

CARE INTERNATIONAL IN NIGER
ZINDER CHILD HEALTH PROJECT

REPORT ON THE RESULTS OF THE CHILD SURVIVAL
EVALUATION SURVEY

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I INTRODUCTION

A Project Description

The Zinder Child Health Project (ZCHP) is a four year child survival (CS) project located in the Zinder Department of Niger. Begun in late 1988, the ZCHP has undertaken child survival activities in two arrondissements, Matameve and Magaria, with a total population of 563,182. The project operates in a total of 48 villages, 15 villages with rural dispensaries (DR) and 33 villages with volunteer village health workers (VHW).

In order to achieve its long term goal of reducing child morbidity and mortality in the areas it serves, the ZCHP aims to accomplish three objectives:

- 1 To increase by 30% the number of women able to improve the management of their child's nutrition (0 -3 years) using local resources
- 2 To increase by 30% the number of women able to practice improved management of diarrheal disease for their children under 5
- 3 To strengthen the capabilities of Ministry of Public Health (MOPH) personnel to plan, manage and implement nutrition promotion and oral rehydration therapy (ORT) activities for their catchment areas

The ZCHP concentrates on two principal child survival interventions: control of diarrheal disease (CDD) and nutrition education and promotion. The project focuses on strengthening the technical and communication skills of MOPH personnel at the department, arrondissement and dispensary level in order to more effectively reach mothers and community members. In villages without health facilities, the project, in collaboration with MOPH personnel, works with female trained birth attendants (TBA) and male village health agents (VHA) to improve their skills regarding diarrheal disease and nutrition. Project activities have included developing and adapting appropriate CDD and nutrition messages and training materials, training of MOPH nurses, doctors and mid-wives as trainers for CDD and nutrition, training of village health workers in CDD and nutrition promotion and education, and follow up supervisory visits to VHW's.

The first phase of the ZCHP, a Child Survival III project funded jointly by USAID and CARE International, comes to a close in June 1992. While the project will be continued as part of the Zinder Integrated Health Project (ZIHP), a final evaluation of the first phase has been scheduled for June 1992. In order to

facilitate this evaluation, the ZCHP conducted a survey of mothers' knowledge, attitudes and practices regarding diarrheal disease and nutrition in April 1992. This survey, part of a larger study considering family planning knowledge, attitudes and practices as well as a range of child survival interventions which will serve as the baseline for future project activities, provides quantitative information which can be used to evaluate project success.

B Child Survival Evaluation Survey Objectives

The child survival survey was developed to meet the following objective:

- 1 To facilitate evaluation of the ZCHP by providing quantitative data regarding mothers' knowledge, attitudes and practices with respect to the project's two major child survival interventions of diarrheal disease control and nutrition education and promotion.

In the final evaluation activity, this information will be used to assess project strengths and weaknesses and to assist in the development of strategies and activities for the second phase of the ZIHP.

II SURVEY METHODOLOGY

A Methodology

The evaluation survey was conducted on a sub-sample of women from the larger ZIHP baseline survey. Only the methodology relevant to the CS evaluation survey will be discussed here.

1 Sampling

The selection of the village sample was stratified by those villages with rural dispensaries (DR) and villages without DR. Six villages were selected with DR's and six without. A total of 12 villages were included in the sample. In each village, 20 mothers were randomly selected. A total of 240 mothers of children under two were interviewed in the ZCHP area.

2 Questionnaire Development

The survey questionnaire consists of three sections:

- 1 socio-demographic characteristics,
- 11 child survival information (nutrition, diarrheal disease, immunization), and
- 111 family planning

The sections on socio-demographic characteristics and family planning were based on the Demographic Health Survey (DHS) questionnaire currently being used in Niger to allow comparisons with that data. The Niger DHS questionnaire was judged too complex and too long to be used in this survey, so that only the most relevant questions were selected and some questions were simplified. The child survival section of the questionnaire followed the guidelines for standardized surveys developed by Johns Hopkins University. Several additional questions were included for the specific purpose of the evaluation of ZCHP.

The questionnaire was translated into Hausa and pre-tested in a rural Hausa village with 30 women. The questionnaire was revised according to the findings of the pre-test. The Hausa version was further revised during the training of the interviewers to ensure standardization of language use.

The complete questionnaire consisted of 62 questions and averaged 30 minutes per interview (see Appendix 4).

3 Survey Teams and Field Work

Three survey teams, each consisting of six female and one male interviewers, a supervisor and one or two monitors carried out the field work. The interviewers were recruited locally in Zinder. They were fluent in French and Hausa and the majority had previous survey experience. Two members of the Statistics Department of the Ministry of Plan and Finance with previous survey experience served as supervisors. The third supervisor was a ZCHP staff member.

The interviewers were trained in interview techniques and completion of the survey questionnaire over a period of seven days. Each question was reviewed in French and Hausa and the standardized way of asking the question was determined. The interviewers practiced administering the questionnaire on each other and completed several practice interviews of mothers in a nearby village which was not in the sample. Thirty interviewers were initially trained and the best 24 were selected to carry out the survey field work.

During the survey work in the villages, supervisors assigned each interviewer a local woman to interview. The women were randomly selected from enumerated household lists based on the most recent Niger census. A local guide assisted the interviewer in finding the specified residence. Upon completion of the questionnaire, the interviewer returned the questionnaire to the monitor and the supervisor who checked it to ensure it was filled out completely and correctly. The supervisors and monitors also periodically accompanied the interviewers and observed their work.

The field work was completed in the nine day period, April 18 to 27, 1992.

A Data Entry and Analysis

The questionnaires were returned to Niamey upon completion of the field work. The EPI Info Version 5.0 software package was used for data entry and statistical analysis. The data entry was completed in five days with three persons entering data. Frequency tables and chi-square tests were used for comparison purposes.

B Limitations of the Survey

Throughout this report, comparisons are made with the "Baseline Survey of Project Villages for the Zinder Child Survival Project" of April 1989. Such comparisons must be read with caution for a variety of reasons.

Firstly, seasonal differences may contribute to differences in survey results, as the baseline data collection occurred January 1989, the middle of the dry season, and the evaluation survey was conducted in April 1992, the driest and most difficult time of the year for most people.

Secondly, the questionnaire developed for the final evaluation survey has been adapted to better reflect project activities and emphases. The questionnaire was also adapted to conform to the Johns Hopkins University standardized survey format. It therefore differs significantly from the survey tool used during the baseline in 1989.

Furthermore, the sample size, as well as the choice of mothers to interview, has been modified in order to more closely correspond with the standardized questionnaire. Thus, while the baseline survey considered mothers with children under five years of age, the evaluation survey is limited to mothers with children aged two years or younger.

C Other Surveys Used for General Comparisons

In addition to the ZCHP baseline, several other surveys carried out in Niger are cited for comparison purposes. These surveys include:

1. A 1988 national survey conducted by the National Program for the Control of Diarrheal Disease (NPCCD) of 900 mothers with children under five as to their practices during diarrheal episodes.

2. The Africare 1989 baseline survey conducted with 1,077 mothers of children three years of age and younger in Diffa and Dosso Departments.

3. A mini-survey conducted by ZCHP in CDD and Nutrition, conducted with 120 mothers of children under five in the project area in June 1991, prior to beginning nutrition activities.

III SURVEY RESULTS

A Characteristics of the Sample

A total of 238 mothers of children up to the age of 24 months from 12 villages within the project intervention area were interviewed for the CS evaluation survey. Six of the survey villages have rural dispensaries while the other six are located within a 10 kilometer radius of a dispensary. One hundred and sixty of the mothers (67.2%) live in the arrondissement of Magaria while 78 (32.8%) are in the Matameye arrondissement. Table 1 shows the villages included in the survey as well as their total population.

Table 1 Characteristics of the Sample Villages

Arrondissement	Village	Population	No of women surveyed
Villages with rural dispensaries			
Magaria	Bande	3700	19
	Dungass	9955	19
	Bangaza	2532	21
	Gouchi	2222	20
Matameve	Kanche	6223	19
	Dan Barto	1051	20
subtotal		25683	118
Villages without rural dispensaries			
Magaria	Dawan Bave	949	19
	Gaounawa	967	20
	Guidan Gona	531	20
	Gagaja Tanti	488	22
Matameve	Tassoua Haoussa	911	19
	Kawari	1373	20
subtotal		5219	120
Total		30902	238

The women's ages range from 15 to 45 years of age, with a mean age of 26.5 years. The mean number of living children per woman is 3.4. Further descriptive information regarding the women included in the CS evaluation survey is provided in Table 2.

Table 2 Characteristics of the Mothers

Characteristic	Evaluation 1992	
	No	Percent
Age of mother		
15 to 19 years	35	(14.7%)
20 to 24 years	51	(21.4%)
25 to 29 years	70	(29.5%)
30 to 34 years	48	(20.2%)
35 to 39 years	20	(8.4%)
40 to 45 years	14	(5.9%)
Level of schooling		
none	151	(63.4%)
attended primary school	21	(8.8%)
attended secondary school	4	(1.7%)
attended Coranic school	62	(26.0%)
Ability to read		
not able to read	216	(90.8%)
reads with difficulty	15	(6.3%)
reads easily	7	(2.9%)
N	238	

As expected, educational levels in rural Niger among women are extremely low. Only 9% of the women interviewed were able to read either Hausa or French at minimal levels.

About half of the mothers interviewed (52.5%) were involved in some kind of income generating activity. Most of these women earned money through the sale of food (75.0%) or other kinds of commerce (18.5%). The principle caretaker for child while the mother was at work is shown in Table 3.

Table 3 Principle Caretaker While the Mother is Working (for working mothers only)

Caretaker	Evaluation 1992	
	No	Percent
Mother herself	37	(30.1%)
Husband or partner	3	(2.4%)
Older child(ren)	49	(39.8%)
Parent(s), neighbor or friend	33	(26.8%)
Other	1	(0.8%)
N	130	

The mean age of the index child is 11 1 months The age distribution is shown in Table 4

Table 4 Age Distribution of Children

Age	No	Percent
0 to 2 months	30	(12 6%)
3 to 5 months	46	(19 3%)
6 to 11 months	53	(22 3%)
12 to 17 months	49	(20 6%)
18 to 24 months	60	(25 2%)
Total	238	

B Nutrition

This section provides information on mothers' breastfeeding practices, their knowledge and practices regarding exclusive breastfeeding and supplementary feedings and mothers' responses to growth-faltering

1 Breastfeeding

In the evaluation study, mothers were questioned regarding their current breastfeeding practices Table 5 shows the percentage of women breastfeeding their children at the time of the survey as well as the age distribution of these children Comparable data from the baseline survey is also presented The differences between the baseline and the evaluation surveys are not significant As can be seen from the data, women stop breastfeeding when the child is 18 to 24 months of age

Table 5 Age Distribution of Children Currently Breastfed

Age of Children	Baseline 1989			Evaluation 1992		
	No	N	Percent	No	N	Percent
0 - 11 months	268	277	(96 7%)	130	130	(100 0%)
12 - 17 months	133	139	(95 7%)	47	50	(94 0%)
18 - 24 months	44	218	(20 1%)	13	58	(18 3%)
Total	445	634	(70 2%)	190	238	(79 8%)

Table 6 shows how long after birth women waited before beginning to breastfeed their newborns for both the baseline and the evaluation survey. Only women who are currently breastfeeding are included in the table in order to limit recall bias. As can be seen, women interviewed in the later survey began breastfeeding earlier than women questioned in the baseline. This difference is statistically significant ($p < 0.0001$).

Table 6 Start of Breastfeeding (for women currently breastfeeding)

Began Breastfeeding	Baseline 1989		Evaluation 1992	
	No	Percent	No	Percent
Day of birth	42	(9.6%)	59	(31.2%)
1 day after birth	91	(20.9%)	44	(23.3%)
2 days after birth	157	(36.0%)	43	(22.7%)
3 or more days after birth	145	(33.3%)	43	(22.7%)
N	436		189	

In 1989, 13.1% of breastfeeding women reported giving their newborn colostrum, while in the 1992 survey 31.2% reported that breastfeeding began on the day of birth, therefore also giving colostrum. This is important, as one of the ZCHP's specific health messages stresses the health benefits and importance of feeding colostrum to newborns.

2 Supplementary Feeding

The ZCHP, following MOPH guidelines, promotes breastfeeding with out supplementary food for the first three months of life, with the introduction of supplementary feedings between the ages of 4 to 6 months. This constitutes another of the project's specific health messages. In the evaluation study, 40.3% of mothers reported that children should begin receiving supplementary foods before the age of 4 months, 31.9% stated that supplementary feedings should begin between 4 to 6 months and 23.5% gave a response that was later.

According to a 24 hour food recall question in the evaluation survey, 48.9% of children under 4 months old received no supplementary foods while 89.5% of children in the 4 to 6 month age category were receiving food in addition to breastmilk. While no 24 hour food recall was conducted during the baseline survey, breastfeeding mothers were asked if their child had begun receiving supplementary food. Table 7 compares information regarding supplementary feeding from the two surveys. It may be noted that, using the age groupings presented in the baseline report, no real differences can be seen.

Table 7 Children Breastfed and Receiving Supplementary Food

Age of Children	Baseline 1989			Evaluation 1992		
	No	N	Percent	No	N	Percent
0 - 2 months	19	48	(39.6%)	12	30	(40.0%)
3 - 5 months	58	74	(78.4%)	38	47	(80.0%)
6 - 11 months	100	105	(95.2%)	51	53	(96.2%)
Total	177	227	(78.0%)	101	130	(77.7%)

3 Growth Faltering

In cases where children are experiencing growth faltering, the ZCHP recommends that children receive increased quantities of locally available and enriched foods, in addition to continued breastfeeding. Table 8 shows what mothers report giving their child when he or she is not growing well. Ten percent of mothers reported giving increased quantities of food and 26% giving enriched foods. One third (33%) report giving traditional medicine. A similar question was not asked during the baseline study so comparison is not possible.

However, in the ZCHP 1991 mini-survey of 120 mothers, conducted before specific nutritional activities were begun on the village level, 15% of mothers reported not giving anything special for a child who appeared to be losing weight. The comparable figure from the evaluation study is much lower, 2.1%.

Table 8 Mothers' Responses to Growth Faltering

Mothers Response	Evaluation 1992 *	
	No	Percent
(N = 238)		
Give increased quantities of food	24	(10 1%)
Give enriched foods	62	(26 1%)
Give traditional medicine	83	(34 9%)
Give nothing special	5	(2 1%)
Other	44	(18 5%)
Weaning food (not enriched)	14	(5 8%)
Don't know	25	(10 5%)

* multiple responses permitted

C Well Baby Clinics and Growth Monitoring

During the baseline survey 55 4% of mothers reported having attended well baby clinics (activities include growth monitoring) at dispensaries while 60 9% of mothers questioned during the evaluation survey gave this response. The difference is not significant. Table 9 shows the number of women having attended well baby clinics as well as a breakdown for those living in villages with and without dispensaries. As is expected, more women in villages with dispensaries attend well baby clinics.

Table 9 Women Reporting Attendance at Well Baby Clinics

	Baseline 1989			Evaluation 1992		
	No	N	Percent	No	N	Percent
Women in village with a dispensary	292	352	(83 0%)	104	118	(88 1%)
Women in village without a dispensary	85	328	(25 9%)	41	120	(34 2%)
All women	377	680	(55 4%)	145	238	(60 9%)

Women who reported attending well baby clinics were also asked their reasons for going to the sessions. These reasons are presented in Table 10. There are no important differences in reasons for attendance for the baseline and evaluation surveys.

Table 10 Reasons for Attending Well Baby Clinics

Reason	Baseline 1989		Evaluation 1992*	
	No	Percent	No	Percent
To weigh child	28	(7.4%)	12	(8.6%)
For the child's health	316	(84.0%)	112	(80.6%)
To know if child gained weight	**		15	(10.8%)
To learn feeding practices	19	(5.0%)	7	(5.0%)
Don't know/other	13	(3.4%)	7	(5.0%)
N	376		139	

* multiple responses permitted

** response not listed in baseline report

D Diarrheal Disease

This section contains information concerning two week diarrheal disease incidence, mothers' knowledge of diarrhea prevention, their understanding of the dangers of diarrhea, and their knowledge regarding oral rehydration therapy (ORT). Mothers' reported practices concerning home management of diarrhea are also presented.

1 Two Week Diarrheal Incidence

Table 11 shows the number and age distribution of children having had diarrhea in the two weeks before the survey for both the baseline and evaluation. There is no significant difference between the proportion of diarrheal cases reported in the under 25 month age group in 1989 and 1992. However, these incidence rates (60.5% in the baseline and 53.8% in the evaluation) appear high when compared to other surveys. In the 1988 NPCCD survey, a two week diarrhea incidence rate of 25% was demonstrated. The 1989 Africare baseline survey of mothers with children under three, found a two week diarrheal incidence rate of 33.2%. Differences in the target age groups, the rural/urban make-up of the sample groups, as well as seasonal differences, may account partially for the difference in findings between the studies.

Table 11 Number and Age Distribution of Diarrhea Cases Reported in the Last Two Weeks

Age of Children	Baseline 1989			Evaluation 1992		
	No	N	Percent	No	N	Percent
0 - 5 months	80	162	(49.4%)	34	76	(44.7%)
6 - 11 months	102	115	(88.7%)	35	53	(66.0%)
12 - 24 months	106	199*	(53.2%)	59	109	(55.1%)
Total	288	476	(60.5%)	128	238	(53.8%)

* baseline data for children 12-23 months

2 Diarrheal Disease Prevention

The ZCHP has included prevention of diarrheal disease as one of the messages to mothers. Unfortunately, comparison with baseline data on knowledge regarding diarrhea prevention is difficult due to the differences in the correct responses accepted between the baseline and evaluation surveys.

The baseline demonstrated the following results with regard to women's knowledge of diarrhea prevention: wash hands before feeding child (24.2%), wash hands after defecation (13.8%), eat good food (22.8%), wash food before preparation (17.2%), and keep house and yard clean (15.4%).

In the final evaluation survey, a different list of preventive measures was accepted as correct. Results include: wash hands often with soap (6%), assure cleanliness of foods (34.5%), exclusive breastfeeding (0.4%), use of latrine/proper disposal of feces (2.1%) and assure good quality drinking water (4.6%).

Traditional methods such as concoctions and the wearing of amulets were also frequently mentioned in both surveys. Thirty-eight percent of women in the baseline and 15.5% of mothers in the evaluation cited traditional methods as means of preventing diarrhea.

Table 12 presents the number of correct methods of prevention which were cited by the mothers in the 1989 and 1992 surveys. Again, it is difficult to make comparisons between the results of the two surveys due to differences in the responses accepted as correct and possible difference in the way the questions were asked. However, half of the women in the baseline and evaluation surveys reported no knowledge of ways to prevent diarrhea.

Table 12 Number of Methods of Diarrheal Disease Prevention Cited by Mothers

No. Of Methods of Prevention cited	Baseline 1989		Evaluation 1992	
	No.	%	No.	%
No knowledge	338	(49.7%)	145	(60.9%)
1 method	182	(26.8%)	76	(31.9%)
2 methods	68	(10.0%)	14	(5.9%)
3 methods	55	(8.1%)	3	(1.3%)
4 methods	32	(4.7%)	0	
5 methods	5	(0.7%)	0	
N	680		238	

3 Dangers of Diarrhea

In order for mothers to be motivated to undertake appropriate action in the case of diarrhea, they should understand the dangers of diarrhea. During the evaluation survey, 40.8% of mothers correctly stated that a child can die from diarrhea due to dehydration and water loss. Similar information from the baseline survey is unavailable.

4 Knowledge of Oral Rehydration Therapy

Oral rehydration therapy (ORT) is a critical element in the proper home management of diarrheal disease. Therefore, it is an area of major emphasis and interest for the ZCHP. During both the baseline and the evaluation survey a series of questions was asked in order to determine the level of mothers' knowledge in this area.

a Sugar Salt Solution (SSS)

Given the irregular availability of packets of oral rehydration salts, sugar salt solution (SSS) is the mainstay of the ZCHP's control of diarrheal disease program. As can be seen in Table 13, knowledge of SSS has increased significantly during the life span of the project, increasing from 65.3% in 1989 to 89.0% in 1992 ($p < .0001$). The comparable percentage from the WPCCD 1988 survey is 37.7%, while Africare's 1989 baseline survey in Dosso and Diffa found knowledge levels regarding SSS of 41.4%. During the ZCHP's 1991 mini-survey, 93% of the mothers interviewed had heard of SSS.

In the evaluation survey, knowledge levels remain slightly lower in villages without rural dispensaries (DR's) 83.2% versus 94.9% in villages with DR's. This difference is significant ($p < .01$). Improvements in mothers' knowledge of SSS from 1989 to 1991 are also significant when only women living in villages with DR's are considered ($p < .0001$) and when only women in villages without DR's are examined ($p < .0001$).

Table 13 Women Who know about SSS By Presence of Dispensary

Know about SSS	Baseline 1989			Evaluation 1992		
	No.	N	Percent	No	N	Percent
Women in village with a dispensary	277	352	(78 7%)	112	118	(94 9%)
Women in village without a dispensary	167	328	(50 9%)	99	119	(83 2%)
All women	444	680	(65 3%)	211	237	(89 0%)

Data concerning the number of women having heard of SSS who can correctly prepare it is presented in Table 14. It would appear from this data that, as information regarding SSS becomes more generalized, it is also less well mastered. Sixty percent of women with knowledge of SSS could correctly explain how it was prepared in 1989 while in 1992 only 40.3% could correctly give the recipe. This is a statistically significant difference ($p < 0.001$)

Table 14 Women Who Can Correctly Prepare SSS By Presence of Dispensary

Can correctly prepare SSS	Baseline 1989			Evaluation 1992		
	No	N	Percent	No	N	Percent
Women in village with a dispensary	195	277	(70 4%)	46	112	(41 1%)
Women in village without a dispensary	73	167	(43 7%)	39	99	(39 4%)
All women	268	444	(60 3%)	85	211	(40 3%)

When the percentages of all women surveyed who can correctly prepare SSS in the baseline and evaluation survey are compared the statistical significance disappears. In the baseline, 39.4% of all women could correctly prepare SSS compared to 35.9% in the evaluation survey.

b Oral Rehydration Salts (ORS)

As ORS packets are not always available, the ZCHP has given less attention to their promotion. Therefore, mothers' recognition of the packets is somewhat lower than for SSS. Improvement in levels of ORS recognition since the beginning of the project is still significant ($p < .01$), with 72.6% of women recognizing ORS packets in 1992 versus 62.4% in 1989. In the NPCCD study of 1988, 40% of the women interviewed knew of ORS.

In the evaluation survey, women living in villages with DR's were more likely to recognize ORS packets than those living in villages without DR's ($p < .0001$). This is logical, as ORS packets are distributed almost exclusively at health facilities. Again, improvements in levels of knowledge from 1989 to 1992 remain significant when the two subgroups of women living in villages with DR's and without DR's are examined ($p < .01$ for both groups).

Table 15 Women Recognizing ORS Packets By Presence of Dispensary

Recognize ORS packets	Baseline 1989			Evaluation 1992		
	No	N	Percent	No	N	Percent
Women in village with a dispensary	298	352	(84.7%)	110	117	(94.0%)
Women in village without a dispensary	126	328	(38.4%)	66	120	(51.7%)
All women	424	680	(62.4%)	172	237	(72.6%)

As can be seen in Table 16, women who recognized the ORS packets were slightly better able to correctly prepare it in 1992 than in 1989. Eighty-six percent of mothers recognizing the packets in 1992 correctly identified the quantity of water which should be added to the packet, while in 1989 81.4% of these mothers could correctly prepare ORS. This difference is not statistically significant. It is only when mothers living in villages without DR's are considered separately that a significant change in knowledge levels from 1989 to 1992 is observed ($p < .01$).

Table 16 Women Correctly Preparing ORS By Presence of Dispensary

Can correctly prepare ORS	Baseline 1989			Evaluation 1992		
	No	N	Percent	No	N	Percent
Women in village with a dispensary	259	298	(86.9%)	97	112	(88.2%)
Women in village without a dispensary	86	126	(68.3%)	51	62	(82.3%)
All women	345	424	(81.4%)	148	172	(86.0%)

5 Home Management of Diarrhea Episodes

While knowledge of ORT is an important element in any diarrheal disease control program, it is the actual practices of mothers which are of primary importance. This section considers the responses of mothers when their child falls ill with diarrhea.

a Advice Seeking

During the baseline survey in 1989, 72.7% (494/679) of all mothers sought the help of someone for treatment during their child's last episode of diarrhea. In the 1992 evaluation survey, 66.0% of mothers (138/209) stated that they sought advice the last time that their child had diarrhea. This slight reduction in advice-seeking is not statistically significant.

Table 17 shows who mothers asked for advice concerning their child's diarrhea by presence of a DR. While women living in villages with and without DR's were no more or less likely to seek advice (74% and 58.7% sought advice respectively), their source of information varied considerably ($p < .0001$).

As could be expected, women in villages with DR's were more likely to go to health facilities for advice (90.5% versus 26.6% for non DR villages). Mothers in villages without DR's were more likely to seek advice from a village health worker (48.4% versus 5.4% in DR villages).

There has been a significant change over time in sources of advice for mothers who sought advice in villages without DR's ($p < .001$). Patterns of advice seeking in villages with DR's remained relatively unchanged. Of particular interest to the ZCHP is the proportion of mothers in villages without DR's asking trained birth attendants and village health agents for advice concerning diarrheal disease treatment. In 1989, 20.2% of these women sought advice from VHW's while in 1992 this percentage had risen to 48.4%. Additionally, mothers in villages without DR's were less likely to seek advice from traditional healers in 1992 (12.5%) than in 1989 (24.5%).

Table 17 Source of Advice the Last Time Child had Diarrhea (for mothers seeking advice) By Presence of Dispensary

Who gave advice	Baseline 1989		Evaluation 1992*	
	No	Percent	No	Percent
Villages w/ DR	(N = 306)		(N = 74)	
Health facility	274	(89.5%)	67	(90.5%)
VHW	6	(2.0%)	4	(5.4%)
Traditional healer	11	(3.6%)	5	(6.8%)
Other	15	(4.9%)	5	(6.8%)
Villages w/o DR	(N = 188)		(N = 64)	
Health facility	72	(38.3%)	17	(26.6%)
VHW	38	(20.2%)	31	(48.4%)
Traditional healer	46	(24.5%)	8	(12.5%)
Other	32	(17.2%)	12	(18.8%)

* multiple responses permitted

The ZCHP recommends that mothers seek medical advice for diarrhea when the child is vomiting, when there is a fever, when the diarrhea lasts more than three days and when there are signs of dehydration. Table 18 shows the signs and symptoms which led women to seek advice the last time their child had diarrhea. No similar question was asked for the baseline survey.

Table 18 Signs and Symptoms which Lead Women to Seek Advice for Diarrhea (N=238)*

Mother sought advice because of	Evaluation 1992	
	No.	Percent
Vomiting	21	(15 2%)
Fever	20	(15 4%)
Diarrhea lasting longer than 3 days	69	(50 0%)
Signs of dehydration	33	(23 9%)
Other	12	(8 7%)
Don't know	6	(4 3%)

* multiple responses permitted

b Use of Oral Rehydration Therapy (ORT)

This section considers mothers' use of SSS or ORS for children, as reported in the 1989 baseline survey for children under five and as reported for children up to 24 months in the 1992 evaluation. Analysis is limited to women with children who have diarrhea episodes in the two weeks preceding the survey in order to limit recall bias.

Table 19 compares ORT use in the baseline and evaluation surveys. There has been an overall increase in the use of ORT since project start-up. Over 52% of mothers reported either SSS or ORS use in 1992 compared to 39 1% in 1989. This difference is statistically significant ($p < .01$).

Table 19 Comparison of Reported ORT Use Baseline 1989 and Evaluation 1992 Surveys

Reported ORT Use	Baseline 1989*		Evaluation 1992	
	No.	Percent	No.	Percent
	(N = 258)		(N = 128)	
SSS		**	45	(35 2%)
ORS		**	22	(17 1%)
Either SSS or ORS	101	(39 1%)	67	(52 3%)

*Baseline data for children under five

** No data

In general, the ORT use rates for the baseline and evaluation surveys seem high in comparison with other findings. There is some evidence from the baseline questionnaire that the manner in which the question was asked may have led mothers to affirm SSS use, as a result, the baseline use rate may have been artificially high. The 1988 NPCCD survey found that 24.2% of mothers treating their children for diarrhea at home used either SSS or ORS. The Africare baseline survey of 1989 found that 20.5% of mothers used either SSS or ORS or both for the treatment of cases of diarrhea occurring within the two weeks prior to the survey.

Table 20 compares ORT use in villages with and without dispensaries. The increase in ORT use is most visible in villages without rural dispensaries, where ORT use rose from 24.3% to 41.3% ($p < .02$). In villages with DR's, ORT use increased from 55.7% in 1989 to 62.9% in 1992, but this difference is not statistically significant. The difference in ORS use in villages with and without dispensaries should also be noted.

Table 20 ORT Use for Children With Diarrhea in the Last Two Weeks By Dispensary and Non-Dispensary Villages

Reported ORT Use	Baseline 1989		Evaluation 1992	
	No	Percent	No	Percent
Villages w/ DR	(N = 122)		(N = 60)	
SSS	**		21	(35.0%)
ORS	**		18	(30.0%)
Either SSS/ORS	68	(55.7%)	39	(65.0%)
Villages w/o DR	(N = 136)		(N = 68)	
SSS	**		24	(35.3%)
ORS	**		4	(5.9%)
Either SSS/ORS	33	(24.3%)	28	(41.2%)

** No data

In 1992, 80.5% of all mothers confronted with a case of diarrhea in the two weeks prior to the survey reported giving something to their child. Also of note is the continued use of modern medicine to treat diarrhea. Table 21 demonstrates the reported practices of mothers.

Table 21 ORT or Other Treatment Given to Children with Diarrhea in Last Two Weeks (N=128)*

Treatment Given	Evaluation 1992	
	No	Percent
SSS	45	(35.2%)
ORS	22	(17.1%)
Traditional Medicine	33	(25.8%)
Modern Medicine	24	(18.8%)
Other	5	(3.9%)
No Treatment	25	(19.5%)
N	128	

* multiple responses permitted

As shown in Table 22, more than one third of the mothers giving ORT to their child for diarrhea began treatment less than one full day after the diarrhea began

Table 22 When Mothers Begin Giving ORT

Number of days after start of diarrhea ORT began	Evaluation 1992	
	No	Percent
Less than one day	22	(34.4%)
One day	27	(42.2%)
Two days	10	(15.6%)
Three or more days	5	(7.8%)
N	64	

Ninety-two percent (59/64) reported continuing ORT until the diarrhea stopped

E Diarrhea and Feeding Practices

In this section, mothers' feeding practices during and after their child's last episode of diarrhea are considered

1 Practices During Diarrhea

The ZCHP encourages continued breastfeeding during episodes of diarrhea for all breastfed children. As shown in Table 23, nearly all of the currently breastfeeding mothers interviewed in 1992 continue to breastfeed their child during diarrhea (94.3%). In the 1989 baseline survey 95% of breastfeeding women gave the same response.

Continued supplementary feeding of children not exclusively breastfed during episodes of diarrhea is also recommended by the project. The 1992 evaluation survey shows a slight increase in the percentage of women who continue to feed their child while ill with diarrhea (95.6% versus 91.9% in 1989). This increase is not statistically significant.

Table 23 Reported Practices of Breastfeeding and Giving Foods to Children with Diarrhea

Mothers response to diarrhea	Baseline 1989		Evaluation 1992	
	No	Percent	No	Percent
	(N = 680)		(N = 232)	
Continues breast-feeding same as usual	649	(95.4%)	111	(47.8%)
	**		34	(14.7%)
	**		74	(31.9%)
more often than usual	**		74	(31.9%)
less often than usual	**			
Stops breast-feeding	31	(5.0%)	13	(5.6%)
	(N = 680)		(N = 226)	
Continues feeding same as usual	625	(91.9%)	67	(29.6%)
	**		45	(19.9%)
	**		104	(46.0%)
more often than usual	**		104	(46.0%)
less often than usual	**			
Stops feeding	55	(8.1%)	10	(4.4%)

** no data

Table 24 demonstrates mothers reported practices with regard to fluids. In the Evaluation Survey, almost all mothers reported giving liquids to their children suffering from diarrhea (99.6%). What is of interest here is that about two-thirds of mothers indicated that they gave their child more liquids than usual during an episode of diarrhea. This suggests that they realize that loss of water/liquids is an important consequence of diarrhea which must be addressed.

Table 24 Reported Practice of Giving Fluids to Child With Diarrhea

Mothers Practice	No	Percent
Continues liquids		
same as usual	56	(23.6%)
more often than usual	159	(67.1%)
less often than usual	21	(8.9%)
Stops liquids	1	(0.4%)
N	237	

2 Practices After Diarrhea

The ZCHP encourages catch-up growth for children after episodes of diarrhea by recommending increased feedings of locally available enriched foods after each episode of illness. Information concerning mothers' feeding practices after their child's last episode of diarrhea is presented in Table 25. Thirty one percent of all mothers reported increasing the number of feedings for their child after diarrhea.

Table 25 Mothers Feeding Practices After an Episode of Diarrhea

After diarrhea mother fed child	Evaluation 1992	
	No	Percent
The same number of times as usual	114	(50.4%)
More often than usual	70	(31.0%)
Less often than usual	42	(18.6%)
N	226	

IV DISCUSSION

The ZCHP concentrates on two major child survival interventions, the promotion of improved nutritional practices and the proper home management of diarrheal disease, in order to reduce child morbidity and mortality within its impact area. As can be seen from the evaluation survey, the project has made progress towards its objectives in several important ways, but other aspects of the project would seem to merit increased attention as the project moves into its next phase

A Nutrition

Practices related to the early feeding of colostrum have improved substantially in the four years since project start-up. Over one third of the women surveyed in 1992 began breastfeeding on the day of birth as opposed to only 9.6% for the baseline survey, a considerable increase.

However, it is clear that there are negative breastfeeding practices. Women introduce supplements very early, forty percent of the mothers reported that children should receive supplementary foods before the age of four months. According to 24 hour recall data, one half of children under four months received supplementary foods. Almost 90% of children between four and six months were receiving supplementary food, a practice promoted by MOPH and the ZCHP.

Overall, supplementary feeding practices appear little changed since the baseline survey, although comparison is complicated due to the age groupings used in the baseline survey.

Comparison between the ZCHP's mini-survey of 1991 and the 1992 evaluation survey indicates that an increased number of women appear to understand the importance of giving increased quantities and improved quality of foods in cases of growth faltering. In 1991, 15% of mothers reported doing nothing for a child which was losing weight, while only 2.1% gave this response in 1992. Other mothers in 1992 reported giving increased quantities of food (10.1%) and/or enriched foods (24.4%).

B Well Baby Clinics

According to the survey findings, attendance by mothers at well baby clinics has increased, but not significantly. Their reasons for attending such sessions have not changed, with a majority going for reasons related to the child's health.

C Diarrheal Disease Home Management

Two week diarrhea disease incidence in the project area appears high (55%) in comparison to other surveys conducted in Niger. This may have to do with the younger sample and the time of year the survey was conducted. However, it does demonstrate the importance of an effective diarrheal control program in the area. Of note is the high two-week incidence rate of diarrhea among infants 0-5 months (44.7%).

Mothers were generally better informed about the dangers of dehydration from diarrhea. 40.8% mentioned this in 1992 versus 25.8% in the 1991 mini-survey. It is difficult to judge mothers' knowledge of diarrhea prevention due to differences in the surveys. However, the evaluation survey demonstrates that women are largely unaware of effective means of diarrhea prevention while they frequently mention traditional methods of prevention. These traditional methods frequently include giving a child a small quantity of a herb tea infusion, a practice which can lead to diarrhea.

Mothers were much more likely to have heard of SSS and ORS in the 1992 study than during the baseline survey, with recognition levels rising from 65.3% to 89% for SSS and from 62.4% to 72.6% for ORS. This represents an increase of 36.3% and 16.3% respectively. The increase was most notable in those villages without dispensaries.

There are problems with the recall of the SSS recipe. In fact, according to survey findings, the percentage of women who can correctly prepare SSS actually declined. This may be in part due to the existence of two recipes for SSS which use different hand measurements for salt. Another factor may be the reluctance of women to give their children sugar which they believe causes diarrhea. The survey found that mothers knew the basic ingredients, but had particular difficulty in recalling the correct amount of sugar.

It is interesting to note the decline in knowledge of the recipe was greater in those villages with dispensaries. This poor recall of the SSS recipe in villages with dispensaries may be due to the greater availability of ORS in those villages. Greater rates of ORS use were observed in villages with dispensaries, where almost half of the women using ORT chose to use ORS.

The percentage of women who could correctly identify the amount of water to be mixed with a packet of ORS rose only slightly overall, by 5.6%. However, it should be noted that knowledge of correct preparation of ORS was high, as 86% of women recognizing the ORS packet could describe how to correctly mix it (148/172). Knowledge levels for the correct preparation of ORS increased the most in those villages without dispensaries, rising from 68% to 82%.

While mothers were no more or less likely to seek advice when their child had diarrhea, their source of advice has changed over time, particularly in villages without dispensaries. In these villages, mothers were more likely to ask VHW's for advice. In 1989 less than one quarter of mothers went to a VHW when their child was suffering from diarrhea while in 1992 almost half saw a VHW for advice, an increase of 139.6%

Use of ORT, either SSS or ORS, by women confronted by a case of diarrhea in the two weeks prior to the survey, has risen significantly from 39.1% during the baseline to 52.3% in the evaluation survey. These rates are considerably higher than the findings of the 1988 NPCCD national survey and Africare's 1989 baseline survey. Again this increase has been most important in villages without dispensaries, going from 24.3% in 1989 to 41.3% in 1992, a 70% increase. SSS is the most commonly used form of ORT in all villages.

E Diarrhea and Nutritional Practices

The percentage of women continuing to feed their child who has diarrhea, already high in 1989, has improved slightly although the difference is not significant. Almost all mothers continue to give liquids (99.6%), with 67.1% increasing the frequency with which they are given.

After episodes of diarrhea, 31% of mothers reported increased frequency of feedings for their children, with 50.4% maintaining the same number of feedings. These percentages are again considerably higher than those demonstrated in the NPCCD 1988 survey. While the lack of baseline comparative data limits attribution to project activities, these positive practices with respect to catch up growth are encouraging.

V CONCLUSION

As the data from the CS evaluation survey shows, the ZCHP has made progress towards its objectives in CDD and nutrition promotion.

As concerns practice, more mothers are breastfeeding their infants earlier and giving them colostrum. This is a key finding in Niger where women traditionally discard the "first milk" or colostrum. It clearly demonstrates the potential for positive behavior change.

ORT use has also increased significantly from 39% to 52% for diarrhea during the past two weeks. While questions remain as to the effective use of ORT, that is the correct preparation of the solution, significantly more women report having used SSS or ORS in the last two weeks than in the baseline survey. The project can

also claim some important success in increasing mothers' awareness about the dangers of dehydration and the identification of signs for which referral is necessary

Other positive practices are also reported by mothers, such as the giving of enriched or increased quantities of food for a child whose growth is faltering, the giving of additional fluids during diarrhea, and increased feedings after diarrhea. However, the lack of comparative data limits attribution.

The survey demonstrated that more women are reportedly seeking advice from VHW's during their child's diarrheal episode. Almost half of women seeking advice in villages without dispensaries went to VHW's in 1992 compared with 20% in 1989. It would seem that project activities have had an impact on increasing the credibility of VHW's in the eyes of the mothers.

However, more remains to be done with relation to several key activity areas. In the project area, where the incidence of diarrhea is apparently high, the evaluation survey indicates several critical areas which need to be examined.

An area of concern is the early introduction of supplementary foods to breastmilk in the project area. It is likely that the high rates of diarrheal disease observed in children under six months are largely due to the early introduction of foods and traditional medicines. Although food supplementation between the age of four to six months is part of the MOPH guidelines and a message promoted by the project, with the high rates of diarrheal disease observed in the project area, exclusive breastfeeding to the age of six months may be a more valid practice to promote.

Similarly, the promotion of acceptable, appropriate enriched foods for the daily nutritional needs of children is an area which needs to be addressed. A recent examination of the nutritional value of a range of weaning foods widely promoted by the MOPH as enriched, demonstrated them to be of low energy concentration and unsuitable as a weaning food. Clearly, more information is needed on acceptable, realistic feeding practices for small children in Niger.

Mothers are having difficulty with the correct preparation of SSS. The confusion surrounding the amount of sugar in the SSS recipe is a cause for concern. Since women have apparently accepted messages related to dehydration and the increased giving of fluids during diarrhea, more could be done to examine the constraints women face in using SSS and ORS. Persistent difficulties with the recipe may indicate its cultural unacceptability, since mothers traditionally believe that sugar causes diarrhea. Home available fluids may be a better choice than SSS in the Zinder setting.

Finally, in an area with high diarrhea incidence, an effective diarrhea prevention strategy is necessary. Traditional medicine for the prevention of diarrhea is probably one of the causes of

diarrhea in young children Mothers should know and understand the following basic diarrhea prevention practices i) use of potable water for drinking and cooking, ii) handwashing with soap, iii) use of latrines and proper disposal of child feces, iv) importance of immunization, v) exclusive breastfeeding to the age of six months, and vi) improved weaning practices.

APPENDIX A

QUESTIONNAIRE FOR SURVEY

ENQUETE CAP
SURVIE DE L'ENFANT ET PLANIFICATION FAMILIALE
QUESTIONNAIRE FEMME

Date d'interview ___/04/92 Nom de l'enquêtrice _____

Sections Remplies B C D (Allaitement, Nutrition, Diarrhée) ___
E (Vaccination, Santé Maternelle) ___ F (Contraception) ___

	Contrôle Terrain	Contrôle Bureau	Saisi par
Nom	_____	_____	_____
Date	_____	_____	_____

<u>Identification</u>	Codes
Canton _____ Village _____	Village <input type="text"/> <input type="text"/>
Numero de menage RGPH _____	Menage <input type="text"/> <input type="text"/> <input type="text"/>
Nom de la femme _____	Femme <input type="text"/> <input type="text"/> <input type="text"/>
Date de naissance ____/____ Age ____ (ans) (mois) (année)	Age en années <input type="text"/> <input type="text"/>

Section A Caractéristiques socio-démographiques

N	Questions	Codes	Passer a
1	Avez vous fréquente l'école? (moderne et coranique)	Oui Non	1 2 → 3
2	Quel est le plus haut niveau que vous avez atteint? (<i>encercler</i>) Primaire CI CP CE1 CE2 CM1 CM2 Secondaire 6e 5e 4e 3e 2e 1e Terminale Superieur Ecole coranique Autre (<i>préciser</i>) _____	CI 1 4e 9 CP 2 3e 10 CE1 3 2e 11 CE2 4 1e 12 CM1 5 Ter 13 CM2 6 Sup 14 6e 7 Cor 15 5e 8 Aut 16	
3	Pouvez vous me lire ce qui est écrit sur cette feuille?	Lu Facilement 1 Avec difficulté 2 Pas du tout 3	
4	Quelle est votre ethnie? Autre (<i>préciser</i>) _____	Haussa Djerma Peulh Autre	1 2 3 4

N	Questions	Codes	Passer a												
5	Etes vous actuellement mariée ou vivez-vous en union avec un homme?	Oui . . . 1 Non . . . 2	→ 8												
6	Depuis quand êtes vous mariée ou vivez-vous en union avec un homme?	Mois <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> Année													
7	Avez vous une co-epouse ou plusieurs co-epouses?	Oui . . . 1 Non . . . 2													
8	Avez vous des enfants que vous avez mis au monde?	Oui . . . 1 Non . . . 2	→ 51												
9	a) Combien de fils vivants avez-vous? b) Combien de filles vivantes avez-vous? <i>(Si aucun(e), inscrire '00')</i>	Nombre en vie Fils <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> Filles <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> Total <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table>													
10	a) Combien de vos fils sont decedés? b) Combien de vos filles sont decedées? <i>(Si aucun(e), inscrire '00')</i>	Nombre Decedes Fils <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> Filles <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> Total <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table>													
11	Quel est le nom de votre dernier enfant vivant? _____														
	Quelle est sa date de naissance? _____/_____/_____ Age en mois _____	Age en mois <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr></table>													
	(mois) (annee) Age en annees _____	Si plus de 24 mois →	→ 50												
	<i>(Si enfant a plus de 24 mois ou est né avant 03/90, passer à Q 50)</i>														
12	Est-ce que vous faites un travail qui vous apporte quelque chose en argent ou en nature?	Oui . . . 1 Non . . . 2	→ 14												
13	Quel est ce travail? Autre (<i>preciser</i>) _____	Petit commerce . . . 1 Jardinage 2 Vente des aliments . . . 3 Petit elevage 4 Artisanat 5 Autre 6													
14	Qui s'occupe habituellement de (nom) pendant que vous travaillez? Autre (<i>preciser</i>) _____	Elle-même 1 Mari/conjoint 2 Enfants plus ages 3 Parents, voisin(e)s 4 Ami(e)(s) 5 Autre 6													

Section B Allaitement

N	Questions	Codes								
15	Allaitiez-vous encore (nom)?	Oui . 1 Non 2								
16	Combien de temps apres sa naissance avez-vous mis (nom) a votre propre sein pour la premiere fois? (Si moins de 1 heure, encercler '00') (Si moins de 24 heures, inscrire le nombre d'heures) (Si plus de 24 heures, inscrire le nombre de jours)	Immédiatement 00 Heures <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> Jours <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table> NSP . 99								
17	Qu'est-ce que une femme allaitante peut faire pour avoir suffisamment de lait pour son bebe? Autre (preciser) _____	Allaiter exclusivement les six premiers mois 1 Allaiter frequemment 2 Autre 3 NSP 3								

Section C. Nutrition

N	Questions	Codes																																						
18	Qu'est-ce que votre enfant a mange en dehors du lait maternel hier? (Pour les sauces et plats composés, notez les ingrédients principaux. Notez qu'un aliment sur chaque ligne) (Après avoir noté la liste d'aliments, demandez) A-t-il mange d'autres choses entre les repas? <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Moment</th> <th>Aliments mangés</th> <th>Groupe</th> </tr> </thead> <tbody> <tr> <td>MATIN</td> <td>_____</td> <td>_____</td> </tr> <tr> <td></td> <td>_____</td> <td>_____</td> </tr> <tr> <td></td> <td>_____</td> <td>_____</td> </tr> <tr> <td>MIDI</td> <td>_____</td> <td>_____</td> </tr> <tr> <td></td> <td>_____</td> <td>_____</td> </tr> <tr> <td></td> <td>_____</td> <td>_____</td> </tr> <tr> <td>SOIR</td> <td>_____</td> <td>_____</td> </tr> <tr> <td></td> <td>_____</td> <td>_____</td> </tr> <tr> <td></td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>	Moment	Aliments mangés	Groupe	MATIN	_____	_____		_____	_____		_____	_____	MIDI	_____	_____		_____	_____		_____	_____	SOIR	_____	_____		_____	_____		_____	_____	Groupes Nb de fois Energie <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr></table> Concentre en energie <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr></table> Proteine <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr></table> Legumes et fruits <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr></table>								
Moment	Aliments mangés	Groupe																																						
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SOIR	_____	_____																																						
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	_____	_____																																						
19	A quel âge (en mois) doit-on commencer a donner des aliments autres que le lait maternel tous les jours?	Age en mois <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr></table>																																						
20	Combien de fois par jour un enfant de un a 2 ans doit-il manger en dehors de la têter?	Nb de fois <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td> </td><td> </td></tr></table>																																						

N	Questions	Codes	Passer
21	Si vous constatez que votre enfant ne grandit plus bien que lui donnez-vous? Autre (<i>préciser</i>) _____	Donner Plus à manger 1 Des aliments enrichis 2 Des guitti/bauri 3 Rien de special 4 Autre 5	
22	Quels sont les aliments qui peuvent prévenir le dundumi? (<i>encercler les réponses correctes dans la colonne 'Codes'</i>)	1 Feuilles vertes 2 Foie 3 Lait maternel 4 Oeuf 5 Mangue 6 Courge 7 Carrotte Nb de reponses correctes <input type="checkbox"/>	
E 23	Avez-vous déjà assiste aux consultations des nourrissons sains?	Oui 1 Non 2	→ 25
E 24	Pourquoi allez-vous aux consultations des nourrissons sains? Autre (<i>préciser</i>) _____	Pour Peser l'enfant 1 La sante de l'enfant 2 Savoir si l'enfant a pris du poids/a grandi 3 Apprendre comment nourrir l'enfant 4 Convocation 5 Autre 6 NSP 0	

SECTION D Maladies Diarrhéiques

N	Questions	Codes
E 25	Un enfant peut mourir d'une diarrhee grave Pourquoi à votre avis? Autre (<i>préciser</i>) _____	De la deshydratation /perte de l'eau 1 Autre reponse 2 NSP 9
26	(Nom) a-t-il/elle eu la diarrhée durant les deux dernieres semaines?	Oui 1 Non 2 NSP 9
27	Quand (nom) a/avait la diarrhee, l'allaitiez-vous/ l'avez-vous allaité (<i>cocher la réponse</i>) 1 ___ le même nombre de fois que d'habitude? 2 ___ plus frequemment que d'habitude? 3 ___ moins frequemment que d'habitude? 4 ___ arrêté complètement?	Reponse \ 1 2 3 4 NSP 9
28	Quand (nom) a/avait la diarrhée, lui donnez vous/avez-vous donné à boire (<i>cocher la réponse</i>) 1 ___ autant que d'habitude? 2 ___ plus frequemment que d'habitude? 3 ___ moins frequemment que d'habitude? 4 ___ arrêté complètement?	Reponse \ 1 2 3 4 NSP 9

N	Questions	Codes	Passer a
29	Quand (nom) a/avait la diarrhée, lui donnez vous/avez-vous donné à manger (cocher la réponse) 1 ___ le même nombre de fois que d'habitude? 2 ___ plus fréquemment que d'habitude? 3 ___ moins fréquemment que d'habitude? 4 ___ arrête complètement?	Response N 1 2 3 4 NSP 9	
30	Quand sa diarrhée s'arrête/s'est arrêtée, lui donnez vous/avez-vous donné à manger (cocher la réponse) 1 ___ le même nombre de fois que d'habitude? 2 ___ plus fréquemment que d'habitude? 3 ___ moins fréquemment que d'habitude?	Response N 1 2 3 NSP 9	
31	Avez-vous demandé des conseils ou un traitement pour la diarrhée?	Oui 1 Non 2	→ 34
32	Où/a qui (avez-vous demandé des conseils ou un traitement)? (encercler tout ce qui est cité) Autre (préciser) _____	Formation sanitaire 1 Secouriste 2 Vatrine 3 Pharmacie/dépot pharm 4 Makabout/boka 5 Voisin(e)/parent(e) 6 Autre 7	
33	Quels signes et symptômes vous conduiraient à chercher des conseils ou du traitement pour la diarrhée de (nom)? (encercler tout ce qui est cité) Autre (préciser) _____	Vomissement 1 Févre 2 Diarrhée plus que trois jours 3 Signes de déshydratation 4 Autre 5 NSP 9	
34	Est-ce que quelque chose a été donné pour la diarrhée?	Oui 1 Non 2	→ 36
35	Qu'est-ce qui a été donné? Et quoi d'autre? (Encercler tout ce qui est cité) Autre (préciser) _____	ESS 1 Sachet SRO 2 Injection 3 Comprimé/sirop 4 Médecine traditionnelle /guitti 5 Autre 6 NSP 9	
36	Connaissez-vous l'eau sucrée salée recommandée pour l'enfant quand il a la diarrhée?	Oui 1 Non 2	→ 38
37	Comment prépare-t-on cette l'eau sucrée salée? Recette	Recette correcte 1 Recette incorrecte 2 NSP 9	
38	Connaissez-vous ce sachet? (montrer le sachet SRO)	Oui 1 Non 2	→ 40

	Questions	Codes	Passer a
39	Avec quelle quantité d'eau faut-il préparer la solution à partir du sachet? (<i>Demandez qu'elle montre la tasse utilisée pour mesurer l'eau</i>)	1 litre/1 tasse à sauce Autre NSP	1 2 9
40	Combien de temps après le début de la diarrhée de (nom) avez-vous donné le liquide préparé à partir du sachet ou l'eau sucrée salée? (<i>Si moins de 1 jour, inscrire '00'</i>)	Jours <input type="text"/> <input type="text"/> NSP 9
41	Quand arrêtez-vous de donner la solution du sachet ou l'ESS? Autre (<i>préciser</i>) _____	Jusqu'à ce que La diarrhée s'arrête L'enfant n'ait plus de signes de déshydratation Autre NSP.	1 2 3 9
42	Comment peut-on prévenir la diarrhée? Autre (<i>préciser</i>) _____	Se laver les mains avec du savon plusieurs fois par jour Allaitement exclusif jusqu'à l'âge de 6 mois Utilisation des latrines, évacuation des selles Assurer une bonne qualité de l'eau à boire Assurer la propreté des aliments Autre NSP	1 2 3 4 5 6 9

Section F Contraception

N	Questions	Codes	
50	Pendant combien de mois/jours apres la naissance de (nom de dernier ne) n'avez vous pas eu de rapports sexuels?	Mois	<input type="text"/>
		Jours	<input type="text"/>
51	Si vous pouviez choisir exactement le nombre d'enfants a avoir dans toute votre vie, combien voudriez-vous en avoir?		<input type="text"/>
52	Avez vous deja discute avec votre mari/partenaire du nombre d'enfants que vous voudriez avoir?	Oui	1
		Non	2
53	D'apres vous, quel est le meilleur intervalle entre la naissance d'un enfant et la naissance de l'enfant suivant?	Annee	<input type="text"/>
54	Etes vous enceinte en ce moment?	Oui	1
		Non	2
		NSP	9
55	Maintenant je voudrais vous parler de la planification familiale - les differents moyens ou methodes qu'on peut utiliser pour retarder ou eviter une grossesse. De quels methodes ou moyens avez vous entendu parler? (Encercler la réponse dans la colonne Q55 ci-dessous pour chaque méthode mentionnée spontanément)		
56	Quelle méthode utilisez vous ou votre mari/partenaire pour eviter que vous tombiez enceinte (Encercler la réponse dans la colonne Q56)		
57	Au avez-vous deja utilise comme méthode de PF dans votre vie? (Encercler la réponse dans la colonne Q57)		
58	Avez vous entendu parler de (méthode)? (Lire le nom et la description des méthodes qui n'ont pas été déjà mentionnées spontanément, encercler la réponse dans la colonne Q58)		

Méthode	Q55 Cite spont anee	Q56 Actuell ement utilise	Q57 Deja Utilise	Q58 Entendu l'avez
Pillule (a prendre tous les jours)	1	1	1	1
DIU (un sterilite place dans l uterus par medecin/sage femme)	2	2	2	2
Injection (donne tous les 3 mois)	3	3	3	3
Condom/capote caoutchouc	4	4	4	4
Spermicide (un suppositoire vaginal pour la femme)	5	5	5	5
Abstinence totale (eviter les rapports sexuels)	6	6	6	6
Pratisme/abstinence periodique (eviter des rapports certains jours du mois quand la femme est plus susceptible de tomber enceinte)	7	7	7	7
Coitus interruptus (se retirer avant l ejection)	8	8	8	8
Sterilisation (une operation pour ne plus avoir d'enfant)	9	9	9	9
Autres	10	10	10	10
Autre (Preciser)	11	11	11	11
Aucune (Si toutes les reponses aux Q55 a 58 sont aucune P'SSEP a Q62)	12	12	12	12

N	Questions	Codes	Passer a																												
59	Qui vous a donné les informations que vous connaissez sur la planification familiale? <i>(encercler tous ce qui est cité)</i> Autre <i>(préciser)</i> _____	Mari/conjoint 1 Parent 2 Amie(s) 3 Personnel de Sante 4 Secouriste 5 Matrone 6 Radio 7 Autre 8																													
60	Ou peut-on se procurer un contraceptif (des moyens modernes utilisés pour éviter la grossesse)? Autre <i>(préciser)</i> _____	Formation sanitaire 1 Dispensaire 2 Pharmacie 3 Autre 4 NSP 9	→62																												
61	Combien de temps faut-il pour aller de chez vous à cet endroit? <i>(Si moins de 1 heure, inscrire la réponse en minutes. Autrement, inscrire en heures)</i> Et par quel moyen? Autre <i>(préciser)</i> _____	<table border="0"> <thead> <tr> <th data-bbox="917 766 1031 787"><u>Temps</u></th> <th data-bbox="1063 787 1177 892"> <table border="1" style="width: 40px; height: 40px; text-align: center;"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table> </th> <th data-bbox="1226 766 1323 787"><u>Moyen</u></th> <th></th> </tr> </thead> <tbody> <tr> <td data-bbox="917 798 1031 819">Minutes</td> <td></td> <td data-bbox="1226 798 1356 819">Vehicule</td> <td data-bbox="1372 798 1404 819">1</td> </tr> <tr> <td></td> <td></td> <td data-bbox="1226 829 1307 850">Pieds</td> <td data-bbox="1372 829 1404 850">2</td> </tr> <tr> <td data-bbox="917 861 1031 882">Heures</td> <td></td> <td data-bbox="1226 861 1356 882">Charrette</td> <td data-bbox="1372 861 1404 882">3</td> </tr> <tr> <td></td> <td></td> <td data-bbox="1226 892 1372 913">Deux roues</td> <td data-bbox="1372 892 1404 913">4</td> </tr> <tr> <td data-bbox="917 924 1031 945">NSP</td> <td data-bbox="1161 924 1209 945">99</td> <td data-bbox="1226 924 1307 945">Autre</td> <td data-bbox="1372 924 1404 945">5</td> </tr> </tbody> </table>	<u>Temps</u>	<table border="1" style="width: 40px; height: 40px; text-align: center;"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>					<u>Moyen</u>		Minutes		Vehicule	1			Pieds	2	Heures		Charrette	3			Deux roues	4	NSP	99	Autre	5	
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62	<i>(Si elle n'utilise pas une méthode - réponse #12 encerclé à la question 56)</i> Pourquoi n'utilisez vous pas une méthode de planification familiale? Autre <i>(préciser)</i> _____	Veut des enfants 1 Manque d'information 2 Partenaire/mari contre 3 Coût trop élevé 4 Difficile à obtenir/ trop loin 5 Dangereux pour la sante 6 Opposée à la PF 7 Religion est contre 8 Dieu qui décide 9 Pas/peu de rapports sexuels 10 Difficulté à tomber enceinte 11 Pas commode 12 Jamais pensé à cela 13 Enceinte 14 Autre 15																													

1990 ANNUAL REPORT FORM A COUNTRY PROJECT PIPELINE ANALYSIS
PVO/COUNTRY PROJECT NIGER 93 80532 01

391

FIELD	Actual Expenditures to Date (09 / 01 / 87 to 06 / 30 / 92)			Projected Expenditures Against Remaining Obligated Funds (07 / 01 / 92 to 03 / 01 / 93)			Total Agreement Budget (Columns 1 & 2) (___ / ___ / ___ to ___ / ___ / ___)		
	AID	PVO	TOTAL	AID	PVO	TOTAL	AID	PVO	TOTAL
COST ELEMENTS									
I PROCUREMENT									
A Supplies	26 835	8 796	35 631						
B Equipment	37 533	21 435	58 968						
C Services/Consultants	49 028	8 822	57 850						
1 Local									
2 Expatriate									
SUB-TOTAL I	113,396	39,053	152,449				155,035	12 250	167,285
II EVALUATION/SUB-TOTAL II	7,753	3 719	11,472						
III INDIRECT COSTS									
Overhead on HQ/HO (%) _____									
SUB-TOTAL III							58,916		58 916
IV OTHER PROGRAM COSTS									
A Personnel (list each position & total person months separately)									
1) Technical	207,515	14 041	221 556						
2) Administrative	75 977	94 552	170 529						
3) Support	25 420	9 762	35 182						
B Travel/Per Diem									
1) In country	34 245	13 972	48 217						
2) International	17 420	4 069	21 489						
C Other Direct Costs (utilities, printing rent, maintenance, etc)	122 409	75 589	197 998						
SUB-TOTAL III	482 986	211 985	694 971				486 049	190 147	676 196
TOTAL FIELD	614,135	214,757	828,892			43,005	700,000	202 397	902 397

Handwritten notes:
- W/IRP
- 95,222
- 92,121
- 40,200 remaining
- APD
- 21,120
- 5/11