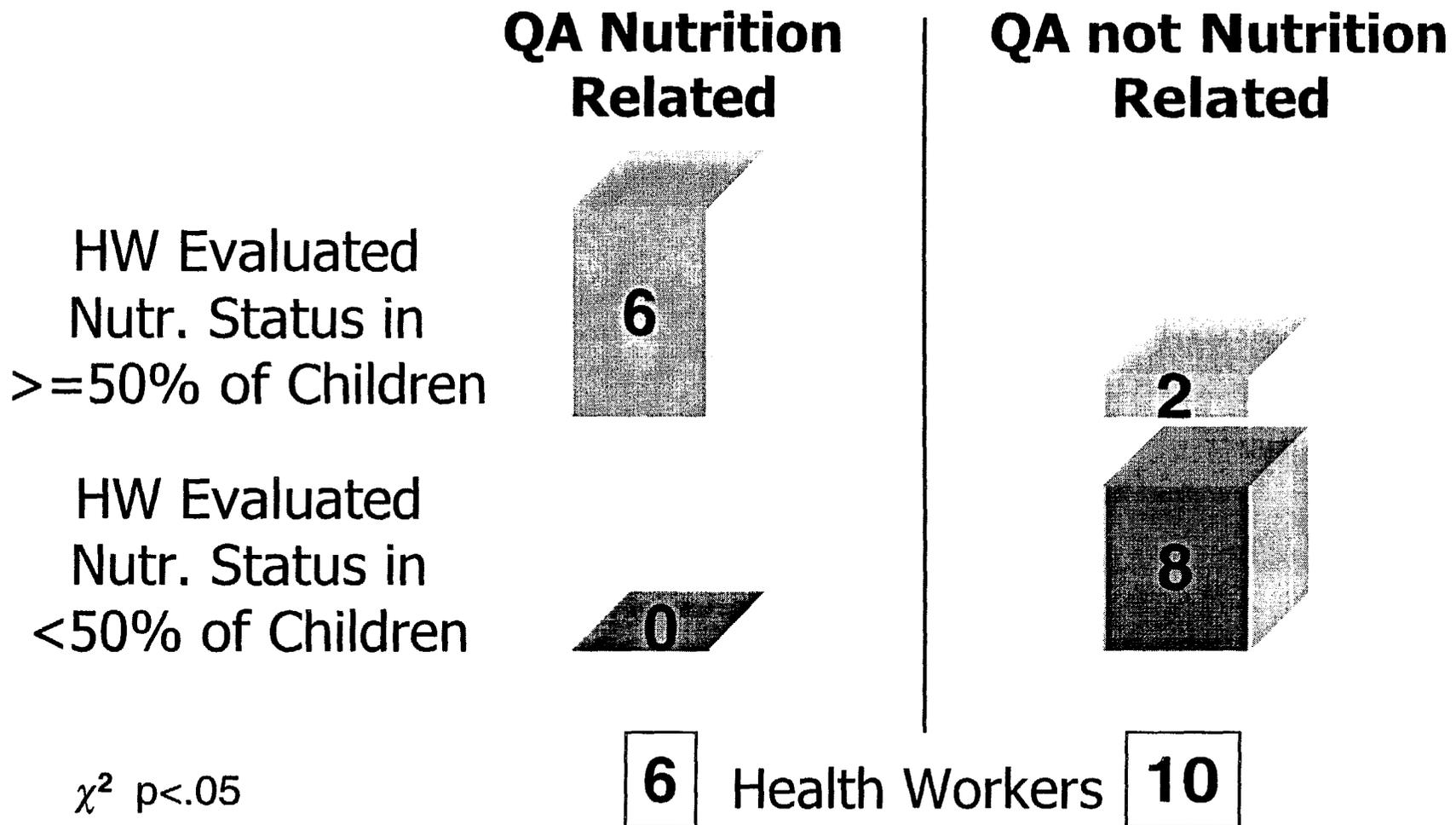
Integrated Case Management + QA = Better Performance

1. Nutritional status assessed



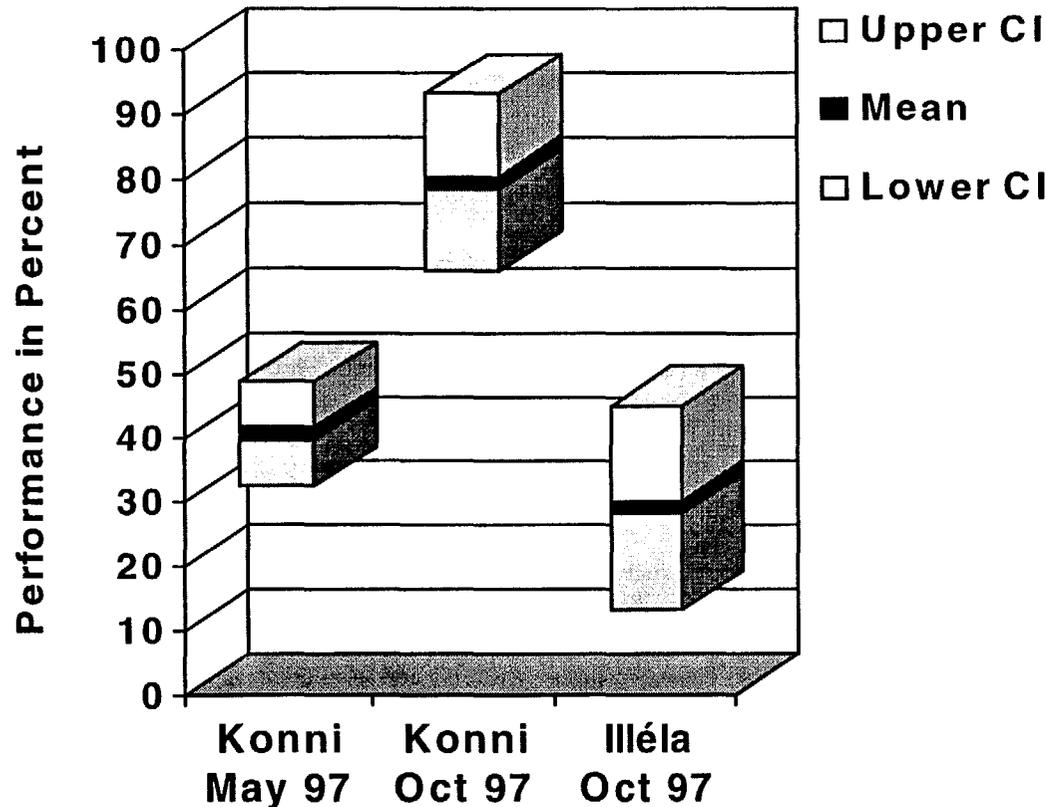
- Significant improvement in Konni (95% confidence intervals do not overlap)
- Illéla has still the same performance as Konni earlier (95% CI overlap)

QA Problem Solving and Performance are Related



Integrated Case Management + QA = Better Performance

2. Vaccination status checked

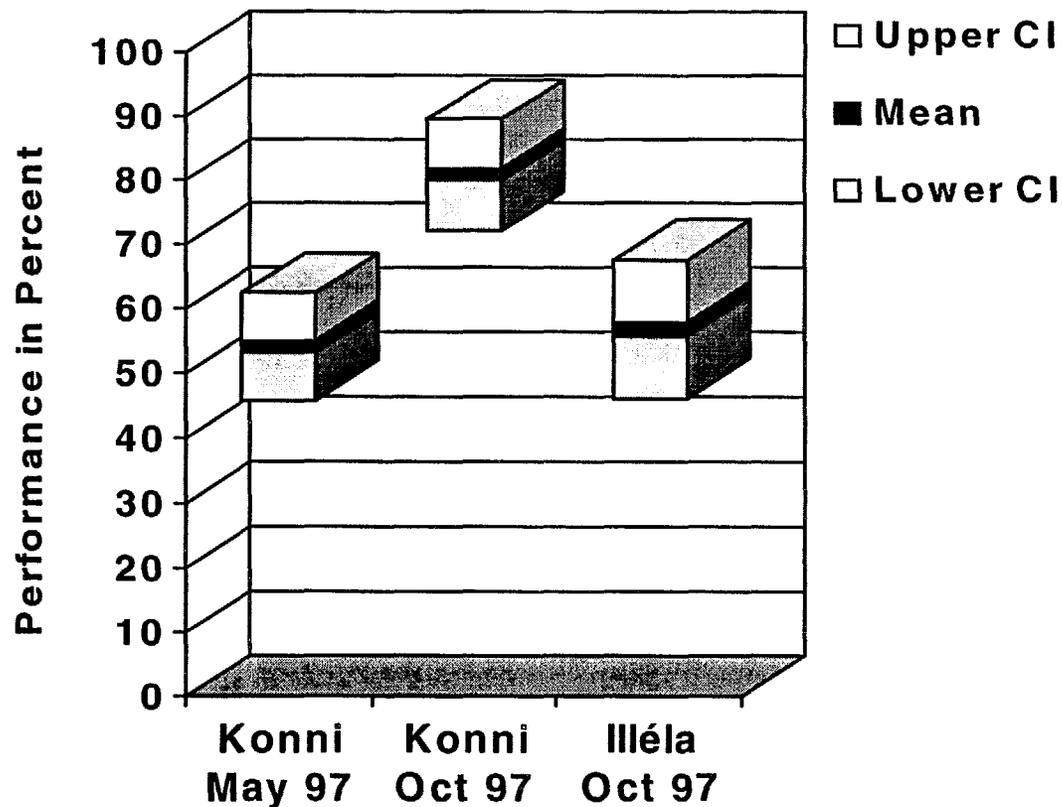


- Significant improvement in Konni (95% confidence intervals do not overlap)
- No improvement in Illéla, note the wider CI because of fewer observations (95% CI overlap)

22

Konni Improved, But it is a Close Call

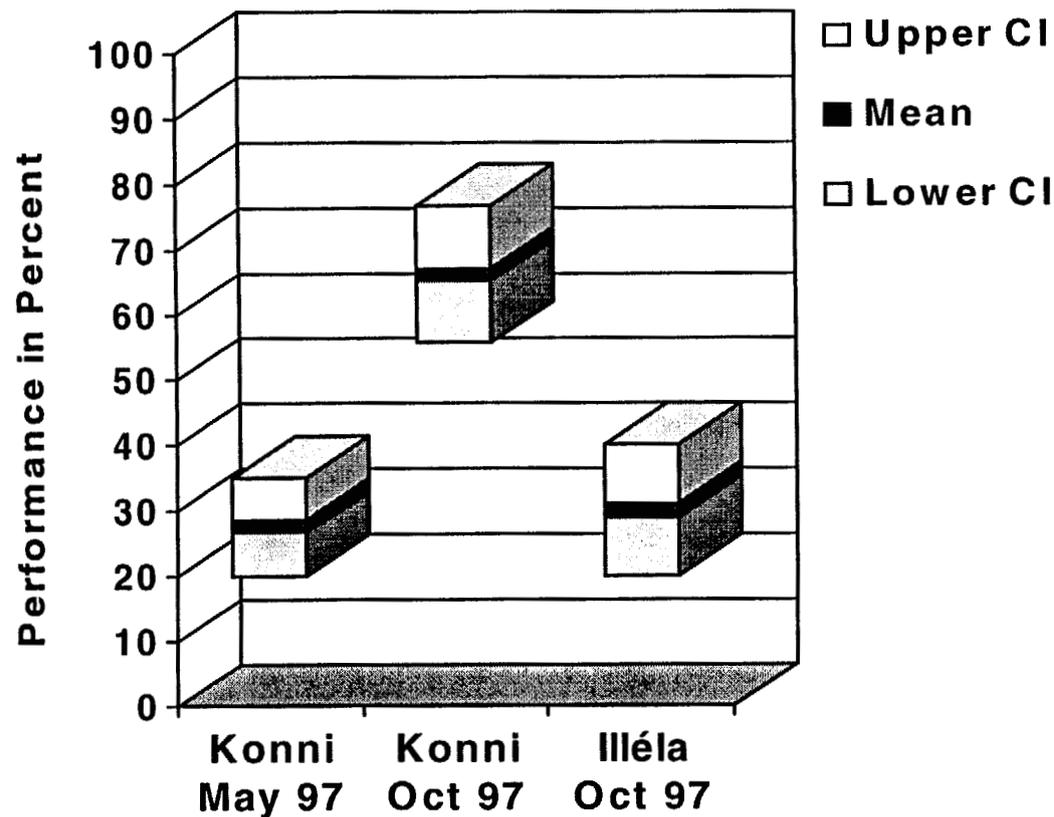
3. HW checked at least one danger sign



- Significant improvement in Konni (95% confidence intervals do not overlap)
- No improvement in Illéla (95% CI overlap)

Integrated Case Management + QA = Better Performance

4. Caretakers counseled on increasing liquids

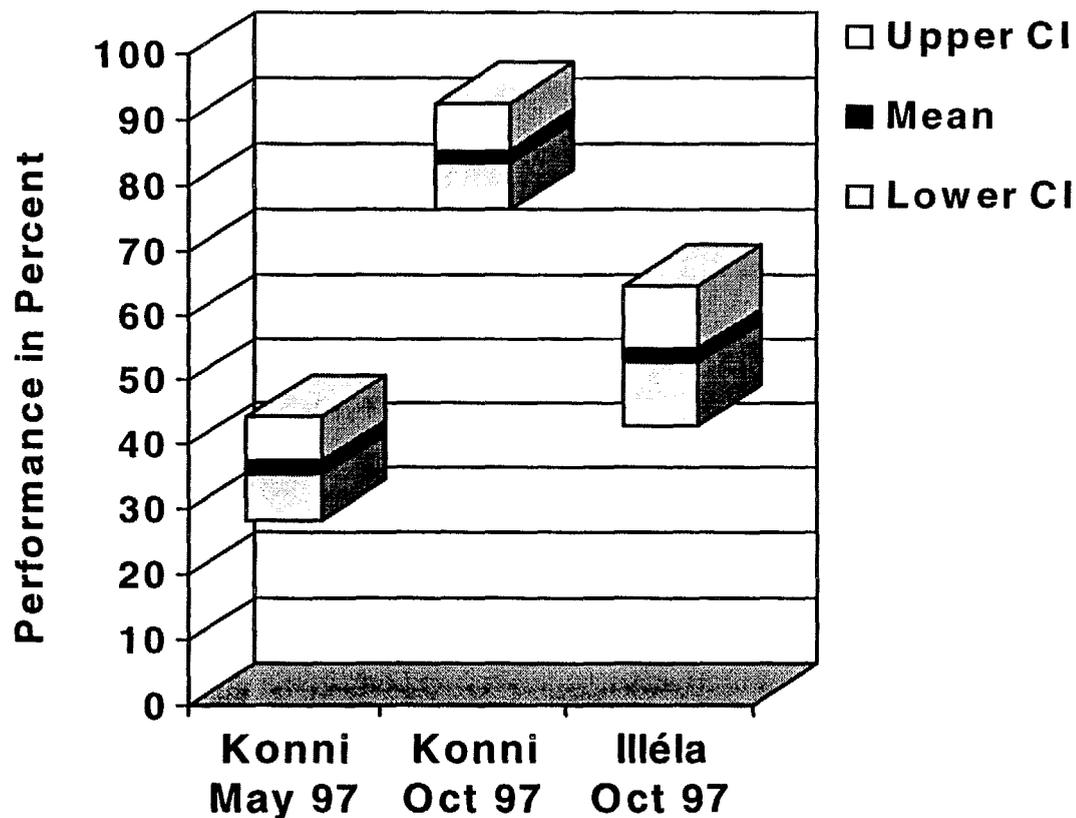


- Significant improvement in Konni (95% confidence intervals do not overlap)
- No improvement in Illéla (95% CI overlap)

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Differences That Aren't - Useful Confidence Intervals

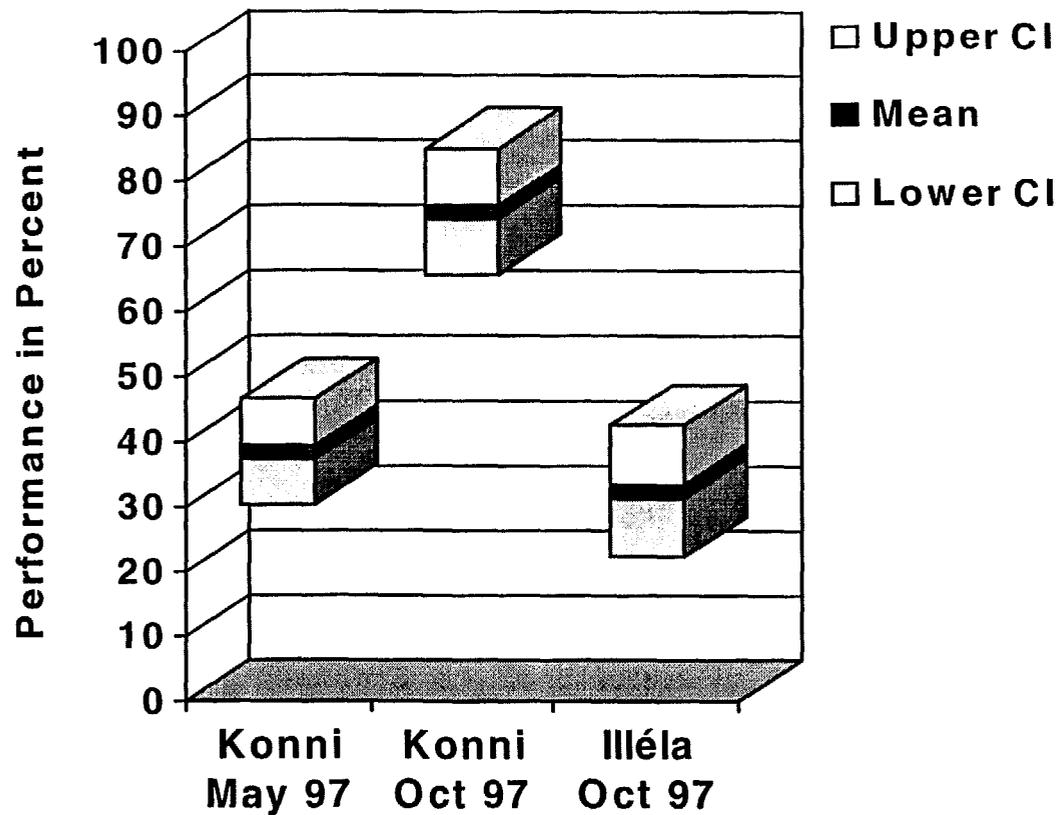
5. Caretakers counseled on correct feeding practices



- Significant improvement in Konni (95% confidence intervals do not overlap)
- Though Illéla is 20% higher it is still consistent with the Konni baseline (95% CI overlap)

Integrated Case Management + QA = Better Performance

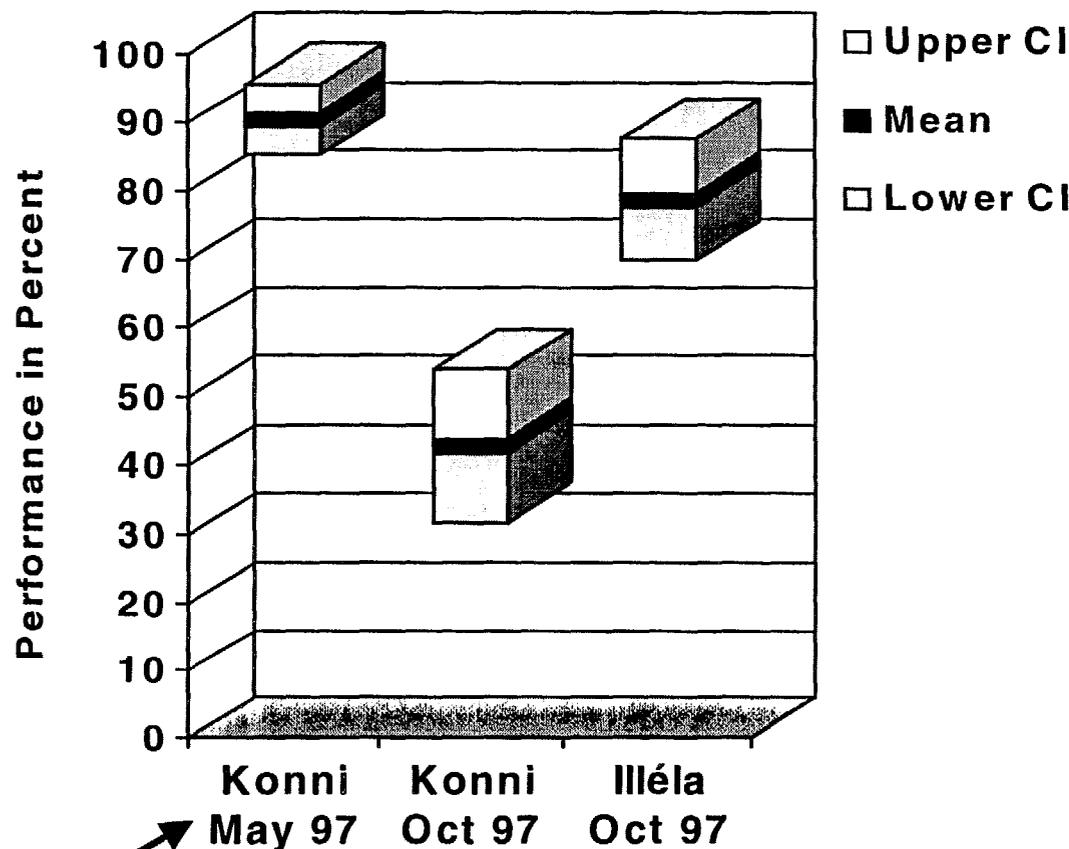
6. Caretakers counseled to return if danger signs



- Significant improvement in Konni (95% confidence intervals do not overlap)
- No improvement in Illéla (95% CI overlap)

When Measurements are Not Comparable, or Have Errors, or...

7. Caretakers knowing at least 2 signs for seeking care immediately



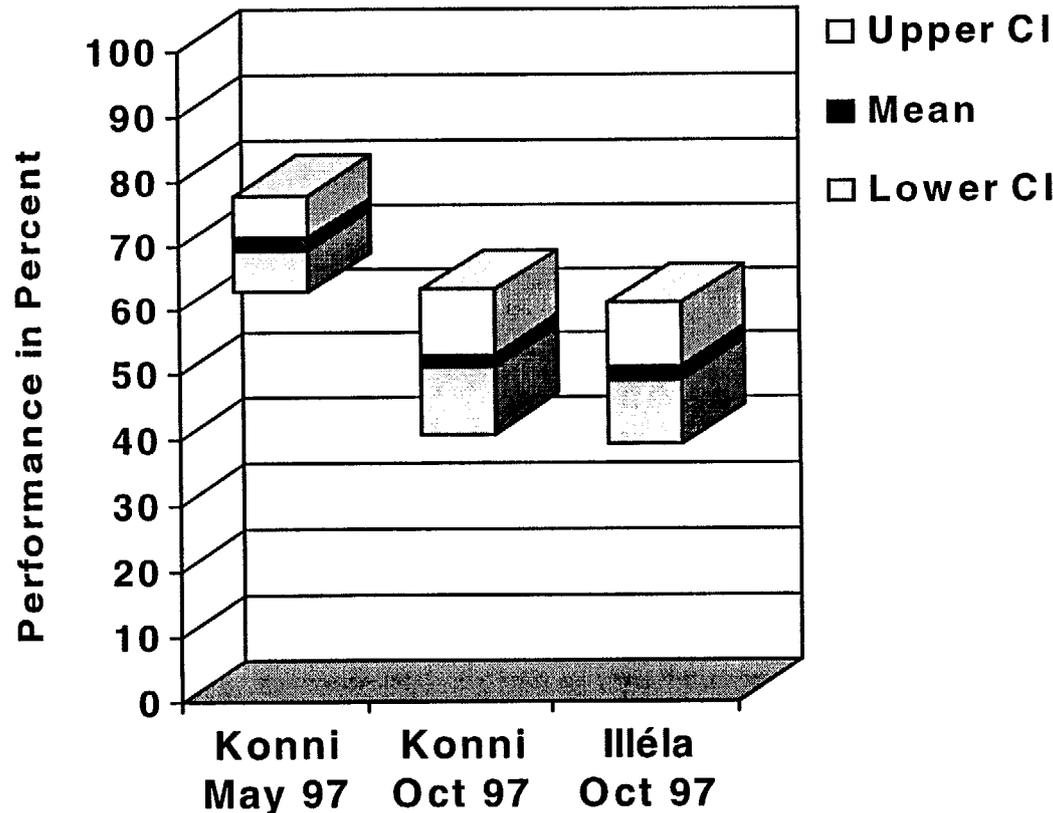
(May Survey 1 sign only)

- May estimates in Konni are too high (one sign in May versus two signs in Oct.)
- It is inconsistent with better counseling in Konni (indicator 6.)
- How come Illéla does so much better? Many possibilities: QA, measurement error, supervision, training?

A Problem of Too Many Standards?

Journal of Interpersonal Violence

8. Caretakers counseled on correct treatment



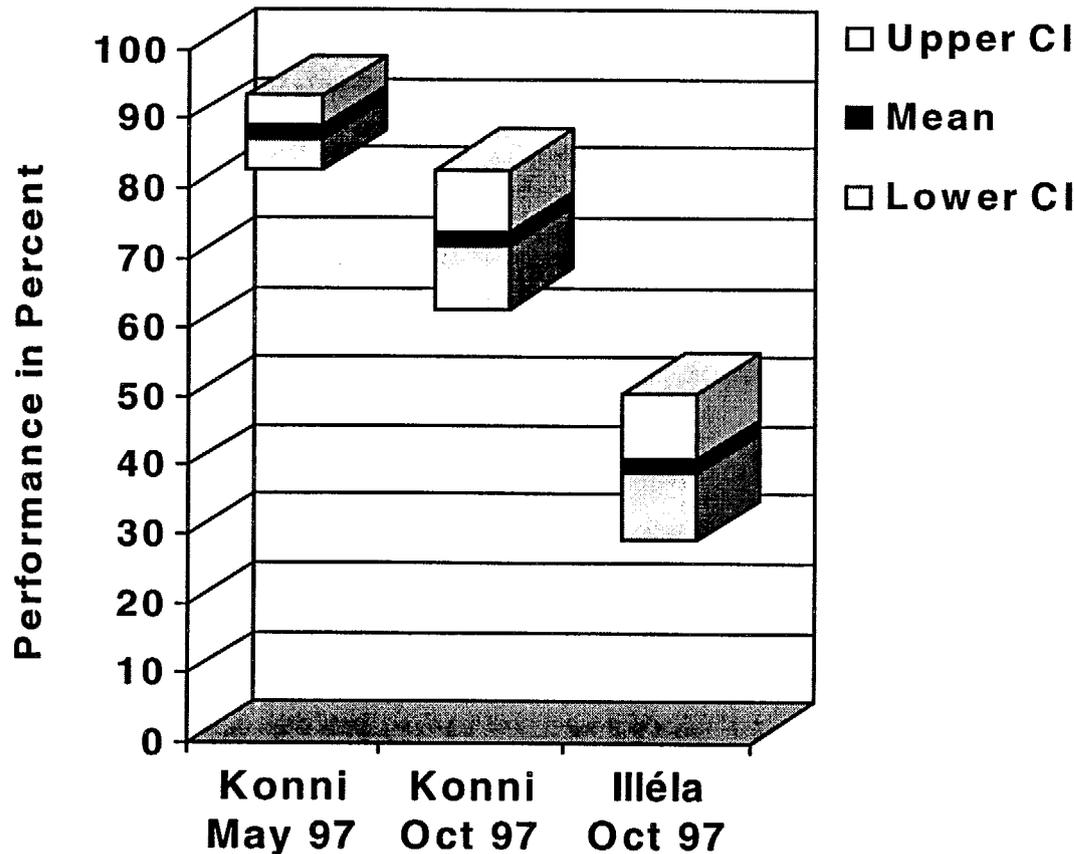
- The three scenarios do not seem any different (CI can also be in error)

- Treatment standards: SPT, Case management, HKI, and other non-standard training

28

Normal Variation, Not a Valid Measure, or Measurement Error?

9. Caretakers know the correct treatment with oral medications



- Konni is high and stays the same, Illéla seems to lag behind
- What if caretaker knowledge is not dependent on counseling by HW?
- Was this question asked the same way in Konni and Illéla?

APPENDIX B
List of Questions Used to Interview Key Informants

Questions à la DDS/ECD et aux Agents de Santé

1. **Qui participe dans les EAQ**
Rôle de la communauté, documentation des activités(réunions, procès verbaux)
2. **Y a t-il des cycles en cours/Responsabilités**
3. **Quels sont Principaux problèmes identifiés**
Problème prioritaire identifié (importance relative/pertinence)
4. **Quelles sont les causes de ces problèmes**
5. **Quelles informations sont utilisées?**
Délai/Difficultés rencontrées pour la collecte des données
6. **Sources d'information utilisées**
Quelle source d'information a été utilisée?
7. **Qualité des données**
Peut on vérifier les données?
8. **Utilité des données**
Les données actuelles sont-elles conformes aux décisions prises
9. **Quelles Solutions sont envisagés**
Les données actuelles sont-elles conformes aux décisions prises
Adéquation solutions/problèmes
10. **Y a t-il un Plan d'action pour l'application des solutions?**
11. **Evaluation des succès**
Documentation des succès
12. **Critères de succès/cibles**
Quels indicateurs/données
13. **Délai pour chaque étape du cycle/du cycle entier**
Résultats intermédiaires assez rapides?
14. **Ressources nécessaires pour chaque cycle AQ**
Coûts, pérennité, replicabilité

15. **Rôle de la Supervision**
Documentation: calendrier, grille, rapport
Existence de rapports de supervision permettant de suivre l'évolution de la performance des AS
16. **Rôle du Coaching**
Documentation: calendrier, rapport
17. **Rôle des Réunions Trimestrielles**
Documentation: calendrier, rapport
18. **Rôle de ERPA: comme source d'information, pour établir les standards de PEC, dans la supervision systématique, dans la formation continue des AS**
Connaissance des AS concernant les résultats de ERPA
Connaissance des AS concernant les normes de la PC
Quels aspects de la PC ont été améliorés?
Comment la formation continue a t-elle changé?
19. **Quelles sont les étapes suivantes, quelles sont les améliorations planifiées?**
20. **Comment intégrer ERPA dans l'AQ et la Supervision?**
21. **Comment adapter ERPA pour intégrer tout les composantes du PMA?**
22. **De quelle façon a l'AQ changée votre travail?**
23. **Dans quel sens a l'ERPA changé votre travail?**

APPENDIX C
Research Questions to Evaluate the Validity and Reliability of RPA as an Instrument to
Assess the Effectiveness of the Combined Quality Assurance and Implementation of Case
Management Standards Approach

VALIDATION DE LA MÉTHODOLOGIE ERPA

Le but d'ERPA est de servir autant que source d'information dans le processus d'assurer la qualité des services. Dans ce but cette méthodologie doit être capable de mesurer la performance des agents de santé et du système de santé au niveau des structures sanitaires dans plusieurs sens. Il doit permettre avec un certain degré de précision de:

- Détecter une performance satisfaisante
- Déterminer si la performance est non satisfaisante par rapport aux standards
- Identifier les éléments spécifiques de la prestation des soins qui peuvent être améliorés directement par les agents de santé ou/et par les membres de l'ECD

Pour déterminer si l'approche ERPA est une méthodologie valide et fiable des validations internes et externes sont nécessaires. C'est une évaluation quantitative qui met en corrélation les différents données de ce enquête et compare aussi les données de ERPA avec ceux collectés avec des autres instruments, comme, par exemple, l'enquête des formations sanitaires du 1995 et 1996. Cette validation doit répondre à certaines questions, comme par exemple:

1. Est-ce que la performance observée avec la méthodologie ERPA est reflétée dans les statistiques sanitaires du SNIS, par exemple, quels est l'évolution des indicateurs du PMA à Tahoua en comparaison avec d'autres départements et est-ce que les statistiques sanitaires changent à la suite de ERPA (à l'enquête même un effet sur la qualité)? (Ex. Maradi, Dosso) *¹
Ceci ne peut pas servir autant que une évaluation de l'efficacité du programme parce que cela ne tient pas compte de beaucoup d'autres facteurs qui affectent ces indicateurs.
2. Est-ce que les CSI supervisés qui reçoivent une rétro information constructive offrent des services de meilleure qualité et sont plus efficace ? **²
3. Est-ce que la satisfaction des clients est plus élevée dans les CSI où les EAQ sont plus avancées dans la résolution du problème? ***³
(Cf. Enquête URC sur la satisfaction des clients)

1 * Source des données: SNIS

2 ** Source des données: PIS/DDS

3 *** Informations à obtenir de la réunion avec ECD de Konni et Illéla

4. Est-ce que les services avec une "bonne" AQ (équipe active, supervision facultative) sont plus "efficace", de meilleure qualité? ²

5. Est-ce que la qualité, l'efficacité des services est meilleure quand les AS utilisent les informations? Utilisent les outils d'AQ? ^{2,3}
Pour répondre à cette question des informations supplémentaires sont nécessaires (d'un future ERPA). Il faut aussi clarifier le but immédiate de AQ, est-ce que c'est l'amélioration de la qualié des services ou de la efficacité?

6. Est-ce que la qualité, l'efficacité des soins est maintenue dans le temps une fois que le cycle est terminé? ²
(Information supplémentaires à ajouter à ERPA; Répétition de ERPA/ supervision trimestrielle)

7. Est-ce que la connaissance des mères est meilleure quand l'AS utilise les bonnes techniques de counseling?

8. Est-ce qu'il y a moins d'occasions manquées quand les services sont offerts plus régulièrement, de façon intégrée là où le problème en cours de résolution est en rapport avec le sujet? ³

9. Est ce que le nombre, la catégorie du personnel et la formation reçue récemment sont liés à une meilleure qualité (performance des AS) et efficacité plus élevée? ²

10. Est-ce que les mères ont une meilleure connaissance des services et une meilleure fréquentation des services dans les CSI où la communauté participe "activement" à la résolution des problèmes? ^{2,3}

APPENDIX D
Objectives and Itinerary

PROJET CONJOINT DE SANTE - ASSURANCE DE QUALITÉ/BASICS
ELABORATION D'UNE ETUDE DE CAS

OBJECTIF DE LA VISITE A TAHOUA ET KONNI
16 février 1998

Le projet BASICS a commissionné une étude de cas qui a pour but de "Démontrer comment la prise en charge des enfants malades peut être améliorée dans un environnement de Assurance de Qualité". Malgré le fait que cette étude est menée avant la formation en PCIME, qui n'est que planifiée plus tard dans l'année 1998, plusieurs activités réalisées par le projet ont déjà préparées le terrain pour la PCIME.

Diverses activités ont contribué à l'introduction des normes et standards pour la performance des agents de santé dans la prise en charge des enfants malades:

- Les enquêtes des structures sanitaires en 1995 et 1996 et les restitutions
- L'enquête de Mai 1997 et la restitution des données en Juin 1997
- L'ERPA et la restitution des résultats en Octobre et Novembre 1997

L'ERPA a été réalisé entièrement avec les ressources humaines disponibles au niveau des districts de Birni Konni et Illela dans le département de Tahoua. Si cette approche donne des résultats valides et fiables il pourrait renforcer la supervision et les données pourront être utilisées dans le processus de assurance de qualité des services.

Dans ce cadre l'objective spécifique de la visite a Tahoua et Konni est:

**Evaluer dans quelle mesure ERPA peut être utilisée pour améliorer
la qualité de la prise en charge des enfants malades
dans les centres de santé de premier niveau**

Audiences:

- Direction Départementale de la Santé de Tahoua
- Equipe Cadre de District de Konni
- Agents de santé travaillant dans les CSI

Calendrier de visite:

- | | |
|-----------------------------|---|
| - Lundi/Mardi 16 et 17.2.98 | Préparation de l'étude de cas a QAP/BASICS
Niamey |
| - Mercredi 18.2.98, 8h30: | Rencontre avec le Directeur du SNIS |
| - Mercredi 18.2.98, 14h00: | Départ pour Tahoua |
| - Jeudi 19.2.98: | Travail avec DDS Tahoua et recherche des données
de ERPA |
| Rencontre avec | Dr. Boucar Maina, Conseiller Technique Principal |

- Mr. Sabou Djibrina, Spécialiste en M&E
Mr. Adakal, Responsable PIS/DDS Tahoua
- Vendredi 20.2.98: Visite à Konni - Séance de travail avec ECD de Konni
 - Samedi 21.2.98, matin: Réunion de travail avec ECD Konni et Illéla
 - Samedi 21.2.98, après-midi: Retour à Niamey
 - Dimanche 22.2.98: Réunion de travail avec Dr. Geslin et Dr. Karki

APPENDIX E
Bibliography

BIBLIOGRAPHY

1. Franco LM, et al. Achieving quality through problem solving and process improvement. QAP/USAID.
2. Karki Mahamane. Quatre ans d'expérience d'amélioration de la qualité à travers les cycles de résolution des problèmes dans le département de Tahoua, au Niger. Projet Assurance de Qualité/BASICS. Tahoua, Décembre 1997. Pg 41-48.
3. Sabo Djibrina. Travaux des équipes AQ dans le département de Tahoua. Projet Assurance de Qualité/BASICS. Tahoua, Janvier 1998.
4. Bouchet B, Malouin R. Trip Report Niger: July 6 - August 8, 1997. QAP. Pg 12-14.
5. Karki M, Geslin C, Kelly P, Blum L. Rapport de l'enquête sur la prise en charge de l'enfant malade dans les districts sanitaires de Boboye, Konni et Guidan-Roumji au Niger. BASICS, May 1997.
6. Colette Geslin. ERPA - Evaluation Rapide des Performances des Agent. Rapport de Mission, Niger, January 1998.
7. Karki Mahamane. L'expérience des supervisions et des réunions trimestrielles dans une perspective d'amélioration de la qualité des soins de santé primaires dans le département de Tahoua au Niger. Projet Assurance de Qualité/BASICS. Tahoua, Novembre 1997.