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## CARE in Niger The SANU YARA Project

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### Final Evaluation Report

Zinder, Niger

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**Attachment 2** Assessment methodology

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**Attachment 7** List of educational support materials

**Attachment 8** KPC results

Special reports Available upon request

- a "Building Community Social Support to Promote Improved Breastfeeding Practices Formative research for the development of a communication strategy for a CARE/USAID centrally-funded Child Survival project in Zinder, Niger " By Michelle Kouletio, April 1998
- b "Activity to Sustainability A holistic analysis of health volunteer motivation " By Shannon Mason, May 1999
- c "The Acceptability and Feasibility of an Alternative Oral Rehydration Therapy in Niger " By Karen Riggs, May 1999
- d "Evaluation of the Kourni Dispensary A Community-Partnered, Private, Rural Health Facility By Thomas D Murray, November 1998
- e "The Sanu Yara Project Mid-term Evaluation Report " Submitted by Marcie Rubardt December 1997

## LIST OF ACRONYMS

DIP	Detailed Implementation Plan
EDF	European Development Fund
EPI	Expanded Program for Immunization
GON	Government of Niger
HIS	Health Information System
IEC	Information, Education, Communication
ILO	International Labor Organization
IOP	Individual Operation Plan
KAP	Knowledge, Attitudes and Practices
MCH	Maternal and Child Health
MOPH	Ministry of Public Health
ORS	Oral Rehydration Solution
ORT	Oral Rehydration Therapy
PRA	Participatory Rural Appraisal
TBA	Traditional Birth Attendant
TT	Tetanus Toxoid
USAID	United States Agency for International Development
VHC	Village Health Committee
VHW	Village Health Worker

## A SUMMARY

CARE's four year Sanu Yara Child Survival Project was initiated on September 29, 1995. The project targeted 70 villages in the Niger districts of Matameye, Magaria and Mirriah, serving 42,713 mothers and children under two years of age. The goals of the project were to

- 1) Reduce the high morbidity and mortality associated with vaccine-preventable diseases, malnutrition, malaria, and diarrheal diseases in children under five in Mirriah, Matameye and Magaria Districts through the use of sustainable child survival interventions and
- 2) Strengthen the Ministry of Health system and institute viable community-level structures to ensure the long-term sustainability of the child survival interventions

Project intervention areas included immunization (35%), nutrition (35%), case management of diarrheal disease control (20%), and malaria (20%)

The project's management team was based in Zinder and used five project field workers to provide support services and supervision to volunteer village health agents (traditional birth attendants (TBA), first aid workers and animators). Six village health agents were selected and trained from each village to carry out project activities at the community level. Their responsibilities included organizing community immunization sessions, providing health education on key project messages, making home visits to ill children or those defaulting on immunizations, maintaining a village medicine kit, and encouraging home treatment of diarrheal disease and malaria and referring severe cases to the clinic. In addition, a village health committee was organized and trained to manage the village medicine kit. This committee consisted of the community's first aid workers, TBAs and five other community members.

The project made significant progress toward achieving their goals and objectives through the use of innovative approaches to help communities begin to take responsibility for the health of their women and children. With the assistance and support of project staff, communities organized themselves to collect funds to purchase and maintain a village medicine kit and to participate in community-based vaccination sessions. This included not only the organization of women and children in the community but also arranging or paying for the clinic nurse's transportation. The medicine kits included chloroquine and ORS packets so that uncomplicated cases of malaria and diarrhea could be treated first in the community. In many cases, this was the first time these supplies were available at the community level.

Mother-to-mother support groups were created to encourage immediate and exclusive breastfeeding of children less than 6 months of age. Although these groups were organized late in the project, women in the villages seem enthusiastic about the groups and are using the meeting times to discuss not only breastfeeding practices, but all of the project's maternal and child health messages. The project also promoted an improved, locally available weaning food and a locally available alternative oral rehydration therapy. From their previous child survival project experience in Niger, CARE learned that it is difficult to get traditional health workers (the first aid worker and TBAs) to do health education activities in addition to their normal tasks. So, the Sanu Yara project helped the villages identify two animators to help with health education.

activities at the community level. Animators were trained by project staff to promote key health behaviors through group discussions and home visits. The Sanu Yara project also helped to support Niger's first model community-partnered, private rural health facility, the Kourni Dispensary.

A comparison of the baseline and final surveys illustrates the project's progress toward improving knowledge and behaviors in the target communities. Knowledge of the benefits of tetanus toxoid increased from 20% to 87%, coverage of fully immunized children 12-23 months went from 12% to 52%, and women who received two doses of TT before the birth of their youngest child rose from 36% to 81%. Improvements in feeding practices were just as striking. The rate of reported immediate breastfeeding within one hour following birth increased from 11% to 53% and the exclusive breastfeeding rate for children between 0 and 6 months increased from 0% to 18%<sup>1</sup>. The project also succeeded in improving the practice of giving the same or more breastmilk during a diarrheal episode to children under 2 years of age, an increase in 14%, from 56% to 72%.

### *Priority conclusions*

- 1 The project successfully increased demand for health activities and services by helping communities identify and adopt behaviors that promote good health. Many of the project communities reported seeing an improvement in the health of their women and children. Women and men both mentioned the benefits brought about by immunizations and immediate breastfeeding. Because of the visible benefits, many of the project communities became fully engaged in project activities, sending transportation for clinic nurses to come to the villages to vaccinate women and children, organizing a fund to pay for a village medicine kit, and becoming fully involved in mother-to-mother support groups. Additionally, women mentioned the benefits they had seen from exclusive breastfeeding (in communities where mother-to-mother support groups had started), including a decrease in diarrheal disease. Furthermore, project staff and clinic nurses had been approached by members of other communities in the project zone asking that project activities be implemented in their villages.
- 2 The project's successes were, in part, due to the innovative strategies/approaches used to address difficult maternal and child behavior change issues. Innovative strategies/approaches included the promotion of a home-based rehydration therapy, support groups to promote optimal infant feeding practices, and the promotion of a locally available weaning food. Various studies that were carried out over the course of the project helped project staff identify new strategies and approaches to overcome barriers to behavior change, especially those behaviors that seemed particularly hard to change (for example, exclusive breastfeeding, appropriate feeding practices during weaning, use of ORS during diarrhea). The strategies and approaches that resulted from the findings of these studies significantly contributed to the project's results.

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<sup>1</sup> Of the mothers who reported that their infants were exclusively breastfed, 0% reported that their child had experienced a diarrheal episode during the 2 weeks prior to the survey.

- 3 Although progress towards most project impact objectives was successfully monitored through a computerized information system, poorly designed indicators and incomplete survey instruments flawed the overall system. While some of the project's indicators were difficult to measure because of the way they were written (see comments in the objective tables below), others reflected sub-optimal practices. Even though the project conducted a baseline and a final survey, both surveys lacked critical questions that were needed to gather information on key indicators. Without this data, a comparison of the baseline and final survey data was not possible. The project did conduct a mid-term survey and a mini-survey, both of which helped to monitor the project's progress, even though the results cannot be compared to the baseline survey because of the difference in sampling. In addition, many of the monitoring forms to collect data on community activities were developed late in the project. There is very little documentation on project inputs and processes.

**B ASSESSMENT OF RESULTS AND IMPACT OF THE PROGRAM**

**1 Summary Chart**

*a Results of Intervention Objectives*

<b>Intervention Indicators</b>	<b>Baseline Results</b>	<b>Objectives</b>	<b>Final Results</b>	<b>Comments</b>
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Intervention Indicators	Baseline Results	Objectives	Final Results	Comments
<u>Immunization</u>				
1 Increase the percentage of mothers who know that tetanus toxoid protects both the mother and child	20%	50%	87%	The GON announces that during a measles epidemic, mothers should take their child for measles vaccination at 6 months. Project staff have speculated that this may have caused some confusion among mothers. 40% of mothers answered that measles vaccine should be given between 6 and 9 months. The evaluators felt that confusion could have also been caused by the project insisting that health agents and mothers learn the complete immunization schedule, thus weakening the chances that the main message concerning measles vaccination would be retained.
2 Increase the percentage of mothers who know that measles vaccine should be given at 9 months	3%	50%	23%	
3 Increase the percentage of children between 12 and 23 months* who are fully immunized	12%	55%	52%	
4 Increase the percentage of women of reproductive age who received two doses of tetanus toxoid before the birth of their youngest child less than two years	36%	55%	81%	
*The analysis of data used children aged 12 through 23 months, not children between 12 and 23 months (which would not include those children aged 23 months)				
This indicator measures women's TT vaccination seeking behaviors. It is not necessarily an indication of the percentage of women and their newborns that are protected against tetanus, since dates of the TT vaccination were not taken into account. A woman who received two doses of TT during her first pregnancy is protected for three years. If she is now on her second or higher pregnancy and it				

Intervention Indicators	Baseline Results	Objectives	Final Results	Comments
				<p>has been longer than three years, she and her newborn are NOT protected Five doses of TT at appropriate intervals are needed to protect a mother and all of her future pregnancies from tetanus Once a woman has completed the five doses, she is protected for all of her reproductive life and she will need no more doses of TT during future pregnancies</p> <p>A better indicator that is possible in a survey is 'the percentage of newborns protected against neonatal tetanus' This indicator takes into account number, interval and dates of TT</p>
<p><u>Nutrition</u></p> <p>1 Increase the percentage of children less than 24 months of age who received breastmilk within the first hour after birth</p> <p>2 Increase the percentage of children 0 to 6 months who are exclusively breastfed</p>	<p>11%</p> <p>0%</p> <p>21%</p>	<p>30%</p> <p>10%</p> <p>50%</p>	<p>53%</p> <p>18%</p> <p>33%</p>	<p>This indicator was changed upon recommendation of the midterm evaluation The original indicator was breastfeeding within 8 hours following birth However, the baseline data reported in the DIP of 11% was actually for children breastfed within one hour after birth This indicator relies on a mother's recall of an event that could have happened nearly 2 years previous to the evaluation Looking at the group of 0-6 months old may have provided a more accurate picture of actual practices</p> <p>Of the 23 infants (18%) between 0 and 6 months of age who were reported to be exclusively breastfed 0% were reported to</p>

Intervention Indicators	Baseline Results	Objectives	Final Results	Comments
3 Increase the percentage of 0 to 6 month olds who are predominantly breastfed	26%	50%	No data avail	<p>have had a diarrheal episode during the 2 weeks prior to the survey</p> <p>This indicator was changed upon recommendation of the midterm evaluation. The final evaluation evaluators believe that this is a secondary indicator that should only be used to measure progress toward the optimal practice of exclusive breastfeeding until 6 months of age.</p>
4 Increase the percentage of mothers with a child between 6 and 24 months who knows that a child 6 to 24 months should be fed at least 5 times a day	No data avail	35%	53% (20% 6-11 months and 33% 12-23)	<p>This question was dropped from the final evaluation due to advice given during a workshop by CARE. It would have been interesting to see if mothers' knowledge on frequency of feeding had increased over the life of the project since this was one of the key messages.</p>
5 Increase the percentage of mothers with children 6 to 24 months who feed their children at least five times a day (including breastfeeding for children 6 to 12 months)	No data avail	50%	38%	<p>This indicator was added upon recommendation of the midterm evaluation. There were no questions in the baseline survey to assess this behavior.</p>
6 Increase the percentage of women of reproductive age (15-49)* who know at least 2 practices to improve their own nutrition when they are pregnant or breastfeeding				<p>This indicator was added upon recommendation of the midterm evaluation. Mothers' nutrition was not part of the original project objectives, so there was no question in the baseline survey to assess this behavior.</p> <p>*The sample used in the survey was women 15-45 years of age.</p>

Intervention Indicators	Baseline Results	Objectives	Final Results	Comments
<u>Diarrhea</u>				
1 Increase the percentage of children less than 24 months with diarrhea in the past 2 weeks who were given the same amount or more breastmilk	56% (7% more than usual)	75%	72% (20% more than usual)	The primary indicator should be whether a child is being breastfed more often than normal during a diarrheal episode, which is the optimal behavior sought. The secondary indicator would be to see if the child is receiving the same number of feedings during diarrhea as normal, which would allow the project to measure progress toward the optimal objective of getting the mother to increase feedings.  This includes all children treated with SRO, SSS, or cheque (a liquid that by adding salt has been shown to be an appropriate rehydration fluid and may be found in nearly every home on a daily basis). During the life of the project, the price of SRO significantly increased and stockouts were common.
2 Increase the percentage of children less than 24 months with diarrhea in the past two weeks who were treated with ORT	42%	60%	47%	
<u>Malaria</u>				
1 Increase the percentage of presumed cases of malaria in children less than 24 months that are treated correctly and first with chloroquine in the home	No comparable data avail 20%*	60%	36%	* The baseline survey did not ask about <i>correct treatment</i> of children with possible malaria cases. The question only asked if the feverish child was given chloroquine. At baseline, 70% of the mothers with a child who had a fever within the past 2 weeks reported giving their child chloroquine, this was slightly lower (65%) during the final evaluation. The 20% reported in the DIP came from a mini-survey carried out in 10 non-project villages soon after the start of the project. This data is not
	No	30%	71%	

Intervention Indicators	Baseline Results	Objectives	Final Results	Comments
<p>2 Increase the percentage of women who take chloroquine prophylacticy from 3 months of pregnancy until 6 weeks after delivery</p>	<p>comparable data avail 17%*</p>			<p>comparable to the final KPC survey data</p> <p>* Even though this is reported as 17% in the DIP and other project documents, there was no question in the baseline survey to measure this indicator. The data (17%) reported were obtained from a mini-survey taken in 10 non-project communities a few months after the start of the project. The final survey only asked if the mother took weekly chloroquine during her pregnancy, the question did not inquire about the length of time the chloroquine was taken.</p>

b Results of Training Objectives

Training Objectives	Expected Results	Achievements	Comments
<p>1 To prepare a knowledgeable team of men and women in each of 70 villages who will (1) educate villagers about nutrition, immunizations, diarrheal disease and malaria and (2) provide ORS packets and basic medicines to villagers at a reasonable cost</p>	<p>140 village animators trained</p> <p>140 TBAs trained to promote breastfeeding</p> <p>37 new and replacement VHW/TBAs trained</p> <p>130 VHWs re-trained in project interventions</p> <p>Educational support materials designed, reproduced and distributed</p> <p>Mothers in villages educated through home visits*</p> <p>70 village tracking systems put into place for immunizations</p> <p>39 villages have medicine kits (including chloroquine and ORS packets) for the first time</p>	<p>171 village animators trained</p> <p>150 TBAs trained, including training on breastfeeding</p> <p>58 new first aid workers trained and 87 new TBAs trained</p> <p>246 VHWs re-trained in various aspects of project interventions</p> <p>See list of educational support materials in attachment 5</p> <p>975 women were paid a home visit from April-June, 1999 (673 visits made by animators or TBAs and 302 made by project field workers)</p> <p>70 villages have registers</p> <p>41 villages were equipped with medicine kits for the first time with the Sanu Yara project</p>	<p>*The results did not specify whether the project field workers or the VHWs would accomplish the home visits. The content of these visits is also not specified</p> <p>Even though all 70 villages have a register, the registers have proven hard to complete and few villages are able to complete them without the assistance of a project field worker</p>
<p>2 To enable village management</p>			

Training Objectives	Expected Results	Achievements	Comments
<p>committees to manage village medicine kits for the sale of medications with a small profit</p> <p>3 To orient clinic personnel in the new nutrition recipes and ensure that they understand the importance of immediate and exclusive breastfeeding and how to promote it effectively</p> <p>4 To enable clinic personnel in selected clinics to implement a cost recovery system in conjunction with community committees</p> <p>5 To prepare health and management</p>	<p>70 village mgmt committees trained to manage village medicine kits</p> <p>Nurses at clinics trained in project interventions</p> <p>Oral rehydration materials put into place in 6 clinics</p> <p>Cost recovery systems put into place in 6 clinics</p> <p>6 health committees trained in cost recovery</p> <p>6 mgmt committees trained in cost recovery</p>	<p>70 village management committees trained including management of medicine kits</p> <p>14 clinic nurses and 24 auxiliary clinic health workers trained in Baby Friendly Initiative, quality assurance, supervision, cost recovery, nutrition recipes (fura de mai)</p> <p>6 clinics received oral rehydration materials S/broum, Kourni, Kantche, Dan Barto, Doungou, and Daratchama</p> <p>Project support given to one cost recovery system at Kourni and essential medicines and training provided to Matameye</p> <p>0 health committees trained in cost recovery</p> <p>7 management committees trained</p>	<p>Material received at each clinic included 2 plastic bowls, 3 plastic mats, 3 plastic cups, 1 – 1 liter beaker, 3- 2 liter plastic cups, 3 soup spoons</p> <p>Upon the recommendation of mid-term evaluation, project staff decided not to implement cost recovery in the planned 5 clinics (Kourni being the 6<sup>th</sup> clinic and already receiving project support) Essential medicines were given to two clinics Kourni and Matameye Project staff helped communities organize and provided supervision, management support, and training to the</p>

Training Objectives	Expected Results	Achievements	Comments
<p>committees in clinic villages to assume their roles in a cost recovery system</p> <p>6 To provide project staff with the skills necessary to successfully implement and manage the project</p>	<p>6 clinics receive supply of essential medicines</p> <p>Nurses in 6 clinics trained in cost recovery system</p> <p>Baseline survey completed</p> <p>Annual survey completed</p> <p>Midterm evaluation completed</p> <p>Final evaluation completed</p> <p>Nutrition consultancy completed</p> <p>IEC consultancy completed</p> <p>Staff trained in focus group</p>	<p>in cost recovery</p> <p>2 clinics received supply of essential medicines Matameye and Kourni</p> <p>37 clinic nurses from 6 clinics trained in cost recovery system</p> <p>Completed Oct 1995</p> <p>1 completed in Nov 1996 in 10 villages</p> <p>KPC completed in October 1997, evaluation completed in Nov 1997</p> <p>KPC survey completed in July 1999, evaluation completed in Sept 1999</p> <p>Nov 1995 for weaning food recipes (Eleanore Seumo-Fosso), July 1997 for breastfeeding strategy (Michelle Kouletio), support</p>	<p>Kourni clinic</p> <p>The annual surveys were discontinued after the mid-term evaluation</p>

Training Objectives	Expected Results	Achievements	Comments
	<p>methodology by consultant</p> <p>Cost recovery system consultancy completed</p>	<p>from <i>Linkages</i> 1998-99 (Ginette Belange, Nancy Nachbar, Ann Brownlee)</p> <p>Completed in April 1997 by Mary Dean Purves</p> <p>Staff trained by Mary Dean Purves in April 1997</p> <p>Evaluation of Kourni Dispensary, November 1998</p>	

c Results of Sustainability Objectives

Sustainability Goals	Objectives	Activities	Achievements	Comments
1 Community structures can identify and solve basic health problems, especially those related to children's health	<p>a 70 villages will have functioning medicine kits</p> <p>b 70 village committees will manage kits in sustainable manner</p>	<p>a 70 village management committees trained</p> <p>b Medicine kits provided to 70 villages</p> <p>c Reliable and inexpensive supply system identified</p>	<p>70 village management committees trained (100%)</p> <p>62 villages (89%) provided with medicine kits</p> <p>24 villages (39%) have access to a reliable and reasonably priced supply system</p> <p>The project is working with the remaining 38 villages with medicine kits to identify an adequate supplier</p>	<p>40 villages (57%) had a performing management committee during the period Nov 98-Apr 99</p> <p>Originally, it was planned that the village medicine kits would be re-supplied through medicines provided under the Bamako Initiative</p> <p>When this strategy was changed, the project looked for other means to ensure the communities would have a reasonably priced means to re-stock their kits</p> <p>32 of the kits (52%) have made a profit</p>
2 Village health teams will provide health education information and organize immunization sessions, villagers will adopt behaviors that actively promote and improve children's health	<p>a VHWs and village animators will educate villagers</p> <p>b VHWs will organize immunization sessions</p>	<p>a VHWs and animators trained for 70 villages</p> <p>b VHWs organize immunization sessions 3 times/year</p>	<p>VHWs and animators were trained from 70 villages (100%)</p> <p>32 villages (46%) of villages organized</p>	<p>Between Nov 98 and Apr 99</p> <p>38 villages had performing first aid workers (66 (45% of those trained) total workers were performing)</p> <p>49 villages had performing TBAs (89 total (59% of those trained) TBAs were</p>

Sustainability Goals	Objectives	Activities	Achievements	Comments
<p>3 Clinic personnel will supervise village health teams on a regular basis</p>	<p>a VHWs will go to clinics for supervision b Clinic nurses will go to village at least 3 times/year</p>	<p>a VHWs made aware of importance of supervision b Cost recovery system in place that can cover logistical support</p>	<p>vaccination sessions 3 times/year</p> <p>VHW are reported to go to clinics to ask questions or seek assistance, but not to be supervised (0%) The project helped in</p>	<p>performing) 46 villages had performing animators (83 total (49% of those trained) were performing) 83% (116) of animators reported holding education sessions without the assistance of project staff This represented 46 villages (66% of the project villages) The 32 villages that organized vaccination sessions 3 times a year did not necessarily do this by themselves In most cases, the community would organize themselves and transport of the health worker and the project field worker would negotiate the vaccination date with the clinic nurse</p> <p>Supervision at the clinic has not worked Routine supervision of the VHWs by clinic nurses has never worked without the project's input (per diem, motorcycle</p>

Sustainability Goals	Objectives	Activities	Achievements	Comments
<p>4 Clinics will re-supply VHWs medical kits in a timely fashion</p>	<p>a 6 clinics will have basic medicines in stock</p> <p>b Medicines will be available for village kits at reasonable cost</p>	<p>a Nurses and community committees trained in cost recovery system for 6 clinics</p> <p>b Initial supply of medicines provided to 6 clinics</p>	<p>establishing a cost recovery system in one of the clinics that would provide logistical support to the 70 project communities</p> <p>22 nurses in Matameye were trained in cost recovery</p> <p>2 health centers received medicines (Kourni and Matameye)</p>	<p>repair) Supervision during vaccination sessions does not occur The supervision component is not sustainable</p> <p>The project planned to install cost recovery systems in 5 clinics in the district of Matameye (in addition to the Kourni clinic) The project provided essential medicine and training to one clinic (Matameye) See further explanation on page 48 )</p> <p>Since the project decided not to continue with the plans to do cost recovery in all 6 clinics, this objective was not fully met The project worked with the Kourni clinic to establish and improve their cost recovery system and supplied the hospital in Matameye with their initial supply of essential</p>
<p>5 Clinics will carry out the advanced EPI strategy</p>	<p>a Clinic staff will provide immunization services in</p>			

Sustainability Goals	Objectives	Activities	Achievements	Comments
	project villages further than 5 km from clinic at least 3 times/year	<ul style="list-style-type: none"> <li>a Nurses convinced of importance of advanced strategy</li> <li>b Cost recovery systems provide funds for logistical support for EPI services</li> </ul>	<p>Nurses are participating in vaccination sessions if the community pays the costs</p> <p>Cost recovery is not operational at the clinic level</p>	<p>medicines The village medicine kits are not stocked through the clinics, but the project has worked to set up a reliable, reasonably priced stock system See section on financial sustainability on page 51 for more details</p> <p>42 communities (60%) participated in vaccinations by either sending an oxcart or paying gas money to the clinic nurse Several villages have reported success with this method and are likely to continue to demand vaccination services after the end of the project</p>

## 2 Results – Technical Approach

The Sanu Yara (Healthy Child) project was implemented in three districts of the Zinder Department in eastern Niger, namely Matameye, Magaria, and Mirriah. The four-year project (September 29, 1995 - September 30, 1999) built on several years of CARE experience in the Zinder Department. Sanu Yara was implemented in a total of 70 villages, 65 of which were involved to varying degrees in previous CARE health projects.

The project's overall goals were

- 1) Reduce the high morbidity and mortality associated with vaccine-preventable diseases, malnutrition, malaria and diarrheal diseases in children under five in Mirriah, Matameye and Magaria Districts through the use of sustainable child survival interventions,
- 2) Strengthen the Ministry of Public Health (MOPH) system and institute viable community-level structures to ensure the long-term sustainability of the child survival interventions.

A full list of objectives is presented in the summary charts beginning on page four.

With these goals in mind and building on the lessons learned from the previous health projects, the Sanu Yara project was designed to focus on four key child survival interventions: nutrition (35%), immunizations (35%), diarrhea case management (20%) and malaria prevention and management (10%). Rather than attempt to cover all aspects of each of these interventions, Sanu Yara's approach was to emphasize a few key messages for each intervention area and target women of reproductive age (15-45) and children less than 5 years old.

As the project goals imply, the project focused its efforts at the community level, working to improve knowledge and change behaviors for key maternal and child health problems within the four intervention areas. The project aimed to involve communities in their own health activities in order to motivate them to take increased responsibility for health in the village. The strategy involved working with a team of volunteer health workers and animators (6 per village) in each community: 2 first aid workers, 2 traditional birth attendants and 2 animators. The VHWs and animators supported project activities and served as a channel to communicate key messages. Specific tasks included organizing the community for immunizations sessions, keeping and re-stocking the village medicine kit (first aid worker), and transmitting key health messages to women and their families through home visits and group discussion sessions. The project hired five field workers to assist each project community get health activities started, to monitor progress of activities and to supervise the animators work (according to MOPH's supervision protocol, supervision of the TBAs and first aid workers is the responsibility clinic nurses). Other project staff, including two field worker supervisors and a community participation coordinator, provided additional support to the communities and field workers. (See attachment 4 for the complete roles of each type of VHW and the job description for the project field workers.)

At the clinic level, the project aimed to improve the knowledge and practices of the clinic staff, particularly the nurses, since clinic nurses carried out vaccine sessions at the community level and were responsible for supervision of the TBAs and first aid workers at the community level. Clinic nurses and auxiliary staff received training in optimal early infant feeding practices, quality assurance, cost recovery and supervision.

In addition to improving knowledge and practices of clinic personnel, the project was originally designed to help the government of Niger (GON) implement a cost recovery system in a total of six clinics in the Matameye District. However, after assessing the results of UNICEF's experience in cost recovery in the neighboring district of Mirriah and considering the impact on existing local pharmacies, the project decided to alter this part of the strategy. The project worked with one community-managed health center to improve their cost recovery system and assisted the MOPH train clinic-level health workers within the project zone in cost recovery systems.

The project chose a phased approach to implementing activities in the 70 selected communities. Ten communities were targeted during the first year of the project, 30 the second year and the remaining 30 during the third year of the project. Each community received three months of intensive support from the project field workers and other project staff to begin activities. After the 3-month introduction period, project staff continued to support each community on a less intensive basis.

### **(i) Immunization Results**

The Sanu Yara strategy for the immunization intervention was to increase community members' awareness of the importance of immunizations, thereby creating a demand for immunization services. The communities were mobilized to organize themselves for vaccination sessions where the clinic nurse would come to the village to vaccinate women and children (target group children <24 months and women 15-45 years old). Key messages were passed through the VHWs, village animators and the project field workers. The project selected the following key messages for the immunization component<sup>2</sup>

- Vaccinations offer protection against many dangerous diseases. A child who is not fully immunized has an increased risk of malnutrition, handicaps or death.
- The anti-tetanus vaccine protects both the mother and child against tetanus.
- Measles vaccine should be given at 9 months of age.
- By the age of 1 year, a child should be entirely vaccinated against the 7 diseases.
- Every woman must have received at least 2 anti-tetanus vaccinations before the birth of her last child.
- All women 15-49 years of age should be vaccinated against tetanus.

The project's immunization component was, for the most part, successful as measured by a comparison of the baseline and final surveys. Three out of the four objectives were met, with 2 project objectives being surpassed by more than 25%. The two objectives

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<sup>2</sup> These messages were taken from the project document entitled, "Repertoire des messages clés". These messages vary slightly from the messages presented in the job aid for project field workers and animators, which also vary slightly from the messages taught during training. This is discussed in more detail under the section concerning IEC.

for mothers' knowledge and care-seeking behavior showed the greatest improvement. Knowledge of benefits of TT vaccine increased from 20% to 87% (project objective 50%) and coverage of 2 TT vaccinations before the birth of the woman's youngest child increased from

36% to 81%<sup>3</sup> (project objective 55%). The objective of having 55% of children between 12 and 24 months of age fully immunized by the end of the project was nearly reached with the final survey reporting 52% of this age group fully immunized, an increase of 40% from the baseline of 12%.

The fourth objective for the immunization component, to increase from 3% to 50% the percentage of mothers who know that measles vaccine should be given at 9 months, was not fully achieved, but did have some success. Twenty-three percent (23%) of mothers in the final survey stated that a child should be vaccinated against measles at 9 months.

#### Factors affecting achievement of objectives

The project's approach of assisting communities to organize immunizations in their village was likely one of the major contributing factors to achievement of the two care-seeking behaviors. During the intensive phase of intervention at the village level, immunization sessions were organized on a monthly basis. This allowed the community to "catch up" on the immunizations both for women and children (once the intensive period was over, vaccinations were scheduled 3 times/year in most areas<sup>4</sup>). The project's field workers assisted the community to set a date for vaccinations with the appropriate clinic nurse. At the beginning of the project, per diem and transportation costs (for motorcycle gas, for example) were paid by the project. When gas prices doubled during the second year of the project and as the community began to see the benefits of the immunization sessions, several communities either collected funds to pay for the nurse's gas or sent an ox/donkey cart to bring the vaccines and the nurse to the village to conduct the immunizations. During the period between November 1998 and July 1999, 42 communities participated in organizing at least one vaccination session in their community. After talking to community members, the evaluation team felt that several communities truly see the benefits of vaccinating women and children. It appears that these communities are sufficiently motivated to continue organizing vaccination sessions.

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<sup>3</sup>This indicator measures women's TT vaccination seeking behaviors. It is not necessarily an indication of the percentage of women and their newborns that are protected against tetanus, since dates of the TT vaccination were not taken into account. A woman who received two doses of TT during her first pregnancy is protected for three years. If she is now on her second or higher pregnancy and it has been longer than three years, she and her newborn are NOT protected. Five doses of TT at appropriate intervals are needed to protect a mother and all of her future pregnancies from tetanus. Once a woman has completed the five doses, she is protected for all of her reproductive life and she will need no more doses of TT during future pregnancies. A better indicator that is possible in a survey is 'the percentage of newborns protected against neonatal tetanus'. This indicator takes into account number, interval and dates of TT.

<sup>4</sup>Project staff reported that some communities were asking that monthly immunization sessions continue past the initial three-month intensive period. The evaluators felt that this was not cost-effective for the size of the project communities and recommended that the staff work with these communities to come up with a more reasonable, cost-effective timetable.

In talking to project staff and the women from project communities, it became apparent that women are motivated by actions and behaviors that directly benefit them. This may have been a contributing factor to the success of the two immunization objectives directly concerning the health of women. In addition, at least two project communities commented that during a recent measles epidemic, the children from their village did not contract measles. Members of surrounding villages were coming to them asking how they could get help, which made them feel important and proud of their achievement.

Although the message to vaccinate against measles at 9 months is among the key project messages, it is speculated that this message may have been confused with a MOPH health message that states that during a measles epidemic mothers should seek vaccination for a child at 6 months. This is somewhat substantiated by the final survey, which reported that 40% of mothers answered that measles vaccine should be given between 6 and 9 months. However, another possible explanation for not achieving this objective lies in the way the immunization messages were transferred. Instead of concentrating on the timing of the measles vaccination, the training of VHWs, animators, and project field workers focused on teaching the complete immunization schedule. This, in turn, was taught to mothers. Trying to learn the timing of each and every vaccine most likely diluted the key message – vaccinate your child against measles at 9 months of age – thus decreasing the chances that the key message would be retained. Additionally, there was no specific IEC visual aid to reinforce the measles message, the message was part of a more comprehensive visual aid on immunizations.

#### Unexpected successes/outcomes

One of the most impressive, unexpected successes is that the project apparently increased demand for vaccinations for children and pregnant women. Furthermore, there is some evidence that demand and interest in maternal and child health (MCH) services has *increased among neighboring villages*. During the final evaluation, all of the clinic nurses stated that they had seen an increase in demand for services at their health site. They also reported having non-project communities coming to ask them when they were coming to their community to give vaccinations. The project itself has had several communities request project activities.

The project's health information system permitted successful tracking of complete vaccination coverage at the village level. This information was systematically shared with the District Health Service and relevant clinic nurses. Unfortunately, the national health information system does not use this information, so the information was used by the MOPH only at the local level.

Another unexpected success was the community's financial commitment to the immunization program. As mentioned above, at the beginning of the immunization activities, the project provided per diem and transport for clinic nurses who were conducting village-level immunization services. As this became increasingly difficult, the communities, not wanting to forego the immunization sessions, began to organize themselves to provide transport for the nurses.

Furthermore, the use of the oxcart to help with the advanced strategy for immunizations was adopted by the MOPH during national vaccination days. Before Sanu Yara began to use this approach, national vaccination days were accomplished with automobiles. The adopted use of the oxcart has proven to be very cost-effective for the GON.

### Constraints

- Regular vaccine shortages, and breakdowns of the cold chain, particularly due to gas shortages in the area, were hindrances to project activities. At one point in the project, there was a scarcity of BCG needles and the project negotiated with a US company to provide needles to fill the gap. Delayed salaries for MOPH clinic nurses and lack of spare parts and gas for their motorcycles hindered the supervision of the VHWs. There were times when some of the clinic nurses refused to provide community-level immunization services because they were on strike.
- The register that was developed by the project and used at the community level to track women and children's immunization status was very difficult to complete and maintain. Because of this difficulty, the project's field workers normally filled out the register. For the project's monitoring system, the register was ideal – the project could track number and percentage of fully immunized children. However, from the point of view of the communities and sustainability, the register needed to be simplified or another, more appropriate tool, developed. This was never done. Furthermore, it was not evident that the community ever really understood the importance of the register. Without understanding and accepting its importance, it is unlikely that the community would be motivated to continue using this tool.

### Lessons learned

- Key messages must be conveyed in a simple, direct manner, without extraneous information. It appeared that the project had a clear idea of what messages they wanted to promote. However, during the training of key staff and village volunteers, other information was added that could have led to message confusion and detracted from the project's actual goals and objectives.
- Approaches and tools need to be adapted to the realities and special needs and characteristic of the community in order to function well and be sustained. A one-size-fits-all approach to community development misses unique opportunities to make a difference and show results. When an approach or tool is not working well, other options need to be explored. For example, when this project found that certain communities were not responding well to the standard project approach (i.e. the community was not engaging in project activities), other ways of working with those communities should have been explored.
- Registers or any other type of record keeping forms must be simple, user friendly, and in some cases designed for an illiterate population in order to increase the possibility of sustainability and use at the village level. However, a register for

immunization services must also be specific enough to track completely vaccinated children. The vaccination register used by the project was beneficial to the project because of its effectiveness in tracking fully immunized children. However, the register is not a sustainable tool because the community cannot easily use it. The project needed to work on a way to help the community track fully immunized mothers and children in an effective way. For example, the project may have considered educating mothers about the importance of keeping and using the vaccination health cards that were distributed by the project. It is more likely that a community will use and keep a form or tool if they feel it is somehow useful and valuable to them.

- Building on existing community strengths facilitates community development and illustrates how community members can take control of their own problems. Projects need to identify community resources and look for ways the community organizes itself, then build on these opportunities. For example, before the implementation of Sanu Yara, several of the project communities had experience organizing themselves for immunizations during an epidemic. The project helped the communities build on this strength by showing them that they could use the same or similar techniques to organize themselves for vaccination sessions without an epidemic.
- Without activities to increase local capacity to organize vaccination sessions, communities have neither the ability nor the confidence to coordinate with the clinic nurse for community-level vaccination sessions. Although community members effectively participated in and facilitated the vaccination sessions, CARE staff involvement in organizing immunization sessions was essential to the success of these sessions. Few communities felt comfortable organizing dates and times with the clinic nurses, so this was left to the project field worker.
- The use of ox/donkey carts has potential for project activities beyond the immunizations sessions. Carts could be used, for example, for cross-visits between communities, for traveling theatre shows, etc. Most communities would be able to supply carts as a part of their contribution.

## **(ii) Nutrition Results**

The nutrition component of Sanu Yara became the largest component of the project in terms of effort. The Sanu Yara project focused its nutritional improvement intervention on the following two key behaviors:

- 1) To promote and support immediate and exclusive breastfeeding until the age of 6 months,
- 2) Encourage mothers to feed their children more frequently and to add a supplemental energy source to children's food starting at 6 months of age.

At the beginning of the project, the primary approach to promoting optimal infant feeding practices was to use VHWs and animators to make personal contacts with mothers through home visits. Following the research of a graduate student and results from the

mid-term evaluation, the project revised its strategy for promoting exclusive breastfeeding to include choosing a mother from the community to model exclusive breastfeeding, identifying exclusively breastfed infants by blue bracelets, and organizing and promoting community level breastfeeding support groups. The revised strategy also included a new focus on mothers' nutrition during pregnancy and lactation. Throughout the project, additional reinforcement of the key nutrition messages was sought by training clinic nurses in preparation and promotion of an enriched weaning food (tuwo or fura de mai) as well as in the baby-friendly initiative and encouraging them to make their clinics baby-friendly. The target population for the nutrition component was children less than 24 months old.

The project selected the following key messages for the nutrition component (taken from the project document "Repertoire des messages clés")

- A newborn baby must be put to the breast in the first 8 hours after birth
- Exclusively breastfeed a child from birth until 6 months of age<sup>5</sup>
- Maternal milk is by itself the best food and drink for a baby during the first 6 months of life
- A baby needs to be breastfed as soon as possible after birth. Every mother can breastfeed her baby
- So that a mother can have sufficient breastmilk, the baby must breastfeed often
- Mothers should breastfeed their baby more than one year and even to the age of 2 years, if possible
- Starting at 4-6 (6) months, a child needs other foods in addition to breastmilk
- Until the age of 2 years, a child needs to eat 5-6 times a day
- A child less than 2 years of age needs enriched foods, therefore it is necessary to add a small quantity of fat or oil to the family pot
- All children need foods rich in vitamin A
- A child less than 2 years of age must eat at least 5 times a day

The project's nutrition objectives were modified following the mid-term evaluation to change the focus from knowledge to practice. Because of this change, only 3 of the 6 project objectives for nutrition had data from both the baseline knowledge, attitudes and practice (KAP) survey and the final KAP survey. The project made great strides towards improving immediate and exclusive breastfeeding practices. At baseline, only 11% of mothers had breastfed their infant within one hour after birth (the common practice is to give goat's milk for 3 days following birth) and 0% of children between 0 and 6 months of age were exclusively breastfed. By the end of the project, 53% of mothers reported breastfeeding within one hour after birth<sup>6</sup> (project objective 30%) and 18% of mothers reported exclusive breastfeeding of infants between 0 and 6 months of age (project objective 10%). A second indicator to measure predominant breastfeeding (child receives breastmilk and water only) was added after the mid-term evaluation.

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<sup>5</sup> The original message promoted exclusive breastfeeding until 4 months of age. The project actually promoted exclusive breastfeeding to 6 months of age.

<sup>6</sup> This question was asked of all women with a child less than 2 years of age, which means that in several cases the mother would have to recall a practice that happened more than a year previous to the survey. It was also recognized by project staff and the evaluators that the message to immediately breastfeed after birth is widely known, which could have some impact on the response of mothers.

The baseline results showed that 21% of women predominantly breastfed their 0-6 month old infant compared to 33% in the final survey (project objective 50%)<sup>7</sup>

Unfortunately, the question to obtain data on how many mothers know that a child of 6-23 months of age should be fed at least 5 times a day was dropped from the final survey. The question was dropped because project staff were encouraged to look more at practices than at knowledge. However, this indicator was kept during the modification of nutrition objectives, therefore the question should have been asked in the final survey. Furthermore, since practice does not necessarily confirm knowledge, this information would have allowed the project to compare knowledge to practice for this particular behavior.

The final two indicators were added upon recommendation of mid-term evaluation, so there is no baseline data available to make a comparison. These indicators are

- 1) Increase the percentage of mothers who feed their 6-23 month old children at least 5 times a day and
- 2) Increase the percentage of women (15-45) who know at least 2 practices to improve their own nutrition during pregnancy and lactation

Even though there were no baseline data available, the project set the objectives of 35% and 50%, respectively, based on what they considered practical. The final survey reported that 53% of children 6-23 months old were being fed at least 5 times a day (20% for the age group 6-11 months and 33% for the age group 12-23 months). For children 6-11 months, breastfeeding was included as 2 meals, if the child was breastfed more than 3 times a day. Thus, if a child of this age was given complementary foods at least 3 times a day and breastfed at least 3 times a day, they would be included as having been fed at least 5 times a day. Breastfeeding was not counted as a meal for children in the 12-23 month age group. Data on types of food given were not analyzed.

Thirty-eight (38%) of the women surveyed knew at least 2 practices to improve their own nutrition during pregnancy or lactation (objective of 50%). This objective was added at the same time that CARE/Zinder began implementation of their reproductive health project. Staff of Sanu Yara believed that this objective would be better addressed by the reproductive health project, especially since the project was just starting, thus little was done in this project to address this indicator.

### Factors affecting achievement of objectives

It appears that the immediate breastfeeding objective was achieved due to several factors working in support of one another. Traditionally, a TBA is called directly after birth to help cut the umbilical cord and clean the baby. Thus, in project villages, a project-trained TBA was often with the mother directly after birth, an appropriate time to

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<sup>7</sup> Predominant breastfeeding is not the optimal feeding practice for children less than 6 months of age. This indicator should be considered a secondary indicator to exclusive breastfeeding and should only be used to measure progress toward the optimal practice of exclusive breastfeeding until about 6 months of age. When an indicator such as this is included in a project, the project runs the risk of confusing the optimal practice with the sub-optimal practice, sometimes taking away from the focus of the optimal, even though the optimal may be hard to obtain.

encourage and help the mother begin immediate breastfeeding. Mothers also seemed willing to initiate immediate breastfeeding because of the benefits they were seeing. Project staff were getting feedback from women that they were experiencing quicker birthing of the placenta, a shorter duration of after-birth contractions, and no engorgement of their breasts. These benefits were often discussed among the women of the village. A consultant from Linkages confirmed this during a recent study in the project villages. As well, with immediate initiation of breastfeeding, there was no need to buy goats milk, a benefit voiced by both women and men. The combination of these factors seemed to influence a change in behavior toward greater acceptance of immediate breastfeeding.

Exclusive breastfeeding was a more difficult behavior to change. There appeared to be a great deal of resistance to “exclusively” breastfeeding as opposed to “predominantly” breastfeeding. Mothers felt that their children needed water. In 1997, a student from Emory University conducted a special study project to design a communications strategy to increase the prevalence of exclusive and immediate breastfeeding in the Sanu Yara project zone. Following this study, the project modified its breastfeeding promotion strategy to include three levels: the community, the individual and the health center personnel. Several groups were targeted in the community due to their social influence on mothers. These groups included husbands, mother-in-laws, co-wives, community health workers, and young girls. Individual needs were addressed through the use of mother-to-mother support groups and “models” in the communities who practiced exclusive breastfeeding. Blue bracelets identified exclusively breastfed babies. These bracelets proved to be a positive communication tool, as community members would ask why the babies were wearing a blue bracelet, prompting discussions on exclusive breastfeeding. Health center personnel were given training in the “Baby Friendly Initiative” to promote breastfeeding.

The organization of mother-to-mother support groups appeared particularly successful in getting mothers together to talk about key breastfeeding messages. In several sites visited, members of the support groups said that they discuss all of the key health messages of the Sanu Yara project, not only breastfeeding messages. Often the village animator or TBA would attend the meetings to talk about maternal and child health issues. However, during the evaluation team’s site visits and during the recent investigation by Linkages, it was found that these support groups were not really functioning as support groups, i.e. there is very little sharing of *personal* experiences, opinions, problem-solving, etc. Since there was no in-depth training of the project staff in lactation management, this is understandable.

The messages concerning immediate and exclusive breastfeeding seemed to be retained effectively by the village animators and TBAs. The results of a “mini-test” carried out during the final evaluation showed that the majority of village animators and TBAs were able to correctly answer the questions related to immediate and exclusive breastfeeding. Since the village animators and the TBAs knew these messages so well, it is likely that they discussed them often during the group discussions and home visits.

In addition, mothers reported seeing a link between immediate and exclusive breastfeeding and their children’s health and a link between their children’s good health and a decrease in their workload. During the site visits, several mothers commented

that their exclusively breastfed baby had fewer episodes of diarrhea, which saved them the time of frequent cleanup. They also commented that their children were healthier, therefore there were fewer trips to the clinic, which again saved them time. Both the staff and the evaluators noted that women seemed to be more willing to adopt practices and behaviors that save them time and/or effort.

### Unexpected successes/outcomes

At mid-term, the project staff was discouraged about the exclusive breastfeeding results. They really felt that this objective was too hard to obtain and stated in the third annual report, "we consider even a smaller percentage of 5% to be more realistic and our benchmark for success." With a change in strategy, the project was able to surpass their objective of 10%.

Mother-to-mother support groups were not part of the initial project strategy. The project modified the nutrition strategy to include this activity following a study by a student from Emory University. The increase in the percentage of children exclusively breastfed is believed to be, for the most part, an outcome of the support group activity.

The mother-to-mother support groups provided benefits beyond what was originally expected. Group meetings became an occasion to not only discuss breastfeeding messages and issues but also messages and issues concerning other project interventions. Some of the support groups even took on various other activities such as food drying and food demonstrations. Whereas village animators and TBAs were not always comfortable in organizing and conducting a group discussion meeting, they seemed to be at ease in talking about project interventions within the support group. In effect, the support groups became an informal way of conducting a discussion group. Several of the groups also took it upon themselves to make sure that at least one group member attended every birth in the community. At the birth, the support group member would encourage and assist the birthing woman to immediately breastfeed her infant.

In some villages, the support groups also proved to be the impetus to organize women for other project activities, such as immunization sessions. In a couple of the villages visited by the evaluation team, the immunization activities had not been working well before the creation of support groups. After the groups were formed, the women began to get funds together to pay for the clinic nurse to visit their village and provide vaccination services. In this way, the women began to take more responsibility for their health and the health of their children.

For years the MOPH has been promoting special recipes for weaning. Given the lack of success of this approach, the Sanu Yara project decided to take a different approach to improve children's weaning diet. During the first quarter of the project, a nutrition consultant carried out qualitative research to determine the acceptability of adding oil to foods traditionally eaten by children to improve the energy value of the food. The food that was chosen was tuwo or fura (a common household food), the resulting food was tuwo or fura de mai (tuwo or fura with added oil). Mothers reported to project staff that they prefer this alternative to preparing special weaning recipes. In the final survey, 44% of mothers reported that their child ate fura de mai at least one time in the 24 hours preceding the survey.

## Constraints

- One of the most important constraints for this intervention was the lack of clarity of key messages. Lack of clear messages, could have caused confusion at all levels: the project level with mid- and senior-staff and project field workers, the village level with the village animators and village health workers, and the clinic level with the clinic nurses. The presence of extraneous messages only added to the confusion and detracted from the project's key messages (for example, the message "all children need foods rich in vitamin A" did not coincide to any of the project's objectives). Because the messages were not well formulated at the beginning of the project, they needed to be revised over the life of the project. Each time the messages were revised, the project's field agents had to "re-train" the VHWs and village animators to bring them up to date. Moreover, it appeared that even the project staff was sometimes unsure of the correct message. For example, there are 2 key messages concerning the frequency of feeding for children 6 to 24 months of age. One says that a child this age should be fed 5-6 times a day and the other says 5 times a day. There are also 2 messages for immediate breastfeeding – one saying within 8 hours following birth and the other stating as soon as possible following birth (the indicator is initiation within 1 hour following birth).
- Similarly, several of the nutrition objectives, both the original and the modified objectives, were not well defined or justified.
  - The original immediate breastfeeding indicator was designed to measure the percentage of children who were breastfed within the first 8 hours after birth. This indicator was changed upon the recommendation of the mid-term evaluation to conform to the international recommendation, which is breastfeeding within the first hour following birth. The project needed to strive for this optimal practice from the beginning.
  - The recommendation of the mid-term evaluation was to begin to measure the percentage of children *predominantly* breastfed. Although this indicator would help the project track progress toward the optimal practice of exclusively breastfeeding until 6 months, it is not an indicator that the project needed to officially report on. As it is currently presented, it appears that the project is trying to increase predominant breastfeeding, whereas they are actually trying to increase exclusive breastfeeding.
  - When the objective for maternal nutrition was added, the Sanu Yara project staff was well aware that CARE was about to begin a reproductive health project. It should have been recognized by the Sanu Yara project staff that this indicator was more in line with the goals and objectives of the reproductive health project and not relevant to the immediate goals and objectives of this project. The project was not justified in adding this indicator.
- An additional constraint to the project was the deletion of the question on the final survey to measure knowledge of how often a child 6 to 24 months old should be fed. Without the question, the project could not measure success towards this objective.

## Lessons Learned

- Even in the face of seemingly unsurmountable odds, the project should not compromise an optimal behavior change for one that may be easier to achieve but sub-optimal (Example predominantly breastfeeding vs exclusive breastfeeding) Progress toward the optimal behaviors can be measured using secondary indicators, but project objectives should be based on the optimal behavior
- In spite of the significant challenge presented by changing mothers' breastfeeding behaviors, the support group approach not only proved to be effective in increasing immediate and exclusive breastfeeding but it appears to be an appropriate channel for transmitting other MCH messages Women who joined support groups had already decided to change their behavior and to promote and support this change naturally, thus they appeared to be more receptive to the project's key messages
- Using a change agent from the community is an effective way to initiate behavior change Choosing someone to be a model in the community and become a positive deviant proved to be a successful means to motivating women to accept and practice exclusive breastfeeding
- Information can be exchanged in a meaningful way without having to organize a formal meeting, as shown by the exchange of information occurring in the mother-to-mother support groups In fact, the project found that it is very difficult to organize formal meetings with women Informal meetings seemed to work better, even if it was an animator talking to a woman while gathering water at the well In tracking the number of times meetings are held, projects need to have a way to track the informal as well as the formal transfer of information
- When trying to change mothers' behaviors, the best strategy is to start with what they are already doing and try to make positive modifications in this behavior instead of asking them to make a total change The project learned this in a couple of different areas, including the introduction of fura de mai (improving the quality of family foods rather than asking mothers to make a separate meal for the child) and using locally available fluids for treatment of diarrhea (chegue – extra fluid from cooked millet, available in most homes)
- Not all evaluation recommendations merit adoption To ensure that the recommended changes are appropriate, the project should seek a second opinion

### **(iii) Diarrheal Disease Management Results**

CARE/Zinder has intervened to control diarrheal disease since the beginning of their child survival activities in this project zone During one of the earlier child survival projects, CARE trained VHWs (first aid workers and TBAs) in oral rehydration treatment (ORT) At the beginning of the Sanu Yara project, 31 of the 70 villages reportedly had medicine kits that included oral rehydration solution (ORS) packets

As with the other interventions, the Sanu Yara project worked mainly at the community level to ensure appropriate case management of diarrheal disease Rural MOPH

clinics were provided modest supplies and educational materials to help support the project's activities. The target population for this intervention was children less than 2 years of age. The following activities were carried out at the community level:

- Ensure availability of ORS packets, to be sold through first aid workers,
- Training mothers how to prepare and use ORT through small group meetings and home visits,
- Promotion of the same or increased breastfeeding, fluids and food (for children >6 months) during diarrheal episodes,
- Promotion of exclusive breastfeeding up to 6 months of age,
- Promotion of hygiene,
- Referral of severe or prolonged (more than 3 days) cases of diarrhea to the rural health clinic

The project selected the following key messages for the diarrheal disease management component (taken from the project document "Repertoire des messages clés")

- If a breastfeeding child has diarrhea, it is absolutely necessary to continue breastfeeding
- For cases of diarrhea, prepare and give ORS at home
- Diarrhea can kill a child by draining too much water from the body. Therefore, it is essential to give a child with diarrhea a lot to drink
- A child who has diarrhea needs to eat
- If diarrhea persists, it is necessary to go to the clinic
- No medicine (such as tetracycline) should be used to treat diarrhea, except with a prescription
- Various measures can prevent diarrhea: breastfeeding, vaccination against measles, using latrines, keeping food and water clean and washing hands before touching food

Of the project's two objectives for this component, one was achieved. The percentage of children who had diarrhea within the 2 weeks preceding the survey and were given the same or more breastmilk increased from 56% at baseline to 72% in the final KAP survey (project objective 75%). The optimal practice of *increasing* breastfeeding during a diarrheal episode increased from 7% at baseline to 20% at final (the project did not have a specific objective for this practice). The second objective of increasing the percentage of children who had diarrhea within the 2 weeks preceding the survey and were treated with ORT showed only a slight change between the baseline survey and the final survey (from 42% to 47%, with a project objective of 60%).

#### Factors affecting achievement of objectives

The first objective for this intervention was likely achieved due to the emphasis the project placed on breastfeeding. Two of the 4 interventions (nutrition and diarrheal disease) emphasized optimal breastfeeding practices. However, the key messages for breastfeeding during diarrhea focused only on continued breastfeeding and not on the

increase of breastfeeding during a diarrheal episode. Thus, little progress was made toward *increasing* fluids during a diarrhea episode, which is the optimal practice.

There are several factors that might have played a role in the project's unsuccessful attempt to increase the use of ORT to treat diarrheal disease. The price of ORS increased significantly over the life of the project, and during one 6-month period ORS packets were unavailable. The sugar salt solution (SSS) does not appear to be an acceptable option because of the high price of sugar. The project staff also reported that mothers were looking for ways to stop diarrhea, not to avoid dehydration. Mothers did not like to use ORS and SSS because they were expensive and did not stop the diarrhea. While the project did identify an acceptable, alternative oral rehydration therapy (chegue), which was made from ingredients found in nearly every home, the promotion of it started late in the project, not giving the project enough time to measure its impact. The lack of engagement on the part of the clinics was an added factor. Although the project attempted to support community efforts by supplying the rural clinics with materials and supplies to promote ORS, only two of the 6 clinics that received materials and supplies had the items six months later.

#### Unexpected successes/outcomes

Because of the difficulty in promoting ORS and SSS, the project began to look for an alternative oral rehydration therapy. Project staff identified a local millet-based liquid (called chegue<sup>8</sup>) as a potential substitute for oral rehydration solution. In June-August 1998, a study was conducted in collaboration with Emory University in Atlanta to assess the feasibility and acceptability of using chegue with added salt to treat diarrhea. Results of the study showed that mothers would accept chegue with added salt as a treatment for diarrhea if it were shown to be effective. Following the study, the project began to promote chegue with added salt as an oral rehydration therapy. By the final KAP survey (10 months after the project began to promote chegue), 10% of mothers with children who had diarrhea during the 2 weeks prior to the survey reported using chegue to treat the diarrhea.

#### Constraints

- The increase in cost of ORS packets by about 400% was a huge constraint to promoting its use during diarrheal episodes. With the same amount of money, the initial stock of village medicine kits scaled down from 145 to 45 packets. The limited and sometimes non-existent stock of ORS packets was also a major constraint for the project.

The mothers' own needs for the management of diarrhea proved to be an additional constraint to the use of ORS and SSS. Mothers are not looking for ways to avoid dehydration, they are looking for ways to *stop* diarrhea, and they know that ORS and SSS do not do this.

- As with the nutrition intervention, the messages used for this intervention were too vague. For example, one key message was "if a breastfeeding child has diarrhea, it

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<sup>8</sup> Chegue is the liquid that remains after cooking millet for fura, a common practice in the project villages.

is absolutely necessary to continue breastfeeding” The project’s objective was not to have women continue to breastfeed, the objective was to increase the percentage of women who give the *same amount or more* breastmilk during a diarrheal episode Therefore, the message needed to be more direct For example Mothers, when your child has diarrhea, continue to give your child the same amount or more breastmilk<sup>9</sup>

- The project’s messages did not distinguish between rehydration practices for exclusively breastfed children and children who were not exclusively breastfed Mothers were given information on how to treat diarrheal disease episodes without any distinction being made between exclusively breastfeed children and others In fact, it appeared that project staff did not know what to recommend for exclusively breastfed babies with diarrhea

### Lessons Learned

- In order to promote positive behavior change, a project’s strategy must take into account those factors that influence a caretaker or family to accept positive health behaviors In this case, mothers were looking for ways to stop diarrhea not prevent dehydration It seems that mothers want to stop the diarrhea as soon as possible because a child with diarrhea demands a lot of their time (for clean up and treatment) When the project recognized that these were the motivating factors for mothers, they sought to find an acceptable oral rehydration therapy
- Promotion of exclusive breastfeeding is an effective means to prevent diarrhea Of the 18% of children who were exclusively breastfed at the final evaluation none (0%) reportedly had a diarrheal episode in the 2 weeks previous to the survey
- Innovative strategies/approaches are often needed to address difficult maternal and child health (MCH) behavior change issues The project applied such innovative approaches as the use of a home-based dehydration fluid, support groups to promote optimal infant feeding practices, and the use of a locally available weaning food
- Key messages must be clear, action oriented, feasible, and technically accurate Messages need to be verified with appropriate experts (both technical and communication experts) and pre-tested with the target population

### (iv) Malaria Control Results

The malaria control intervention focused on home treatment of presumed malaria (fever) for children and prevention of malaria for pregnant women To achieve early and appropriate treatment of malaria, the project addressed access to chloroquine in village medicine kits, training in dosages and treatment protocols for VHWs, and the establishment of a referral system between the village and the nearest rural clinic for

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<sup>9</sup> The optimal practice is to increase fluid intake However, the project was recommending that mothers give the same amount or more breastmilk

complicated cases (Complicated cases included a fever that continues after 3 days of treatment, the child vomits, the child has convulsions and/or the child refuses to breastfeed ) VHWs were trained to give pregnant women prophylactic doses of chloroquine starting at 3 months of pregnancy and continuing until 6 weeks after birth The target population for this intervention was children less than 5 years old and pregnant women

The project selected the following key messages for the malaria control component (taken from the project document "Repertoire des messages cles")

- Children must be protected against mosquito bites
- Pregnant women should take chloroquine during their entire pregnancy
- Take 3 chloroquine tablets per week from the 3<sup>rd</sup> month of pregnancy until 6 weeks after birth
- A child with malaria needs to drink a lot and eat

Since baseline data are not available for either of the 2 malaria control intervention objectives as stated in the DIP, a comparison of baseline results to final survey results can only be made with the data that are available Although questions were included in the baseline survey about fever within the 2 weeks prior to the survey and what was given to treat the fever, these questions were not specific enough to measure if the children with fever were *treated correctly and first at home* with chloroquine (The project based its objective of 60% on the results of a mini-study conducted in 10 villages soon after the start of the project Because of sampling differences, these data are not comparable to data from the final KAP survey )

Because the baseline survey did gather data about how a fever was treated, some comparisons can be made between the baseline KAP survey and the final KAP survey At baseline, 70% of mothers with a child who had a fever within 2 weeks prior to the survey reported giving their child chloroquine compared 65% during the final survey In the final survey, mothers who gave chloroquine were asked to report on the dosage given Out of the mothers who reported treating a fever with chloroquine, slightly over half (36%) reported giving the correct treatment

The baseline survey questionnaire did not include any questions concerning prophylactic intake of chloroquine for pregnant women As with the other malaria control objective, the baseline data reported in the DIP came from a mini-survey of 10 non-project villages In the final survey, seventy one percent (71%) of women reported taking chloroquine during their last pregnancy However, from the question asked in the final survey, there was no way of knowing how long the woman took the chloroquine, the question asked only if the woman took chloroquine weekly during her last pregnancy

#### Factors affecting achievement of objectives

The surveys show that mothers seem willing to treat a fever with chloroquine, yet nearly half of them did not report giving the proper treatment. It is difficult to know whether this finding is associated with poor reporting by mothers, non-compliance of mothers, or poor performance of the first aid workers (who were responsible for the village medicine kits). It is very likely that at least part of the problem lies with the first aid worker. Although the project trained VHWs in dosages and treatment protocols for distribution of chloroquine, the manual showing the protocols is very difficult to understand. The age-appropriate dosage is unclear and the manual is so full of information, it is hard to read and understand<sup>10</sup> (See example in attachment 5). It is unlikely that a large percentage of first aid workers will remember all the age-specific treatment protocols<sup>11</sup>, so the job aid is an important tool to ensure adherence to protocol.

As for the second objective, it is likely that the practice of taking chloroquine prophylactically increased, since chloroquine became accessible at the village level (through the village medicine kits). This is also a behavior that has a direct effect on women, which appears to influence the choice of practices that they adopt. During the final evaluation site visits, an adequate supply of chloroquine was found in every community kit examined.

### Constraints

- The referral system set up between communities and clinics for complicated cases was not successful. The system was designed to help the project track the diagnostic and referral skills of the VHWs. When working correctly, the first aid worker would give the client a laminated referral card, which she would take to the clinic and present to the clinic nurse. The clinic nurse would register the client by name and village. With this information, project staff could assess the competency of the VHW to recognize and refer complicated malaria cases. However, the system broke down both at the village level and the clinic level. Often mothers who felt that the chloroquine was not working would go directly to the clinic, without a referral from the VHW. On the clinic side, clinic nurses did not feel the need to keep a record of referred cases, since this data was of no use to them. Thus, the project was not able to adequately assess the diagnostic and referral skills of the VHWs.
- The use of the job aid adopted from the National Malaria Program proved to be a hindrance to the project. The manual was difficult to use and understand.

### Lessons Learned

- In order for the project to adequately measure project impact, survey questionnaires must be well designed so that all relevant information is obtained. Without the right questions, survey data become useless to the project.

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<sup>10</sup> This job aid was adopted from the National Malaria Program.

<sup>11</sup> Data collected during the final evaluation site visits indicated that this is the case. Project staff asked the first aid workers to explain the malaria treatment protocol for an 11-year-old child. Only half (5 out of 10) of the first aid workers responded correctly.

- Job aids and other tools designed for community use must be simple, straightforward and adapted for use by the target audience Only primary messages/information should appear on the job aid - extraneous information should be deleted

#### **(v) New tools or approaches developed and/or used by the project**

The project tested several innovative approaches, including mother-to-mother support groups, the use of "chegue" as an alternative, home-based oral rehydration therapy, the use of fura de mai as a weaning food, and mobilizing communities to take responsibility for community vaccinations Mother-to-mother support groups and promotion of fura de mai are discussed under the section on nutrition intervention results Promotion and use of chegue is discussed under the section on diarrheal disease management results Mobilization of communities to participate in community vaccinations is discussed in the section on immunization results

Providing ox/donkey carts to help the clinic nurse transport vaccines is one of the ways communities have participated in village-based vaccinations Already this experience has helped the GON economize during national vaccination days Before CARE's experience with ox/donkey carts and community participation, the GON used cars to transport vaccination supplies during national campaigns, which are expensive and sometimes in short supply The GON has adopted the ox/donkey cart idea as a more cost-effective means of accomplishing these campaigns

Mother-to-mother support groups and the use of chegue are relatively new approaches So far, they have been met with enthusiasm by project staff and mothers in project communities The project is exploring ways to share their findings with other projects inside and outside of Niger The evaluators discussed possible ways the project staff could share their findings, such as a newsletter, using the e-mail/internet system, and making presentations Project findings concerning fura de mai should also be shared in this manner It is particularly important to share findings with the various levels of the Ministry of Health

The Sanu Yara project developed a very extensive health and management information system that includes data gathering tools at all implementation levels community, health center, project field staff and senior staff Included in the system are tools ranging from those created for an illiterate population to more sophisticated tools for monitoring and supervising staff members CARE uses the staff member in charge of this system to help other CARE/Niger projects with their information system needs The information system that was designed under Sanu Yara has been adapted and is being used for CARE's reproductive health project in Zinder

The project used the Participatory Rural Appraisal (PRA) process as an initial activity to introduce the community to the project's activities At the beginning of the project, project staff worked with the community for one week As the project progressed, the time allotted for the PRA decreased, so that when the last group of communities was added, the PRA was taking only a day to complete Although many of the same

community needs were being expressed from community to community, by decreasing the time given to the PRA, the project was unable to observe the community to see how members organized themselves and to identify community leaders. Identification of community systems and leaders are some of the major benefits to using the PRA.

In response to community demand for a health center, the Sanu Yara project collaborated with the Ministry of Health and ten villages to open the Kourni Dispensary (Kourni). The health center was established in April 1996 as a model of a community-run, self-sustaining facility. Kourni represents the first private health facility in Niger that has been established and operated with community participation. With a cost recovery system in place, Kourni has been able to meet its recurrent costs, despite low utilization (Murray, T. 1998). Kourni has the potential to be a model for other community-partnered health facilities in Niger.

Over the life of the project, Sanu Yara benefited from several research projects and special studies. Results of most of these studies have been used to strengthen the implementation of Sanu Yara. The following is a list of these projects.

Research Project	Dates of Research	Researcher	Use in project
1 Acceptability and feasibility of a local weaning food	December 1995	Eleanore Seumo-Fosso Nutritionist, Consultant	Promotion of tuwo and fura de mai
2 "Building Community Social Support to Promote Improved Breastfeeding Practices"	July 1997	Michelle Kouletio CARE/Atlanta in collaboration with Emory University	Development of strategy to promote optimal infant feeding practices through activities with the community, with individuals and with clinic personnel. (This strategy includes mother-to-mother support groups and using positive deviants (models))
3 "Activity to Sustainability A holistic analysis of health volunteer motivation"	June-August, 1998	Shannon Mason Student, Emory University	No evidence as to how this was used in the project
4 Acceptability and Feasibility of an Alternative Oral Rehydration Therapy	June-August, 1998	Karen Riggs Student, Emory University	Project field workers worked with VHWs and village animators to promote chegue

Research Project	Dates of Research	Researcher	Use in project
5 Evaluation of the Kourni Dispensary A community-partnered, private, rural health facility	November 1998	Thomas D Murray Health Finance Consultant for CARE/Niger	Continued supervision of Kourni activities

### **3 Results of Cross Cutting Approaches**

#### **(i) Community Mobilization**

##### *Overview of community mobilization approach*

Community mobilization was one of the most important crosscutting approaches for the Sanu Yara project. Because the project wanted to focus on community mobilization from the start, the project was implemented in phases (with 10 villages in year one, 30 more in year two and the remaining 30 in year three). Each group of 10 villages received an initial 3 months of intensive activities. During this intensive phase, project staff engaged and "mobilized" the community through a participatory process called "Participatory Rural Appraisal". This exercise allowed each community to analyze their health problems and consider possibilities for addressing the identified problems. The PRA process, when accomplished as planned, also helped the community to identify community resources and structures that could be mobilized to resolve their health issues.

Mobilizing a team of volunteer village health workers in each community helped to build community self-reliance and responsibility for health care. In communities where VHWs had not yet been identified by the previous CARE project or were no longer working, the communities were asked to propose 2 men to be trained as first aid workers and 2 women to be trained as birth attendants. All communities were asked to identify 2 women as village animators.

Each of the 6 village volunteers had a specific role to play in project activities. The first aid workers were responsible for managing the medicine kits. The birth attendants were responsible for encouraging immediate and exclusive breastfeeding and promoting other key behaviors and the village animators were responsible for promoting all the project's key health messages through education sessions with women and home visits (See attachment 4 for a complete list of VHWs roles and responsibilities.)

The project further sought to mobilize the community through the organization of village health committees. These committees were given the responsibility of mobilizing and organizing the community for health activities and managing the community medicine kit.

##### *Effectiveness of community mobilization approach*

The project was effective in mobilizing most target communities to participate in project activities. Communities were mobilized to select and support a team of 6 village health agents (2 first aid workers, 2 birth attendants and 2 village animators) in the 70 project villages. As of April 1999, 38 villages (54%) had at least one active first aid worker, 49 villages (70%) had at least one active birth attendant and 46 villages (66%) had at least one active animator. Each of the 70 villages also had a village health committee that had been trained by project staff. Forty villages (57%) had active committees as of April 1999. In April 1999, 37 communities (53%) had formed at least one support group and 5 communities (7%) had more than one support group. (Mother-to-mother support groups were only started in the last year of the project.)

Mobilizing communities to organize community vaccination sessions was a critical element to the accomplishment of the project's immunization intervention objectives. From November 98 – July 99, 42 villages (60%) participated in organizing community-level vaccinations by either providing an ox/donkey care or giving money for transport to the clinic nurse.

Communities that were interested in having a medicine kit in their village were asked to contribute to the cost of the medicines. Sixty-two villages (89%) contributed to buying their medicine kits, for a total contribution of 1,918,355 FCFA or approximately \$3,140.00 US (44% of the total cost of the medicine kits).

#### *Demand for continuation of project activities*

By all reports, there is a high demand in the community for project activities to continue. The project field workers, who are in monthly contact with the communities, report that members of the community are constantly asking them to come more often to help them. Clinic nurses report that community members ask them about the project field workers when time has lapsed between visits to the community. All of the communities visited during the final evaluation expressed a desire to continue work with the project.

#### *Sustaining activities after end of project*

Project staff and the evaluators felt that most of the project communities have been successfully mobilized and have participated to some extent in project activities. However, it appears that very few activities - with the possible exception of the mother-to-mother support groups - are carried out without the assistance of the project field worker. It is likely that one reason communities are asking for a continuation of the project's involvement is that they do not feel comfortable in or capable of continuing these activities without project assistance.

Fortunately, CARE/Zinder has a reproductive health project that has activities in the 70 Sanu Yara villages. The Reproductive Health Project uses some of the same strategies as Sanu Yara, including the use of project field workers. CARE/Zinder plans to continue working with the 70 villages to improve the chances of sustaining the child survival activities implemented by Sanu Yara.

It is likely that this plan will work in the short run, but if long-term sustainability is going to be achieved, the project will need to work on a plan to reinforce capacity at the community level

### *Lessons Learned*

- Community mobilization is a start to creating self-reliant communities, but there must be more than simple mobilization to ensure that a community is equipped with the skills needed to sustain important activities. In order for community members and groups to achieve the skills and confidence necessary to continue project activities without outside input, senior project staff need to develop plans that include indicators and objectives to monitor and measure capacity building. Furthermore, project staff need to be trained in capacity transfer. Building capacity at the village level should be part of the project field workers job description and part of their performance standards.
- Methods and tools to monitor and evaluate community mobilization and participation efforts must be built into the project from the start. Sanu Yara was late in developing these methods and tools and thus they have scanty data on community mobilization and participation from the early part of the project.
- Identification and selection of village health workers, animators, and community leaders is an important factor to the success of community mobilization. The project found that activities were more successful when the community as a whole chose the village health workers, animators, and health committee members. Often, when the village chief selected these essential project agents on his own, it was more difficult to rally community support. Criteria for selection of committee members and village health agents need to be clear and precise as to avoid problems at the community level.
- Communities with strong and secure leadership (normally the village chief) are more likely to succeed. Like any effort, strong leadership is essential for success. When selecting sites, projects should consider strong leadership as a priority criterion.

### **(ii) Communication for Behavior Change**

#### *Overview of IEC approach*

The Sanu Yara project never had a clear, well-defined information, education and communication strategy. The departure of the IEC coordinator in the first year of the project caused a delay in the project's IEC component. Attempts to recruit another IEC coordinator were unsuccessful. Even though three of the project's mid- and senior-level staff members were sent for IEC training, the IEC component was left in limbo. No one was given the authority to lead the IEC efforts of the entire staff, resulting in a disseminated, haphazard approach to IEC.

At several points in the project, the staff tried to pull together an IEC strategy. In April 1996, CARE's Regional Technical Advisor for primary health care visited Niger to train Sanu Yara staff in IEC strategy development. In 1997, when supervision of IEC activities in the field was turned over to one of the project field worker supervisors, project staff designed a draft IEC strategy. Yet, it appears that this draft was never finalized.

In spite of the lack of an IEC strategy, the project used a variety of channels to convey the project's key health messages for the four target interventions. These channels included home visits, songs (2 songs were written), visual aids and public discussion groups. Village animators were selected in each village to carry out health education and community mobilization activities. First aid workers and birth attendants were also encouraged to hold meetings to discuss key messages. IEC activities were by and large directed toward women. Messages were developed for each intervention and some visual aids were produced.

### *Effectiveness of the IEC approach*

The IEC component was one of the weakest parts of the project, in part due to the following

- The packet of messages was not well developed. There were convoluted messages, and extraneous messages that were not relevant to the project's goals and objectives (ex vitamin A). Some messages were conflicting (i.e. chloroquine during pregnancy) and some of the key behaviors had no message (i.e. malaria treatment for children with fever)
- Visual aids were complex and difficult to understand. In addition, there were key messages that were not supported by a visual aid
- Messages were conveyed in only two ways - either through discussion groups or through home visits (with the small exception of the music, but only 2 songs were written and they were not taught to all villages)
- Messages were changed often during the life of the project. When a message was modified, the project field workers had to re-train all animators and VHVs in the new messages, which caused confusion and was disruptive to the project
- The project did not have a clear set of key messages. Key messages differ depending on the document. Messages that were included in the project's repertoire of key messages were different than the messages included in the project's paper "What Every Mother Should Know"
- Because the project did not have a well-defined IEC strategy, they failed to establish IEC performance standards for the animators and traditional birth attendants

The IEC approach appeared to be most effective at the project field workers' level. It seems that the project field workers conducted most of the discussion groups and home visits (with the exception of the mother-to-mother support groups). Project field workers knew the key messages well. Thus, it is likely that the positive results in increased knowledge of key behaviors was due to the hard work of the project field workers.

Even though village health agents appeared to know most of the key project messages (results of final evaluation site visit mini-tests), group discussions and home visits without the assistance of the project field worker were rare. Key messages for immediate and exclusive breastfeeding were known the best. This may be due to the fact that a consultant from Linkages recently worked in the project villages and there has recently been a great deal of emphasis on breastfeeding support groups.

### *Sustaining activities after end of project*

Despite the weakness in the IEC strategy, it is likely that several of the behaviors that were actually changed will be sustained (for example immediate breastfeeding, vaccinations, chloroquine prophylactics). This is due, in part, to the fact that many of the changed behaviors have a direct impact on the mother. For example, mothers have mentioned to project staff that immediate breastfeeding prevents engorgement, helps with birthing the placenta, and reduces the length of after-birth cramping. Because these benefits are real to the mothers, it is likely that they will continue to practice immediate breastfeeding.

Both men and women spoke about the benefits of immunizations. One village that was visited during the final evaluation remarked that during a recent measles epidemic, they were the only village in their area where the children were not infected. Although it is likely that villagers will continue to seek vaccinations, it is not clear if communities will be able to accomplish all the steps necessary to bring these services to the community level. In spite of the fact that most communities were able to mobilize their members to attend village-based vaccination sessions, in most of the villages, it was the project field worker who took the responsibility to negotiate the dates of vaccination sessions with the clinic nurses. It is not known how many communities will be able to complete these negotiations without a field worker's assistance. Without the help of the field worker, keeping vaccination records at the community level will certainly pose a problem. Most of the communities were not able to maintain the vaccination register without assistance and the project did not emphasize keeping and using vaccination cards.

The medicine kits will likely be sustained in the villages where they are currently working (62 villages have medicine kits), as long as there is a reliable and reasonable supply of drugs<sup>12</sup>. This would make chloroquine available at the village level for treating presumed cases of malaria in children and for women during pregnancy.

It is unlikely that animators and birth attendants will continue to make regular home visits or organize regular discussion groups. However, the mother-to-mother support groups appear to be functioning well and may even continue to grow. The support group meetings have been shown to be a place where women can discuss key health issues.

### *Lessons Learned*

- A well-defined and developed IEC strategy including relevant activities is central to achieving behavior change. For optimal impact, a position needs to be created for an IEC expert who has the authority to develop a comprehensive, realistic IEC strategy and coordinate its execution.
- The development of effective and appropriate key messages must be accomplished at the beginning of the project. To be effective, messages need to be feasible and action-oriented and must also be able to motivate the target audience to change behavior. From discussions with women, it was evident that they are motivated by actions that have a direct benefit to them. Specifically, they are interested in practices and behaviors that would save them time. When they perceive a benefit to them, they are likely to make a change.
- In order to ensure technical accuracy of messages, a few "experts" from the appropriate field should review the messages. Pre-testing of messages is vital.

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<sup>12</sup> Project staff has identified a reasonably priced supply of drugs, including chloroquine, for 24 of the 62 villages that are equipped with medicine kits. The staff is working with the remaining 38 villages to identify an appropriate source for restocking medicines.

- Visual aids need to be designed so that they clearly convey the key message  
When the visual aid is too busy, the message is lost Each visual aid should depict only one message, and each key message should be represented by a visual aid
- IEC performance standards must be well defined to allow the project to monitor the success of its change agents This should be built into the monitoring system from the beginning of the project
- Men need to be included in the IEC strategy as a secondary target audience Men often influence women's decisions They can also serve to support women in their decisions concerning certain aspects of their health and that of their children
- Important project components (such as IEC) need to be adequately and thoroughly assessed during every project evaluation and review The mid-term evaluation for the Sanu Yara project did not adequately examine the IEC component

### **(iii) Capacity Building Approach**

#### **Strengthening the PVO Organization**

##### **Improved capacity of CARE**

*CARE/Headquarters* Through this project, CARE has learned a great deal about working with technical support projects such as Linkages The project collaborated with Linkages to evaluate a pilot testing of the breastfeeding communication strategy Moreover, through collaboration with Emory University, the Sanu Yara project benefited from the efforts of several graduate students who conducted their thesis work in the project area CARE built on this experience to develop a system for the use of graduate students to enhance their projects Via this project, CARE has also increased its capacity to promote integrated programming (child survival, reproductive health and women's credit program)

*CARE/Niger* The capacity of several CARE staff members to design, implement and evaluate effective child survival projects was improved through the various activities, workshops and trainings achieved under the Sanu Yara project This has served to improve the capacity of CARE in general

Dr Sani, project manager of the Sanu Yara project, has gained valuable knowledge in program design and implementation As the head of this project, he has had to review and revise project strategies and work with his staff to implement all aspects of the project CARE/Niger is promoting Dr Sani to the position of Health Sector Coordinator in Niamey In this position, Dr Sani will be responsible for donor relations, resource acquisition, and advising health project staff His experience with Sanu Yara will help him fulfill this position

Laminou Sani, the Information System Coordinator, has become an expert in information systems and evaluations through his experience with Sanu Yara Laminou participated in the training and execution of CARE's Household Livelihood Survey in

Niger, he participated in a CARE workshop in Atlanta on health information systems, and he worked on all of the studies carried out under the Sanu Yara project. Laminou has become a resource person for information systems and evaluation/studies carried out by other CARE projects in Niger.

Sanu Yara has profited from the input of several research projects. These projects have resulted in innovative ideas to addressing child survival issues. CARE now has the opportunity to use some of these innovations to improve their child survival programming.

Staff of Sanu Yara has further benefited from various international trainings. Each of the senior staff members participated in at least one international training or workshop. A list of these trainings and workshops may be found on page 53.

### **Influence of Sanu Yara on other CARE projects**

Sanu Yara has coordinated very closely with the reproductive health project operating in the same area. It has allowed synergy between the projects. The strong relationship established with communities through Sanu Yara's activities has allowed CARE health programming to undertake more sensitive subjects such as reproductive health. Lessons learned from the Sanu Yara project have helped guide the implementation process of the Reproductive Health Project.

CARE has the opportunity to use the experiences of Sanu Yara to influence other projects both in and outside of Niger. The project's innovative approaches and lessons learned could benefit many health projects throughout the world.

### **Strengthening Local Partner Organizations**

The Sanu Yara project's primary local partners were the project communities and the Ministry of Health. The project also collaborated with Peace Corps.

### **Changes made in the organizational capacities of local partners**

**Communities** Through the use of the Participatory Rural Appraisal (PRA) process, the project worked with each of the 70 project communities to define their health priorities and develop a plan of action to address the identified priorities. For each community, project field workers used this plan of action to develop a set of health activities within the scope of the project. As a result of the project's support and assistance, most of the project communities were better able to organize themselves to address their health problems. This was evidenced in the following ways:

- A large portion of the communities (62 out of 70) contributed funds to purchase a village medicine kit. Equipped with the medicine kit, a trained first aid worker, and a

community health committee, these communities were able to provide their members with first aid care at the community level

- Several of the project communities created a fund for emergency evacuations
- 42 villages participated in the organization of community vaccination sessions
- 37 communities formed mother-to-mother support groups Although these groups were formed to promote optimal child feeding practices, group members discussed other health topics during their meetings

Sanu Yara worked with 10 communities to organize and initiate a community run, self-sustaining facility (the Kourni Dispensary discussed in the section on community participation) These 10 communities improved their capacity to organize themselves for a common purpose, to launch and implement an important health initiative, and to manage the activities of the health center

Ministry of Health Sanu Yara project's collaboration with the Ministry of Public Health occurred mainly at the rural clinic level, with clinic nurses (strengthening of the health facilities is discussed in the following section) Building the organizational capacities of MOPH counterparts at the district and regional levels was not part of this project, although district health staff did help train village health agents In addition, project activities were coordinated with the district health officers (in Matameye, Mirriah and Magaria), which served to keep them informed of project activities and approaches District and regional health officers for Zinder were also informed of project activities in their areas through quarterly and evaluation reports

### **Lessons Learned**

- Involving communities in the planning process helps them acquire the skills needed to identify health issues and develop their own solutions This capacity building is a sustainable community asset
- With guidance, communities can and will organize themselves to carry out activities that they feel are important to them
- Capacity building must be a planned process with well-defined steps, precise indicators, and a well-developed monitoring plan
- In order to be fully effective, project implementers need to fully understand and correctly use the Participatory Rural Appraisal process This process works best when done over an extended period of time – for at least one week Cutting this methodology down to 1 day does not allow the project or the community enough time to properly assess their priorities and identify leaders and key players

## Strengthening Health Facilities and Health Worker Performance (clinic level)

At the clinic level, the Sanu Yara project was designed to strengthen management skills, clinical services, and health worker performance through three activities

- 1) Provide training to clinic nurses and auxiliary staff,
- 2) Provide funds and/or supplies/equipment on a case-by-case basis to cover the logistical costs of village health worker supervision,
- 3) Assist in the implementation of a cost recovery system at 6 health centers

### **Effectiveness of approach**

Overall, the project succeeded in strengthening the knowledge and to some extent the skills of the clinic health workers, which in turn led to improved services (as reported by clinic nurses and project staff interviewed during the final evaluation) Thirty-eight clinic staff were trained by the project in the "Baby Friendly Initiative", quality assurance, supervision, cost recovery and weaning food recipes that were promoted by the project Health center staff were also involved in project activities through participation in the training (as trainers) and supervision of village-level volunteers Using the clinic nurses as trainers helped improve their capacity to train and gave them the opportunity to meet and work with village health workers from their catchment area Because the focus of the project was on the community, no tools were developed to assess the management skills or services at the health facility level The project kept records of how often clinic nurses supervised community health workers but did not analyze this data in relation to the strengths and weaknesses of the clinic nurse

Health services to the project communities were undisputedly improved, since before the project's inception, there were no health services being offered at the community level During the life of the project, clinic nurses provided immunization services to the villages (with financial assistance for transport and per diem provided by either the project or the community) and made sporadic supervisory visits to the village health workers (depending on availability of per diem and gas for motorcycles)

The Sanu Yara project played an important role in the establishment of Kourni health clinic The project furnished the metal materials for construction of the center, supplied the initial stock of medications, supported a feasibility study, trained the personnel of the clinic, helped the 10 communities to organize, sponsored the management training for Kourni's community management committee, and monitored service delivery during periodic supervisory visits The Kourni experience has proven to be very effective The facility is getting more and more clients and all re-current costs are being covered

The project did not fully implement its plans for cost recovery in the 5 additional clinics This component was modified (unofficially) following the mid-term evaluation By the mid-term evaluation, the European Development Fund (EDF) and the International Labor Organization (ILO) had already implemented a community-based pharmacy network covering the area of these 5 clinics The project decided to modify their cost recovery strategy in an effort to avoid unnecessary duplication of efforts The decision

to modify the strategy was also, in part, based on the failed experience of UNICEF to implement a cost recovery system in another of the project's target districts. Project staff felt that cost recovery as described in the MOPH national policy was not a viable activity.

Nevertheless, in an effort to collaborate with MOPH, EDF and ILO, the project helped to sensitize communities to the selection criteria for pharmacy management committee members and provided the initial stock of essential medicines to two clinics (Kourni and Matameye).

### **Plans for sustaining these activities**

The project was relying on the cost recovery system to cover the expenses associated with VHW supervisions by clinic nurses, immunization and other health services. When the project decided not to implement the cost recovery component, they did not change their sustainability plans. Without an operational cost recovery system, sustainability of the village-level immunizations will depend on the motivation, organization, and leadership of the communities and the motivation and circumstances of the clinic nurses and their resources<sup>13</sup>. It is likely that some communities will make an effort to continue this activity, since they see the benefits. However, project staff feel that some of the clinic nurses are beginning to make higher demands on the community, which may have a negative impact on the number of communities that will continue to seek their services.

It is certain (verified by interviews with clinic nurses) that supervision of village health workers by clinic nurses will not continue once the project ends. Ministry health workers have not received their salary for several months, they do not have a budget for gas or motorcycle parts, and they, themselves, are not regularly supervised or encouraged to do site visits.

On the other hand, the community-partnered clinic at Kourni appears to be self-sufficient, or nearly self-sufficient. Project staff from CARE's reproductive health project will continue to provide limited support and supervision to the center.

### **Linkages between health facilities and communities**

There are two primary links between the health facilities and communities. The first is the relationship between the village health workers and the clinic nurses. Clinic nurses are responsible for supervising village health workers, according to their official MOPH job description. The project was able to give some assistance to clinic nurses to carry out this responsibility, but regular contact is not maintained. Vaccination sessions form the second link, clinic nurses provided vaccination services in the project communities.

It should be noted here that only a few villages in each facility's catchment area were Sanu Yara project villages (an example would be 3 or 4 project villages out of 25–35 total villages in the clinic nurse's/facility's catchment area). Project staff and clinic nurses felt that if project sites were better clustered around the facilities, the impact of

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<sup>13</sup> There have been several Government delays in paying the clinic nurses salaries. Often, during these occasions, the clinic nurses suspend all operations. Maintenance of vaccine supply and the cold chain are further constraints.

the project would be greater in the long run and the nurses would be more motivated to invest in the supervision of VHWs and community activities

### **Lessons Learned**

- Strengthening services at the clinic level provides a good support to community level activities. Having qualified health staff is necessary to reinforce the skills of the village health workers and reinforce project messages.
- No matter how hard it may be, projects need to try to work with their Ministry of Health counterparts. Despite extremely limited resources and low morale amongst MOH personnel, the project exploited every possible means to gain their support and participation in the project. Yet, the project recognized the limitations of the MOPH and justly focused on creating self-reliant communities.
- Working in 70 widely dispersed villages was a logistical challenge for the project. Furthermore, because the project worked in such a small percentage of a nurse's area of intervention, the nurses were less motivated to cooperate with the project. Clustering project sites around the target health facilities would help strengthen the impact of the project and facilitate involvement of the clinic nurses.
- When major strategy changes are made, they must be documented and all other aspects of the project must be modified accordingly. The Sanu Yara project decided mid way through the project not to implement the cost recovery system as planned. This change was never officially made nor was the sustainability plan modified to take in account this major change, which left the project without a viable sustainability plan.

### **Strengthening Health Worker Performance (village level)**

The Sanu Yara project provided training for village health workers and village animators. Following the training of these village health agents, the project field workers provided regular follow-up and assistance at the community level.

### **Effectiveness of the approach**

The project surpassed their training objectives for village health workers and animators. Training was completed for 171 village animators, 150 traditional birth attendants and 147 first aid workers (objective was 140 for each type of health agent). (See section on training, page 45, for more details on the training content.)

Although the project reached their training objectives, performance of the village health workers varied from village to village and varied depending on the type of health worker. Of the trained village health workers, 83 animators (49% - representing 46 villages), 89 TBAs (59% - representing 49 villages) and 66 first aid workers (45% - representing 38

villages) were performing as of April 1999<sup>14</sup> Only 5 villages (7%) did not have at least one performing VHW and only 9 villages (13%) did not have at least one performing TBA or animator (normally responsible for IEC activities) Thirty-seven villages (53%) had at least one performing animator and one performing VHW

Although the project did not have specific objectives for the *performance*<sup>15</sup> of village health workers and animators, given the level of effort of the project, it is reasonable to expect that at least 65% of the agents would be performing (based on the job descriptions and realistic expectations for village volunteers<sup>16</sup>) by the end of the project It is also reasonable to expect that 65% of the villages would have at least one performing animator and one performing VHW Results of this project show that only about 50% of the trained village health workers were performing near the end of the project and 53% of villages had at least one performing VHW and one performing animator

While the approach included training (initial and in-service) and follow-up support from project field workers, the effectiveness of strengthening village health agents performance was compromised because the field workers were never taught to transfer their skills nor were they evaluated by the number of performing agents Had this been part of the project strategy from the beginning, the project would have been able to monitor village health agents' performance and made the necessary modifications to achieve maximum results

#### **Plans for sustaining health worker performance after the project**

The project did not have any specific plans for sustaining village health worker performance For the next two years, CARE's Reproductive Health Project will be able to lend support to the village volunteers and provide supervision of their activities However, without regular supervision, it is unlikely that all the performing volunteers will continue their activities In some of the communities, animators and TBAs have become an integral part of mother-to-mother support groups Because the women seem to enjoy these groups, they have the potential to continue without project input

#### **Tools used to assess the results of improving health worker performance**

*Assessment of health worker performance* The project's information system collected data on the performance of village level health workers The project field workers collected information on a quarterly basis A health agent was considered to be "performing" if he/she met 75% of the criteria for his/her role Data were collected on the following

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<sup>14</sup> These figures are based on the project's definition of "performance", which is evaluated by the project field staff on a quarterly basis See the section on "tools used to assess the results of improving health worker performance" below for a list of criteria

<sup>15</sup> The project objectives were for trained health workers (that each of the 70 project villages would have a team of 6 trained community volunteers in place) At the end of the project, 6 volunteers from each of the 70 villages had been trained but not all were performing

<sup>16</sup> From experience, it is reasonable to ask them to have a group activity once every two weeks and to make home visits 2 - 3 a week

## Animators

- Home visits accomplished (at least 5 times/month)
- Group discussions (at least 5 time/month)
- Data collection on activities, including keeping a daily register
- Food demonstrations (fura and tuwo de mai)
- Participate in organizing vaccination sessions

## First aid workers

- Having medicine available in their kit
- Management of illnesses, especially diarrhea and malaria cases
- Recording malaria and diarrhea cases treated
- Referring complicated malaria and diarrhea cases to clinic
- Availability to villagers
- Collaboration with animators/TBAs and village health committee

## TBAs

- Monitoring pregnancies in the village
- Assisting women during birth
- Having an adequately stocked birthing kit
- Helping animators record new births
- Promotion of immediate and exclusive breastfeeding
- Home visits accomplished (at least 5 times/month)
- Encouraging prophylactic chloroquine for pregnant women
- IEC for women (group discussions)
- Promoting ORS

*Assessment of the results of improving health worker performance* The ultimate goal of improving health worker performance is a change in knowledge and/or behavior of the target population. Changes in knowledge and behavior of the target population were measured by the project through their baseline, mid-term and final KPC surveys. Aside from the constraints noted in the sections on the individual interventions, the surveys were sensitive enough to measure change over the life of the project.

However, it should be noted that in the case of Sanu Yara it is unclear whether the results obtained were the result of improved performance of village health workers or the efforts of the project field workers. It is likely a combination of both, but had the project field workers not been overseeing all aspects of project implementation at the village level, the results may not have been so impressive.

### **Addressing gaps between performance standards and actual performance**

The project attempted to address any gaps they found between performance standards and actual performance of the village health volunteers. The project's field workers took the lead role in this. When they identified a gap, they would work with the village health volunteers to try and rectify the problem. Other project staff was also called in as

needed In-service trainings were held for village health volunteers 120 TBAs, 65 animators and 126 first aid workers participated in in-service training

However, the project did not adequately monitor the knowledge and IEC skills of the village health volunteers There was no standardized means by which to periodically measure the knowledge or behavior change promotion efforts of the volunteers Had the project been equipped with such a tool, they would have been able to focus the in-service trainings to fill gaps in knowledge and IEC performance Although in-service trainings were beneficial to the village volunteers, a review of the training curricula and results of the project suggest that they did not cover the most relevant issues

### **Lessons Learned**

- Projects that use village health volunteers must have the means to regularly monitor and evaluate their sustained knowledge The project should have a capacity building plan for the community that includes specific objectives for building the capacity of village health workers and tools for monitoring these objectives With such tools, gaps can be easily identified and addressed In-service trainings can be used to reinforce information that is lacking
- Given that supervision of village health workers by clinic nurses is inconsistent, projects must seek other, creative ways to ensure regular supervision of VHWs It is clear that clinic nurses are not going to regularly supervise the VHWs, thus, other means of supervision must be found For example, the village health committee president or someone else from the community could be trained to oversee the VHWs
- In order for village health agents to be fully effective in their positions, project personnel must be taught how to build the capacity of the community by transferring their skills and knowledge to the village level agents

## Training

The project's training strategy was divided into three components. In each of the 70 target villages, the project trained a team of 6 community volunteers (2 first aid workers, 2 TBAs and 2 animators) and a village health committee. At the rural clinic level, clinic nurses and some auxiliary staff were trained. The third component addressed the training needs of project staff.

### **Effectiveness of the training strategy**

The training strategy effectively reached all three of these components. As for project staff, the training received was pertinent to their jobs and the project's needs. Each time a staff member received training, they would share their experience and new ideas with all of the senior project staff, thus broadening the impact of the training.

At the clinic level, training was seen not only as a way to improve knowledge and skills of the clinic nurses but also as a way to involve the clinic nurses in project activities. Clinic nurses and auxiliary staff were trained in subject areas that would help them to support project activities and help them improve their services. Clinic nurses who were interviewed during the final evaluation felt that their services had improved due to project inputs. One obvious improvement for them was the delivery of vaccination services, both at the village level (which was not occurring before the project) and at the health facility level. In addition to helping the communities organize vaccination sessions, the project also helped several health facilities with vaccination supplies, motorcycle maintenance (3 repaired) and maintenance of the cold chain (aid to 5 health centers out of 17). Training in supervision methods, provided by the project, reportedly helped the clinic nurses better supervise the VHWs (although this was not done regularly and supervision guide supplies were a problem in some sites). Furthermore, a few of the clinic nurses mentioned that they had started to promote immediate and exclusive breastfeeding and tuwo or fura de mai as a result of training offered by the project.

Training of the village health workers and animators would have been more effective had the trainings focused only on selected key activities for each of the interventions. Each of the training sessions for the village health workers and animators contained extraneous information, information that is interesting, but corresponds to neither the objectives of the project nor the job description of the workers. For example, in the animators training, malnutrition is covered (signs, symptoms, causes, etc.) and the section relating to vaccinations includes teaching the complete vaccination schedule. Because so much information was included in the training, the key messages of the project were diluted.

Training for animators and TBAs focused more on increasing knowledge and skills than on increasing their capacity to conduct discussion groups or do nutrition demonstrations, which compromised the effectiveness of the training.

The training methods used seemed very didactic and did not model the appropriate and effective use of different visual aids. Little time was allocated during the training for

practice It is not clear that the participants themselves had a chance to practice essential skills

### **Training objectives**

Refer to the table on page 7 for a full list of training objectives Except for the training objectives for cost recovery systems (the cost recovery strategy was changed following the mid-term evaluation), all training objectives were met and some exceeded However, the Sanu Yara project's training objectives focused only on the number and types of agents to be trained The project did not have any objectives for the quality of the training or the demonstrated abilities of the trainees As discussed above in the section on strengthening health worker performance (starting on page 42), even though all the training objectives were met, performance of trained health workers varies from village to village

Because training statistics are not part of Sanu Yara's computerized information system, it was very difficult and time consuming to get accurate information on the number of people trained, the villages involved, dates of training, etc

### **Evidence that the training strategy has resulted in new ways of doing things**

*Project staff* Project staff has been able to make positive changes in the implementation of project activities due to the training they have received throughout the life of the project This includes

- Improved relationship between supervisors and their immediate staff (more mentoring as reported by project staff)
- Some improvement in supervision tools and job descriptions both for project staff and for village health agents (work on developing better supervisory tools, although tools still needed improvement) The training on supervision came late in the project (1998 in Nicaragua) The project would have benefited from an earlier training and follow-up assistance on development and use of supervision tools
- Improvement in indicators to monitor community participation (development of new standards and measurement tools) Again, this training came very late in the project (1999 in Bangladesh) This training was complemented by a visit from the project's technical advisor from CARE/headquarters, at which time the staff was given technical guidance and recommendations on how to improve their community participation monitoring system
- Improvement in the project's information system (improvement in monitoring tools, changes in information collected due to a training in Health Information Systems, in Atlanta, Georgia),
- Improved knowledge and skills of project field workers (Most of the project field workers did not have a health background at the time of their employment Training of project field workers took place during the first year of the project )

*Clinic nurses* Clinic nurses feel that their skills in promoting immediate and exclusive breastfeeding have improved. They have used the project's supervisory form when supervising VHWs.

*Village health workers/animators* There is evidence from the project's monitoring system and from interviews done during the final evaluation site visits that the village health workers and animators have increased their knowledge about key project interventions. Some VHWs and animators are conducting home visits and some discussion groups, however, it is not evident that IEC skills have improved, it seems that the VHWs simply repeat the messages. It appears that immediate breastfeeding is being widely promoted and supported by VHWs and animators.

*Village health committees (VHC)* Training of VHC has increased the committees' management skills. Forty villages have active VHCs that are able to manage their village medicine kits, including tracking income and expenditures.

### **Plans for sustaining training activities**

The project has no plans for sustaining training activities after the close of Sanu Yara CARE's Reproductive Health Project will continue to work with these same village health workers and clinic nurses and will provide other training opportunities.

### **Lessons Learned**

- The training of project field workers must include ways in which they can build the capacity of the community. Sanu Yara concentrated on training project field workers on the technical aspects of the project. However, the project field workers are also responsible for building the capacity of community volunteers to conduct IEC sessions and organize the community. Since the field workers do not have training in how to transfer these skills, village health volunteers do not have the capacity or the confidence to perform the work, so village health workers often end up doing the work themselves.
- When extraneous and irrelevant information is included in the trainings, key information is diluted. Everything included in the training of village health agents should be directly related to project goals and objectives.
- Training objectives must focus not only on the number of people to be trained but also on demonstrated knowledge and skills. The training plan needs to define objectives for the demonstrated abilities of the trainees and identify specific means of verification.
- Training information needs to be computerized. Every time training is conducted, information on the number and type of participants, villages concerned, dates, results of pre- and post-tests, etc. should be computerized on a standard form. Training is a major input of the project and needs to be treated as such.

#### **(iv) Sustainability Strategy**

The sustainability objectives articulated in the DIP may be viewed in the table entitled "Results of Sustainability Objectives" found on page 10

Overall, the project's sustainability strategy was weak. The objectives were vague, often without a standard of measurement. Activities proposed to meet the objectives were based on the number of units put into place (ex. number of people trained, number of kits provided) and not the quality of services provided. Cost recovery was a large part of the strategy, and when the project decided not to continue with the plan for cost recovery, the strategy was not modified (see note below about cost recovery). As noted earlier, a transfer of skills and knowledge from the project field workers to the village health agents was not emphasized in the project. Because of this, it is uncertain that the village health agents feel confident enough to continue to provide services to the community without outside assistance, especially in the case of behavior change efforts. The strategy would have been stronger had it included objectives and indicators for building the community's capacity to carry out project activities.

In addition, the project's sustainability plan assumed that certain activities, essential to project sustainability, would be carried out by the MOPH (ex. maintaining the cold chain, furnishing vaccines, managing drug supply, maintaining nurses' motorcycles, organizing and covering the costs of in-service training for VHWs). However, an unstable government and limited resources for health caused a large fluctuation in the price and availability of drugs and other health supplies. Clinic nurses' salaries are not paid regularly, vaccination supplies and essential drug supplies are not reliable, and supervision and training for VHWs is non-existent. The MOPH has just begun the implementation of cost recovery in the project area (cost recovery as stated in the national policy). It is too early to tell if this new system will be able to support the health infrastructure and improve services.

**Note** The project planned to help 5 clinics in Matameye District and the community-run clinic in Kourni establish cost recovery systems (UNICEF was doing cost recovery in the clinics in Mirriah District). However, during the project's third year, the project decided not to proceed with the plan to implement these cost recovery systems. This decision was made in part due to a recommendation made in the mid-term evaluation and in part because the UNICEF cost recovery systems in Mirriah District were failing. At the mid-term evaluation, it was noted that the European Development Fund (EDF) and the International Labor Organization (ILO) were providing support to four of the five clinics that the project was targeting for cost recovery. The EDF facilitated the introduction of cost recovery by providing medicines and building pharmacies in three of the sites. ILO established community-based pharmacies, three of which were located in communities where Sanu Yara had planned to support cost recovery. This led to the recommendation that CARE consider these other community-based initiatives when deciding how to proceed with its cost recovery plan. Based on this recommendation and the fact the UNICEF's cost recovery system was failing (this system was the system that the district health service

had adopted for cost recovery throughout Zinder<sup>17</sup>), the project decided to modify the cost recovery plan<sup>18</sup>. Instead of assisting in the implementation of cost recovery systems in the 5 clinics, the Sanu Yara project provided the initial stock of medicine to Matameye Health Clinic to begin cost recovery operations. Recently, the MOPH has decided to implement a cost recovery system throughout the country. However, at this time, the cost recovery system is not operational, which means that there is no system in place to cover logistical support for supervision of VHWs.

### **Sustainability Goals and Objectives**

The project had five sustainability goals. The following is an overview of these goals and their related objectives and activities.

The first goal (community structures can identify and solve basic health problems, especially those related to children's health) was supported with two objectives: 70 villages would have functioning medicine kits and 70 village health committees would be managing the kits in a sustainable manner. These objectives were unrealistic, considering that activities were only implemented in 70 villages. Normally, a project would not expect to have 100% success. A more reasonable expectation, based on the amount of effort in each community, would have been around 75% success. Of the sixty-two villages (89%) that organized funding to purchase a community medicine kit<sup>19</sup>, 38 (61% or 54% of the 70 villages) had active first aid workers as of April 1999 and 24 of these 62 villages (39% or 34% of the total villages) had access to a reliable and reasonably priced supply system. Thirty-two village medicine kits (52% or 46% of the total villages) were making a profit at the time of the final evaluation. Forty villages (57%) had a performing management committee (responsible for managing the restocking of the village medicine kit and tracking income and expenditures). From the project's perspective this sustainability goal was achieved in those villages that had performing first aid workers who diagnose and treat villagers and who regularly restock their kit (approximately 54% of the villages where there were active first aid workers with functioning medicine kits).

The objectives for the second sustainability goal (that village health teams would provide IEC sessions and organize immunization sessions, villagers would adopt key health behaviors) are extremely vague, lacking quantitative indicators for success. For example, the first objective is that "VHWs and animators will educate villagers." The quantitative standard for reaching this objective is not stated (ex. 2 sessions/month<sup>20</sup>,

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<sup>17</sup> The cost recovery system that Niger has adopted appears to be a modification of the Bamako Initiative. CARE worked to modify this cost recovery approach to make it closer to the Bamako Initiative approach. However, national policy dictates how cost recovery is implemented, which is the approach UNICEF/Niger is taking.

<sup>18</sup> The project never officially changed this part of their strategy but reported the change in the third annual report.

<sup>19</sup> The project had two types of medicine kits, depending on the resources of the community. For the larger kit, the village's participation is 37,000 FCFA or approximately \$61.00. For the smaller kit, the community's participation is 25,000 FCFA or approximately \$41.00. Both sized kits had the medicines in them, only the larger kit had a larger supply of medicines and some extra materials (such as scissors and tongs).

<sup>20</sup> For volunteer health agents, it is reasonable to ask them have a group activity once every two weeks - once a month is just not enough and once a week tends to burn out volunteers pretty quickly. For home visits it is

etc ), and the stated activity for this objective is training, which does not guarantee that villagers will be educated. Although these training objectives were met (VHWs and animators were trained in each of the 70 villages), the performance of the VHWs and animators was not impressive and sustainability of their activities is questionable (See more detail on village health agents' performance under the section "Strengthening Health Worker Performance" on page 42 )

The second objective for this sustainability goal also lacked specificity (VHWs will organize immunization sessions). Although the activity listed did include a standard of 3 times a year, a percentage of VHW necessary in order for the project to feel comfortable with sustainability is not stated (ex 75%). The project reported that 32 villages (46%) organized vaccination sessions 3 times/year. However, these villages did not necessarily do this by themselves. In most cases, the villagers organized transportation for the clinic nurse and organized the women to come with their children to the vaccination sessions, but it was the project field worker who negotiated the vaccination date with the clinic nurse and filled out the vaccination register. Although project field workers reported that a few villages made arrangements with the clinic nurses without their assistance, the field workers did not work with the VHWs to give them the skills and confidence to do this. Therefore, the likelihood of more than a few villages taking on this responsibility is minimal. The village immunization registers were found to be difficult to understand and fill out, and so few villages were able to correctly complete them. It is not likely that the register will be sustained.

The third sustainability goal (clinic personnel will supervise village health teams on a regular basis) and its related objectives were not met. During the project, clinic nurses would only make supervision visits if the project paid their per diem and the community helped with transportation, either by sending an ox/donkey cart or paying for their motorcycle fuel. The recommendation of the mid-term evaluation, to encourage supervision during immunization sessions, was discussed with clinic nurses but never put into action. Although clinic nurses claimed that the immunization sessions were long and they did not want to add the additional time for supervision, project staff felt that nurses did not want to do the two activities together because they wanted the additional per diem for supervision. Supervision of VHWs at the clinics is difficult, since the VHW have to bring their kit to the clinic and the availability of clinic nurses is questionable given their salary situation at the present time. The project's sustainability plan for supervision of VHWs, community immunization sessions and other health services relied on the implementation of a cost recovery system in the project areas.

The fourth sustainability goal (clinics will re-supply VHWs medical kits in a timely fashion) relied on cost recovery being implemented, or at least all clinics having a reliable source of medicines. Although the project only provided the initial supply of medicines to two of the six clinics planned (Kourni and Matameye), the project felt that the drug supplies to the remaining four clinics were adequately covered by the ILO and EDF pharmacy network systems. The project has been working with the 62 villages who have medicine kits to ensure that they have a reliable and reasonably priced supply

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reasonable to expect a health agent to visit a friend or neighbor 2 - 3 a week, especially those with new babies and/or sick children (i.e. what they would be doing anyway as good neighbors)

system in place. Project staff have identified an adequate supply system for 24 of these villages (39% of the 62 villages with medicine kits) and are working on identifying a similar system for the remaining 38 villages. It is not likely that all of these communities will have an adequate supply system in place by the end of the project. The project provided additional assistance to the establishment of cost recovery in the district of Matameye by training 22 nurses in cost recovery.

The final sustainability goal and objective is that clinics will carry out the advanced immunization strategy at least three times a year. Throughout the project, clinics have carried out immunizations in all of the project villages with the assistance of the project (per diem and sometimes transport) and communities (transportation). The project was depending on cost recovery to generate funds to pay the nurses' per diems and, if necessary, transportation costs so that village immunization sessions could continue after the end of project. Now with the end of the project and no operational cost recovery system in place, other means will have to be found if this activity is to be sustained. Because most of the communities have already been participating in vaccination sessions<sup>21</sup> and apparently see the benefit in continued services, it is likely that these villages will want the services to continue, provided an agreement can be worked out with the clinic nurses. Several factors will come into play, including the willingness of the clinic nurses to provide community services, the ability of the communities to plan with clinic nurses and organize themselves, and the willingness of the communities to pay for transportation and per diem.

#### **Status of the phaseover plan**

The project's phaseover plan as detailed in the DIP relies solely on a cost recovery system. The project had planned to cover the costs of transport and per diem for community-based vaccination sessions and VHW supervision until a cost recovery system was in place, at which time these costs could be transferred directly to the clinics. Because the cost recovery plan was never implemented, this phaseover plan was not followed. The phaseover plan should have been modified when the cost recovery plan was modified.

As CARE is continuing to work with the 70 project villages through their Reproductive Health Project, they have the opportunity to continue to provide some technical and managerial assistance to these communities (training and follow-up by project field workers). This is also an opportunity for CARE to begin transferring skills to the community health agents.

#### **Approaches to build financial sustainability**

As discussed above, the project's plan to implement cost recovery at the clinic level was not accomplished.

At the community level, the project implemented a cost recovery system to ensure restocking of the village medicine kits. (Village medicine kits are also the source of

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<sup>21</sup> Forty-two villages (60%) have been participating by either sending an ox/donkey cart or paying gas money to the clinic nurse.

supplies and drugs for the TBAs' kits ) Drugs and supplies from the medicine kits were sold to re-cover the cost of restocking the kits During the project 62 kits were recovering costs or being re-supplied as needed However, since drugs and supplies were not always readily available, re-supplying posed a problem to most of the villages Some villages reported having to travel to Zinder to re-stock their kits By September, the project had helped twenty-four villages (39%) establish a reasonably priced and reliable re-supply network The project was continuing to work with the other 38 villages to find an appropriate supplier Of the 62 villages who purchased a medicine kit, about half are making a profit (32 kits or 52%)

### **How the program has built demand for services and how the community is engaged**

The project built demand for vaccination services, drug supply at the village level and information about key health issues through its work with communities The project worked intensively for three months with each village to introduce project activities and help get the population organized Village health agents (first aid worker, traditional birth attendants and animators) were trained from each village to carry out project activities Communities were encouraged to create a fund to buy a community medicine kit, which contained chloroquine, ORS packets, supplies for the TBAs, and other first aid supplies and drugs Vaccination sessions were planned and organized by the community health agents with the aid of the project health workers Mother-to-mother support groups were established to help improve infant feeding practices

Community members reported to project staff and to the final evaluation team that they could see the benefits of their improved health actions Even neighboring communities were asking project staff and clinic nurses for services, especially vaccination services at the community level The mother-to-mother support groups were discussing all project health messages, not only messages about infant feeding Although the demand for services appears to have been attained in most of the project communities, the sustainability of project activities is of concern It also appears that community members in most communities are sufficiently engaged, but to what extent they can influence how services are delivered is questionable Service delivery depends on factors that the community cannot control, such as the situation of the clinic nurses and availability of drugs and other supplies

## **C PROGRAM MANAGEMENT**

### **Planning**

The project's planning process was done at a time when USAID had suspended all project activities as a result of a military coup in Niger Thus, CARE was unable to contact and meet with MOPH counterparts and the communities As a result, the project plan was written without the input of the project's partners As soon as the suspension was lifted, project staff discussed the project plan with their MOPH counterparts

Because the Ministry of Health was not included in developing the project plan, they apparently felt that they were not full partners in the Sanu Yara project, at least at the regional and district levels. Yet, the Sanu Yara project continued to include the district health officers and clinic nurses in their planning. Regional and district health officials participated in project organized meetings every quarter until the MOPH increased their per diem rates and CARE refused to pay the higher rates. Without per diem, these officials would not come to project meetings. The district health officers have voiced a desire to explore ways in which CARE could collaborate more closely with them.

With the exception of the unrealistic expectations the project had of the MOPH, the project's workplan was practical. However, the plan, in general, was quite vague. Based on CARE/Zinder's experience with this project, the following elements could be added to the preparation and review of the DIP to strengthen implementation of the project:

- Provide adequate time to prepare each element in the DIP so that each section can be properly detailed
- Have a table in the beginning that includes all project goals and objectives. Having the technical objectives in one place, the training objectives in another and the suitability objectives in yet another section of the DIP is not practical from a management perspective
- DIP reviewers need to ensure that all objectives are measurable
- DIP reviewers should pay particular attention to the sustainability plan and objectives to ensure that they are feasible

The project identified the following gaps in the DIP:

- 1 Lack of programming detail. The project was able to fill in most of the programming gaps by applying former experiences of senior staff members and/or utilizing outside assistance. The Sanu Yara project benefited from the input of several studies carried out by graduate students from Emory University. Results of these studies helped the project fill several programming gaps (promotion of infant feeding practices, motivating village health workers, promotion of an alternative to ORS)
- 2 Lack of a detailed sustainability plan with specific goals and objectives and a detailed monitoring plan. The project did not address this gap. Project staff would have benefited from some assistance in developing a detailed sustainability plan.
- 3 Lack of a substantial phaseover plan. The project did not adequately address this gap. When the cost recovery plan was modified, the phaseover plan should have been revised, but it was not.

### **Staff Training**

Senior staff of the Sanu Yara project participated in several trainings and workshops, both in and outside of Niger. The resources dedicated to staff training were adequate, both from the CARE/Zinder viewpoint and the CARE/Atlanta viewpoint<sup>22</sup>. The following table lists the content of the trainings/workshops, the dates and the staff trained. (See

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<sup>22</sup> CARE/Atlanta organizes and partially finances an annual training/workshop for their project staff throughout the world.

the section on training for an overview of how the staff has applied skills and knowledge learned from these experiences Page 45)

<b>Content of training/workshop</b>	<b>Dates/Country</b>	<b>Staff trained</b>
Participatory Rural Appraisal	January 1996 Zinder, Niger	All project staff
Focus Groups	April, 1996 Zinder, Niger	All project staff
IEC	May 1996 Kenya	Project Manager, Assistant Project Manager
	July 1997	Field Worker Supervisor
Quality Assurance	October 1996 Tahoua, Niger	Assistant Project Manager
Conflict Resolution	January 1997 Zinder, Niger	All Project Staff
Health Information Systems	May 1997 Atlanta, Georgia	Project Manager, Health Information Systems Coordinator
Micronutrients	June, 1997 Niamey, Niger	Assistant Project Manager, Field Worker Supervisor
Safe Motherhood	April 1998 Kenya	Project Manager
Supervision	May 1998 Nicaragua	Assistant Project Manager, Field Worker Supervisor
Computer training	June 1998 Zinder, Niger	All Project Staff
Monitoring and Evaluation	November 1998 Dakar, Senegal	Health Information System Coordinator
Maternal and Neonatal Health	November 1998 Lome, Togo	Project Manager, Field Worker Supervisor
Community Participation	May 1999 Bangladesh	Assistant Project Manager, Community Participation Coordinator
Research Use	September 1999 Maradi, Niger	Community Participation Coordinator, Field Worker Supervisor

All staff members have had access to staff development during the course of the project. Each member of the mid- and senior-level staff has grown in some way due to the various trainings and workshops.

Of the 3 members of the senior-level staff (project manager, assistant project manager, and health information system coordinator), only the project manager had former experience working for CARE and working on a child survival project. The project manager of Sanu Yara worked on the previous CARE child survival project in Zinder.

Because of his experience with the former project and his position in this project, he was able to see how a project manager can take lessons learned from one project and apply them to another. This project also provided him the opportunity to see how operations research can be used to strengthen project interventions. The project manager feels that his skills in project development, DIP preparation and monitoring, and budget development have all improved. In his new role as health sector coordinator in the CARE/Niamey office, he will be able to apply some of these skills.

The Sanu Yara project gave the assistant project manager (who was hired by the project as a field worker supervisor and later promoted) an opportunity to learn how to plan, manage, analyze and report on project activities. Through trainings and workshops, he was able to sharpen his management and planning skills. During the absence of the project manager, the assistant project manager was given the task of managing the project, which gave him the opportunity to use his management and planning skills.

The Sanu Yara project was the health information system coordinator's first experience with CARE. During the course of the project, he attended several trainings and workshops and participated in a number of studies. He is noted for his survey skills and is called to provide technical assistance when other CARE/Niger projects need help with their information systems, survey techniques, tools or analysis. The information system that he has designed for the Sanu Yara project has been adapted for use by CARE's Reproductive Health Project.

According to the project manager, each of the 3 mid-level staff (2 field worker supervisors and the community participation coordinator) showed improvement in their skills and knowledge during the course of the project. One of the field worker supervisors had no previous experience in health before joining the Sanu Yara team. She acquired knowledge on all of the project interventions and used this knowledge to support the field workers and their work in the communities. After attending a training on supervision, she worked to improve her supervisory relationship with the project field workers and her own supervisor, and she refined the job descriptions for the project field workers.

The second field worker supervisor came to the project with a health background, having worked for the MOPH for several years. However, she had never worked for a private voluntary organization nor had she ever had to supervise staff. She felt that the project provided her the opportunity to improve her planning, management, monitoring and supervision skills.

The community participation coordinator gained some knowledge and skills in how to foster community participation. He attended a training on the Participatory Rural Appraisal process and used this approach to initiate project activities in each community, although it appears that the approach was not fully understood nor used appropriately. After attending a workshop on community participation and with the assistance of the Sanu Yara technical advisor, he worked to improve the indicators for monitoring community participation. Unfortunately, this training and assistance came late in the project (1999).

Great changes were made in the knowledge, skills and competencies of the project field workers. None of the five project field workers who were hired at the beginning of the project had previous health experience (one field worker was replaced with a nurse during the project). Through their work with Sanu Yara, all of the field workers improved their capacity to coordinate activities, supervise village health agents (especially the animators), and foster community participation. In addition, they became competent in the project's four technical areas. The five project field workers from the Sanu Yara project will become project field workers for CARE's Reproductive Health Project.

### *Lessons Learned*

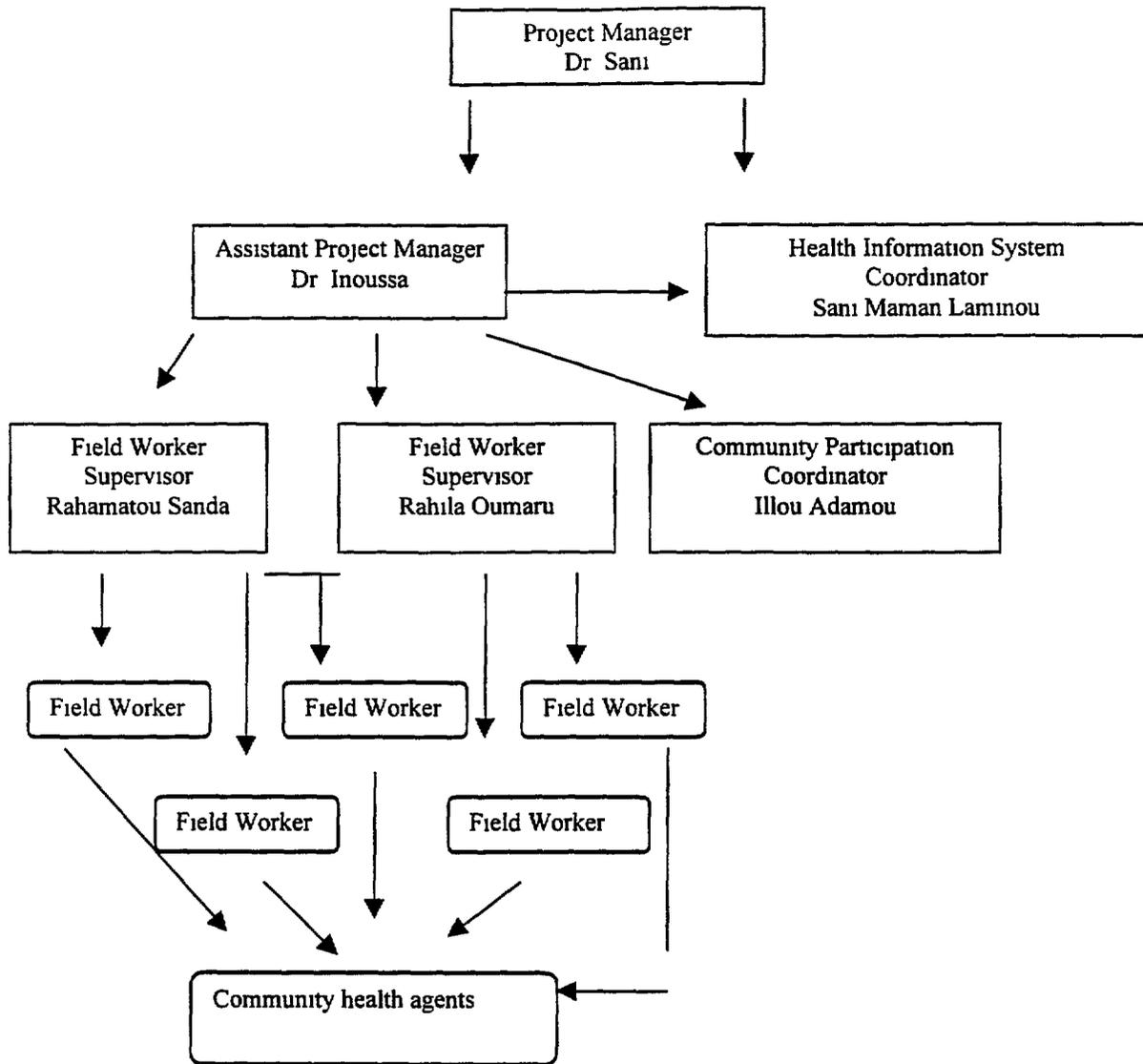
- Plans for building the capacity of program staff need to be made early in the project. Gaps in knowledge, skills and competencies of project staff, especially mid- and senior-level program staff should be addressed as early as possible. As the project progresses, the project manager will need to identify new areas for staff development and modify the staff capacity building plan as needed.
- Trainings and workshops to build staff capacity must be carefully identified and chosen. The training/workshop content should adequately fit the needs of the staff. When selecting trainings and workshops, the project manager and staff should carefully investigate the content and quality of the workshop to judge its appropriateness.
- In order for the *project* to get the full benefit of a training or workshop, the staff must apply the knowledge and skills that they have learned. Trainings and workshops organized by CARE should include a session to explain how projects can use the system/information being taught *if the project is already underway*. The project cannot benefit from trainings or workshops if the participants do not apply what they have learned. An example from this project was the IEC strategy. Although three members of the staff received training in IEC, the staff did not have a clear vision of how to develop an IEC strategy or elaborate meaningful messages.
- Having the person whom is returning from training share their experience and knowledge with the rest of the staff not only helps the staff stay up-to-date but also reinforces the knowledge of trainee.

### **Supervision of Program Staff**

The project developed an adequate supervisory system that includes Individual Operation Plans (IOP) for mid- and senior-level staff, weekly, monthly and quarterly plans, and weekly and quarterly planning meetings between supervisors and their staff. Field workers are supervised once a month. The supervisory system at the project level is fully institutionalized. This project's approach to staff supervision has been adopted by CARE's Reproductive Health project in Zinder.

Below is a diagram of Sanu Yara's supervision system

# SUPERVISION DIAGRAM FOR SANU YARA



## Human Resources and Staff Management

Sanu Yara had a dedicated, motivated, and enthusiastic staff. Even though there appeared to be some tension between various project staff, the overall group dynamic was positive, which had an overriding positive affect on project implementation.

Although each staff member seemed to take responsibility for their work, collaboration between staff members was often weak, the group did not always work as a team. This was particularly evident with the IEC component. With the lack of a clear strategy and direction, each staff member had their own idea about IEC activities, which caused further confusion at the implementation level.

Throughout the course of the project, morale was generally good. Despite times of low moral of one or more staff members, project implementation never seemed to have been negatively affected.

Besides the project director's move to share time between two projects, there were four other major staff moves during the life of the project. In the middle of the project, one project field worker was replaced, and it took 2 months to hire a replacement. During the time it took to recruit and train another field worker, project activities in the field worker's villages were managed by the field worker supervisor. However, given the other responsibilities of the field worker supervisor, she was not able to give full attention to these activities, hence project activities diminished in these villages.

One of the field worker supervisors was promoted to assistant project manager during the second year of the project. The project did not plan to hire a replacement field worker supervisor, thinking that the community participation coordinator and the other field worker supervisor could absorb the extra workload. When this did not work, the project hired a replacement field worker supervisor. At the time of the promotion, the project noted a decrease in supervision of the VHWs by the clinic nurses. Project staff attributed this to the fact that the staff member leaving the post of field worker supervisor was a medical doctor who had the advantage of a professional relationship with the district medical officers. The new field worker supervisor did not have a medical degree and therefore did not incite the same respect. However, the new field worker supervisor did have experience in training and a background in health, which was considered a positive move for the project.

As with the project manager, at the start of the Reproductive Health Project, the health information system coordinator started to share his time between the two CARE projects. This has had an adverse affect on both projects. The health information system coordinator is responsible for entering and analyzing all the data on the computer and providing project statistics for the monthly, quarterly and annual reports for both projects. He is also called upon periodically by other CARE projects throughout the country to help with information problems. Because of the added responsibilities, he is not able to analyze and report on data in a timely fashion. Hence, the project reports are often delayed.

The project did not develop plans to facilitate staff transition to other paying jobs at the end of the project. With the exception of the project manager, the Sanu Yara staff was not given any information concerning other possibilities within or outside of CARE. A meeting was planned for September 21, 1999 to discuss who would have the opportunity to continue their employment with CARE through the Reproductive Health Project. The Sanu Yara project ended September 30, 1999.

### **Financial Management**

CARE has a well-developed financial management system and financial reports are normally submitted on time. The Sanu Yara project uses the systems, policies and procedures established by CARE. Financial roles and responsibilities of each staff member appear to be well delineated. The project prepares monthly and quarterly financial reports, which are approved by the project manager and verified by the CARE/Niamey financial manager before being sent to CARE/Atlanta. The monthly reports include a comparison of the budget with actual expenditures. The quarterly reports provide a much more detailed budget analysis. In addition to in-house reporting, the project submits quarterly reports to USAID.

Activity budgets are prepared quarterly by the assistant project manager, with assistance from mid- and senior-level staff. It appears that all senior-level staff has adequate budgeting skills to accurately estimate costs and elaborate budgets.

Outside technical assistance was provided to assist in the evaluation of the Koumri clinic. Had the project proceeded with the cost recovery plan, it is likely that they would have needed further outside assistance to help develop financial sustainability plans. Because cost recovery was not implemented, it was not necessary.

### **Logistics**

The Sanu Yara project did not depend on procurement of large equipment or supplies. This project inherited vehicles, computers and other supplies from the previous child survival project, therefore logistics had no impact on project implementation.

### **Information Management**

#### *Effectiveness of the information system and collecting data*

Sanu Yara's system to measure progress toward project objectives was, for the most part<sup>23</sup>, effective. The project carried out a baseline survey, a mid-term survey<sup>24</sup> and a final survey. A mini-survey was also accomplished after the first year of the project in

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<sup>23</sup> Both the baseline survey and the final survey were missing key questions that were needed to track progress on three of the project objectives. Because these questions were not in the surveys, no comparison of before and after project activities can be made for these three behaviors.

<sup>24</sup> The mid-term survey was carried out in 40 villages (villages where the project had initiated activities at that time). This survey was for tracking progress. Because of the sample differences, the mid-term cannot be compared to the baseline or the final survey.

the 10 first-year villages. The project's monitoring system includes tracking information about village health agents' activities (home visits, group discussions, maintenance of medicine kits, health committee performance, mother-to-mother support group activity, and vaccination activity) and the vaccination situation at the health clinics (including stock-outs and cold chain maintenance). All of these data were systematically collected and entered into a computer so that they could be analyzed and used to track progress. Although the monitoring system served the project's purposes for tracking progress towards project objectives, monitoring project inputs and processes was omitted. The project did not keep adequate computerized records on training, for example. Furthermore, the project did not fully document the process used to work with communities.

### *Reporting and using data*

The project prepared monthly, quarterly and annual activity reports. Each project implementation level used the data to make management or technical decisions. The field worker supervisors reviewed the results of the data analysis with the field workers. When problems were found, the supervisors helped the field workers find solutions. In the case of a difficult problem, the field worker supervisors or the community participation coordinator accompanied the field worker to the community to help resolve the issue. For example, when the data analysis showed that a village's medicine kit was not being maintained properly, the community participation coordinator (who was in charge of medicine kit maintenance) accompanied the field worker to the village. They worked together with the village health committee to identify the barriers and find solutions. The monitoring system alerted the staff to villages where vaccination coverage was low, in which case they took corrective action. Through careful monitoring of the cold chain maintenance and vaccine supply, the project was able to intervene at appropriate times (the project helped with the repair of refrigerators, covering repair and transportation costs and during one shortage of BCG needles, the project helped to fill the gap). The village vaccination register was used by the project to identify dropouts. When dropouts were found, the project field worker or village animator made a home visit to discuss the importance of vaccinations and encourage the mother to vaccinate her child.

### *Skills of project staff to continue collecting project data and use it for project revisions or strengthening*

The health information system coordinator is highly skilled in data collection and analysis. He is used by CARE projects throughout Niger to help with information systems, data collection, and analysis. The staff seemed to be able to use the data to identify gaps and problems in project implementation and management. Most of the time they could find solutions to these problems, especially if by continuing to do what they were already doing (e.g. organizing vaccination sessions) could solve the problem. However, it seemed that when there were large gaps or complex problems that were not easily rectified, the staff was at a loss as to what to do. One example of this was the effort to improve exclusive breastfeeding. By mid-term, there had been little change in the prevalence of exclusive breastfeeding to 6 months. At this time, instead of looking for innovative ways to promote exclusive breastfeeding, the project adopted the mid-term evaluation recommendation to rewrite the objective to reflect intermediate

steps to exclusive breastfeeding (i.e. increased predominant breastfeeding - breastmilk and water) The project only changed their strategy when a research student from Emory student designed an innovative communication strategy to promote optimal breastfeeding practices With the adoption of this strategy, the project began to see results

### *Special assessments*

The project received input from three Emory graduate students, all of whom gave the project innovative ideas for programming In July 1997, an Emory student conducted formative research in the project area and developed a communication strategy to promote exclusive breastfeeding to 6 months The project adopted this strategy, which included creating mother-to-mother support groups, giving blue bracelets to babies who were exclusively breastfed and identifying a mother in the village who would model exclusive breastfeeding Within the next year and a half, the project saw an increase in the prevalence of exclusive breastfeeding to 6 months (final survey reported 18% infants between 0 and 6 months were exclusively breastfed)

In June-August 1998, a study was conducted to determine the feasibility and acceptability of a possible alternative millet-based oral rehydration therapy (chegue) for children between the ages of 6 months and 5 years The study concluded that chegue with added salt would be acceptable as a treatment for children with diarrhea Based on the of this study, the project began to promote chegue as an alternative oral rehydration therapy By the end of the project, 10% of mothers reported giving chegue to their children whom had diarrhea within 2 weeks prior to the survey

A third study was also carried out between June and August 1998 This study explored factors that motivate village health workers, barriers to carrying out their activities, and ways to sustain village health worker activity Although the researcher made recommendations to the project, there was no clear evidence that the Sanu Yara project applied these recommendations Because this project relied heavily on the work of village volunteers, it is unfortunate that the project did not implement any of these recommendations The failure of the project to do so may negatively impact the sustainability of the VHWs

In 1995, the project sought assistance to study the acceptability and feasibility of local weaning recipes Using formative research techniques, the study found that the fura de mai recipe, which had been promoted by a former child survival project in Niger, was an acceptable and feasible weaning food The Sanu Yara project continued to promote fura and tuwo de mai as an appropriate weaning food for children 6-24 months of age

An evaluation of the Kourni Dispensary was conducted in November 1998 Following the evaluation, Sanu Yara staff continued to work with the Kourni staff and communities to improve the center's organization and utilization rates Since the evaluation, Kourni has reduced the consultation fee and the center is reporting higher utilization rates

### *Strengthening other existing data collection systems*

Through the experiences of the Sanu Yara project, the data collection system of CARE's Reproductive Health Project has been strengthened. The health information system coordinator works on both projects, thus he can directly apply his experiences and the lessons learned from Sanu Yara to the Reproductive Health Project. Sanu Yara has also lent his time to other CARE projects in Niger to help improve their data collection systems.

#### *Understanding of project achievements*

The project staff definitely has a clear understanding of what the project has achieved. Through periodic staff and supervisory meetings and project reports, the project staff is kept up-to-date on all project accomplishments.

CARE's headquarter staff are also kept abreast of the project's achievements. The child survival technical advisor is in e-mail contact with the Zinder office and has made periodic visits over the project's four years.

The project made every effort to inform the district and regional health officials of project achievements. Project reports were sent to all local MOPH officials on a regular basis. All of the health officials who were interviewed during the final evaluation were well aware of Sanu Yara's activities.

Communities that were visited during the final evaluation seemed to have a clear understanding of the project's achievements, in so much as it affected the health of their women and children. Most of the villages visited commented on how well their children were growing and how healthy they had been since they started participating in project activities. The project does not routinely share results with the communities, although some field workers have done this on their own.

#### *Data use beyond this project*

Project monitoring and impact data have been used by CARE's Reproductive Health Project. Beyond this, the project has not been very successful at sharing their results and findings with other projects.

### **Technical and Administrative Support**

The project has received a variety of technical assistance over the four years of the project. The following table provides a list of the type, source and utility of the technical assistance received by the project. In addition to these technical visits, CARE's child survival technical advisor visited the project site at least once per year.

Type of Technical Assistance	Source	Timeliness	Utility
Design, implementation and analysis of baseline survey	Pierre-Marie Metangmo, PVO CSS The Johns Hopkins University	October 1995 Timely, at beginning of project	Provided baseline data for almost all project objectives
Study and recommendations on the acceptability and feasibility of local weaning foods	Eleanore Seumo-Fosso, Nutritionist Consultant	December 1995 Timely, at beginning of project	Basis for communication strategy to promote fura and tuwo de mai
Preparation of DIP	Kathy Tilford, Director Primary health Care Unit CARE	January 1996 Timely, after baseline survey within first 4 months of project	Project working document
Training of staff in focus group discussions and IEC strategy development	Mary Dean Purves, CARE Regional Technical Advisor, PHC	April 1996 Timely, within first 6 months of project	Focus group discussions were not used regularly in the project The project never developed a detailed IEC strategy This consultancy would have been more useful if the project had come out with a detailed, feasible IEC strategy
Research on attitudes and key influences regarding breastfeeding and development of a communication strategy to promote exclusive breastfeeding to 6 months	Michelle Kouletio, Health and Population Unit, CARE/Atlanta in collaboration with Rollins School of Public Health at Emory University	July 1997 Late in the project, but timely in that the project was struggling to improve breastfeeding practices It is unfortunate for the project that this study did not occur earlier in the project, as it would have	The project adopted the communication strategy developed during this consultancy/research project The strategy was very successful in engaging women in mother-to-mother support groups and raising awareness of exclusive breastfeeding

Type of Technical Assistance	Source	Timeliness	Utility
		given more time to work on developing support groups in all of the target villages	
Input and guidance for mid-term evaluation	Marcie Rebardt, External consultant Catherine McKaig, Senior Technical Advisor, CARE	November 1997 Timely, at the mid-point of the project	The mid-term evaluation made several recommendations to the project. Some of the recommendations merited acceptance and others did not.
Research to explore factors that motivate village health workers, barriers to carrying out their activities and ways to sustain village health worker activity	Shannon Mason Rollins School of Public Health at Emory University	June-August 1998 Late in the project This consultancy would have been useful toward the beginning of the project. As it was, the project did not have much time to implement the recommendations. (The project did not have a choice in the timing of this research.)	This research did not get transferred into practice.
Research on the acceptability and feasibility of an alternative oral rehydration therapy	Karen Riggs Rollins School of Public Health at Emory University	June-August 1998 Late in the project This consultancy would also have been useful earlier in the project. (The project also did not have a choice in the timing of this research.)	Due to the results of this research, the project began to promote the use of chegue as an alternative oral rehydration therapy.
Evaluation of the Kourni Dispensary	Thomas D. Murray Health Finance Consultant	November 1998 Somewhat late, this may have been	The project was able to use the recommendations.

Type of Technical Assistance	Source	Timeliness	Utility
		more useful if it had been accomplished during the second year of the project	given by the consultant to help the communities and staff of Kourni to improve the center
Preliminary qualitative assessment of breastfeeding promotion efforts to guide breastfeeding support group training	Ginette Belanger Linkages consultant	November 1998 Timely in that the communication strategy to promote exclusive breastfeeding had just started	The original plan for this consultancy was to look at how the support groups were functioning and train the field workers and group facilitators in mother support group methodology. However, the consultant decided that the project staff needed training in breastfeeding basics, thus the training in support group methodology was not done. The project continued to create support groups at the community level, even without this training. Although the groups have many beneficial aspects, they are not truly "support" groups, in that no "support" is given during group meetings. Without the training that was to happen during this consultancy, the project did not know how to create "support" groups.
Evaluation of mother-to-mother support groups	Nancy Nachbar Linkages Consultant Ann Brownlee Wellstart	September 1999 Timely in that the support groups were starting to take	The results of this evaluation will be useful to a follow-on activity

Type of Technical Assistance	Source	Timeliness	Utility
		off Any earlier, the evaluation would have been useless	

*Assistance that was not available*

The project would have benefited from further technical assistance on the development of an IEC strategy. Although they received technical assistance in this area, a detailed strategy was never developed. Having a consultant to provide technical assistance *only* for the development of an IEC strategy would have placed adequate focus on this important project element.

The project manager would have liked to have technical assistance on budget analysis. The mid-term evaluation recommended that CARE review the current budget monitoring tools to determine their adequacy and the project manager's ability to use them. It appears that this was never accomplished. The project manager continues to have difficulty with budget analysis, especially the budgets prepared for USAID.

CARE/Atlanta could help projects plan for technical assistance by facilitating a direct relationship between individual projects and institutions such as Emory University or technical projects such as Linkages. Careful review of project documents and reports should give headquarters an idea of what kind of assistance is necessary to support each project. Headquarters should provide feedback on all project reports so that the lines of communication remain open.

CARE could further assist their projects by helping to develop relationships between CARE's child survival projects throughout the world. CARE could organize cross-visits to allow projects to share experiences and or strengthen their interventions. A newsletter is a good way for projects to keep abreast of new developments, strategies, innovative activities, etc.

CARE/Atlanta devoted approximately two months a year to supporting the Sanu Yara project.

**Management Lessons Learned**

- Maintaining contact and sharing experiences with a broad range of development organizations allows project staff to benefit from and apply relevant lessons learned from others' experiences. The project's failure to network with other development organizations unnecessarily limited its impact. The failure to network in this way means the project is operating in isolation. Sharing experiences regarding innovative approaches benefits the development community as a whole, broadens the impact of these innovations and gains recognition for the agency and its staff.

- Having a capacity building strategy for project staff from the inception of the project promotes timely training of staff. Adequate budgeting for capacity building will be ensured if plans are made early in the project. Technical assistance must be timely and well chosen in order to positively affect project execution and improve the project's approach.
- The exit plan should be directly linked to the sustainability plan. The project should be able to withdraw assistance from a village when the village demonstrates the ability to sustain activities. This ability is related to the mastery of specific knowledge and skills among clearly identified village-level change agents.
- Having solid supervision and financial systems in place ensures timely start-up of project activities, without delays at the management level.
- One person must be responsible for the IEC component in order to ensure a focused strategy and cohesive implementation.
- Project staff and project technical advisors must carefully review survey questionnaires to ensure that they include all questions that are necessary for the project to measure progress towards their full range of program objectives.
- Monitoring and information systems must be developed and set up at the beginning of the project. Monitoring systems need to include ways to track project inputs and implementation methodologies. Not only are these important for evaluating the project and developing lessons learned, but they are also important for projects wanting to replicate activities.

#### **D OTHER ISSUES IDENTIFIED BY THE TEAM**

The following issues were of particular interest to the Sanu Yara staff and the CARE/Niger country director:

- 1 Site Selection From discussions with project staff and direct observations, it appears that site selection played an important role in the success or failure of project activities. One of the most important characteristics that affected success of project activities appeared to be the leadership of the community. In those communities where there was strong leadership (normally by the village chief), activities seemed to be more successful than in those communities where leadership was weak. Organization of the community also seemed to be important (which was often directly linked to leadership). Communities that had organized themselves without project input (for example for vaccination during epidemics) seemed to have more success organizing for project activities. Without further data and information, it is not possible to judge to what extent education levels, access to curative care and access to clean water influenced a population's interest in the project. In the future, criteria for site selection should include strong leadership in the community and some ability to organize themselves to address critical problems. In addition to community characteristics, the project should also consider the location of sites. The villages in this project were scattered throughout the three target districts and

haphazardly dispersed throughout the health centers' catchment areas. It would facilitate project activities to cluster sites around the health centers.

- 2 Gender The project targeted women of reproductive age and children under 5 years of age. Thus the focus of most of the activities was women. However, all of the first aid workers in the villages were men and most of the members of the village health committees were men. Nearly all discussion groups were held for women, but field workers did report holding some discussion groups for men. Men were also included in the start up activities. Despite the fact that the project did not directly target men, their active support of many activities and knowledge of the key messages was evident. Future projects and activities should include a specific strategy for targeting men.
- 3 Role of TBAs In the project area, a TBA is normally called after the birth of the child to cut the cord and clean the infant. During this time, she has the opportunity to encourage and help the mother initiate immediate breastfeeding. However, the TBAs role could be broader than this by asking them to assist the animators in making home visits and conducting group discussions. In fact, the project reported that some TBAs were already doing this. Mother-to-mother support groups that were visited during the final evaluation reported that TBAs were often invited to group meetings to discuss health messages. However, it was also found during the final evaluation interviews that TBAs did not have as much knowledge about project interventions as the animators. Knowledge of both the TBAs and the animators should be routinely monitored during the project.
- 4 IEC, project monitoring and community participation See the individual sections within the report. Page 34 for IEC, page 58 for project monitoring, and page 32 for community participation.
- 5 CARE's comparative advantage CARE's country director asked the evaluation team to determine CARE's comparative advantage in child survival in Niger. It appears that CARE has two advantages. CARE has vast experience implementing innovative activities, as evidenced in the Sanu Yara project through the mother-to-mother support groups, promotion of chegue and promotion of tuwo and fura de mai. All of these innovations have shown some success and have potential for replication and expansion in other parts of Niger. The second advantage is that CARE has developed a comprehensive health information system and has a staff member who is a specialist in data collection and analysis.

## **E CONCLUSIONS AND RECOMMENDATIONS**

In spite of considerable constraints, the Sanu Yara project made significant progress in improving both knowledge and health practices in their target population, as evidenced by the measurement impact indicators (see the table of project objectives beginning on page 4)

In addition to the technical objectives, the project met nearly all of the stated training objectives. Village health workers, animators and members of the village health committees were trained from all 70 project villages. Nurses from the clinics that serve the target population were trained so that they could support the various aspects of the project. Furthermore, the project successfully improved the capacity of its own staff to implement and manage project activities. Because the project decided not to implement cost recovery as originally planned, the cost recovery training objectives were not met.

The sustainability objectives were hard to measure since they were extremely vague. For the most part, the stated sustainability objectives were not met. Several of these objectives were contingent on an operational cost recovery system. Since the project did not establish a cost recovery system as planned and the MOPH did not initiate cost recovery activities until nearly the end of the project, the system is not yet functioning in a manner that would help sustain project activities. However, the project's focus on community interventions and behavior change are first steps toward sustainability. It appears that the project has increased demand for certain services, which may be one of the key elements in sustainability. Once the population begins to demand services, it is likely that the systems will respond.

The Sanu Yara project's most important achievements resulted from the fact that project staff remained flexible in their approaches. In so doing, they were able to modify plans to include innovative approaches that emerged during the life of the project. The project accommodated and encouraged a number of studies that led to the introduction of innovative concepts, which impacted positively on project results. These included the communications strategy for exclusive breastfeeding, the promotion of chegue as an alternative oral rehydration therapy, and the promotion of tuwo and fura de mai as a locally available weaning food. This project was able to make great strides in improving infant feeding practices by adopting and implementing these innovative approaches. In addition, the project worked very closely with the 10 communities and the staff of the Kourni Dispensary to pilot test the first community-partnered, private health facility in Niger.

Another important achievement of this project was the introduction of community-based vaccination sessions. Vaccination outreach is key to achieving high immunization coverage. Sanu Yara altered the traditional approach to vaccination outreach by placing a large part of the responsibility on the community. Community involvement will be a key factor in whether or not clinic nurses will continue to provide community-level vaccination services.

The project encountered many constraints throughout its four years. The lack of government commitment to the project began at the very beginning of the project and continued to the end. The instability of the government only increased the difficulties, with a number of health worker strikes, periodic stockouts of essential drugs and vaccination supplies and breakdowns in the cold chain. Economic conditions and lack of food security often make it difficult for communities to participate in project activities, particularly the village level pharmacy or immunization activities that require monetary participation. In spite of all of these constraints, project staff remained dedicated and enthusiastic and found ways to work around most of these barriers.

## *Outline of Lessons Learned*

The most important lessons are presented below. Other lessons learned may be found in individual sections throughout the report.

### Overriding Lessons Learned

- 1 The phasing in approach appears to present more problems than advantages. The impact of the project would be greater in the long run if villages were clustered and entered at approximately the same time. To permit this, the ratio of Field Workers/villages should not exceed 1/10. Site selection should include the criterion of demonstrated leadership and motivation.
- 2 The project's failure to network with other development organizations unnecessarily limited its impact. Maintaining contact and sharing experiences with a broad range of development organizations allows project staff to benefit from and possibly apply lessons learned from others' experiences. The failure to network in this way means the project is operating in isolation. Sharing experiences regarding innovative approaches benefits the development community as a whole, broadens the impact of these innovations and gains recognition for the agency and its staff.
- 3 An IEC strategy and activities are central to achieving behavior change. For optimal impact, a position needs to be created for an expert in IEC who develops a comprehensive, realistic IEC strategy and coordinates its execution.
- 4 Even in the face of seemingly unobtainable odds, the project must not compromise an optimal behavior change for one that may be easier to achieve. Example: predominantly breastfeeding vs. exclusive breastfeeding. Progress toward the optimal behaviors can be measured using secondary indicators, but project objectives should be based on the optimal behavior.
- 5 In addition to building technical knowledge and skills of the field agents, to ensure sustainability it is essential that community development skills be systematically incorporated into the capacity building aspects of the project. Furthermore, project staff responsible for capacity building of the village health agents, Field Workers should be evaluated on the village health agents' abilities to serve as effective change agents for their community. Training of Field Workers should seek to increase their capacity to promote sustainable community development.

### Lessons Learned about immunization interventions

- 1 Key messages must be conveyed in a simple, direct manner, without extraneous information. It appeared that the project had a clear idea of what messages they wanted to promote. However, during the training of key staff and village volunteers, other information was added that could have led to message confusion and detracted from the project's true goals and objectives.

- 2 Approaches and tools need to be adapted to the realities and special needs and characteristic of the community in order to function well and be sustained. A one-size-fits-all approach to community development misses unique opportunities to make a difference and show results. When an approach or tool is not working well, other options need to be explored. For example, when this project found that certain communities were not responding well to the standard project approach (i.e. the community was not engaging in project activities), other ways of working with those communities should have been explored.

#### Lessons Learned about nutrition interventions

- 1 In spite of the significant challenge presented by changing mothers' breastfeeding behaviors, the support group approach not only proved to be effective in increasing immediate and exclusive breastfeeding but it appears to be an appropriate channel for transmitting other MCH messages. Women who joined support groups had already decided to change their behavior and to promote and support this change naturally, thus they appeared to be more receptive to the project's key messages.
- 2 When trying to change mothers' behaviors, the best strategy is to start with what they are already doing and try to make positive modifications in this behavior instead of asking them to make a total change. The project learned this in a couple of different areas, including the introduction of fura de mai (improving the quality of family foods rather than asking mothers to make a separate meal for the child) and using locally available fluids for treatment of diarrhea (chegue – extra fluid from cooked millet, available in most homes).

#### Lessons Learned about diarrhea interventions

- 1 Mothers are looking for ways to stop diarrhea not prevent dehydration. It seems that mothers want to stop the diarrhea as soon as possible because a child with diarrhea demands a lot of their time (for clean up and treatment). In order to promote behavior change among mothers, projects need to recognize the factors that influence a mother or family to accept positive health behaviors and develop their strategy accordingly.
- 2 Innovative strategies/approaches are often needed to address difficult maternal and child health (MCH) behavior change issues. The project applied such innovative approaches as the use of a home-based dehydration fluid, support groups to promote optimal infant feeding practices, and the use of a locally available weaning food.

#### Lessons Learned about community mobilization

- 1 Methods and tools to monitor and evaluate community mobilization and participation efforts must be built into the project from the start. Sanu Yara was late in developing these methods and tools and thus they have scanty data on community mobilization and participation from the early part of the project.

- 2 Communities with strong and secure leadership (normally the village chief) are more likely to succeed Like any effort, strong leadership is essential for success When selecting sites, projects should consider strong leadership as a priority criterion

#### Lessons Learned about communication for behavior change

- 1 The development of effective and appropriate key messages must be accomplished at the beginning of the project To be effective, messages need to be feasible and action-oriented and must also be able to motivate the target audience to change behavior From discussions with women, it was evident that they are motivated by actions that have a direct benefit to them Specifically, they are interested in practices and behaviors that would save them time When they perceive a benefit to them, they are likely to make a change
- 2 IEC performance standards must be well defined to allow the project to monitor the success of its change agents This should be built into the monitoring system from the beginning of the project

#### Lessons Learned about health worker performance (village level)

- 1 Projects that use village health volunteers must have the means to regularly monitor and evaluate their sustained knowledge The project should have a capacity building plan for the community that includes specific objectives for building the capacity of village health workers and tools for monitoring these objectives With such tools, gaps can be easily identified and addressed In-service trainings can be used to reinforce information that is lacking

#### Lessons Learned about training

- 1 When extraneous and irrelevant information is included in the trainings, key information is diluted Everything included in the training of village health agents should be directly related to project goals and objectives
- 2 Training objectives must focus not only on the number of people to be trained but also on demonstrated knowledge and skills The training plan needs to define objectives for the demonstrated abilities of the trainees and identify specific means of verification
- 3 Training information needs to be computerized Every time training is conducted, information on the number and type of participants, villages concerned, dates, results of pre- and post-tests, etc should be computerized on a standard form Training is a major input of the project and needs to be treated as such

#### Lessons Learned about staff training

- 1 Plans for building the capacity of program staff need to be made early in the project. Gaps in knowledge, skills and competencies of project staff, especially mid- and senior-level program staff should be addressed as early as possible. As the project progresses, the project manager will need to identify new areas for staff development and modify the staff capacity building plan as needed.

#### Lessons Learned about management

- 1 The exit plan should be directly linked to the sustainability plan. The project should be able to withdraw assistance from a village when the village demonstrates the ability to sustain activities. This ability is related to the mastery of specific knowledge and skills among clearly identified village-level change agents.
- 2 Project staff and project technical advisors must carefully review survey questionnaires to ensure that they include all questions that are necessary for the project to measure progress towards their full range of program objectives.
- 3 Monitoring and information systems must be developed and set up at the beginning of the project. Monitoring systems need to include ways to track project inputs and implementation methodologies. Not only are these important for evaluating the project and developing lessons learned, but they are also important for projects wanting to replicate activities.

#### E Conclusions and Recommendations

CARE is implementing child survival projects in several countries around the world and would like the manager's of these projects to benefit from the lessons learned from Sanu Yara and other child survival projects that are culminating this year. To this end, CARE intends to send the summary portion of each evaluation report to these project managers for their reference. Similarly, CARE will also circulate the Results Highlight so that other's can learn from CARE's experience.

In addition, to circulating the lessons learned with CS project managers, CARE regularly organizes brown bag lunches at headquarters so that Atlanta-based employees and visiting field staff can learn more about the project. The results of the final evaluation will provide an opportunity for such sharing.

And finally, CARE anticipates that by sharing the report with BHR/PVC the lessons learned, and particularly the Results Highlight, will be disseminated to Congress and to other PVOs for their benefit.

#### For CARE/Zinder

- Incorporate the lessons learned from this project and previous child survival projects into CARE's Reproductive Health Project (as appropriate) or follow-on child survival projects.

- Ensure that the lessons learned and the innovative approaches used in the Sanu Yara project are disseminated to other organizations and projects working in child survival. This is particularly important for organizations and projects working in Niger. However, the results of this project are also important for child survival projects in other parts of the world. Hold a meeting in Niger to present the findings of Sanu Yara, and invite representatives from all relevant organizations and projects. Write an article highlighting the accomplishments of the project and send it to partners and other CARE child survival projects throughout the world.

For CARE/Headquarters

- Develop a list of indicators that are technically accurate, measurable, and reflect optimal practices. Ensure that all of CARE's child survival projects select indicators from this list.
- Help overseas projects set up a system that would allow them to share experiences, lessons learned, and innovative approaches. This might include a newsletter, cross-visits, or dissemination of articles highlighting project success. In addition, encourage overseas staff to use technical specialists to review all technical aspects of the project. With the widespread use of the Internet and e-mail, this has become easier.
- Send out a questionnaire well before the annual workshop/training to ask about needs and expectations of project staff in relation to the topic being addressed. Include at least one session at each workshop/training to explain how the information presented could be used by a project that is *already underway*.

For USAID/BHR/PVC

- Re-design the format of the Detailed Implementation Plan so it more "user friendly" to project managers and other senior staff. Ask that a table of all project indicators (including training and sustainability indicators) be presented in the first few pages of the DIP so they are grouped together and equal emphasis is placed on *all* of the indicators. Ensure that sustainability plans are clear and include measurable indicators.

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**ATTACHMENTS**

## Attachment 1

### Team members and titles

Cheryl Combest	Team Leader
Bonnie Kittle	CARE/Atlanta representative
Dr Sani Aliou	Project Manager, Project Sanu Yara, CARE/Zinder
Dr Inoussa Malam Issa	Assistant Project Manager, Project Sanu Yara, CARE/Zinder
Sani Maman Laminou	Health Information System Coordinator
Illou Adamou	Community Participation Coordinator
Rahamatou Sanda	Field Worker Supervisor, CARE/Zinder
Bawa Dakaou	Licensed surgeon, District Health Service
Maman Nafiou Oumarou	Human Resource Officer, District Planning Office

## Attachment 2

### Assessment methodology

This evaluation took place from August 30, 1999 through September 10, 1999 in Zinder, Niger. The evaluation team was made up of an external consultant, a representative from CARE/Atlanta, five members of the Sanu Yara staff, one representative from the Ministry of Health/District Office and one representative from the Ministry of Plan/District Office (A list of evaluation participants is included in attachment 1). The USAID/BHR/PVC's "Child Survival XI Guidelines for Final Evaluation" were used to direct the evaluation team's information gathering efforts.

The evaluation team carried out the following data collection activities as part of the review process:

- Review of documents and monitoring tools (annual reports, DIP, baseline survey, mid-term evaluation, final survey, research documents, training modules, special study reports, other relevant project documents as well as supervision forms, data collection forms, etc.)
- Briefing with Sanu Yara project staff on all aspects of the project, the perceived strengths and weaknesses, and identification of gaps in information
- Site visits, including
  - Development of tools for collecting data in the field  
Six questionnaires were developed for use during the site visits (see attached sample questionnaires)
    - One for the animators and TBAs
    - One for the first aid workers
    - One for the village health committees
    - One for community women of child bearing age
    - One for community men with children <5 years of age
    - One for clinic nurses
  - Selection of sites  
The selection of villages was based on their performance as judged by a list of criteria selected by project staff. Among the sites visited, there were 3 high performing villages, 3 mediocre performing villages and 2 non-performing villages.
  - Site visits  
Site visits were made to 8 villages over a three-day period. The evaluation team split into two groups and each group visited 4 sites.

Interviews were carried out in each village with project-trained first aid workers, TBAs, animators and village health committee members. All project-trained workers were asked questions to ascertain knowledge of key project health messages and project activities. The evaluation team also checked the village medicine kits, TBAs kits and IEC materials. In addition, women and men with children less than 5 years of age were

interviewed separately to determine their knowledge of and participation in project activities

Additional interviews were conducted with 2 district health directors (Matameye and Magaria) and two of the project field workers

- Analysis of data collected

The evaluation team held a debriefing meeting in Zinder to present the evaluation results to the Sanu Yara project's partners, including Matameye District Health Director, Immunization Coordinator for the region, Peace Corps, and staff of CARE's Reproductive Health Project (see a full list of participants below)

The team leader, project manager and representative from CARE/Atlanta also held a debriefing meeting with the secretary general of the Ministry of Health and the CARE country director in Niamey

**Attachment 3**  
**List of Participants for debriefing in Zinder**

1	Malam Issa Inoussa	CARE Zinder – Sanu Yara
2	Bonnie L Kittle	CARE Atlanta
3	Cheryl Combest	CARE consultant
4	Rahamatou Sanda	CARE Zinder – Sanu Yara
5	Mama Nafiou Oumarou	District Planning Office
6	Bawa Dakaou	District Health Service
7	Illou Adamou	CARE Zinder – Sanu Yara
8	Laminou Sani	CARE Zinder – Sanu Yara
9	Daoudaika Noritari	CARE Zinder
10	Abdoul Ratah Harbou	CARE Zinder
11	Toye Ali Antanou	CARE Zinder
12	Mahaman Nour Moussa	CARE Zinder – Reproductive Health
13	Adamou Bahago Maimounatou	District Planning Office
14	Oumarou Assou Elisee	DTK-ADP Zinder
15	Laminou Laoualy	District Health Director – Matameye
16	Bintou Kiari	CARE Zinder
17	Aichatou Hamidou	Field Worker, CARE Zinder
18	Aichatou Dikissi	Field Worker, CARE Zinder
19	Ramatou Moustapha	Field Worker, CARE Zinder
20	Aichatou Moussa	Field Worker, CARE Zinder
21	Aichatou Yahaya	Field Worker, CARE Zinder
22	Tatchriua Sekir Foulaué	Field Worker, CARE Zinder
23	Sani Aliou	Project manager, CARE Zinder – Sanu Yara
24	Gumarou Haoua	District Health Service
25	Goundara Moumouni Abdou	Coordinator EPI/District Health Service/Zinder
26	Seriba Coulibaby Boubacar	Supervisor/CARE Zinder – Reproductive Health
27	Maman Sayo	Supervisor/CARE Zinder – Reproductive Health
28	Souley Idi	Field Worker, CARE Zinder
29	Harouna Abhassam	Field Worker, CARE Zinder
30	Scott Webb	Peace Corps Volunteer
31	Andrea Webb	Peace Corps Volunteer

**Attachment 4**  
**Questionnaire for First Aid Workers**

- 1 How do you treat an 11-year-old child who has malaria?
- 2 What group takes prophylactic chloroquine? What is the protocol?
- 3 What do you recommend for a 6-month-old child who has diarrhea?
- 4 What do you recommend for an 8-month-old child who has diarrhea?
- 5 What actions should a mother take to ensure that her child less than one-year-old stays in good health?
- 6 How many doses of TT vaccine does a pregnant woman need to protect her child against tetanus?
- 7 Who is targeted for vaccinations in your village?
- 8 At what age should a child have his/her measles vaccine?
- 9 From whom do you seek advice?
- 10 Who ensures the control of your work?
  - If he answers the field worker ask  
From who else besides the field worker?

Check the medicine kit

**Attachment 4 – cont'd**  
**Questionnaire for TBAs and animators**

- 1 What should a pregnant woman do to prevent malaria?/ How do you prevent malaria during pregnancy?
- 2 What should a pregnant woman eat to ensure she has an adequate diet?
- 3 What advise do you give a pregnant woman about feeding her newborn infant?
- 4 What do you recommend for a 6-month-old child who has diarrhea?
- 5 What do you recommend for an 8-month-old child who has diarrhea?
- 6 What actions should a mother take to ensure that her child less than one-year-old stays in good health?
- 7 How many doses of TT vaccine does a pregnant woman need to protect her child against tetanus?
- 8 At what age should a child have his/her measles vaccine?
- 9 From whom do you seek advice?
- 10 Who ensures the control of your work?
  - If he answers the field worker ask  
From who else besides the field worker?
- 11 When did you last re-stock your medical kit? How?
- 12 Have you had a rupture of stock in the last 12 months? Of what products/supplies?

For animators only

- 13 Ask to see their IEC materials and ask them to explain the message for each visual aid
  - Look for  
Malaria  
Immediate Breastfeeding  
Exclusive Breastfeeding  
Diarrhea  
Vaccination

**Attachment 4 – cont'd**  
**Questionnaire for Village Health Committee members**

- 1 How many times have you met as a committee in the past 6 months?
  - Did you make any decisions?
  - If yes, what decisions were made?
- 2 As a health committee, have you identified any health problems in your community?
  - If yes, which ones?
  - Did you take action to solve these problems? If yes, what?

**Questions for ONLY the non-technical members of the committee (i.e. not the first aid worker or TBA)**

- 3 What actions should a mother take to ensure that her child less than one-year-old stays in good health?
- 4 What are the roles and tasks of the animators?
- 5 What are the roles and tasks of the TBAs?
- 6 What are the roles and tasks of the first aid workers?
- 7 Do you have a system to control the work of these health agents? When was the last time you used this system?
- 8 In the past 6 months, has there been a time when the 2 first aid workers were absent from the village at the same time?
  - If yes, what happened when someone needed medicines?

**Questions for all**

- 9 When did you last restock your village medicine kit? How?
- 10 Has there been a rupture of stock in the past 12 months? If yes, what medicines/supplies?
- 11 Have you started to take steps to ensure the continuation of vaccination sessions without the assistance of the project field worker? If yes, what? If no, why?
  - and the other project activities?

**For the treasurer** Ask to see the medicine kit

**Attachment 4 – cont'd**  
**Questionnaire for women**

- 1 Do you think that your health and the health of your child have improved since the field worker started working in your community? If yes, how?
- 2 Has this project responded to your health needs? If yes, how? If no, what is missing?
- 3 What are the changes in health that you have seen since the start of this project?
- 4 How many of you have received advice from the TBA in the past 3 months? What advice?
- 5 How many of you have received advice from the animator in the past 3 months? What advice?
- 6 How many of you have received advice from the first aid worker in the past 3 months? What advice?
- 7 Who among you had problems/illnesses during your last pregnancy
  - What problem/illness?
  - From whom did you seek advice?
  - What advice?
  - Were you satisfied with this advice?
- 8 Have you identified other health problems (besides what the project is addressing) that you would like to solve?
  - If yes, what?
  - What have you done about them?
- 9 Can you tell us why ORS packets are not often used when a child has diarrhea?
- 10 Is there a mother-to-mother support group in your village?
  - If yes, does the group discuss other topics besides breastfeeding?
- 11 What service does the support group provide?
  - Who is your resource person?

**Attachment 4 – cont'd**  
**Questionnaire for men**

- 1 Do you think that the health of your family has improved since the field worker started working in your community? If yes, how? --
- 2 Has this project responded to the health needs of your family? If yes, how? If no, what is missing?
- 3 What are the changes in health that you have seen since the start of this project?
- 4 In your opinion, what services does the animator offer?
- 5 In your opinion, what services does the TBA offer?
- 6 In your opinion, what services does the first aid worker offer?
- 7 Have you identified other health problems (besides what the project is addressing) that you would like to solve?
  - If yes, what?
  - What have you done about them?
- 8 What actions should a mother take to ensure that her child less than one-year-old stays in good health?  
(Circle the responses given)
  - Immediate breastfeeding
  - Exclusive breastfeeding until 6 months
  - Vaccinations
  - After 6 months, appropriate weaning foods at least 5 times a day
  - Other
- 9 Is there a mother-to-mother support group in your village?
- 10 What service does the support group provide?
- 11 What has been your contribution to the project?
  - vaccination
  - diarrhea
  - nutrition
  - malaria

**Attachment 4 – cont'd**  
**Questionnaire for clinic nurses**

- 1 What do you know about the CARE child survival activities?
- 2 In what way are you involved in any of these activities?
- 3 How do these activities fit in with the Ministry of Health's plan of action?
- 4 How have these activities helped you with your work? Get concrete examples
- 5 What support has the CARE project provided to you?
- 6 Has the project in any way influenced you in your work? If yes, how?
- 7 When was the last time a VHW from one of the project villages (name of specific villages) came to see you? You went to see them?
- 8 Has the project increased your opportunities to supervise the VHW in your area? Do you regularly supervise the VHWs in the project villages? If yes, how often?
- 9 Do you have a supervision form that you use when supervising the VHWs?
- 10 What could an organization like CARE do to help you in your work?

## Attachment 5

### List of persons interviewed and contacted

#### CARE/Niger

Douglas Steinberg CARE Country Director

#### CARE/Zinder

Dr Sani Aliou	Project Manager, Project Sanu Yara, CARE/Zinder
Dr Inoussa Malam Issa	Assistant Project Manager, Project Sanu Yara, CARE/Zinder
Sani Maman Laminou	Health Information System Coordinator
Illou Adamou	Community Participation Coordinator
Rahamatou Sanda	Field Worker Supervisor, CARE/Zinder
Aichatou Yahaya	Project Field Worker, Sanu Yara Project
Aichatou Dikissi	Project Field Worker, Sanu Yara Project

#### Government of Niger

Djimradu Maza-Wage Assistant Secretary General, Prefecture of Zinder

#### Ministry of Health

Dr Hamissou Maoude	Secretary General, Ministry of Health
Dr Laminou Laoualy	District Health Director, Matameye
Dr Harou Issoufou	District Health Director, Magaria
Ousmane Aissata	General Supervisor, District Health Office, Magaria
Bawa Dakaou	Licensed Surgeon, District Health Service
Abdou Amani	Head Nurse, Dungass health center
Ayoubou Bakaye	Head Nurse, Dan Tchiao health center
Hamidou Ousmane	Head Nurse, Yekoua health center
Mamane Rabiou Sahadou	Head Nurse, Sassoumbroum health center
Moussa Ali	Nurse, Korama health center
Mamane Moutari Amadou	Nurse, Dogo health center
MouMouni Hassane	Nurse, Dan Barto health center
Hamidou Fassouma	Nurse, Yekoua health center
Boukary Issoufou	Nurse, Sassoumbroum health center

#### Ministry of Plan

Maman Nafiou Oumarou Human Resource Officer, District Planning Office

#### Communities

First aid workers, traditional birth attendants, animators and village health committee members, from the villages of

Bangaya  
Angoal Biri  
Kanassane  
Faroun Rouwa  
El Dawa  
Roufaou  
Mazanya  
Kori

## Attachment 6

### Job description for project field workers and roles of village health workers

#### Job description for project field workers

- 1 Organized community agents and the village health committee for vaccination sessions and all other project activities
- 2 Reinforce collaboration between community agents (monitoring meetings, explanation on how the agents complement each other) for all activities, especially to ensure that the animators and the first aid workers organize the vaccination sessions together
- 3 Give community agents the opportunity to lead meetings in your presence
- 4 Help the animators (or other literate members of the community) to keep the village registers up to date (new births, pregnant women, deaths, vaccinations )
- 5 Ensure regular monitoring of the animators and the TBAs (Are they called during labor? Does she assure immediate breastfeeding and make house visits for prophylactic chloroquine?)
- 6 Ensure adequate monitoring of the first aid workers' medicine kits to make sure there is no rupture of stock
- 7 Prepare the transfer of activities to the community agents and implicate them more in the activities to show them that the activities can be done without the field worker
- 8 Ensure 2 regular visits per month to each village, putting more of an emphasis on the villages that are lagging behind (3 visits per month)
- 9 Reinforce public hygiene activities through the health committees and develop a hygiene calendar
- 10 Regularly collect information on vaccinations, meetings and the medicine stock of first aid workers
- 11 Identify needs for training, replacement and re-training of community agents
- 12 Conduct quarterly evaluations of each village's plan of action developed during the PRA

### **Roles and tasks of the animators**

- 1 Promote immediate breastfeeding and exclusive breastfeeding to 6 months
- 2 Promote progressive weaning starting at 6 months
- 3 Promote new weaning recipes (fura and tuwo de mai)
- 4 Sensitize the population on the prevention and treatment of malaria
- 5 Help the field workers to conduct a census and keep in-going records of all children less than 23 months old and all women 15-49 years for vaccination purposes
- 6 Help to mobilize and organize the community for vaccination sessions
- 7 Encourage the population to adopt hygienic actions to prevent diarrhea
- 8 Sensitize parents to treat cases of diarrhea in their children
- 9 Conduct home visits concerning the 4 project interventions (nutrition, vaccination, diarrheal disease and malaria)

### **Roles and tasks of traditional birth attendants**

- 1 Conduct counseling sessions and home-visits to sensitize the population in their village on the subjects of nutrition, pregnancy, birth, malaria, diarrhea, vaccinations and hygiene
- 2 Take charge of cases of malnutrition
- 3 Take charge of cases of diarrhea
- 4 Promote immediate and exclusive breastfeeding
- 5 Promote optimal weaning practices
- 6 Record activities

### **Roles and tasks of the First Aid Worker**

- 1 Conduct counseling sessions and home-visits to sensitize the population in their village on the subjects of nutrition, pregnancy, birth, malaria, diarrhea, vaccinations and hygiene
- 2 Take charge of cases of malnutrition in the village

- 3 Take charge of cases of diarrhea in the village
- 4 Supply and manage the stock of ORS and the education materials
- 5 Ensure the distribution of condoms and spermicides in the village
- 6 Identify and treat infections and immediate traumas
- 7 Supply and manage the essential medicines
- 8 Record all their activities

### **Role of the Village Health Committee**

- 1 Motivate the population to improve their health by taking collective and personal actions
- 2 Organize meetings to inform the population of the problems and possible solutions
- 3 Organize vaccination sessions in their community
- 4 Management of the medicine kit

## **Attachment 7**

### **List of educational support materials**

#### **Given to all health agents**

- 1) Immediate and exclusive breastfeeding poster with goat, two breastfeeding women and goat with baby crossed out
- 2) Poster of 3 food groups for pregnant and lactating women
- 3) Picture/poster with a healthy child (just a child standing up)
- 4) Technical sheet for malaria with treatment schedule

#### **Given to first aid workers and TBAs**

- 5) Picture/poster of child with kwashiorkor
- 6) Picture/poster of child with marasmas

#### **Given to animators**

- 7) Poster showing the 7 target illnesses of the vaccination campaign
- 8) One sheet showing the places on the child's body where vaccinations are given

#### **Selected sites (possibly only one village)**

- 9) Flipchart (pagivolte) on hygiene and diarrhea
- 10) Poster on dehydration

**Attachment 8  
KPC Results**

## **Attachment 9 KPC Results REMERCIEMENTS**

La realisation de l'enquête finale du Projet Sante Nutrition des enfants (Projet Sanu Yara PN34) a ete, comme toutes les operations de collecte de donnees, une oeuvre collective

Il faut donc rendre a Cesar ce qui appartient a Cesar

Les resultats issus de cette enquête et qui sont contenus dans ce rapport sont les fruits de la mobilisation et des efforts de tous et de chacun

Ne pouvant toucher tous les acteurs individuellement, je voudrais adresser tous nos remerciements et toute notre gratitude a toutes les personnes et a toutes les institutions ayant participees a son organisation

Ces remerciements et cette gratitude vont particulierement a Dr Sanı Aliou responsable des Projets PN34 et PN43, Dr Inoussa Malam Issa Chef de Projet Adjoint PN34 et Mr Sanı Maman Laminou Coordonnateur du Systeme d'Informations des Projets PN34 et PN43, pour leur sollicitude bienveillante, leur participation active et pour toutes les facilites qu'ils nous ont accordees pendant tous les travaux de preparation et d'execution de cette enquête

Ces remerciements et cette gratitude s'adressent aussi a tout le personnel de Care Zinder pour leur assistance multiforme, a la Direction Departementale de la Sante, a la Direction Departementale du Plan, a l'Ecole Nationale de Sante Publique de Zinder et a toutes les autorites administratives et coutumieres des zones de l'enquête pour leur franche collaboration

Aux equipes de terrain notamment les contrôleurs, les enquêtrices, les chauffeurs et les autres agents de terrain du PN34 qui ont travaille souvent dans des conditions difficiles, je voudrais en plus leur adresser toutes nos felicitations

Enfin je voudrais faire une mention speciale aux acteurs anonymes mais cles de cette enquête, que l'on a tendance souvent a oublier, c'est-a-dire toutes les femmes enquêtees, qui malgre les perturbations que nous leur causons dans leurs multiples et difficiles travaux "d'Hercule" quotidiens, nous ont apporte une aide tres precieuse par leur disponibilite et par les reponses qu'elles ont bien voulu fournir aux nombreuses questions qui leur ont ete posees C'est donc aussi et grace surtout a elles que nous pouvons disposer des donnees qui sont publiees dans ce rapport

**LE CONSULTANT**

**IDRISSA ALICHINA KOURGUENI**

## I RESUME

L'enquête finale du projet survie de l'enfant (Projet Sanu Yara PN 34) s'est déroulée dans le département de Zinder (Magaria, Matameye et Mirriah), du 26 juillet au 30 juillet 1999

L'échantillon de cette enquête est composé de 300 mères âgées de 15-49 ans et dont les enfants ont moins de 24 mois

Cette enquête finale avait pour objectif de fournir des informations actualisées sur les connaissances, les attitudes et les pratiques de la population cible en matière de santé nutrition ainsi que le taux de couverture vaccinale des mères qui peuvent être utilisées pour la conception d'autres activités mais aussi à des fins de comparaison avec les données de base ou les données de sources secondaires

### **La population enquêtée présente les caractéristiques suivantes**

- près de 40 % des ménages des mères enquêtées n'ont pas accès à l'eau potable salubre contre 74 % observés en 1998 à l'EDSN II ,
- 72 % des mères enquêtées n'ont qu'une (1<sup>e</sup>) ou deux (2) pièces pour dormir avec tous les enfants membres du ménage ,
- la taille moyenne des ménages est de sept (7) personnes

### **Les principaux résultats observés à cette enquête sont**

- la majorité des mères enquêtées mettent leurs enfants au sein dès les huit premières heures de leur naissance plus qu'à l'enquête de base (78 % contre 26 %)
- l'effectif des enfants allaités exclusivement au lait maternel est de 23 parmi les 130 enfants âgés de 0-6 mois soit 18% alors qu'il était inexistant à l'enquête de base D'autre part, l'allaitement prédominant est de 33 % dans cette même tranche d'âge ,
- l'introduction précoce d'autres aliments que le lait maternel avant 6 mois reste monnaie courante dans la zone d'enquête
- concernant la consommation d'aliments, près de 57 % des mères ont déclaré donner au moins 5 fois à manger par jour à leurs enfants ,
- la majorité des femmes (85 %) ne connaissent pas les aliments qui peuvent prévenir l'avitaminose A (dumdumi) comme à l'enquête de base, alors que la

proportion d'enfants ayant reçu la capsule de la vitamine A est assez élevée par rapport à la moyenne nationale (32 %),

- l'incidence de diarrhée chez les enfants les 2 dernières semaines est de 48 % contre 55 % à l'enquête de base, aucun des 23 enfants parmi les 130 âgés de 0-6 mois et allaités exclusivement au sein n'a eu de diarrhée alors que 47 parmi eux et non exclusivement allaités ont connu un épisode de diarrhée,
- Une majorité d'enfants reçoivent au moins la même quantité de lait maternel (72%), au moins la même quantité de liquide (92%) pendant leur épisode de diarrhée, la proportion de ceux qui ont reçu au moins la même quantité d'aliment solide est plus faible (30%),
- Les mères s'adressent beaucoup plus aux agents communautaires (64%) qu'aux formations sanitaires (4%) et aux marabouts/boka (2%) pour demander conseil lorsque leur enfant avait la diarrhée,
- Pres de 47% d'enfants ont reçu un traitement à base de TRO au cours de leur épisode de diarrhée,
- 51 % des mères connaissent les règles élémentaires d'hygiène de prévention de la diarrhée (se laver les mains, assurer une bonne qualité de l'eau à boire, allaitement exclusif jusqu'à 6 mois, utilisation de latrines et évacuation des selles),
- L'incidence de la fièvre chez les enfants a été de 27 % et 36% de ceux-ci ont reçu la dose normale pour le traitement à domicile,
- Pres de 71 % des mères enquêtées ont déclaré avoir pris de la chloroquine à titre prophylactique au cours de leur grossesse,
- Les mères enquêtées sont nombreuses (87%) à savoir que la vaccination contre le tétanos faite à une femme en âge de procréer protège la mère et l'enfant,
- Il y'a aussi une majorité des mères enquêtées (74%) qui connaissent qu'il faut au moins deux doses de vaccination anti tétanique à une femme enceinte pour protéger son enfant,
- 52% d'enfants de 12-23 mois ont été complètement vaccinés et 81% de femmes ont reçu au moins deux (2) doses de VAT

## II INTRODUCTION

Le Projet de Survie de l'Enfant (SANU YARA PN34), finance par l'USAID, dont les activités ont démarré en Septembre 1995 dans le département de Zinder, arrive à son terme en Septembre 1999 après quatre (4) ans d'intervention

Conformément à la politique de l'USAID, il sera effectuée une évaluation finale de ce Projet Afin de permettre à l'équipe qui sera chargée de cette évaluation finale de disposer de données quantitatives notamment des indicateurs clés permettant de mesurer et de comparer les résultats atteints par le Projet dans ses différentes composantes, il a été retenu de réaliser une enquête similaire à l'enquête de base qui a eu lieu avant le démarrage des activités du Projet en octobre 1995

Ce rapport présente donc les principaux résultats de cette enquête finale du Projet de Survie de l'Enfant (Projet SANU YARA PN34)

### **2 1 Généralités**

Le Projet de Survie de l'Enfant (SANU YARA PN34) touche trois (3) arrondissements du département de Zinder à savoir Magaria, Matameye et Mirriah Il a fait suite au Projet Santé Intégrée qui avait couvert les arrondissements de Magaria et Matameye de 1992 à 1995 Il couvre 70 villages contre 65 dans le Projet précédent

### **2 2 Buts et objectifs du Projet SANU YARA**

Le Projet SANU YARA (PN34) s'articule autour de quatre (4) composantes qui sont la **vaccination**, la **nutrition**, le **contrôle des maladies diarrhéiques** et le **paludisme** Il s'est fixé deux (2) buts généraux et plusieurs objectifs spécifiques par composante

#### **2 2 1 Buts du Projet**

Ils sont au nombre de deux (2), à savoir

- 1 Réduire les taux élevés de morbidité et de mortalité infantile liées aux maladies évitables par la vaccination, à la malnutrition, au paludisme et aux maladies diarrhéiques chez les enfants de moins de 5 ans dans les arrondissements de Magaria, Matameye et Mirriah à travers l'utilisation d'interventions pérennisables en survie de l'enfant ,
- 2 Renforcer les capacités du système de santé et instaurer des structures communautaires viables assurer l'impact à long terme des interventions de survie infantile

#### **2 2 2 Objectifs du Projet**

Le Projet s'est fixé plusieurs objectifs spécifiques par composante

#### 2 2 2 1 Objectifs au niveau de la vaccination

Quatre (4) objectifs spécifiques ont été retenus

- ❖ Augmenter de 20 à 50 % les mères qui savent que le vaccin anti-tétanique protège à la fois la mère et l'enfant
- ❖ Augmenter de 3 à 50 % les mères qui savent que la vaccination contre la rougeole se fait à 9 mois
- ❖ Augmenter de 12 à 55 % les enfants de 12 à 23 mois qui sont complètement vaccinés
- ❖ Augmenter de 36 à 55 % les femmes qui ont reçu au moins 2 doses de VAT

#### 2 2 2 2 Objectifs au niveau de la nutrition

Il y en a quatre (4)

- ❖ Augmenter de 11 à 30 % les enfants de moins de 24 mois nourris au sein au cours des 8 premières heures suivant la naissance
- ❖ Augmenter de 0 à 10 % les enfants de moins de 24 mois qui ont été exclusivement nourris au sein jusqu'à 6 mois
- ❖ Augmenter le % des enfants de 12-24 mois qui mangent au moins 5 fois par jour
- ❖ Augmenter le % des enfants de 6-24 mois qui prennent du Fura enrichi à l'huile

#### 2 2 2 3 Objectifs au niveau du contrôle des maladies diarrhéiques

Deux (2) objectifs spécifiques ont été retenus

- ❖ Augmenter de 56 à 75 % le % des enfants de moins de 24 mois ayant la même quantité de lait maternel ou plus au cours de leur épisode de diarrhée
- ❖ Augmenter de 42 à 60 % le % des enfants ayant reçu la TRO pendant leur dernier épisode de diarrhée

#### 2 2 2 4 Objectifs spécifiques au niveau du paludisme

Deux (2) objectifs spécifiques ont été fixés

- ❖ Augmenter de 20 à 60 % le % de cas de paludisme présumé chez les enfants de moins de 24 mois qui sont convenablement traités à domicile
- ❖ Augmenter de 17 à 30 % le % des femmes en grossesse qui prennent la chloroquine du troisième mois jusqu'à 6 semaines après l'accouchement

### 2 3 Localisation du projet SANU YARA

Le projet SANU YARA est exécuté dans le département de Zinder en République du Niger. Ce pays est limité au Nord par l'Algérie et la Libye, à l'Est par le Tchad, au Sud par le Nigeria et le Bénin et à l'Ouest par le Burkina Faso et au Nord-Ouest par le Mali.

Malgré une des plus vastes superficies d'Afrique de l'Ouest (1 267 000 km<sup>2</sup>), il est complètement enclavé, a un climat très rude et extrêmement chaud avec une température pouvant atteindre 40°C à l'ombre, une pluviométrie mal répartie dans l'espace et le

temps et dont les hauteurs moyennes sont comprises entre 200 et 600 mm par an. Hormis le fleuve Niger, qui traverse l'Ouest du pays sur 500 km, les autres cours d'eau sont surtout constitués de rivières semi-permanentes (la Komadougou Yobe au Sud-Est) et de lacs permanents (le lac Tchad au Sud-Est).

Les sols, en majorité ferrugineux tropicaux et hydromorphes et assez pauvres et pour la plupart désertiques, doivent nourrir une population essentiellement composée d'agriculteurs et d'éleveurs. L'économie du pays, dont l'agriculture constitue la principale richesse, est en crise depuis plus d'une décennie entraînant une paupérisation progressive de la population surtout des zones rurales qui vivent dans des conditions précaires.

Les 2/3 de la population vivent en dessous du seuil de pauvreté (DSCN 1994) et le pays est toujours classé parmi les derniers sur la base de l'indice de développement humain dans les rapports annuels du PNUD. Les études récentes (EDSN II 1998) ont relevé cet état de fait. Le département de Zinder, dont la population représentée en 1999 est près de 17% des 10 millions de Nigériens, bien que recelant d'énormes potentialités, avec des terres fertiles cultivables non exploitées et d'importantes ressources en eau souterraines et de surface (HLS Zinder 1998), figure parmi les régions du pays dont les indicateurs socio-économiques sont les plus bas (EDSN II 1998).

Il est subdivisé en cinq (5) arrondissements qui sont Goure, Magaria, Matameye, Mirriah et Tanout.

Le Projet SANU YARA intervient dans trois (3) de ces arrondissements (Magaria, Matameye et Mirriah) considérés comme les plus riches du département en potentialités et en ressources agro-sylvo-pastorales.

#### **2.4 Objectifs de l'enquête finale**

L'enquête finale a été retenue comme un des multiples outils qui vont guider l'équipe d'évaluation finale dans son appréciation des résultats du Projet SANU YARA. Elle sera un des documents de référence qui devront permettre à l'équipe d'évaluation finale de répondre à certaines questions importantes sur l'impact des activités réalisées par le Projet depuis 1995.

Trois (3) objectifs ont été fixés à l'enquête finale :

- fournir des informations actualisées sur les connaissances, attitudes et pratiques de la population cible en matière de santé-nutrition ainsi que le taux de couverture vaccinale,
- fournir des informations sur les connaissances, attitudes et pratiques des mères qui peuvent être utilisées pour la conception d'autres activités,
- fournir des données actuelles pour des fins de comparaison avec les données de base ou les données de sources secondaires.

Ce sont à peu près les mêmes objectifs qui avaient été retenus pour l'enquête de base.

### **III MATÉRIELS ET MÉTHODES**

Le souci de comparabilité des données de l'enquête finale, par rapport à l'enquête de base, a constitué une des préoccupations majeures dans la préparation, la conception et la réalisation de l'enquête finale. Ainsi, la même méthodologie des enquêtes CAP recommandée par l'Université Johns Hopkins et l'USAID, déjà utilisée en 1995 pour l'enquête de base, a été reconduite pour l'enquête finale Santé-Nutrition du Projet SANU YARA (PN34). Le plan et la structure du rapport d'analyse sont aussi identiques à ceux de l'enquête de base.

### 3 1 Echantillonnage

Comme pour l'enquête de base, l'échantillon de l'enquête finale est constitué de 300 femmes dont l'âge est compris entre 15 et 49 ans et qui ont un enfant de moins de 24 mois. Concernant l'échantillon, il a été d'abord procédé au tirage de 30 villages sur les 70 dans lesquels intervient le Projet SANU YARA (PN34) par la méthode de la proportion inégale (sondage par grappe). C'est ensuite sur le terrain, dans les villages tirés, que chaque équipe conduite par son contrôleur a opéré le tirage des 10 femmes éligibles (méthode de tire-bouchon), devant le chef de village ou son représentant avec l'assistance des agents communautaires de CARE International Zinder (Animatrices, matrones, secouristes, )

Tableau 3 1 Taille et couverture de l'échantillon

Arrondissements	Nbre de villages enquêtes	Nbre femmes enquêtées	de	Nbre d'enfants trouvés
Magaria	19	190		190
Matameye	9	90		90
Mirriah	2	20		20
<b>TOTAL</b>	30	300		300

Ainsi donc, les 30 villages prévus ont été visités et 300 femmes âgées de 15-49 ans et ayant un enfant de moins de 24 mois ont été effectivement enquêtées.

### 3 2 Questionnaire

Conformément à l'enquête de base, un seul type de questionnaire a été conçu pour l'enquête finale. Il s'agit d'un questionnaire femme structuré en six (6) parties destinées à recueillir des données sur les éléments ci-dessous :

- Identification (localisation des villages en fonction des CSI, Canton et Arrondissement),
- Caractéristiques socio-démographiques des femmes, de leurs enfants et de leurs conjoints (âge, état matrimonial, niveau d'instruction, activité),
- Nutrition pour collecter des informations sur les connaissances, attitudes et pratiques des mères en matière d'allaitement et de la nutrition des enfants et de leurs mères,
- les maladies diarrhéiques (prévalence, traitement et connaissances de la mère en matière de prévention),
- le paludisme (prévalence et traitement de la fièvre, connaissance et chimioprophylaxie),

- la vaccination (connaissances et couvertures vaccinales chez les femmes et les enfants)

Par rapport a l'enquête de base, les seules innovations apportees au questionnaire de l'enquête finale de 1999 portent sur un ajout de questions sur les caracteristiques socio-demographiques relatives au conjoint de la femme et sur l'environnement dans lequel vivent la femme et son enfant c'est-a-dire le menage, les recettes de sevrage et la suppression de toutes les questions sur la contraception et la garde des enfants

Dans l'ensemble, il a ete reconduit les mêmes questions avec les formulations de 1995 sauf lorsqu'il a ete juge necessaire d'apporter des ameliorations ou des precisions pour une meilleure comprehension des questions par les enquêtrices eu egard a l'importance des informations a collecter Dans la plupart des cas, l'esprit de la question a ete respecte Il s'est agi simplement d'adapter le questionnaire a la traduction faite en Haoussa, l'une des langues nationales parlees dans les zones d'intervention du Projet utilisee au cours des interviews

### **3 3 Formation du personnel de terrain**

Une formation theorique qui a dure 3 jours, a ete donnee a quinze (15) enquêtrices et cinq (5) contrôleurs du 20 au 22 Juillet 1999 Elle a porte sur les elements suivants

- un bref historique de CARE International et son domaine d'intervention ,
- CARE International au Niger ,
- et sur les objectifs du Projet SANU YARA,
- les objectifs specifiques de l'enquête,
- les rôles des contrôleurs et des enquêtrices,
- la methodologie (echantillonnage, choix des menages et principes de l'enquête)

Enfin, il a ete procede a la revue des questionnaires suivie de jeux de rôle et de traduction en Haoussa des differents modules

Après donc trois (3) jours de formation theorique, une enquête pilote d'une journee a ete organisee le 23 Juillet 1999 dans cinq (5) villages de la commune de Zinder pour familiariser encore davantage les enquêtrices et les contrôleurs a l'outil principal de collecte de donnees qu'est le questionnaire

Enfin une autre journee, celle du 24 Juillet 1999, a ete consacree aux corrections et amendements du questionnaire après l'experience vecue de l'enquête pilote

A l'issue de la formation, treize (13) enquêtrices et quatre (4) contrôleurs ont ete selectionnes Ce qui a permis de composer quatre (4) equipes dont trois (3) constituees de trois (3) enquêtrices chacune et une composee de quatre (4) enquêtrices

### **3 4 Logistique**

Alors que pour l'enquête de base douze (12) vehicules avaient ete mobilises, l'enquête finale en a utilise seulement cinq (5) dont quatre (4) pour les equipes de terrain et un (1) pour la supervision

Chaque equipe a reçu du materiel de camping (lampes, moustiquaires, lits de camp, caisse a pharmacie et fournitures)

### **3 5 Enquête de terrain**

La collecte de données sur le terrain a duré cinq (5) jours du 26 au 30 Juillet 1999. Les 30 villages ont été répartis entre les quatre (4) équipes. Chacune des enquêtrices avait administré trois à quatre questionnaires selon les cas par village.

Les contrôleurs avaient pour mission de tirer les femmes éligibles sur le terrain, de vérifier la qualité des données recueillies par les enquêtrices et de veiller au respect des consignes données pendant la formation.

Une équipe de supervision, constituée du Consultant chargé de la conduite des travaux de l'enquête, du responsable du Projet SANU YARA (PN34) et du responsable du système d'information, a effectué un suivi des équipes sur le terrain dès leur départ de Zinder le 26 Juillet 1999 et ce jusqu'à leur retour le 30 Juillet 1999.

### **3 6 Dépouillement et interprétation**

Après la vérification des questionnaires sur le terrain par les contrôleurs et l'équipe de supervision, un autre contrôle a été effectué au bureau. Il s'agissait surtout de contrôle de cohérence de certaines variables importantes (âge, année de naissance, allaitement exclusif, vaccination etc.) Ainsi, les 300 questionnaires ont été corrigés et validés.

Ensuite est intervenue la saisie des questionnaires qui a démarré le 29 Juillet sur le logiciel d'exploitation EPI INFO 6. La saisie a continué le 31 Juillet 1999 après le retour des contrôleurs de terrain avec deux machines supplémentaires mobilisées à cet effet. Elle a duré finalement jusqu'au 03 Août 1999. Les contrôles de cohérence ont été poursuivis après la saisie des données et l'édition des premiers tableaux, toujours sur l'âge, l'année de naissance, la vaccination, l'allaitement exclusif et ce jusqu'au 04 Août 1999.

La rédaction du rapport de l'enquête finale n'a donc démarré que le Vendredi 05 Août 1999.

Contrairement à 1995, il n'a pas été procédé à un dépouillement manuel et à une interprétation consécutive des résultats.

Pour l'enquête finale, l'exploitation a été informatisée et ce sont les tableaux qui en sont issus qui permettent de faire l'analyse des données.

## **IV RESULTATS**

L'analyse des résultats issus de cette enquête finale du Projet SANU YARA portent sur les principales caractéristiques socio-démographiques, et les connaissances, attitudes et pratiques concernant la nutrition et l'allaitement maternel, les maladies diarrhéiques, le paludisme et enfin sur la vaccination des mères et de leurs enfants de moins de 24 mois.

### **4 1 Caractéristiques socio-démographiques**

#### **4 1 1 Repartition des mères**

La structure par âge des 300 mères enquêtées présente une caractéristique majeure : la prédominance des mères âgées de 19 à 24 ans qui sont près de 38% de l'échantillon total. Ce sont donc essentiellement des mères très jeunes qui ont été tirées et interviewées dans l'échantillon. Cette structure est sensiblement

similaire a celle observee par l'enquête de base en 1995. Même si pour les tranches d'âges 25-29 ans et 30-34 ans on a constate une legere regression par rapport a l'enquête de base

La majorite de la population enquêtee est donc extrêmement jeune. Plus de 57% des femmes interviewees ont un âge compris entre 19 et 30 ans et pres de 70% ont moins de 30 ans

A l'enquête de base en 1995, les proportions etaient respectivement de 58% pour les femmes de 19 a 30 ans et pres de 69% avaient moins de 30 ans

La repartition des meres a l'EDSN II en 1998 n'est que tres legerement differente de ces deux enquêtes puisque seules les proportions des meres de 15-19 ans (23%) et 20-24 ans (18%) ne sont pas proches

**Tableau 4 1** Repartition des meres

Tranches d'âge(annees révolues)	Fréquence	Pourcentage (%)
15-18 ans	37	12,3
19-24 ans	113	37,7
25-29 ans	59	19,7
30-34 ans	55	18,3
35-39 ans	23	7,7
40-44 ans	10	3,3
45-49 ans	3	1,0
<b>TOTAL</b>	<b>300</b>	<b>100</b>

#### 4 1 2 Repartition des enfants

La proportion des enfants âgés de 12 a 23 mois est de 36% en 1999 contre 34% en 1995 et c'est l'effectif le plus eleve. Les enfants âgés de 0-3 mois representent 23% de l'échantillon en 1999 contre 28% en 1995. L'échantillon des enfants selon l'âge est donc pratiquement semblable

**Tableau 4 2** Repartition des enfants

(mois révolus)	Frequence	(%)
0-3 mois	70	23,3
4-5 mois	41	13,7
6-11 mois	81	27,0
12-23 mois	108	36,0
<b>TOTAL</b>	<b>300</b>	<b>100</b>

#### 4 1 3 Niveau d'instruction des meres

La particularite des resultats sur l'instruction des meres est qu'on constate que la proportion des meres qui n'ont aucune instruction ne represente que 52% de l'effectif total de l'échantillon alors qu'elle etait de 76% a l'enquête de base de 1995 et 85% a l'EDSN II de 1998 pour l'ensemble du pays, 92% pour le milieu rural et 55% pour le milieu urbain. Le niveau d'instruction des meres observe en 1999 est donc legerement meilleur que celui de l'enquête de base de 1995, de ceux de l'EDSN II en 1998 de l'ensemble du pays et du milieu rural. Il est par contre proche du niveau d'instruction observe a l'EDSN II en 1998 pour le milieu urbain

La proportion des femmes ayant le niveau primaire est égale à 17% contre 16% en 1995 à l'enquête de base, 10% à l'EDSN II en 1998 pour l'ensemble du pays, 7% pour le milieu rural et 23% pour le milieu urbain

Enfin, une autre particularité majeure réside dans l'effectif élevé des femmes ayant fréquenté l'école coranique ou ayant été alphabétisées 28% contre seulement 5% en 1995

**Tableau 4 3 Niveau d'instruction des meres**

Niveau d'instruction	Frequenc e	Pourcentage(%)
Aucun	155	51 7
Primaire	50	16 7
Secondaire	11	3 7
Superieur	0	0 0
Autres	84	28 0
<b>TOTAL</b>	<b>300</b>	<b>100</b>

#### 4 1 4 Activites generatrices de revenu

Les résultats permettent de constater que plus de la moitié des femmes (53%) ont le petit commerce comme activité génératrice de revenu. La proportion était de 60% en 1995. Le petit élevage n'est que de 6% contre 26% en 1995. Celles qui ne font aucune activité sont autour de 25% contre 27% en 1995.

**Tableau 4 4 Activites generatrices de revenu**

Activités	Frequenc e	(%)
Aucune	75	25 0
Petit commerce	158	52 7
Jardinage	0	0 0
Petit élevage	18	6 0
Activité artisanale	20	6 7
Autres	29	9 7
<b>TOTAL</b>	<b>300</b>	<b>100</b>

#### 4 1 4 Etat matrimonial des femmes

La majorité des femmes qui ont été interviewées sont mariées soit 97% dont 65% appartiennent à des foyers monogames et 32% polygames. Ces proportions étaient respectivement de 84%, 62% et 38% à l'EDSN II 1998 pour l'ensemble du pays. Les données de l'enquête finale sur l'état matrimonial actuel des femmes enquêtées sont donc assez semblables à celles observées par l'EDSN II en 1998.

**Tableau 4 7 Etat matrimonial des femmes enquêtees**

Etat matrimonial	Frequenc e	(%)
Mariee monogame	195	65 0
Mariee polygame	96	32 0

Separee	1	0 3
Divorcee	6	2 0
Veuve	2	0 7
Celibataire	0	0 0
<b>TOTAL</b>	<b>300</b>	<b>100</b>

#### 4 1 6 Niveau d'instruction des conjoints

Les conjoints des meres enquetees ont un niveau d'instruction nettement meilleur a celui de leurs epouses. Aussi, les conjoints sans aucune instruction ne sont que de 23% contre 52% pour les femmes, soit pres de deux fois plus. Ceux qui ont le niveau secondaire sont assez nombreux, 11% contre 4% pour les femmes.

Mais la particularite la plus frappante c'est la proportion tres forte (51%) de ceux qui ont fait l'ecole coranique ou qui ont ete alphabetsises. A l'EDSN II 1998, les hommes enquetees sans aucune instruction representaient 71% et ceux qui avaient le niveau secondaire 11%.

Tableau 4 6 Niveau d'instruction des conjoints

Niveau d'instruction	Frequence	Pourcentage (%)
Aucun	66	22 6
Primaire	43	14 7
Secondaire	31	10 6
Superieur	2	0 7
Autres	150	51 4
<b>TOTAL</b>	<b>292</b>	<b>100</b>

#### 4 1 7 Provenance de l'eau de boisson du menage

Selon les donnees recueillies, les menages dans lesquels vivent les meres enquetees et leurs enfants s'approvisionnent en eau de boisson principalement au niveau des forages (42%), des puits cimentes non fermes (40%) et des puits traditionnels (14%).

Si on combine les reponses sur les robinets, les forages et les puits cimentes fermes, on releve que pres de 46% seulement des meres et des enfants enquetees ont acces a l'eau potable salubre protegee, ce qui veut dire que de 54% n'ont pas d'eau potable salubre a leur disposition.

En 1998, a l'EDSN II, on a denombre que pres de 14% des menages s'approvisionnaient principalement aux forages pour l'eau de boisson, 13% utilisaient des robinets et 56% des puits publics. Dans l'ensemble, il y avait pres de 74% des menages ruraux qui n'avaient pas d'eau potable salubre a leur disposition.

Tableau 4 7 Provenance de l'eau de boisson des menages

Provenance de l'eau de boisson	Frequence	Pourcentage(%)
Robinet	3	1 0
Forage	125	41 7
Puits cimentee ferme	9	3 0
Puits cimentee non ferme	120	40 0

Puits traditionnel	42	14 0
NSP	1	0 3
<b>TOTAL</b>	<b>300</b>	<b>100</b>

#### 4 1 8 Utilisation du revenu du menage

Les donnees recueillies sur l'utilisation du revenu des menages, bien que difficilement collectees du fait de la difficulte de la question et de la meconnaissance des femmes sur la destination des ressources du menage, donnent quelques indications utiles

- l'alimentation absorbe la majeure partie des revenus des menages pour plus de 50% ,
- les depenses sur la sante se situe entre 10 et 15% seulement des ressources des menages,
- l'education, l'habillement et les ceremonies sont les autres rubriques auxquelles les menages destinent leurs revenus

#### 4 1 9 Utilisation des pieces pour dormir

Pour apprecier les conditions d'habitat dans lesquels vivent les meres et leurs enfants et le degre de promiscuite selon les cas, il a ete demande aux enquetees de fournir des donnees sur le nombre de pieces que leurs menages utilisent pour dormir

Dans la majeure partie des menages, il y a une (1) seule piece (35%) ou deux (2) pieces (37%) , ce qui fait que pour plus de 72% des meres enquetees, leurs conjoints et les autres membres du menage utilisent une a deux pieces pour dormir

Or, la taille moyenne des menages dans les zones de l'enquete finale est de 7 personnes soit pres de 4 personnes par piece pour dormir

On constate d'ailleurs que les menages de 5-7 personnes representent 36%, de plus de 7 personnes 32%, de moins de 4 personnes 32%

Il y a donc pres de 68% des menages dont la taille est au moins egale a 5 personnes

**Tableau 4 8**                      **Utilisation des pieces pour dormir pour les menages**

<b>Nombre de pieces</b>	<b>Frequenc e</b>	<b>(%)</b>
1	105	35 0
2	111	37 0
3	42	14 0
4	26	8 7
5	9	3 0
6	5	1 7
8	1	0 3
10	1	0 3
<b>TOTAL</b>	<b>300</b>	<b>100</b>

**Tableau 4 9**                      **Taille des menages**

<b>Taille des menages</b>	<b>Fréquenc e</b>	<b>(%)</b>
- 4 personnes	95	31 7
5-7 personnes	108	36 0

+ 7 personnes	97	32 3
<b>TOTAL</b>	<b>300</b>	<b>100</b>

#### 4 2 Allaitement maternel

Les données recueillies sont basées exclusivement sur les déclarations des mères pour l'état nutritionnel et l'allaitement maternel et sur l'exploitation des divers documents de santé (carnet de santé, carte de micro-nutriments )

##### 4 2 1 Allaitement actuel au sein

Concernant l'allaitement au sein, 97% des mères interviewées ont déclaré donner le sein à leurs enfants au moment de l'enquête comme à l'enquête de base

Tableau 4 10 Allaitement actuel au sein

Allaitement actuel au sein	Fréquence	Pourcentage (%)
Oui	291	97 0
Non	9	3 0
<b>TOTAL</b>	<b>300</b>	<b>100</b>

##### 4 2 2 Temps de mise au sein après la naissance

La majorité des mères enquêtées (53%) ont déclaré avoir mis leurs enfants au sein dans la première heure après la naissance contre seulement 11% à l'enquête de base et 28% pour l'ensemble du Niger (25% pour le milieu rural et 47% pour le milieu urbain à l'EDSN II en 1998) Entre 1 heure et 8 heures la proportion est de 25% contre 15% à l'enquête de base tandis que pour 8 heures et plus c'est 21% contre 74%

Ainsi, on constate qu'à l'enquête finale, au cours des 8 1<sup>ères</sup> heures après la naissance, près 78% d'enfants ont été allaités au sein contre 26% seulement à l'enquête de base

Tableau 4 11 Temps de mise des enfants au sein après la naissance

Temps de mise au sein après la naissance	Fréquence	Pourcentage (%)
1ere heure	160	53 3
1-8 heure	74	24 7
8 heures et +	63	21 0
NSP	3	1 0
<b>TOTAL</b>	<b>300</b>	<b>100</b>

Le niveau d'instruction apparaît comme une variable discriminatoire dans la rapidité de mise au sein après la naissance de l'enfant

Ainsi, les mères ayant le niveau secondaire avec une proportion de 73% et celles du niveau primaire avec 64% sont plus promptes, dès la première heure suivant la naissance, à mettre les enfants au sein contre 52% pour celles qui ont été à l'école coranique ou alphabétisées et 49% pour celles qui n'ont aucune instruction

À l'EDSN II en 1998, ces proportions étaient de 47% pour le secondaire et plus, 39% pour le niveau primaire et 27% pour aucune instruction

**Tableau 4 12** Temps de mise des enfants au sein apres la naissance selon le niveau d'instruction

Temps de mise des enfants Au sein après la naissance Niveau d'instruction des mères	1ere heure	1-8 heures	8 heures et plus
Aucun	76	38	41
Primaire	32	13	2
Secondaire	8	1	2
Autres	44	22	18
<b>TOTAL</b>	<b>160</b>	<b>74</b>	<b>63</b>

#### 4 2 2 Allaitement exclusif

La notion d'allaitement exclusif bien que difficile a apprehender, peut s'apprecier de plusieurs maniere a partir des informations recueillies avec les declarations des meres. Ainsi, parmi les 170 enfants âges de 6 a 23 mois, on denombre 96 enfants soit 56 % chez qui les meres ont declare n'avoir commence a donner autre chose que le lait maternel qu'apres 6 mois.

D'autre part, parmi les 130 enfants âges de 0 a 6 mois, on note 23 enfants soit 18 % qui sont exclusivement allaites au sein (ne reçoivent même pas de l'eau au moment de l'enquête) et 43 enfants soit 33 % qui en plus de lait maternel reçoivent de l'eau uniquement, donc chez qui l'allaitement est predominant (lait maternel + eau).

**Tableau 4 13** Allaitement exclusif

Allaitement exclusif	Frequence	Pourcentage (%)
Oui	23	17 7
Non	67	82 3
<b>TOTAL</b>	<b>130</b>	<b>100</b>

**Tableau 4 14** Repartition des enfants par tranche d'âge selon qu'ils aient commence a prendre d'autres aliments que le lait maternel tous les jours

Tranche d'âge	Frequence	(%)
0-3 mois	81	27 0
4-5 mois	55	18 3
6 mois et +	96	32 0
Uniquement au lait	66	22 0
NSP	2	0 7
<b>TOTAL</b>	<b>300</b>	<b>100</b>

Malgre cela, la pratique d'introduction precoce d'autres aliments en plus du lait maternel reste monnaie courante dans la region. 74% des enfants âges de 0-3 mois boivent actuellement de l'eau, ainsi que 85% de ceux âges de 4-5 mois. En plus de cette eau, d'autres aliments tels que la bouillie et le lait de vache ou de chevre sont donnees a ces enfants. Mais les resultats d'aujourd'hui sont meilleurs que ceux de

l'enquête de base ou la proportion des enfants qui étaient alimentés à ces âges était beaucoup plus élevée

Tableau 4 15 Aliments donnes actuellement

Age (mois) Aliments	0-3		4-5		6-11		12-23	
	Eff	%	Eff	%	Eff	%	Eff	%
Eau	52	74 3	35	85 4	81	100	108	100
Lait de vache ou de chevre	3	17 6	2	6 9	12	15 2	32	29 6
Bouillie	12	70 6	23	76 7	66	83 5	96	88 9
Fruits	0	0 0	1	3 3	23	29 1	59	54 6
Carottes, courge, papaye, mangue	0	0 0	1	3 3	12	15 4	49	45 4
Viande, poisson	0	0 0	0	0 0	26	32 9	78	72 9
Oeufs, autres produits a base de lait	0	0 0	1	3 3	19	24 1	56	51 9
Miel, sucre	3	17 6	8	26 7	48	60 8	85	78 7
Feuilles vertes	0	0 0	0	0 0	25	31 6	82	75 9
Arachide, haricot	0	0 0	0	0 0	33	41 8	89	82 4

#### 4 2 3 Allaitement et alimentation

Plusieurs questions qui se completent ont ete posees pour apprehender l'alimentation des enfants des meres enquetees. Concernant *Fura da mai*<sup>25</sup>, une recette de sevrage introduite chez les enfants de plus de 6 mois, on denombre 103 meres parmi 234 soit 44 % qui ont declare avoir donne au moins une fois le Fura da mai (23 % l'ont donne plus de 3 fois). En plus, pres de 57 % des meres declarent donner a manger au moins 5 fois par jour a leurs enfants contre 50 % a l'enquete de base.

<sup>25</sup> Liquide compose a partir de la farine de mil cuite qui represente un plat traditionnel tres consommé au Niger. Une étude nutritionnelle a montré que si on y ajoute de l'huile d'arachide ce plat devient plus equilibre en energie pour les enfants apres 6 mois.

**Tableau 4 15**                      Fréquence de consommation de *Fura da mai* les derniers jours

Nombre de consommation	Fréquence	(%)
Pas consomme	131	56 0
1 fois	11	4 7
2 fois	16	6 8
3 fois et +	23	9 8
Autres	53	22 6
<b>TOTAL</b>	<b>300</b>	<b>100</b>

La majorité des femmes enquêtées ne connaissent pas les aliments qui peuvent prévenir l'avitaminose A (*dundumi*). En effet, seuls 15% ont répondu positivement contre 16% à l'enquête de base. Pourtant, la proportion des enfants ayant reçu la vitamine A selon les documents de santé est très élevée (32%), près de deux fois de plus qu'à l'enquête de base (18%) et plus élevée qu'à l'EDSN II 1998 (20%) où les déclarations des mères ont été incluses.

**Tableau 4 16**                      Connaissance de l'avitaminose

Connaissance	Fréquence	Pourcentage (%)
Oui	45	15 0
Non	131	43 7
NSP	124	41 3
<b>TOTAL</b>	<b>300</b>	<b>100</b>

**Tableau 4 16**                      Aliments cités pour la prévention de l'avitaminose

Aliments cités	Fréquence	(%)
Feuilles vertes	16	17 6
Foie	19	20 9
Lait maternel	1	1 1
Œuf	6	6 6
Mangue	7	7 7
Courge	3	3 3
Carotte	10	11 0
Tomate	11	12 1
Autres	18	19 8
<b>TOTAL</b>	<b>91</b>	<b>100</b>

Concernant l'alimentation de la femme enceinte, pres de 74% d'entre elles ont declare qu'elle doit être differente de celle des autres femmes

**Tableau 4 17** Alimentation de la femme enceinte ou allaitante par rapport aux autres femmes

Alimentation	Frequence	Pourcentage (%)
Consomme feuilles vertes	184	54 1
<i>Fura da mai</i> 4 fois/semaine	83	24 4
Autres	71	20 9
NSP	2	0 6

Pour ce qui est d'autres mesures que la femme enceinte ou allaitante doit prendre differemment des autres femmes, 41% des enquetees ont declare qu'elle doit augmenter son temps de repos et 53% estiment qu'elle doit diminuer sa charge de travail, soit 94% qui pensent qu'elle doit se reposer plus que les autres femmes

**Tableau 4 18** Mesures a prendre par une femme allaitante ou enceinte

Mesures	Frequence	(%)
Augmenter son temps de repos	123	31 0
Diminuer sa charge de travail	244	61 5
Autres	16	4 0
NSP	14	3 5

### 4 3 Contrôle des maladies diarrhéiques

Il ressort des donnees recueillies que 143 enfants, soit 48%, ont eu la diarrhee durant les deux dernieres semaines Il y en a eu 55% a l'enquete de base et 38% ont ete observes pour l'ensemble du Niger (39% pour le milieu rural et 32% pour le milieu urbain et 46% pour la region de Zinder/Diffa) en 1998 a l'EDSN II

**Tableau 4 19** Episode de diarrhee durant les deux dernieres semaines

Cas de diarrhee	Frequence	(%)
Oui	143	47 7
Non	157	52 3
<b>TOTAL</b>	<b>300</b>	<b>100</b>

Il est important de souligner que les resultats de l'enquete indiquent que parmi les 130 enfants ages de 0-6 mois, il y'en a 23 soit 18 % qui sont allaites exclusivement au sein maternel et dont aucun d'eux n'a connu un episode de diarrhee les deux dernieres semaines Par contre, parmi les 107 de la même tranche d'age qui ne sont pas exclusivement allaites au sein, 47 soit 44 % ont connu un episode de diarrhee au cours des deux dernieres semaines

**Tableau 4 20** Diarrhee et allaitement exclusif

<b>Exclusif Diarrhee</b>	<b>Oui</b>	<b>Non</b>	<b>TOTAL</b>
Oui	0	143	143
Non	23	134	157
<b>TOTAL</b>	<b>23</b>	<b>277</b>	<b>300</b>

Il faut souligner que pendant leur episode de diarrhee des deux dernieres semaines precedant l'enquete, 52 % des 143 enfants enquetes ont ete allaites comme d'habitude contre 49% a l'enquete de base et 20% plus que d'habitude contre 7% a l'enquete de base

Il y a donc pres de 72% d'enfants ayant eu la diarrhee qui ont continue a recevoir au moins la même quantité de lait maternel contre 56% a l'enquete de base. Ceux qui ont reçu moins que d'habitude ne representent que 24% contre 42% a l'enquete de base

**Tableau 4 21** Diarrhee et quantité de lait maternel donne

<b>Nombre de fois de lait donné</b>	<b>Frequenc e</b>	<b>(%)</b>
1	74	51.7
2	28	19.6
3	34	23.8
4	1	0.7
5	6	4.2
<b>TOTAL</b>	<b>143</b>	<b>100</b>

Pour ce qui est du liquide donne a boire, 51% ont reçu le même nombre de fois contre 29% a l'enquete de base, 36% plus que d'habitude contre 63% a l'enquete de base. Il y a donc 89% d'enfants qui ont reçu au moins la même quantité de liquide pendant la diarrhee contre 92% a l'enquete de base

**Tableau 4 22** Diarrhee et quantité de liquide donne

<b>Nombre de fois</b>	<b>Frequenc e</b>	<b>(%)</b>
Même nombre de fois que d'habitude	73	51.0
Plus frequemment que d'habitude	52	36.4
Moins frequemment que d'habitude	13	9.1
Arrête complètement	4	2.8
NSP	1	0.7

<b>TOTAL</b>	<b>143</b>	<b>100</b>
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Enfin, concernant la consommation d'aliments solides, 25% ont mangé la même quantité que d'habitude contre 32% à l'enquête de base, 5% plus que d'habitude contre 5% en 1995. Il y a donc 30% d'enfants qui ont reçu au moins la même quantité d'aliments solides pendant la diarrhée contre 37% en 1995.

**Tableau 4 23** Diarrhée et consommation d'aliments solides

<b>Nombre de fois</b>	<b>Fréquence</b>	<b>(%)</b>
Même nombre de fois que d'habitude	35	24,5
Plus fréquemment que d'habitude	7	4,9
Moins fréquemment que d'habitude	40	28,0
Arrête complètement	14	9,8
L'enfant n'a pas commencé à manger	47	32,9
<b>TOTAL</b>	<b>143</b>	<b>100</b>

La réaction des mères face à la diarrhée est appréciée par les mesures qu'elles prennent notamment les conseils qu'elles demandent. Selon les mères, elles se sont surtout adressées pour les conseils, aux secouristes (35 %), matrones (18 %), animatrices (11 %), aux formations sanitaires (4%) ou aux marabouts/boka (2%) lorsque leurs enfants avaient eu la diarrhée. À l'enquête de base, les enquêtées étaient près de 57% à demander conseils auprès des formations sanitaires et 11% aux marabouts/boka.

Ainsi donc les femmes font recours aux agents communautaires (secouristes, matrones et animatrices) dans 64 % des cas pour avoir des conseils sur le traitement de la diarrhée contre 23% à l'enquête de base.

**Tableau 4 24** Diarrhée et conseils

<b>Demande de conseils</b>	<b>Fréquence</b>	<b>(%)</b>
Formations sanitaires	4	4,2
Secouristes	33	34,7
Matrones	17	17,9
Animatrices	10	10,5
Agents de terrain CARE	14	14,7
Pharmacie et dépôts pharmac	1	1,1
Marabouts/boka	2	2,1
Voisins/Parents	14	14,7
<b>TOTAL</b>	<b>95</b>	<b>100</b>

Parmi les enfants qui ont eu la diarrhée au cours des 2 dernières semaines précédant l'enquête 33 % ont reçu un traitement à base des solutions de rehydratation orale (TRO = ESS ou SRO ou *shegue*<sup>26</sup> ou solution à base de mil)

<sup>26</sup> Dérivé liquide de la préparation du Fura (boule) qu'on laisse refroidir pour donner à l'enfant qui a la diarrhée

**Tableau 4 25** Diarrhee et traitement reçu

Traitement reçu	Frequence	(%)
Aucun	26	13 0
ESS	48	24 0
SRO	24	12 0
Shegue	20	10 0
Solution a base de mil	2	1 0
Decoctions	14	7 0
Medicaments	42	21 0
Autres	24	12 0

C'est la diarrhee de plus de trois (3) jours qui pousse les meres a demander conseils (21%) ainsi que la tres grande fatigue (25%), les signes de deshydratation (17%) et la perte d'appetit (15%) A l'enquête de base ce sont presque les même symptomes et signes qui avaient ete cites, diarrhee de plus de 3 jours (53%), grande fatigue (28%), perte d'appetit (16%) avec un element different qu'est la fièvre (23%)

**Tableau 4 26** Diarrhee et signes ou symptômes conduisant a demander conseils

Symptômes et signes	Frequence	(%)
Vomissements	44	6 9
Fievre	63	9 8
Diarrhee de plus de trois jours	133	20 7
Signes de deshydratation	106	16 5
Sang dans les selles	17	2 7
Tres grande fatigue	157	24 5
Perte d'appetit	96	15 0
NSP	25	3 9

Sur les 300 meres enquetes, 203 connaissent les regles elementaires d'hygiene de prevention de la diarrhee soit 68 % (se laver les mains, assurer une bonne qualite de l'eau a boire, allaitement exclusif jusqu'a 6 mois, utilisation de latrines et evacuation des selles)

**Tableau 4 27** Diarrhee et prevention

Prevention	Fréquence	(%)
Se laver les mains plusieurs fois/jour	43	8 6
Allaitement exclusif jusqu'a 6 mois	39	7 8
Utilisation de latrines et evacuation des selles	5	1 0
Assurer une bonne qualite de l'eau a boire	24	6 8
Assurer la proprete des aliments	92	18 4
Gris-gris	122	24 4
Ne peut rien faire	13	2 6
Autres	108	21 6

NSP	45	90
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#### 4 4 Paludisme

##### 4 4 1 Mesures de prévention du paludisme chez les enfants

Concernant les mesures de prevention du paludisme, les moustiquaires ont ete citees a 28% contre 25% a l'enquête de base , l'assainissement a 16% contre 4% en 1995 , l'insecticide a 26% contre 3% , enfin la chloroquine a ete citee a 12% contre 26% a l'enquête de base

Tableau 4 28 Mesures de prevention du paludisme chez les enfants

Prévention	Fréquence	(%)
Assainissement	88	15 9
Moustiquaire	156	28 3
Insecticide	143	25 9
Chloroquine	67	12 1
Ne peut rien faire	13	2 4
Autres	58	10 5
NSP	27	4 9

##### 4 4 2 Traitement du paludisme chez les enfants

La prevalence de la fièvre est de 27% parmi les enfants contre 72% en 1995 Parmi les enfants qui ont eu la fièvre, 65% ont reçu la chloroquine contre 70% a l'enquête de base et 9% ont reçu d'autres médicaments contre 22% a l'enquête de base

Parmi les enfants qui ont ete traites a la chloroquine a domicile au cours de leur episode de fièvre, 36% ont reçu la dose normale qui est conforme a la brochure " traitement du paludisme a domicile" du Programme National de Lutte contre le Paludisme au Niger

Tableau 4 29 Medicament donne pour traiter le paludisme chez les enfants

Traitement	Frequence	(%)
Chloroquine	53	64 6
Autres médicaments	8	9 8
Rien fait	21	25 6

#### 4 4 3 Grossesse et prévention du paludisme (chimio prophylaxie)

71% des meres enquetees ont declare avoir pris de la chloroquine a titre prophylactique pendant leur grossesse Et ce sont surtout les femmes instruites notamment celles ayant le niveau secondaire (91%) et celles ayant le niveau primaire (84%) qui font cette prevention contre 68% parmi celles qui n'ont aucune instruction

Tableau 4 30 Prevention du paludisme pendant la grossesse

Chloroquine	Fréquence	(%)
Oui	212	70 7
Non	87	29 0
NSP	1	0 3
<b>TOTAL</b>	<b>300</b>	<b>100</b>

Tableau 4 31 Prevention du paludisme pendant la grossesse selon le niveau d'instruction

Niveau d'instruction Chloroquine	Aucun	Primaire	Secondaire	Autres	TOTAL
Oui	105	42	10	55	212
Non	50	8	1	28	87
NSP	0	0	0	1	1
<b>TOTAL</b>	<b>155</b>	<b>50</b>	<b>11</b>	<b>84</b>	<b>300</b>

#### 4 5 Vaccination

Les donnees relatives a la vaccination ont ete recueillies a partir des differents documents de sante (carnets, cartes et registres) au moment de l'enquete et pour l'appréciation des connaissances des femmes a partir de leurs reponses lors des interviews

##### 4 5 1 Connaissances des meres sur la vaccination

Sur les 300 femmes de l'échantillon, 87% ont declare que c'est pour proteger l'enfant et la mere que la vaccination contre le tetanos est faite aux femmes en âge de procreer contre 27% a l'enquete de base

Ensuite, 28% des femmes enquetees ont repondu qu'il faut 2 doses de vaccination a une femme enceinte pour qu'elle puisse proteger son enfant contre le tetanos et 46% plus de 2 doses. Donc, il y a pres de 74% des femmes enquetees qui affirment que le nombre de doses de vaccination de tetanos pour qu'une femme enceinte puisse proteger son enfant est egale au moins a 2 alors que seules 49% le savaient a l'enquete de base

Enfin, pour l'âge de vaccination de l'enfant contre la rougeole, seuls 23% ont repondu que c'est a 9 mois. En considerant que la vaccination de la rougeole peut se faire a partir de 6 mois en cas d'épidémie, on a 40 % de meres qui ont repondu que cette vaccination se fait entre 6 et 9 mois

Tableau 4 32 Raisons de la vaccination des femmes en âge de procreer contre le tetanos

Raisons	Frequence	(%)
Pour proteger l'enfant et la mere	261	87 0
Pour proteger l'enfant uniquement	14	4 7
Pour proteger la mere uniquement	9	3 0
NSP	16	5 3
<b>TOTAL</b>	<b>300</b>	<b>100</b>

Tableau 4 33 Nombre de doses de vaccination a une femme enceinte pour proteger son enfant contre le tetanos

Nombre de doses	Fréquence	(%)
Aucune	1	0 3
1 dose	28	9 3
2 doses	84	28 0
Plus de 2 doses	137	45 7
NSP	50	16 7
<b>TOTAL</b>	<b>300</b>	<b>100</b>

Tableau 4 34 Age auquel un enfant doit être vaccine contre la rougeole

Age (en mois)	Frequenc e	(%)
0-5	107	36
6-8	52	17
9	69	23
Plus de 9	4	1
NSP	68	23
<b>TOTAL</b>	<b>300</b>	<b>100</b>

### **5 5 2 Vaccination des mères**

Il ressort des donnees recueillies que 85% des meres enquetees ont un carnet de sante contre 46% a l'enquete de base Parmi ces meres, il y en a eu 243 ( 94%), qui ont reçu au moins deux (2) doses de VAT contre 78% a l'enquete de base

### **4 5 3 Vaccination des enfants**

Parmi les enfants, 227 avaient un carnet de sante soit 76% contre 40% a l'enquete de base Les proportions de vaccins suivantes ont ete observees

- BCG 208 soit 92 %
- POLIO1 190 soit 84 %
- POLIO2 148 soit 65 %
- POLIO3 105 soit 46 %
- DTC1 192 soit 85 %
- DTC2 148 soit 65 %
- DTC3 103 soit 45 %
- ROUVAX 107 soit 47 %

L'accessibilite a la vaccination est de 85 % (192 enfants sur 227 ont eu le DTC1)

Pour les vaccinations necessitant un seul contact (rougeole BCG), les couvertures sont pour le BCG 92 % et la rougeole 47 % Le taux de deperdition est egal a  $(192-103)/192 = 46 \%$ , il etait de 50 % a l'enquete de base

A l'enquete de base en 1995, les taux de couverture vaccinale pour la rougeole et le BCG etaient respectivement de 34% et 45% Pour la POLIO et la DTC, le taux etait de 20%

En 1998 a l'EDSN II, ces taux etaient de 47% pour le BCG et 38% pour la rougeole

La couverture vaccinale chez les enfants de 12-23 mois est de 52% (56 enfants sur 108)

## **V DISCUSSIONS**

La comparaison des donnees recueillies lors de l'enquete finale avec le resultats de l'enquete de base et de l'EDSN II 1998 permet d'apprécier le niveau des principaux indicateurs socio-demographiques mesurant les resultats atteints par le Projet

Il convient de souligner que l'enquete a eu lieu en Juillet, en pleine periode de soudure, et donc de difficultes economiques et alimentaires pour les populations des zones rurales Est-ce que cela a une incidence sur les resultats, la question reste posee

La methodologie utilisee pour le tirage de l'echantillon notamment la methode de tire-bouchon pourrait avoir introduit des biais sur les resultats

Les villages ruraux du Niger, dans la majorite, sont eparpilles dans les champs Il est difficile de trouver le "milieu" ou le "centre" des villages surtout que ce choix est fait en collaboration avec le chef de village ou son representant qui ont tendance a guider les equipes en fonction de leur propre appreciation du "centre" du village

Les concessions les plus proches peuvent être habitees par des femmes qui sont parentes et qui peuvent alors avoir les mêmes caracteristiques Les matrones et secouristes ont eu souvent tendance a demander aux equipes de terrain de changer de concession des qu'une femme tiree est absente avec pour preoccupation de faire enquêter celles pour qui ils ont des preferences ou des affinites

Comme a l'enquête de base, il y a eu un seul questionnaire femme La collecte des donnees est realisee comme si la mere et l'enfant sont des entites individuelles independantes On ne semble pas tenir compte de l'environnement socio-culturel (menage, conditions d'habitat) dans lequel ils vivent et qui peuvent avoir un impact sur leur comportement

A titre d'exemple, les comportements, les attitudes et les pratiques d'une femme sur des questions de sante et de nutrition peuvent être influences par son statut matrimonial (monogame ou polygame), le niveau d'instruction de son conjoint et/ou de ses coepouses, le rang de l'enfant, les ressources du menage, etc

Enfin, la periode de l'enquête (mois de Juillet) en pleine saison de pluies, periode de soudure et de difficultes economiques et alimentaires pour les populations des zones rurales, periode de ruissellement et de stagnation de l'eau, periode de proliferation des herbes et d'insectes de tous genres, peut avoir un impact sur certains resultats

## **5 2 Caractéristiques socio-demographiques**

Les resultats de l'enquête permettent de constater que la structure par âge des femmes interviewees est proche de celles de l'enquête de base de 1995 et de l'EDSN II de 1998 en soulignant la redistribution effectuee au niveau des groupes d'âge 15-19 ans et 20-24 ans a cette enquête L'echantillon tire en 1999 pourrait être donc considere au point de vue repartition par âge comme assez representatif globalement de la population feminine

Concernant le niveau d'instruction, on constate que les meres de la zone d'enquête ont un meilleur niveau a l'enquête finale qu'a l'enquête de base En effet, les meres sans aucune instruction sont beaucoup moins nombreuses aujourd'hui qu'au moment de l'enquête de base

L'environnement dans lequel les meres et les enfants de la zone d'enquête vivent n'est pas tres different de celui des autres femmes du Niger Ainsi, ils vivent dans des menages de grande taille et dorment dans leur majorite dans une ou deux pieces Par contre, ils ont un meilleur acces a l'eau potable salubre

Certaines variables apparaissent comme des variables discriminatoires dans les attitudes et les comportements des meres en matiere de sante et de nutrition de leurs enfants ce sont le niveau d'instruction et le statut matrimonial Les quelques correlations qui ont ete tentees avec ces variables ont permis de constater que les meres les plus instruites et/ou mariees monogames avaient plus de reflexe positif quant

a la prevention et/ou le traitement de la diarrhee et du paludisme et quant a l'alimentation de leurs enfants que les meres moins instruites et/ou mariees polygames

**TABLEAU 5 1 ANALYSE COMPARATIVE DES PRINCIPAUX INDICATEURS ET OBJECTIFS DU PROJET PN 34**

Volet	Indicateurs	Enquête de base 1995	Objectifs du Projet 1995	Enquête finale 1999
<b>Nutrition</b>	% Enfants/nourrissons < 24 mois allaites dans les huit premieres heures apres la naissance	11 %	30 %	78 %
	% Enfant/nourrissons < 24 mois allaites exclusivement jusqu'a 6 mois	0 %	10 %	8 %
	% de meres ayant un enfant de moins de deux ans et qui savent qu'un enfant doit être nourri au moins 5 fois par jour	26 %	50 %	57 %
	% Enfants de 0 a 23 mois qui reçoivent les aliments energetiques quatre fois par jour	4 %	25 %	23 %
<b>Diarrhee</b>	% Nourrissons/enfants de moins de 24 mois atteints de diarrhee au cours des deux dernieres semaines et qui ont reçu la même quantité de lait maternel ou plus	56 %	75 %	72 %
	% Nourrissons/enfants de moins de 24 mois atteints de diarrhee au cours des deux dernieres semaines et qui ont été traités au moyen de la TRO	42 %	60 %	47 %
<b>Paludisme</b>	% de cas de malaria presumes chez les enfants de moins de 24 mois, qui sont convenablement traités a domicile d'abord avec la chloroquine	20 %	60 %	36%
	% De femmes qui prennent de la chloroquine a titre preventif a partir du 3 <sup>eme</sup> mois de grossesse	17 %	30 %	71 %
<b>Vaccination</b>	% d'enfants de 12 a 23 mois qui ont reçu toutes leurs vaccinations	12 %	55 %	52 %
	% de femmes en âge procréer qui ont reçu deux doses de vaccin anti-tétanique avant la naissance de leur plus jeune enfant âge de moins de deux ans	36 %	55 %	81 %
	% des meres qui savent que le vaccin anti tetanique protege a la fois la mere et l'enfant	20 %	50 %	87 %
	% des meres qui savent que le vaccin contre la rougeole doit être administré a neuf mois	3 %	50 %	23 %

### 5 3 Nutrition

Les différents résultats observés laissent apparaître que dans l'ensemble, tous les objectifs ont été atteints et certains sont même très largement dépassés

Ainsi, concernant le % d'enfants âgés de moins de 24 mois allaités dans les 8<sup>ères</sup> heures après la naissance, l'objectif était de 30 % alors que les résultats de l'enquête finale sont de 78%

Pour ce qui est du % d'enfants de moins de 24 mois allaités exclusivement jusqu'à 6 mois, l'objectif était de 10 % et les résultats observés de 8 % A l'enquête de base ce % était nul (0 %) Il faut ajouter que parmi les 130 enfants âgés de 0-6 mois il y en a 23 qui sont allaités exclusivement au lait soit 18 % et 43 sont allaités au lait mais consomment aussi de l'eau uniquement soit 33 % qui reçoivent l'allaitement maternel prédominant D'autre part, parmi les enfants âgés de 6 à 23 mois, on a observé 96 enfants soit 59 % qui n'auraient rien reçu que le lait maternel jusqu'à l'âge de 6 mois selon les déclarations de leurs mères Mais on n'a pas d'informations s'ils avaient consommé de l'eau ou non de leur naissance à leur 6<sup>ème</sup> mois

Concernant l'objectif de % de mères ayant un enfant de moins de 2 ans et qui savent qu'un enfant doit être nourri au moins 5 fois par jour, il avait été fixé à 50 % et les résultats de l'enquête finale sont de 57 %

### 5 4 Diarrhée

Les résultats sont assez proches des objectifs qui avaient été fixés

Ainsi, pour l'objectif relatif au % d'enfants âgés de moins de 24 Mois atteints de diarrhée au cours des 2 dernières semaines et qui ont reçu la même quantité de lait maternel ou plus, il était fixé à 75 % et les résultats observés à l'enquête finale sont de 72 %

En ce qui concerne l'objectif relatif au % d'enfants de moins de 24 Mois atteints de diarrhée au cours des 2 dernières semaines et qui ont été traités au moyen de la TRO, il avait été fixé à 60 % et les résultats de l'enquête finale sont de 46 %, inférieurs donc à l'objectif

### 5 5 Paludisme

Le premier objectif c'est-à-dire, le pourcentage de cas de malaria présumés chez les enfants de moins de 24 mois et qui sont convenablement traités à domicile d'abord avec la chloroquine, était de 60 % Il n'a pas été atteint car les résultats de l'enquête finale sont de 36 %

Par contre, le 2<sup>ème</sup> objectif qui est le % de femmes qui prennent la chloroquine à titre préventif à partir du 3<sup>ème</sup> mois de grossesse et qui avait été fixé à 30 %, a été atteint et même largement dépassé En effet, les résultats de l'enquête finale sont de 71 %

### 5 6 Vaccination

Trois (3) objectifs sur quatre (4) ont été atteints dont 2 ont été largement dépassés

Ainsi, concernant l'objectif du % d'enfants de 12 à 23 mois qui ont reçu toutes les vaccinations, il était de 55 % et les résultats de l'enquête finale sont de 52 %

L'objectif relatif au % de femmes en âge de procréer qui ont reçu 2 doses de vaccins anti-tétanique avant la naissance de leur plus jeune enfant âgé de moins de 2 ans avait été fixé à 55 %. Il a été atteint et est même largement dépassé car les résultats de l'enquête finale sont de 81 %.

Le 3<sup>ème</sup> objectif c'est-à-dire le % des mères qui savent que le vaccin anti-tétanique protège à la fois la mère et l'enfant, a été lui aussi largement dépassé. Il avait été fixé à 50 % et les résultats observés à l'enquête finale sont de 87 %.

Enfin le 4<sup>ème</sup> objectif notamment le % des mères qui savent que le vaccin contre la rougeole doit être administré à 9 mois n'a pas été atteint même si on y inclut les réponses des mères entre 6 et 9 mois. Il avait été fixé à 50 % alors que les résultats observés sont de 23 % pour les réponses des mères sur 9 mois et 40 % pour les réponses des mères entre 6 et 9 mois.

## VI RECOMMANDATIONS

Elles concernent la méthodologie de l'enquête et les différents volets du projet.

### **6 1 Sur la méthodologie**

Il serait souhaitable que le questionnaire de base femme soit plus enrichi avec d'autres questions permettant la recherche des déterminants et des causes des comportements, attitudes et pratiques des mères sur la nutrition et la santé de leurs enfants.

En plus, d'autres questionnaires notamment un questionnaire ménage et/ou un questionnaire village pourraient compléter le questionnaire femme avec des questions contextuelles et relatives à l'environnement socio-culturel dans lequel vivent les mères et leurs enfants.

### **6 2 Sur l'approche globale d'intervention du projet**

Pour des actions ultérieures, il y a lieu de ne pas oublier que la mère et l'enfant ne sont pas des éléments isolés et que leurs comportements, leurs connaissances, leurs attitudes et leurs pratiques dépendent aussi en grande partie des groupes socio-culturels dans lesquels ils vivent et qui peuvent, dans certains cas, les influencer.

### **6 3 Sur la diarrhée**

L'incidence de la diarrhée chez les enfants pendant les 2 dernières semaines est restée quasi la même dans la zone du projet depuis des années et le recours à la thérapie par voie orale reste encore insuffisant. Dans cette enquête il ressort également que 54 % des ménages n'ont pas accès à l'eau potable salubre.

Le secteur de l'eau devrait alors constituer une alternative à envisager dans les prochaines interventions de CARE qui pourrait avoir un meilleur impact que les stratégies jusqu'ici utilisées pour lutter contre la diarrhée.

L'intensification de la promotion de l'allaitement maternel pourrait être aussi une alternative complémentaire.

#### **6 4      Sur la nutrition**

Autant l'allaitement maternel immédiat (les 8 premières heures) est devenu une pratique courante (78 %), autant l'allaitement maternel exclusif demeure encore faible. Il serait souhaitable d'envisager pour les prochaines interventions d'investir dans des approches novatrices, adaptées aux contextes pour renforcer la nouvelle tendance qui se dessine dans la zone du projet.

Malgré les résultats très appréciables dans l'activité de distribution des capsules de vitamine A, il n'y a qu'une très faible proportion des femmes (15 %) qui connaissent les aliments qui peuvent prévenir l'avitaminose A (dumdumi). Aussi on pourrait prendre en compte la lutte contre l'avitaminose A dans les prochaines interventions de CARE dans le secteur de la santé.

#### **6 5      Sur le paludisme**

Le niveau de connaissance des mesures de prévention reste faible sauf pour les femmes en grossesse. On pourrait envisager alors de mettre un accent particulier sur les stratégies de prévention individuelles et collectives dans le cadre de la lutte contre le paludisme.

#### **6 6      Sur la vaccination**

Les résultats obtenus par le projet montrent qu'il est possible d'influencer la couverture vaccinale en milieu rural malgré les nombreux problèmes dont font face les services de santé.

Cependant, pour garantir la pérennité de ces résultats, il est recommandé que les stratégies d'IEC se focalisent et ciblent les ménages et les groupes au lieu des individus, que les relations services de santé et communauté soient plus formelles et non dépendantes de la présence du projet et enfin qu'il soit établi un système plus efficace de gestion et d'information sur les vaccinations effectuées par les services et les acteurs de santé.