

BASELINE SURVEY

Child Survival XI

(Project #FAO-0500-A-00-5025-00)

**Hais, Khokha and Jabal Ras Districts
Hodeidah Governorate
Republic of Yemen
1995-1999**

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Acknowledgments.....	3
Acronyms	4
Executive Summary	5
I. Introduction	
A. Background	5
B. Objectives of the Survey	7
C. Schedule of Activities in Yemen	8
II. Methodology	
A. The Questionnaire	9
B. Determination of Sample Size	9
C. Selection of Sample.....	10
D. Training of Supervisors and Interviewers.....	10
E. Conducting of the Interviews.....	11
F. Method of Data Analysis	12
III. Results and Discussion	
A. Identification Module.....	13
B. Mother's Education and Occupation Module	14
C. Breast Feeding/Nutrition Module	15
D. Growth Monitoring Module.....	17
E. Diarrheal Disease Module.....	17
F. Immunization Module.....	20
G. Maternal Care Module	22
IV. Costs.....	24
V. References.....	25
Appendices	
A. Survey Results	26-34
B. Questionnaire in English and Arabic	35-50
C. Population Data.....	51
D. Map of Survey Area	52
E. Training Schedule of Supervisors and Interviewers	53
F. Key Effect Indicators	54
G. Graphs (Important Findings)	55-64

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Acronyms

ADRA	Adventist Development and Relief Agency
CDD	Control of Diarrheal Disease
CSSP	Child Survival Support Program
CSXI	Child Survival XI
DIP	Detailed Implementation Plan
EPI	Expanded Program of Immunizations
BHR/PVC	Bureau of Humanitarian Response/Private & Voluntary Cooperation
IMR	Infant Mortality Rate
JHU	Johns Hopkins University
KPC	Knowledge, Practice and Coverage
MD	Maryland
MOH	Ministry of Health
NGO	Non-Government Organization
ORT	Oral Rehydration Therapy
PVO	Private Volunteer Organization
TOST	Training of Survey Trainers
UNICEF	United Nations International Children's Fund
USAID	United States Agency for International Development
VHP	Village Health Promoter
VHC	Village Health Committee
VHW	Village Health Worker
VV	Village Vaccinator
WCBA	Women of Child Bearing Age
WHO	World Health Organization

Executive Summary

A Rapid Knowledge, Practices and Coverage (KPC) 30-Cluster Survey was carried out encompassing three local government districts on the southern border of the Hodeidah Governorate, Yemen, October 17-23, 1995. The three districts are Hais, Khokha and Jabal Ras. This work was achieved through the cooperation of the private voluntary organization (PVO) Adventist Development and Relief Agency (ADRA)/Yemen and the local Ministries of Health (MOH).

A Child Survival XI (CSXI) project is being implemented by ADRA/Yemen, a PVO with headquarters in the USA in coordination with the Hodeidah Governorate Health Office and District Health staff in the three target districts. ADRA/Yemen received a grant from USAID's BHR/PVC Office for this project. The project will serve a population of 100,000 potential beneficiaries by implementing CS activities from October 1, 1995 to September 30, 1999, in three local government districts of the Hodeidah Governorate.

The objectives of the survey were to obtain information on the knowledge and practices of mothers of children under two years of age, the coverage of local health centers, and to identify health care factors most commonly involved at the household level for childhood illness. The survey will provide baseline data useful for project planning and for measuring project accomplishments. The objectives of the survey were completed within one month. The ADRA/Yemen field team discussed the results extensively in order to evaluate project plans as outlined in the proposal and to provide background information for development of the Detailed Implementation Plan (DIP).

The survey questionnaire was initially designed at the PVO Child Survival Support Program (PVO/CSSP) office in Baltimore, MD in consultation with ADRA/Yemen and then refined in Sana'a and the Tihama of Yemen. ADRA/Yemen staff in coordination with District Health staff selected a field team. The 24 member team participated in a four day training program on the methodology of conducting a WHO 30-cluster sample survey. This enabled them to competently conduct this baseline and to conduct other surveys of this type as a routine activity to measure project progress. Six four-person teams of two interviewers, one supervisor and one core team member conducted the interviews in 30 different clusters. Each cluster included 10 cohort household survey interviews of mothers with children less than 2 years of age. A total of 295 households were interviewed.

Major findings for the three districts include: the rate of children with immunization cards recording complete immunization coverage was lower than the estimated national rates for complete immunization, only 6% female literacy rate, over half of the mothers surveyed reported their child had diarrhea in the last two weeks, less than one-third of those mothers were treating diarrhea with ORT, almost none of the mothers had growth monitoring cards, and more than 60% of children under four months of age were not being exclusively breast fed.

I. Introduction

A. Background

The Adventist Development and Relief Agency (ADRA), a PVO with its headquarters in Silver Spring, Maryland, USA, will be implementing a Child Survival XI (CSXI) project in the three districts of Hais, Khokha, and Jabal Ras of the Hodeidah Governorate, in the Republic of Yemen. These CS activities are funded by USAID's BHR/PVC office to be implemented from October 1, 1995 to September 30, 1999.

Current infant mortality rates (IMR) are not available for the targeted districts, however, UNICEF estimates Yemen's IMR to be 130 per 1,000 live births. Yemen has a child mortality rate of 177 per 1,000 live births. The leading causes of infant and child deaths are diarrhea, respiratory infections, neonatal tetanus, and measles. Maternal mortality rates are among the highest in the world, with estimates consistently reaching up to 1,000 deaths per 100,000 live births. Primary causes of maternal mortality are a lack of prenatal care and inaccessibility or total lack of health and emergency services in rural areas. Full immunization coverage rates for children 12-23 months are estimated at about 40%. Tetanus toxoid coverage for WCBA is at 7.5%. In addition, the current malnutrition estimate for children under two is 30% (CSO, 1994).

Percentage of project effort and resources are targeted to the following CS activities:

CDD	40%
EPI	40%
Nutrition: breast feeding	20%

The proposed strategy focuses on empowering local community, private and public sector entities to provide essential CS services. The foundation of the entire initiative is the empowerment of local community networks, and the training of volunteers. This will be accomplished through training local volunteer health promoters, development of village health committees, support to community health workers and by facilitating the local area councils to assume responsibility for local health and socio-economic issues.

This project will coordinate with local MOH institutions and staff and will have significant input into strengthening MOH service delivery capacity.

In 1991, USAID required PVOs with new USAID CS grants to conduct a 30-cluster baseline survey using a standardized questionnaire developed by John Hopkins University (JHU). As part of this requirement, ADRA/Yemen sent a participant to the JHU Training of Survey Trainers Workshop (TOST), conducted in Baltimore, MD. Three major areas of concentration were included in the workshop: 1) an explanation of the organization of the standardized questionnaire, as well as the purpose of each question; 2) information and skills development to train core team members, supervisors and interviewers in the conduct of a standard WHO 30-cluster survey and 3) information and skills development to train core team members and supervisors to manually tabulate, analyze and develop a report from the completed survey questionnaires.

B. Objectives of the Survey

The method of choice for these kinds of surveys is a 30-cluster sampling technique. The study population consists of mothers of children under the age of 24 months living in the PVO project area. By restricting the sample to mothers of children less than 24 months of age, repeat surveys can ascertain the project's ability to reach children born during the life of the project. In addition, the survey can establish whether the project was successful in communicating to the mothers certain action messages about key CS interventions through village based volunteers.

A population based sample survey is one method of obtaining rates; i.e., data relative to denominators, which are an important part of a project's health information system. That data collected from a sample survey can be used for project design, management information and evaluation purposes.

The objectives of the survey are to provide ADRA/Yemen with information about the following issues:

- Knowledge of mothers of children under two years of age about the following health concerns: major threats to infants; maternal and child health; ways to prevent immunizable diseases; proper treatment of diarrheal diseases (ORT); and appropriate nutrition/weaning practices
- Actual practices of mothers with regard to the intervention areas mentioned above
- Target groups for health education action messages
- For children aged 12-23 months: the coverage rates of BCG, DPT3, OPV3, measles vaccines and drop out rates between series antigens

The survey establishes estimates of child survival knowledge and assesses the extent of practices and coverage (KPC) of the project's primary health care interventions. The data collected will help ADRA/Yemen do two things: 1) evaluate project plans described in the CSXI proposal in order to develop the DIP; and 2) plan, manage, and assess project activities targeted towards changing behaviors at the household level.

C. Schedule of Activities in Yemen

October 8	Training of core team
October 9	Travel to field site
October 10	Preparations for survey training
October 11	Training of supervisors
October 12-16	Training of supervisors and interviewers
October 17-23	Conduct of survey interviews
October 24-25	Manual tabulation of questionnaires
October 26-27	Group discussion for analysis of results and project implications
October 29	Local Feedback - Government and health leaders from the three districts
October 30	Local Feedback - MOH of Hodeidah Governorate
October 31-November 2	Write report of survey
December 4	National Feedback - MOH, USAID, and other NGOs in Sana'a

II. Methodology

A. The Questionnaire

The questionnaire, which contains 32 questions, was designed to collect information from mothers of children under 24 months of age. The questions were based on a standardized survey format which USAID requires of all PVO CSXI projects. The standardized survey instrument was developed by the staff at PVO CSSP, with the assistance of US and international experts for the various intervention areas, and in cooperation with ADRA/

Yemen field staff. ADRA/Yemen, in cooperation with the PVO CSSP survey trainers William Weiss and Cynthia Carter, further customized the standardized survey questionnaire making the finalized questionnaire appropriate to the actual CSXI project interventions and the project area.

Breakdown of the questions:

- | | |
|---------|--|
| 1 & 2 | Name and age of the respondent (mother) and her youngest child under 24 months of age |
| 3 - 6 | Mother's literacy, employment, and who cares for the child when the mother is away from home |
| 7 - 13 | Breast feeding, nutrition and other feeding practices |
| 12 - 13 | Growth monitoring |
| 14 - 21 | Mother's response to diarrheal disease and management of child with diarrhea |
| 22 - 27 | Immunization status of the child and mother's knowledge of tetanus toxoid vaccines |
| 28 - 32 | Maternal health card, tetanus toxoid immunizations status and ante-natal care. |

The questionnaire was originally written in English and sent to the ADRA/Yemen country office. ADRA/Yemen staff hired a Yemeni for translation of the questionnaire into Arabic and more specifically Arabic of the Tihama area. Certain questions were further customized to fit the project area.

B. Determination of Sample Size

Sample sizes were calculated with the following formula:

$$n = z^2(pq)/d^2$$

where:

- n = sample size
- z = statistical certainty chosen
- p = estimated prevalence/coverage rate/level to be investigated
- q = 1 - p
- d = precision desired.

The value of p was defined by the coverage rate that requires the largest sample size (p = .5). The value d depends on the precision, or margin of error, desired (in this case d = .1). The statistical certainty was chosen to be 95% (z = 1.96). given the above values, the following sample size (n) needed was determined to be:

$$n = (1.96 \times 1.96) (.5 \times .5) / (.1 \times .1)$$

$$n = (3.84) (.25) / .01$$

$$n = 96$$

It takes much time to randomly select an identified individual from the survey population, and then perform this selection 96 times to identify a sample of $n = 96$. Time can be saved by doing a *30 cluster* sample survey in which several individuals within each cluster selected to reach the required sample size. However, in order to compensate for the bias which enters the survey from interviewing persons in clusters, rather than as randomly selected individuals, experience has shown that a minimum sample of 210 (7 per cluster) should be used given the values of p , d , and z above (Henderson, et al., 1982). In general, when using a 30 cluster sample survey, the sample size used should be approximately double the value n , when:

$n = (z \times z) (pq) / (d \times d)$. In this case, a sample size of 300 (10 per cluster) was selected so as to ensure that subsamples would be large enough to obtain useful management type information.

The estimates of confidence limits for the survey results were calculated using the following formula:

95% confidence limit = $p \pm z$ (square root of (pq/n))

where:

p = proportion in population found from survey

z = statistical certainty chosen (if 95% certainty chosen, then $z = 1.96$)

$q = 1 - p$

n = sample size

Example: If the proportion of children in the *survey* who were completely and correctly immunized is 37% and $n = 297$:

95% confidence limit = $.37 \pm 1.96$ (square root of $(.37 \times .63 / 297)$)

($z = 1.96$)

$1.96 = .37 \pm .03$ (or, 34% to 40%)

In other words, we are 95% sure that the actual proportion of children in the *survey area* who are completely and correctly immunized is between 34% and 40%.

C. Selection of the Sample

The sample consisted of 295 women with children 0-23 months of age in the three districts of Hais, Khokha and Jabal Ras. Ten women were selected in each of 30 randomly selected cluster sites following the process described in the *The EPI Coverage Survey* training manual (WHO, 1991).

Once the survey teams reached the designated cluster site, the initial household surveyed within the cluster, as well as the direction from the initial household, was randomly selected.

D. Training of Supervisors and Interviewers

The ADRA/Yemen staff had pre-selected supervisors and interviewers for training. The training of supervisors and interviewers took place in four days. Prior to the first day of training, the survey trainer explained the purpose of the survey and the process of random selection to core team members.

The first training day was dedicated to survey administration, methodology, and understanding the questionnaire. The survey trainer conducted the following classes: 1) purpose and objectives of the survey, 2) roles of supervisors and interviewers, 3) selection of the starting household and survey direction, 4) community protocols and taboos, and 5) review of the customized questionnaire.

The second day of training was a review for the supervisors but introduced the interviewers to the same topics of survey purpose, roles of supervisors and interviewers, and familiarization with the questionnaire.

The third day of field training commenced with a question and answer session regarding practice interviews that the students had done over the weekend. The questionnaire review was completed, practice interviews were conducted in class and survey methodology was discussed and practiced in individual team groups.

On the final day a mother from the clinic was asked to be interviewed from the front of the class. Following the interview the students were asked to critique the team that had conducted the interview and a discussion of good and bad techniques ensued. A field practice of household selection was instructed in the town of Hais. The afternoon was dedicated to collation of questionnaires and scheduling for the first day of interviewing.

E. Conducting of the Interviews

The survey was conducted over 5 days; October 17 - 19, 22 and 23. Thirty clusters were randomly selected by ADRA/Yemen staff upon arrival of the survey trainer. Permission to enter the various clusters to conduct the interviews was sought from local leaders and sheiks by the ADRA/Yemen Country Director and other core team members while training was being held. The teams to survey each area were selected on the final day of training.

The supervisors of each team were responsible for the selection of the starting household and survey direction. The supervisors observed at least one complete interview by each surveyor each day. Each questionnaire was checked for completeness before the survey team left the survey area, so that, in the case of missing or contradictory information, the mother could be visited again the same day.

In many countries it is very difficult to determine exact ages for many individuals. This is particularly true in those countries where birth registration is not common and where the exact birth date is rarely required for official documents. To reduce the importance of age misreporting we have limited the tabulations to broad age groups. In most cases, the tabulations are for all children under age 2 (that is, 0-23 months), separately for children 0-3, 4-11 and 12-23 months. In cases where a child is "about one year old" or "about 2 years old" the interviewers have been trained to probe to try to determine whether the child is past its first (or second) birthday. The interviewers were given a chart that lists the Islamic months (lunar based) in relation to the Gregorian calendar (solar based).

In order to ensure consent and confidentiality, a consent form was given to each interviewer to be read to the mother before commencing with the survey. The consent form advised the potential respondent that she was not obligated to participate in the survey, and that no services would be withheld from her if she chose not to participate. The consent form also assured the mother that all information would be held in confidence, and that the information would be used to help health workers plan health activities.

F. Method for Data Analysis

October 24 and 25 were dedicated to manual data tabulation. The ADRA/Yemen Asst. Project Director (also the survey trainer) supervised the hand tabulation.

Six two-person teams, made up of core team members and supervisors were available full-time for hand tabulation. Manual tabulation required two full days of dedication. The hand tabulators sat around large tables to administer the process. The questionnaires were organized by cluster site, and each cluster of questionnaires was circulated between each of the tabulators. Each of the tabulators were assigned the responsibility of recording the responses to one question at a time going through each of the 295 survey questionnaires until all the responses to that particular question had been accounted for. The tabulators were trained to analyze the results of the questions they had each tabulated and then wrote out the results and analysis at the bottom of the hand tabulation sheets.

Immunization coverage was analyzed by looking at children aged 12-23 months. By restricting the sample to children of these ages, we can estimate the percentage of children fully immunized within the first year of life. For example, if only 50% of the children aged 12-23 months in the *survey* are fully immunized, we can then assume that the percentage of children in the *project area* who receive the full set of immunizations by age 12 months is 50% or less.

For the purpose of feedback to the local governments and health leaders, key indicators and other information that they would find interesting was gathered together and shared. Frequency distributions for each of the questions and a few key cross tabulations were also included in the hand tabulations.

Once the frequency tables and some cross tables were finalized, the results of the survey were compared to the Republic of Yemen MOH and UNICEF/WHO health messages and ADRA/Yemen CSXI project objectives in order to develop the first draft of the survey report. This was done during group discussions on October 26 and November 2 with the core team members. The consensus of the group was recorded and provided the basis for the results and discussion sections of this survey report.

III. Results & Discussion

The following answers were given for the 32 questions. 295 questionnaires were manually tabulated for analysis. No questionnaires were removed from the analysis although missing data was recorded for some questions. Interviews where the missing data was found were mostly from the first day of interviewing when supervisors and interviewers were adjusting to accuracy. After each statement of results a short discussion follows as an analysis of the results and inclusive of project plans to meet the needs evaluated.

Each of the following numbered modules refers to the survey question of that number.

A. Identification Module

2. 15.6% (46 of 295) of the children in the survey are under four months of age. 54.2% (160 of 295) children in the survey are under the age of one year (0-11 months of age). 45.8% (135 of 295) of the children in the survey are 12-23 months of age. The mean age of children in the survey is 10.7 months.

AGE	FREQUENCY	PERCENT	CUMULATIVE %
0	7	2.4%	6.7%
1	17	5.8%	12.0%
2	8	2.7%	18.0%
3	14	4.7%	22.3%
4	14	4.7%	29.0%
5	14	4.7%	34.3%
6	14	4.7%	38.7%
7	8	2.7%	44.3%
8	18	6.1%	48.7%
9	19	6.4%	52.3%
10	17	5.8%	57.0%
11	10	3.4%	62.3%
12	26	8.8%	66.3%
13	11	3.7%	70.7%
14	10	3.4%	74.7%
15	14	4.7%	78.3%
16	8	2.7%	82.7%
17	13	4.4%	85.0%
18	14	4.7%	88.0%
19	7	2.4%	92.3%
20	11	3.7%	94.3%
21	7	2.4%	95.3%
22	5	1.7%	98.0%
23	9	3.1%	100.0%
TOTAL	300	100.0%	

B. Mother's Education and Occupation Module

Formal Education and Literacy

3. 91.2% (269 of 295) of mothers surveyed, reported that they had no formal education. 3.1% (9 of 295) mothers reported that they had attended primary school, but could not read. 3.4% (10 of 295) mothers had attended primary school and could read. 2.4% (7 of 295) had either a secondary or higher level of education. In sum, 94.2% (278 of 295) either did not attend school or went to primary but do not read. 5.8% (17 of 295) of mothers surveyed, reported that they could read.

Discussion and Recommendations

The question of literacy among females here relates only to those who have had a formal education and does not take into account those who learn to read in the home. Therefore, the approximate percentage of 6% could be slightly higher if this were considered. This percentage of the three districts surveyed is still less than the 10% of female literacy of northern Yemen (UNICEF, 1993).

For those that can read, ADRA/Yemen should develop simple written health messages in Arabic. For mothers that cannot read, village health promoters should be trained to use adult learning methodologies, for example the use of demonstrations, role plays, pictorial presentations and focus group discussions.

A separate project (by ADRA/Yemen) from the CSXI will target the literacy problem. By improving the basic skills in literacy and numeracy, women's general knowledge in the areas of health care, nutrition, agriculture and environmental health will also increase (UNICEF, 1993).

Working away from Home

4. 63.0% (186 of 295) of mothers reported that they generally stay close to the home during the day. The remaining 37.0% (109 of 295) do work away from home.

Discussion and Recommendations

63% of the mothers stay close to home during the day. Through the experience of the interviewers, it was noted that most mothers do their house and/or field chores in the mornings and rest during the afternoon hours, although this did tend to vary according to village. 58% and 21% left their children in the care of relatives and older children respectively. Other caretakers mentioned by mothers were husbands and neighbors. In order for village health promoters to reach mothers, home visits and/or training sessions will need to take place in the afternoons or evenings. Training sessions will make it possible for all village women and older female siblings to attend. Older siblings could also be reached through coordination of ADRA/

Yemen and the school health services program. Village health promoters will need to explore different avenues to reach husbands such as market days, elders' meetings and village health committees.

Income Generating Work

5. 294 mothers answered this question. 82.0% (241 of 294) of mothers surveyed stated that they were not involved in any income generating work. 7.5% (22 of 294) reported that they earn income from harvesting. 5.4% (16 of 294) stated that they earn income from selling handicrafts. 5.0% (14 of 294) stated that they sold foods such as dairy products for income. 3 mothers stated they were salaried workers, 2 mothers that they sold agricultural products and 1 mother that she

was a shop keeper or a street vendor. 3.4% (10 of 294) reported earning income from categories not listed in the questionnaire. No mother stated that they earned income as servants.

Caretakers

6. 294 mothers answered this question. 58.2% (171 of 294) of mothers reported that they leave their child with relatives when they go away from home. 21.8% (64 of 294) reported leaving the child with older children. 12.6% (37 of 294) reported taking their child with them. 5.8% (17 of 294) reported that they leave their child with their husband. 3.7% (11 of 294) stated leaving their child with neighbors or friends. No mother stated that they left their child with a maid servant or took them to nursery school.

C. Breast Feeding/Nutrition Module

Facts for Life breast feeding messages state that breast milk alone is the best possible food and drink for a baby for about the first six months of life, that babies should start to breast feed as soon as possible after birth, that a variety of additional foods is necessary when a child is about six months old with continued breast feeding well into the second year of a child's life and for longer if possible (UNICEF, et al., 1993).

Prevalence and Persistence of Breast Feeding

7. 76.9% (227 of 295) of mothers reported that they are currently breast feeding their child. Of those mothers in the survey with a child 20-23 months of age (32 mothers), 62.5% (20 of 32) were still breast feeding their children.

8. 65 of 68 mothers who were not breast feeding their child, answered this question. 95.4% (62 of 65) stated that they had breast fed their child in the past.

Discussion and Recommendations

In comparison to the rest of the information gathered in this survey, the areas of nutrition and breast feeding were the most encouraging. This subject was the strongest area for mothers, although improvement is still needed. 98% of the children in the survey had been breast fed at some time, however, at the time of the survey 77% were currently being breast fed. Survey data revealed that over 63% of children in the 20, 21, 22 and 23 month age group were still being breast fed. ADRA/Yemen should build on this positive report of practice and continue to emphasize the benefits of prolonged breast feeding (first two years of a child's life) during training of VHPs, TBAs and the communities themselves.

Initiation of Breast Feeding

9. Only those mothers who were currently breast feeding or who had breast fed in the past were asked this question (289 of 295). 48.4% (140 of 289) reported that they began breast feeding their child during the first hour after delivery. 13.8% (40 of 289) reported that they began between one and eight hours after delivery. 37.7% (109 of 289) of mothers stated that waited more than eight hours after the delivery to begin breast feeding. In sum, 62.3% (180 of 289) stated that they had begun breast feeding within the first eight hours.

Discussion and Recommendations

There are no recent nationwide statistics on the initiation of breast feeding. One survey in 1988 of rural Dhamar found that 41% of babies were breast fed from their first day (UNICEF, 1993). The results from

this baseline survey shows that 62% were being breast fed within the first eight hours after delivery and 38% after that length of time. ADRA/Yemen should build on this second positive report of practice and continue to emphasize the benefits of early initiation of breast feeding after delivery during the training of VHPs and mothers in the villages.

Exclusive Breast Feeding

10. Of the children, 0-3 months of age (46 of 295), 37.0% (17 of 46) were being exclusively breast fed. In other words, they were not being given any of the food/fluid categories listed in question 10a-10i. Of the 63% (29 of 46) of the mothers who were not exclusively breast feeding 82.8% (24 of 29) were adding water and herbal teas.

Discussion and Recommendations

37% of the 46 children in the 0, 1, 2, and 3 month age group in the survey were being exclusively breast fed. We found that the majority of mothers who were not exclusively breast feeding a child from this age group were adding water and herbal teas. ADRA/Yemen will need to emphasize the importance and benefits of exclusive breast feeding during the first six months of life by targeting mothers, VHPs, TBAs and professional health workers.

Introduction of Supplements

10. Of the children 5-8 months of age (59 of 295), 69.5% (41 of 59) were being given complimentary foods. That is, the mothers are giving their infants at least one of the non-fluid food categories listed in question 10c-10i.

11. 294 mothers answered this question. 41.2% (121 of 294) mothers responded that they should start giving a child foods in addition to breast milk between the ages of 4-6 months. 29.6% (87 of 294) indicated an age earlier than four months. 16.7% (49 of 294) indicated an age later than 6 months. 12.6% (37 of 294) stated that they did not know when. In sum, 58.8% (173 of 294) did not know that mothers should give their children food in addition to breast milk between 4-6 months of age.

Discussion and Recommendations

70% of the 59 children in the 5, 6, 7, and 8 month age group had been given solid or semi-solid foods. About 59% of mothers, when asked, did not know that children should be introduced to foods other than breast milk at about six months of age. Of that 59%, almost 30% indicated an age for food introduction earlier than four months. This serious misconception will be addressed in conjunction with the health messages related to exclusive breast feeding. Although 70% is the majority of mothers practicing appropriate supplementation of foods, it would appear that the remaining 30% of the infants are not getting sufficient nutrition. Furthermore, this survey did not address the quality or quantity of the foods being given to the children and therefore further analysis of the 70% being given solid or semisolid foods is not possible.

In general, Yemeni women are well aware of the benefits of breast feeding for themselves and for their children. Obstacles to good breast feeding practices are numerous for the rural women. There are many pressures and a very tiring lifestyle of heavy workloads to fetch water and firewood or work in the fields that demand time and energy from their bodies, making them too weak to produce sufficient milk (UNICEF, 1993). Health training by ADRA/Yemen will need to take these facts of life into consideration.

D. Growth Monitoring Module

Possession of Growth Monitoring Card

12. Of the 295 mothers surveyed, only one mother had a growth monitoring card for her child. 3.1% (9 of 295) stated that they had lost their child's growth monitoring card and 96.6% (285 of 295) stated that they never had a growth monitoring card.

Use of Growth Monitoring Card

13. The one growth monitoring card that was found indicated that the child had been weighed in the past four months prior to the survey.

Discussion and Recommendations

Growth monitoring cards were not present in the villages surveyed. The ADRA/Yemen CSXI project objectives as stated in the proposal is to decrease malnutrition in children under two from current estimate of 30% to 20%. Because the percentage of malnutrition was not possible to obtain from this survey, ongoing activities such as training VHPs and village vaccinators (VV) to conduct weighing sessions at monthly vaccination sites will need to be done. This is one of the key inputs in the proposal. They will need to focus on monthly weighing of underweights only and quarterly weighing in normal weight children. ADRA/Yemen will work in coordination with the District Health offices to provide cards to all children under the age of two years in the project areas and encourage VHPs to ensure that all children under two years are weighed and that weights are recorded on the child's growth monitoring card. VHPs will also need to be trained to encourage mothers to safeguard the cards.

E. Diarrheal Disease Module

Incidence of Diarrhea

14. 59.0% (174 of 295) of the mothers reported that their child had diarrhea within the past two weeks prior to the survey. 1.7% (5 of 295) of the mothers stated that they didn't know.

Continuation of Breast Feeding during Diarrhea

15. 173 mothers (of 174 with a child who had diarrhea in the past two weeks) answered this question. Of the 141 infants/children in the survey who are still being breast fed and who had diarrhea in the past two weeks, 54.6% (77 of 141) were given breast milk the same as usual and 19.1% (27 of 141) were given more than usual. In sum, 73.8% (104 of 141) were breast fed the same amount or more than usual during the diarrhea episode.

20.6% (29 of 141) mothers gave their child less breast milk than usual and 5.7% (8 of 141) stopped breast feeding completely during the diarrhea episode. In sum, 26.2% (37 of 141) gave less breast milk or stopped giving breast milk completely.

Continuation of Fluids other than Breast Milk during Diarrhea

16. 173 mothers (of 174 with a child who had diarrhea in the past two weeks) answered this question. Of the 112 infants/children in the survey who are not being exclusively breast fed and who had diarrhea in the past two weeks, 33.0% (37 of 112) were given more fluids (other than breast milk) during

the diarrhea episode. 27.7% (31 of 112) were given fluids the same as usual. In sum, 60.7% (68 of 112) were being given fluids other than breast milk more or the same amount as usual.

21.4% (24 of 112) of mothers gave their child less fluids than usual during diarrhea, and 17.9% (20 of 112) stopped giving their child fluids completely. In sum, 39.3% (44 of 112) gave less fluids or stopped completely giving fluids other than breast milk during their child's diarrhea episode.

Continuation of Solid/Semisolid Foods during Diarrhea

17. 173 mothers (of 174 with a child who had diarrhea in the past two weeks) answered this question. Of the 86 infants/children in the survey who are not being exclusively breast fed, but had diarrhea in the past two weeks, 4.7% (4 of 86) were being given solid or semisolid foods more than usual. 24.4% (21 of 86) were given the same as usual solid/semisolid foods. In sum, 29.0% (25 of 86) were given more or the same as usual solid/semisolid foods during the diarrhea episode.

44.2% (38 of 86) of mothers gave their child less than usual amounts of solid/semisolid foods during the diarrhea episode and 26.7% (23 of 86) stopped giving them completely. In sum, 70.9% (61 of 86) gave less or stopped completely giving solid/semisolid foods during their child's diarrhea episode.

Treatment of Diarrhea

18. 173 mothers (of 174 with a child who had diarrhea in the past two weeks) answered this question. 28.3% (49 of 173) mothers responded that they treated their child with at least one of the ORT categories listed in question 18 (18b-18e). 22.5% (30 of 173) mothers used the ORS sachet, 3.5% (6 of 173) gave home fluids to their child, 3.5% (6 of 173) used a cereal-based ORT, and 2.9% (5 of 173) gave a sugar-salt solution as treatment.

46.2% (80 of 173) mothers gave their child anti-diarrhea or antibiotics as treatment for their child's diarrhea. 11.6% (20 of 173) gave something other than the categories listed in question 18. 35.8% (62 of 173) did not give any treatment for their child's diarrhea.

Seeking Advice or Treatment for Diarrhea

19. 33.3% (58 of 174) of the mothers with a child who had diarrhea in the past two weeks sought advice or treatment for their child's diarrhea.

20. Of the 58 mothers who sought advice or treatment for their child's diarrhea: 34.5% (20 of 58) went to a general hospital, 20.1% (12 of 58) went to a village health worker, 15.5% (9 of 58) went to the health center, 12.1% (7 of 58) went to the pharmacy, 6.9% (4 of 58) went to private clinic or doctor, and 6.9% (4 of 58) sought advice from friends and relatives. 8.6% (5 of 58) sought help from sources other than those listed in question 20. No mother sought advice or treatment from a traditional birth attendant or traditional healer.

Signs/Symptoms of Diarrhea that cause Mothers to seek advice for Diarrhea

21. Of the mothers interviewed, when asked what signs/symptoms would cause them to seek advice or treatment for their child's diarrhea, 62.4% (184 of 295) stated fever; 46.8% (138 of 295) stated prolonged duration of diarrhea (at least 14 days); 44.1% (130 of 295) stated vomiting; 25.8% (76 of 295) stated weakness or tiredness; 16% (47 of 295) state loss of appetite; 3.1% (9 of 295) stated blood in the stool. 16.6% (49 of 295) responded with a sign/symptom other than the ones listed in question 21. 15.6% (46 of 295) did not know what signs/symptoms would cause them to seek advice for their child's diarrhea.

Discussion and Recommendations

In 1988, a survey of the Tihama region reported that 40% of infants visiting health centers were for diarrhea disease cases (UNICEF, 1993). More recent statistics point to a national 20.4% of children who had diarrhea in the last two weeks prior to the survey (CSO, 1994). This baseline survey revealed that almost 60% of the mothers interviewed in the project area reported that their child had had diarrhea within the last two weeks.

Facts for Life diarrhea messages stress the importance of continuing the breast feeding of children being breast fed, and of giving extra fluids and continued feeding during a diarrhea episode. It also states that providing extra foods when the child is recovering from diarrhea is important for proper recovery (UNICEF, et al., 1993). Approximately 74% continued breast feeding the same amount or more than usual during the diarrhea episode. Although this is quite good, the other 26% needs to be addressed. 60% were giving the same amount or more than usual fluids other than breast milk. Here too, 40% of the mothers not practicing this important health factor will need to be addressed. Only 29% were being fed the same amount or more solid/semisolid foods during the episode. 71% were fed less or stopped completely. This is a very significant percentage that ADRA/Yemen will need to focus on. Specific educational efforts and focus group discussions are advisable to understand the reasons behind this behavior. Based on the information gathered, special health messages related to appropriate treatment practices should be developed for VHPs to bring to mothers in the project area.

Facts for Life messages also stress the dangers of using medicines to treat diarrhea (UNICEF, et al., 1993). Baseline survey results show that approximately 28% use some form of ORT (10% lower than the national average) (UNICEF, 1993). 46% of the children with diarrhea in the past two weeks were being treated with anti-diarrhea or antibiotics. 36% did not give any treatment. This indicates considerable room for education on ORS and home-based fluids for home management. ADRA/Yemen should place special emphasis on the advantages and use of home-based fluids as a first-line treatment of diarrhea versus the dangers of using medicines. The use of ORS packets should also be a strong promotional component for this CDD intervention. The education of local pharmacists and other health facilities and village health promoters (VHP) on standard case management will involve organizing training workshops for this specific purpose.

Signs and symptoms of diarrhea demanding additional attention and most frequently mentioned were fever (62%), prolonged duration (47%), vomiting (44%), weakness or tiredness (26%), loss of appetite (16%) and blood in the stool (3%). 16% didn't know what signs or symptoms would cause them to seek advice or treatment. *Facts for Life* stresses in order, dehydration, fever, loss of appetite, vomiting, passing several watery stools in one or two hours, and blood in the stool as signs that a mother should seek qualified medical help for her child (UNICEF, et al., 1993). Health messages should be provided by ADRA/Yemen emphasizing signs related to dehydration as the most important indicators that a child needs medical help during diarrhea. The training of VHPs to emphasize these messages to mothers is an integral part of this intervention.

Only 33% of the mothers whose children had diarrhea in the past two weeks sought advice or treatment. A significant percentage of mothers sought advice from a form of government institution whether it was a hospital, health center or village health workers (VHW). This is encouraging for working with VHWs as an avenue of health messages to the mothers.

a hospital, health center or village health workers (VHW). This is encouraging for working with VHWs as an avenue of health messages to the mothers.

F. Immunization Module

Reported Immunizations

22. 36.9% (109 of 295) mothers surveyed, reported that their child had received at least one immunization. 62.7% (185 of 295) of the mothers reported that their child had not received any immunizations and 0.3% (1 of 295) didn't know.

Knowledge of Age for Measles Vaccination

23. 16.3% (48 of 295) of the mothers surveyed, stated that a child should receive its measles vaccine at nine months of age. 1.0% (3 of 295) mothers stated the age of six months as the time when a child should be vaccinated for measles. 1.0% (3 of 295) mothers gave an age other than nine months or six months. 81.7% (241 of 295) stated that they did not know. In sum, 83.7% (247 of 295) did not know that a child should receive the measles vaccine at nine months of age.

Knowledge of Reasons for Tetanus Toxoid Vaccinations

24. 293 mothers answered this question. 12.6% (37 of 293) stated that the main reason why pregnant women need to be vaccinated with the tetanus toxoid (TT) vaccine is to protect both the mother and newborn. 3.4% (10 of 293) said it protects only the mother and 4.1% (12 of 293) said it only protects the newborn. 79.9% (234 of 293) stated that they did not know, or stated something other than the categories listed in question 24.

Knowledge of Number of Tetanus Toxoid Vaccinations Necessary for Protection

25. 294 mothers answered this question. 11.2% (33 of 294) mothers stated that a pregnant woman needs more than two TT injections to protect the newborn infant from tetanus. 5.4% (16 of 294) said that a pregnant woman needs one TT, 4.1% (12 of 294) said two injections were necessary and 3 mothers said that none were needed. 78.2% (230 of 294) said that they did not know. In sum, 15.3% (45 of 294) stated that a pregnant woman needs at least two TT injections to protect the newborn infant from tetanus, and 84.7% (249 of 294) stated that none was needed, one was needed or didn't know.

Possession of Immunization Card

26. 294 mothers answered this question. 21.4% (63 of 294) stated that they had an immunization card, 12.2% (36 of 294) stated they had lost the card and 66.3% (195 of 294) stated that they had never had a card for their child.

Immunization Coverage

27. The immunization status for children 12-23 months of age is based on the immunization card actually seen by the interviewers. There were 135 children in the survey 12-23 months of age. The following are coverage figures for BCG, OPV, DPT and measles:

BCG Status
for 135 children 12-23 months of age

No BCG		Yes BCG	
#	%	#	%
108	80.0%	27	20.0%

OPV Status
OPV 1,2 & 3 for 135 children 12-23 months of age

OPV1		OPV2		OPV3		Drop Out	
#	%	#	%	#	%	DO Freq	DO Rate
30	22.2%	29	21.5%	23	17.0%	7	23.0%

DPT Status
DPT 1,2 & 3 for 135 children 12-23 months of age

DPT1		DPT2		DPT3		Drop Out	
#	%	#	%	#	%	DO Freq	DO Rate
25	18.5%	23	17.0%	20	14.8%	5	20.0%

Measles Status
for 135 children 12-23 months of age

No Measles		Yes Measles	
#	%	#	%
120	88.9%	15	11.1%

Fully Immunized Status
for 135 children 12-23 months of age

Not Fully Immunized		Fully Immunized	
#	%	#	%
122	90.4%	13	9.6%

Discussion and Recommendations

20% of the mothers interviewed had an immunization card for their child and 12% stated that they had lost their child's card. Approximately 37% of the children had received at least one vaccination.

Antigen-specific immunization coverage rates for the 12-23 month age group are: BCG 20%, OPV123 17%, DPT123 15%, and measles 11%. These percentages represent population based coverage rates for the surveyed children, as recorded on the immunization card and all percentages are significantly lower than the national averages (BCG - 60%, OPV123 - 47%, DPT123 - 47%, measles - 51%) The rate of children fully immunized (BCG + OPV123 + DPT123 + measles) in the baseline survey is 9.6% and is lower than the 39% rural area EPI coverage estimate and 41% national EPI coverage estimate of 1991. The national objective for full immunization coverage of children during the first year of life is 80% (UNICEF, 1993). The ADRA/Yemen CSXI project objective as stated in the proposal is to increase percent of children under two completing immunizations from the current 40% to 60%. This objective will need some adjusting to incorporate baseline survey results and maintain a realistic goal.

In the surveyed population, the difference between the first and third DPT is approximately 20%. This figure may not be significant since so few mothers had cards.

The low percentage of mothers who reported that their child had received immunizations and who had in their possession immunization cards, as well as the low coverage rates, suggest that immunizations are not reaching children the number of times required to fully immunize in the first year of life. Further research to determine the reasons for low coverage and high drop-out rates needs to be done. Issues to consider are accessibility, quality of services, and distribution. They can be researched through formal and informal interviews with health center personnel. Focus group discussions would be an appropriate means of discovering the possibility of attitudes and beliefs detrimental to immunizations. ADRA/Yemen will work in collaboration with private and public health institutions and village health committees (VHC) in the project area to provide routine immunization services. Additional means of support from ADRA/Yemen should include training of health staff, a cold chain maintenance crew and providing cold chain equipment. Health messages on the importance of completing the EPI schedule during a child's first year of life will be accomplished through VHPs and immunization campaigns.

Overall knowledge of mothers about the timing and purpose of immunizations is quite poor. For example, 84% did not know that a child should receive the measles vaccine at nine months of age and 80% stated that they did not know (or stated something other than the listed categories) the reason for tetanus toxoid vaccinations. 85% stated that one or none was needed or didn't know. ADRA/Yemen should introduce and reinforce messages about the timing and benefits of immunizations for both the mother and child.

G. Maternal Care Module

Possession of Maternal Cards

28. 6.8% (20 of 295) mothers surveyed had maternal health cards. 14 mothers reported losing their maternal health card and 88.5% (261 of 295) stated that they did not have one.

Tetanus Toxoid Injections indicated on Maternal Health Card

29. Of the 20 women who had maternal health cards, 70.0% (14 of 20) had received two or more TT vaccinations and the remaining 6 had one TT injection indicated on the card.

Ante-Natal Care Visits

30. 20 women had maternal health cards. Information was only recorded off of 17 cards. 12 of the cards had spaces for ante-natal visits and 5 did not. This question records ante-natal visits and is filled out by the interviewer after viewing the card.

31. Of the 12 mothers whose cards had spaces for ante-natal care visits 5 had made one visit, 4 had made two or more visits and 3 had not made a visit.

Birth Attendants

32. 71.9% (212 of 295) of the mothers interviewed reported that a traditional birth attendant tied and cut the cord on the delivery of their last child. 21.0% (62 of 295) said a family member cut the cord, 6.1% (18 of 295) was done by a health professional, 2 did it themselves and 1 had a neighbor do it.

Discussion and Recommendations

The question of importance for this CS project from the section of maternal care on the questionnaire pertains to the number of TT vaccinations mothers have received. Because there were so few mothers who had maternal health cards (20), the percentage does not show a true picture of TT status. Only 4.7% of the total mothers interviewed had had two or more TT vaccinations. ADRA/Yemen will need to incorporate TT vaccinations in their EPI program. In order to better estimate TT coverage of all WCBA, the project should distribute maternal health cards and through training and education encourage these women to obtain their vaccinations.

For the future when ADRA/Yemen introduces maternal care services into its program, the additional results will become useful. They point out obvious targets for the training of TBAs and family units and the need for addressing referral issues..

IV. Costs

<u>EXPENSE</u>	<u>AMOUNT</u>
Training Supplies, Copies, Miscellaneous	\$405.00
Transportation	570.00
Translator, Translations, Supervisors, Interviewers	1,986.00
Per Diems	808.00
Training Facility	44.00
Accommodations	927.00
TOTAL ESTIMATE	\$4,740.00

V. References

- Adventist Development and Relief Agency, 1994. *Child Survival XI Proposal*. Submitted to BHR/PVC of the United States Agency for International Development, Washington, DC. ADRA/International: Silver Springs, Maryland.
- Central Statistical Organization, Sana'a Yemen, 1994. *Yemen Demographic and Maternal and Child Health Survey 1991/1992*. Macro International Inc.: Calverton, Maryland.
- Henderson, R.H. & Sundaresan, T. 1982. "Cluster Sampling to Assess Immunization Coverage: A Review of Experience with a Simplified Sampling Method," *Bulletin of the World Health Organization*. 60 (2): pp. 253-260.
- UNICEF, 1993. *The Situation of Children and Women in the Republic of Yemen 1992*. UNICEF-Sana'a, Republic of Yemen.
- UNICEF, WHO, UNESCO and UNFPA, 1993. *Facts for Life: A Communication Challenge*. P&LA: Benson, United Kingdom.
- World Health Organization, 1991. *The EPI Coverage Survey: Training for Mid-Level Managers*. WHO: Geneva, Switzerland.

Appendix A. Survey Results

Question	Frequency	%
Mothers Education/Occupation		
3. What was the highest educational level you attained?	n=295	
1. none	269	91.2
2. primary does not read	9	3.1
3. primary reads	10	3.4
4. secondary and higher	7	2.4
TOTAL	295	
4. Do you work away from home?	n=295	
1. yes	109	37.0
2. no	186	63.0
TOTAL	295	
5. Do you do any "income generating work"?	n=294	
(multiple answers possible; record all answers)		
a. nothing	241	82.0
b. handicraft, weaving, rugs, etc.	16	5.4
c. harvesting, fruit picker	22	7.5
d. selling agricultural products	2	0.7
e. selling foods, dairy products	14	5.0
f. servant/household services	0	0.0
g. shop keeper, street vendor	1	0.3
h. salaried worker	3	1.0
i. other	10	3.4
Skip	1	
6. Who takes care of (name of child) while you are away from home?	n=294	
(multiple answers possible; record all answers)		
a. mother takes child with her	37	12.6
b. husband/partner	17	5.8
c. older children	64	21.8
d. relatives	171	58.2
e. neighbors/friends	11	3.7
f. maid	0	0.0
g. nursery school	0	0.0
Skip	1	

Question	Frequency	%
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Breast Feeding/Nutrition

7.	Are you breast feeding (name of child)?	n=295	
	1. yes	227	76.9
	2. no	68	23.1
	TOTAL	295	
8.	Have you ever breast fed (name of child)?	n=65	
	1. yes	62	95.4
	2. no	3	4.6
	Skip	3	
	TOTAL	68	
9.	After the delivery, when did you breast feed (name of child) for the first time?	n=289	
	1. during the first hour after delivery	140	48.4
	2. from 1 to 8 hours after delivery	40	13.8
	3. more than 8 hours after delivery	109	37.7
	4. do not remember	0	0.0
	TOTAL	289	
10a.	Are you giving (name of child) water (or herbal teas)?	n=295	
	1. yes	237	80.3
	2-3. no or doesn't know	58	19.7
	TOTAL	295	
10b.	Are you giving (name of child) cow milk, goat milk, or formula?	n=295	
	1. yes	229	77.6
	2-3. no or doesn't know	65	22.1
	Skip	1	0.3
	TOTAL	295	
10c.	Are you giving (name of child) semisolid foods such as gruels, porridge or semolina?	n=295	
	1. yes	211	71.5
	2-3. no or doesn't know	82	27.8
	Skip	2	0.7
	TOTAL	295	
10d.	Are you giving (name of child) fruits?	n=295	
	1. yes	155	52.5
	2-3. no or doesn't know	140	47.5
	TOTAL	295	

Question	Frequency	%
10e. Are you giving (name of child) carrot, squash, mango or papaya?	n=295	
1. yes	135	45.8
2-3. no or doesn't know	159	53.9
Skip	1	0.3
TOTAL	295	
10f. Are you giving (name of child) dark green leafy vegetables, such as spinach?	n=295	
1. yes	83	28.1
2-3. no or doesn't know	212	71.9
TOTAL	295	
10g. Are you giving (name of child) meat or fish?	n=295	
1. yes	162	54.9
2-3. no or doesn't know	132	44.7
Skip	1	0.3
TOTAL	295	
10h. Are you giving (name of child) lentils, peanuts, or beans?	n=295	
1. yes	106	35.9
2-3. no or doesn't know	187	63.4
Skip	2	0.7
TOTAL	295	
10i. Are you giving (name of child) eggs or yogurt?	n=295	
1. yes	176	59.7
2-3. no or doesn't know	119	40.3
TOTAL	295	
10j. Are you adding dark green leafy vegetables such as spinach, to (name of child)'s food?	n=295	
1. yes	72	24.4
2-3. no or doesn't know	221	74.9
Skip	2	0.7
TOTAL	295	
10k. Are you adding honey or sugar to (name of child)'s meals?	n=295	
1. yes	179	60.7
2-3. no or doesn't know	115	39.0
Skip	1	0.3
TOTAL	295	
10l. Are you adding fat (lard) or oil to (name of child)'s meals?	n=295	
1. yes	168	56.9
2-3. no or doesn't know	125	42.4
Skip	2	0.7
TOTAL	295	

Question	Frequency	%
10m. Are you adding iodized salt to (name of child)'s meals?	n=295	
1. yes	104	35.3
2-3. no or doesn't know	190	64.4
Skip	1	0.3
TOTAL	295	
11. When should a mother start adding foods to breast feeding?	n=294	
1. start adding earlier than 4 months of age	87	29.6
2. start adding between 4-6 months of age	104	35.4
3. start adding about 6 months of age	17	5.8
4. start adding later than 6 months of age	49	16.7
5. doesn't know	37	12.6
Skip	1	
TOTAL	295	

Growth Monitoring

12. Does (name of child) have a growth monitoring/promotion card?	n=295	
1. yes	1	0.3
2. lost card	9	3.1
3. no	285	96.6
TOTAL	295	
13. Look at the growth monitoring card of the child, and record the following information: has the child been weighed in the last four months?	n=1	
1. yes	1	100.0
2. no	0	0.9
TOTAL	1	

Diarrheal Diseases

14. Has (name of child) had diarrhea during the last two weeks?	n=295	
1. yes	174	59.0
2. no	116	39.3
3. doesn't know	5	1.7
TOTAL	295	
15. During (name of child)'s diarrhea did you breast fed...	n=173	
1. more than usual?	27	15.6
2. same as usual?	77	44.5
3. less than usual?	29	16.8
4. stopped completely?	8	4.6
5. child not breast fed	32	18.4
Skip	1	
TOTAL	174	

<u>Question</u>	<u>Frequency</u>	<u>%</u>
16. During (name of child)'s diarrhea, did you provide (name of child) with fluids other than breast milk...	n=173	
1. more than usual?	37	21.4
2. same as usual?	31	17.9
3. less than usual?	24	13.9
4. stopped completely?	20	11.6
5. exclusively breast feeding	61	35.2
Skip	1	
TOTAL	174	
17. During (name of child)'s diarrhea, did you continue to provide (name of child) with solid/semisolid foods...	n=173	
1. more than usual?	4	2.3
2. same as usual?	21	12.1
3. less than usual?	38	22.0
4. stopped completely?	23	13.3
5. exclusively breast feeding	87	50.3
Skip	1	
TOTAL	174	
18. When (name of child) had diarrhea, what treatments, if any, did you use? (multiple answers possible; record all answers)	n=173	
a. nothing	62	35.8
b. ORS sachet	39	22.5
c. sugar-salt solution	5	2.9
d. cereal-based ORT	6	3.5
e. infusions or other fluids	6	3.5
f. anti-diarrhea medicine or antibiotics	80	46.2
g. other	20	11.6
19. When (name of child) had diarrhea, did you seek advice or treatment for the diarrhea?	n=174	
1. yes	58	33.3
2. no	116	66.7
TOTAL	174	
20. From whom did you seek advice or treatment for the diarrhea of (name of child)? (multiple answers possible; record each answer)	n=58	
a. general hospital	20	34.5
b. health center/clinic/post	9	15.5
c. private clinic/doctor	4	6.9
d. pharmacy	7	12.1
e. village health worker	12	20.1
f. traditional healer	0	0.0
g. traditional birth attendant	0	0.0
h. relatives & friends	4	6.9
i. other	5	8.6

Question	Frequency	%
21. What signs/symptoms would cause you to seek advice or treatment for (name of child)'s diarrhea? (multiple answers possible; record all answers)	n=295	
a. doesn't know	46	15.6
b. vomiting	130	44.1
c. fever	184	62.4
d. dry mouth, sunken eyes, sunken fontanelle, decreased urine output (dehydration)	26	8.8
e. diarrhea of prolonged duration (at least 14 days)	138	46.8
f. blood in stool	9	3.1
g. loss of appetite	47	16.0
h. weakness or tiredness	76	25.8
i. other	49	16.6

Immunizations

22. Has (name of child) ever received any immunizations?	n=295	
1. yes	109	36.9
2. no	185	62.7
3. doesn't know	1	0.3
TOTAL	295	
23. At what age should (name of child) receive measles vaccine?	n=295	
1. specify in months: 2 mos	1	0.3
3 mos	1	0.3
5 mos	1	0.3
6 mos	3	1.0
9 mos	48	16.3
2. doesn't know	241	81.7
TOTAL	295	
24. Can you tell me the main reason why pregnant women need to be vaccinated with tetanus toxoid vaccine?	n=293	
1. to protect both mother/newborn against tetanus	37	12.6
2. to protect only the woman against tetanus	10	3.4
3. to protect only the newborn against tetanus	12	4.1
4. doesn't know or other	234	79.9
Skip	2	
TOTAL	295	

Question **Frequency** **%**

25.	How many tetanus toxoid injections does a pregnant woman need to protect the newborn infant from tetanus?	n=294
	1. one	16 5.4
	2. two	12 4.1
	3. more than two	33 11.2
	4. none	3 1.0
	5. doesn't know	230 78.2
	Skip	1
	TOTAL	295
26.	Do you have an immunization card for (name of child)?	n=295
	1. yes	63 21.4
	2. lost it	36 12.2
	3. never had one	195 66.3
	Skip	1
	TOTAL	295

27.

BCG Status
for 135 children 12-23 months of age

No BCG		Yes BCG	
#	%	#	%
108	80.0%	27	20.0%

OPV Status
OPV 1,2 & 3 for 135 children 12-23 months of age

OPV1		OPV2		OPV3		Drop Out	
#	%	#	%	#	%	DO Freq	DO Rate
30	22.2%	29	21.5%	23	17.0%	7	23.0%

DPT Status
DPT 1,2 & 3 for 135 children 12-23 months of age

DPT1		DPT2		DPT3		Drop Out	
#	%	#	%	#	%	DO Freq	DO Rate
25	18.5%	23	17.0%	20	14.8%	5	20.0%

Measles Status
for 135 children 12-23 months of age

No Measles		Yes Measles	
#	%	#	%
120	88.9%	15	11.1%

Fully Immunized Status
for 135 children 12-23 months of age

Not Fully Immunized		Fully Immunized	
#	%	#	%
122	90.4%	13	9.6%

Maternal Care

28. Do you have a maternal health card? **n=295**
- | | | |
|------------|-----|------|
| 1. yes | 20 | 6.8 |
| 2. lost it | 14 | 4.7 |
| 3. no | 261 | 88.5 |
| TOTAL | 295 | |
-
29. Look at the maternal health card and record the number of TT vaccinations in the space below: **n=20**
- | | | |
|----------------|----|------|
| 1. one | 6 | 30.0 |
| 2. two or more | 14 | 70.0 |
| TOTAL | 20 | |
-
30. Does the card have space to record ante-natal care visits? **n=17**
- | | | |
|--------|----|------|
| 1. yes | 12 | 70.6 |
| 2. no | 5 | 29.4 |
| Skip | 3 | |
| TOTAL | 20 | |
-
31. If yes, record whether the mother ever made any antenatal visit? **n=12**
- | | | |
|----------------|----|------|
| 1. one | 5 | 41.7 |
| 2. two or more | 4 | 33.3 |
| 3. none | 3 | 25.0 |
| TOTAL | 12 | |

<u>Question</u>	<u>Frequency</u>	<u>%</u>
32. At the delivery of (name of child), who tied and cut the cord?	n=295	
1. yourself	2	0.7
2. family member	62	21.0
3. traditional birth attendant	212	71.9
4. health professional (physician, nurse or midwife)	18	6.1
5. doesn't know	0	0.0
6. other	1	0.3
TOTAL	295	

Appendix B. Questionnaire in English and Arabic

PVO/COUNTRY ___ CLUSTER # ___ HOUSEHOLD # ___ RECORD # ___

**PVO Child Survival Rapid Knowledge, Practice & Coverage (KPC)
Survey Questionnaire
(July 1995 Edition)**

All questions are to be addressed to the mother with a child under two (less than 24 months of age)

Interview date	___/___/9_	Reschedule interview	___/___/9_
	(dd/mm/yy)		(dd/mm/yy)
Interviewer name	_____		
Supervisor	_____		
Community	_____		

- Name and age of the mother
Name _____ Age (years) _____
- Name and age of the child less than 24 months of age
Name _____ Age in months _____
Birth date ___/___/___
(dd/mm/yy)

Mother's Education/Occupation

- What was the highest educational level you attained?
 - none []
 - primary does not read []
 - primary reads []
 - secondary & higher []
- Do you work away from home?
 - yes []
 - no []
- Do you do any "income generating work"?
(multiple answers possible; record all answers)
 - nothing []
 - handicraft, weaving, rugs, etc []
 - harvesting, fruit picker []
 - selling agricultural products []
 - selling foods, dairy products []
 - servant/household services []
 - shop keeper, street vendor []
 - salaried worker []
 - other (specify) _____ []

6. Who takes care of (name of child) while you are away from home?

(multiple answers possible; record each one)

- a. mother takes child with her []
- b. husband/partner []
- c. older children []
- d. relatives []
- e. neighbors/friends []
- f. maid []
- g. nursery school []

Breastfeeding/Nutrition

7. Are you breastfeeding (name of child)?

- 1. yes []---> go to 9
- 2. no []

8. Have you ever breast-fed (name of child)?

- 1. yes []
- 2. no []---> go to 10

9. After the delivery, when did you breast-feed (name of child) for the first time?

- 1. during the first hour after delivery []
- 2. from 1 to 8 hours after delivery []
- 3. more than 8 hours after delivery []
- 4. do not remember []

10. a. Are you giving (name of child) water (or herbal teas)?

- 1. yes []
- 2. no []
- 3. doesn't know []

b. Are you giving (name of child) cow milk, goat milk, or formula?

- 1. yes []
- 2. no []
- 3. doesn't know []

c. Are you giving (name of child) semisolid foods such as gruels, porridge or semolina?

- 1. yes []
- 2. no []
- 3. doesn't know []

d. Are you giving (name of child) fruits?

- 1. yes []
- 2. no []
- 3. doesn't know []

- e. Are you giving (name of child) carrot, squash, mango or papaya?
1. yes []
2. no []
3. doesn't know []
- f. Are you giving (name of child) dark green leafy vegetables, such as spinach?
1. yes []
2. no []
3. doesn't know []
- g. Are you giving (name of child) meat or fish?
1. yes []
2. no []
3. doesn't know []
- h. Are you giving (name of child) lentils, peanuts, or beans?
1. yes []
2. no []
3. doesn't know []
- i. Are you giving (name of child) eggs or yogurt?
1. yes []
2. no []
3. doesn't know []
- j. Are you adding dark green leafy vegetables, such as spinach, to (name of child)'s food?
1. yes []
2. no []
3. doesn't know []
- k. Are you adding honey or sugar to (name of child)'s meals?
1. yes []
2. no []
3. doesn't know []
- l. Are you adding fat (lard) or oil to (name of child)'s meals?
1. yes []
2. no []
3. doesn't know []
- m. Are you adding iodized salt (local brand name) to (name of child)'s meals?
1. yes []
2. no []
3. doesn't know []

11. When should a mother start adding foods to breastfeeding?
1. start adding earlier than 4 months of age []
 2. start adding between 4-6 months of age []
 3. start adding about 6 months of age []
 4. start adding later than 6 months of age []
 5. doesn't know []

Growth Monitoring

12. Does (name of child) have a growth monitoring/promotion card?
1. yes [] (must see card)
 2. lost card [] ---> go to 14
 3. no [] ---> go to 14
13. Look at the growth monitoring card of the child, and record the following information: has the child been weighed in the last four months?
1. yes []
 2. no []

Diarrheal Diseases

14. Has (name of child) had diarrhea during the last two weeks?
1. yes []
 2. no [] ---> go to 21
 3. doesn't know [] ---> go to 21
15. During (name of child)'s diarrhea did you breast-feed.
(read choices 1-4 to the mother)
1. more than usual? []
 2. same as usual? []
 3. less than usual? []
 4. stopped completely? []
 5. child not breastfed []
16. During (name of child)'s diarrhea, did you provide (name of child) with fluids other than breast-milk.
(read choices 1-4 to the mother)
1. more than usual? []
 2. same as usual? []
 3. less than usual? []
 4. stopped completely? []
 5. exclusively breastfeeding []

17. During (name of child)'s diarrhea, did you continue to provide (name of child) with solid/semisolid foods.
(read choices 1-4 to the mother)
1. more than usual? []
 2. same as usual? []
 3. less than usual? []
 4. stopped completely? []
 5. exclusively breastfeeding []
18. When (name of child) had diarrhea, what treatments, if any, did you use?
(multiple answers possible; record all answers)
- a. nothing []
 - b. ORS sachet []
 - c. sugar-salt solution []
 - d. cereal based ORT []
 - e. infusions or other fluids []
 - f. anti-diarrhea medicine or antibiotics []
 - g. other (specify) _____ []
19. When (name of child) had diarrhea, did you seek advice or treatment for the diarrhea?
1. yes []
 2. no [] ---> go to 21
20. From whom did you seek advice or treatment for the diarrhea of (name of child)?
(multiple answers possible; record each answer)
- a. general hospital []
 - b. health center/clinic/post []
 - c. private clinic/doctor []
 - d. pharmacy []
 - e. village health worker []
 - f. traditional healer []
 - g. traditional birth attendant []
 - h. relatives & friends []
 - i. other (specify) _____ []
21. What signs/symptoms would cause you to seek advice or treatment for (name of the child)'s diarrhea?
(multiple answers possible; record all answers)
- a. doesn't know []
 - b. vomiting []
 - c. fever []
 - d. dry mouth, sunken eyes, sunken fontanelle, decreased urine output (dehydration) []
 - e. diarrhea of prolonged duration (at least 14 days) []
 - f. blood in stool []
 - g. loss of appetite []
 - h. weakness or tiredness []
 - i. other (specify) _____ []

Immunizations

22. Has (name of child) ever received any immunizations?
 1. yes []
 2. no []
 3. doesn't know []
23. At what age should (name of child) receive measles vaccine?
 1. specify in months [__/__]
 2. doesn't know (99)[]
24. Can you tell me the main reason why pregnant women need to be vaccinated with tetanus toxoid vaccine?
 1. to protect both mother/newborn against tetanus . . []
 2. to protect only the woman against tetanus []
 3. to protect only the newborn against tetanus []
 4. doesn't know or other []
25. How many tetanus toxoid injections does a pregnant woman need to protect the newborn infant from tetanus?
 1. one []
 2. two []
 3. more than two []
 4. none []
 5. doesn't know []
26. Do you have an immunization card for (name of child)?
 1. yes [] (must see card)
 2. lost it []---> go to 28
 3. never had one []---> go to 28

27. **Look at the vaccination card and record the dates of all the immunizations in the space below:**

		(dd/mm/yy)
BCG		_ _ / _ _ / _ _
OPV	1st	_ _ / _ _ / _ _
	2nd	_ _ / _ _ / _ _
	3rd	_ _ / _ _ / _ _
DPT	1st	_ _ / _ _ / _ _
	2nd	_ _ / _ _ / _ _
	3rd	_ _ / _ _ / _ _
Measles		_ _ / _ _ / _ _

MATERNAL CARE

28. Do you have a maternal health card?
- 1. yes [] (must see card)
 - 2. lost it [] ---> go to 32
 - 3. no [] ---> go to 32

-
29. Look at the maternal health card and record the number of TT vaccinations in the space below:
- 1. one []
 - 2. two or more []
 - 3. none []

-
30. Does the card have space to record ante-natal care visits?
- 1. yes []
 - 2. no [] ---> go to 32

-
31. If, yes, record whether the mother ever made any ante-natal visit?
- 1. one []
 - 2. two or more []
 - 3. none []

-
32. At the delivery of (name of child), who tied and cut the cord?
- 1. yourself []
 - 2. family member []
 - 3. traditional birth attendant []
 - 4. health professional (physician, nurse or midwife) []
 - 5. doesn't know []
 - 6. other (specify) _____ []

***** END OF QUESTIONNAIRE *****

الاستبيان البدائي لحيس والخوخة وجبل راس (نواحي)
ادرايمن البرنامج البقاء للطفل أكتوبر ١٩٩٥

كل الاسئلة ستوجه الى الام والطفل تحت السنيتين (اقل من ٢٤ شهر)

تاريخ المقابلة	تاريخ اعادة المقابلة
___/___/___	___/___/___
ي / ش / س	ي / ش / س
اسم المقابلة.....	
مشرفة.....	
المجتمع.....	

١- اسم وعمر الام

الاسم العمر.....

٢- اسم وعمر الطفل اقل من سنتين

الاسم تاريخ الميلاد ___/___/___ العمر بالشهور _____
ي / ش / س

عمل وتعليم الام

٣- لما فين درستين؟

١- مدرستش ()

٢- درست ابتدائي لكن ما عرفش اقرا..... ()

٣- درست ابتدائي واقرا..... ()

٤- درست اعدادية او اكثر..... ()

٤- انتن تشتغلن برا امييت؟

١- ايوه ()

٢- لا ()

٥- تعلمي اي شئ تجيب لك بيسو او فلوس ؟

(ممکن تختاري اكثر من اجابة واحدة)

- أ- ولا شي ()
ب- تستغلي اي شي بيدك ()
ج- تستغلي في مزرعة مش حقاك ()
د- تبيعي اي شي من امزرعة ()
هـ- تبيعي مكلو/ اي حاجة من امدواب ()
و- تستغلي في بيوت الناس ()
ز- تبيعي اي شي في امشارع او امسوق ()
ح- معك معاش كل شهر ()
ط- معك شغل ثاني (ماهو) ()

٦- عند من يجلس (اسم الطفل) لمن انتي برا امبيت؟

(ممکن تختاري اكثر من اجابة واحدة)

- أ- الام تبز جاهليا معاها ()
ب- زوجيا ()
ج- جيلتيا امكبار ()
د- خوتيا ()
هـ- جيرانه /صاحبيتها ()
و- شغالة ()
ز- حضانة ()

التغذية والرضاعة الطبيعية

٧- ترجلي (اسم الطفل)

- ١- ايوه ()
٢- لا ()
روحي الى رقم (٩)

٨- ومن قبل رجلي (اسم الطفل)

- ١- ايوه ()
٢- لا ()
روحي الى رقم (١٠)

٩- بعد الولادة يحين رجتي (اسم الطفل) اول مرة؟

- ١- خلال السائذ الاولى بعد الولادة ()
٢- من ساعة الى ثمان ساعات بعد الولادة ()
٣- اكثر من ثمان ساعات بعد الولادة ()
٤- مكرش ()

١٠- أ- تبيي (اسم الطفل) مايو (اوشامي حقا امجيلة)؟

- ١- ايوه ()
٢- لا ()
٣- مارفش ()

ب- تبيي (اسم الطفل) لبن امبقة /لبن مغمة/لبن امقص؟

- ١- ايوه ()
٢- لا ()
٣- مارفش ()

ج- تبيي (اسم الطفل) اي ماكل خفيفو او رطبو؟ ادمفتوتو؟

- ١- ايوه ()
٢- لا ()
٣- مارفش ()

د- تبيي (اسم الطفل) خضرة حالي (مثل برتقال/تفاح/موز/عمبا)؟

- ١- ايوه ()
٢- لا ()
٣- مارفش ()

هـ- تبيي (اسم الطفل) جزرو/دباقرع/عمبا اضام/عمبا فنفل؟

- ١- ايوه ()
٢- لا ()
٣- مارفش ()

و- تبيي (اسم الطفل) اي حاجة خضراء مثل ملوخية/رجلة/فاموليا خضراء؟

- ١- ايوه ()
٢- لا ()
٣- مارفش ()

ز- تبيبي (اسم الطفل) لحمو او حوتو ؟

- ١- ايوه ()
٢- لا ()
٣- مارفش ()

ح- تبيبي (اسم الطفل) عدسو/حب العزيز/فول او فاصوليا؟

- ١- ايوه ()
٢- لا ()
٣- مارفش ()

ط- تبيبي (اسم الطفل) بيضو تريبو (زبادى) ؟

- ١- ايوه ()
٢- لا ()
٣- مارفش ()

ي- تبيبي خسروات خسراء (ملوخية -رجلة-فاصوليا-خسراء) في اماكل
ل (اسم الطفل) ؟

- ١- ايوه ()
٢- لا ()
٣- مارفش ()

ك- تبيبي عسلو او سكرو ل (اسم الطفل) في اماكل ؟

- ١- ايوه ()
٢- لا ()
٣- مارفش ()

ل- تبيبي (اسم الطفل) سمنو بلدى او زيتو او زبدة في اماكل؟

- ١- ايوه ()
٢- لا ()
٣- مارفش ()

م- تبيبي (اسم الطفل) ملحو الصليف او ملحو البحر في اماكل ؟

- ١- ايوه ()
٢- لا ()
٣- مارفش ()

١١- يحين لازم الام تبدأ تاهب ماكلو مع امرضاعة ؟

- ١- قبل اربعة شهور ()
٢- بين اربعة الى ستة شهور ()
٣- لما كلن عمرة تقريبا ستة شهور ()
٤- لما كان عمره اكثر من ستة شهور ()
٥- مارفش ()

متابعة النمو

١٢- ^{صح} (اسم الطفل) كرت الوزن ؟

- ١- ايوده () لازم اشوف الكرت
٢- ضاع () روي الى رقم (١٤)
٣- لا () روي الى رقم (١٤)

١٣- شوفي الى كرت وزن الطفل واكتبي الجواب التالي:

هل كان عند الطفل وزن في الاربع الشهور الماضية؟

- ١- ايوده ()
٢- لا ()

امراض الاسهال

١٤- اهل كان (اسم الطفل) عنده سيلو الاسبوعين الذي راحو (باكوا) ؟

- ١- ايوده ()
٢- لا () روي الى رقم (٢١)
٣- مارفش () روي الى رقم (٢١)

١٥- لما كان (اسم الطفل) عنده سيلو رجليته؟

(اقرا الاختيارات من ١-٤؛ للام)

- ١- اكثر من العادة ()
٢- مثل العادة ()
٣- اقل من العادة ()
٤- وقفت ()
٥- مارجليش ()

١٦- لما كان (اسم الطفل) عنده سيلو شربتي اي شي سايل مثل الماء او العصير
(اقرأ الاختيارات من ١-٤ لنام)

- ١- اكثر من العادة ()
٢- مثل العادة ()
٣- اقل من العادة ()
٤- وقفت ()
٥- رجلته بس ()

١٧- لما كان (اسم الطفل) عنده سيلو بقتي تبني له ماكلو قويو/ماكلو رطبو
(اقرأ لاختيارات من ١-٤ لنام)

- ١- اكثر من العادة ()
٢- مثل العادة ()
٣- اقل من العادة ()
٤- وقفت ()
٥- رجلته بس ()

١٨- لما كان (اسم الطفل) عنده سيلو ماسويتي له ؟
(اكثر من اجابة ممكن اختاري كل الاجابات)

- أ- ولاشي ()
ب- محلول الارواء ()
ج- سكرو وملحو ومايو ()
د- ماي امرز /ماي امزره/ماي امطعام ()
هـ- مغذية او اي شي ثاني سايل ()
و- دواء امسيل او مضاد حيوي ()
ز- اي شي ثاني ()

١٩- لما (اسم الطفل) كان عنده سيلو سالتني اي حد ينصحك ؟

- ١- ايود ()
٢- لا ()
روحي الى رقم (٢١)

٢٠ - من أعطاك العلاج لما كان (اسم الطفل) عنده سيل ؟
(اكثر من اجابة ممكن / اختارى كل الاجابة)

- أ- انمستفي ()
ب- مركز الصحة / العيادة / مخزن ادوية ()
ج- عيادة خاصة ()
د- صيدلية ()
هـ- صحي ()
و- نظب العربي ()
ز- ولاده ()
ح- خوتي / صحباتي ()
ط- أي شيء ثاني _____ ()

٢١ - ما الأعراض التي تدفوك للأخذ بال نصيحة أو المعالجة عند الاسهال ل (اسم الطفل) ؟
(اكثر من اجابة ممكن / اختارى كل الاجابات)

- أ- مارفش ()
ب- طرش / قذف ()
ج- حمى ()
د- فمه ناشفو / عيونه داخل / هامته داخل / بول قليل / جفافو ()
هـ- سيلو مستمر و اكثر من اربعة عشر يوم ()
و- دم في امسيل ()
ز- ماياكلش ()
ح- تعبنا و ضعيف ()
ط- اي شيء ثاني _____ ()

التلقيح (التطعيم)

٢٢ - هل لقتي ل (اسم الطفل) اي لقاح من قبل ام لا ؟

- ١- ابود ()
٢- لا ()
٣- مارفش ()

٢٣- متى عليك تلقيح ل (اسم الطفل) من امحصيه؟

- ١- عمره بالشهور ()
٢- مارفش ()

٢٤- ممكن نقولي لي السبب لمة المرء الحامل تحتاج لتلقيح امكزاز ؟

- ١- يحفظ الام والتونو من امكزاز ()
٢- يحفظ بس المراد من امكزاز ()
٣- يحفظ بس التونو من امكزاز ()
٤- مارفش لوتني ()

٢٥- كم ابرد تحتاج المرء الحامل لتحافظ على التونو من امكزاز ؟

- ١- واحده ()
٢- اثنين ()
٣- اكثر من اثنين ()
٤- صفر (ولا واحدة) ()

٢٦- عندك كرت تلقيح لـ (اسم الطفل)

- ١- ايود () لازم اشوف الكرت
٢- ضيعته () روى الى رقم (٢٨)
٣- ما عنديش () روى الى رقم (٢٨)

٢٧- كرت تلقيح واكتبي تحت تاريخ التلقيح في المكان انفاضي

(ي/ش/س)

السل :

الاول شلل الاطفال

الثاني

الثالث

الاول السعال الديكي (انجرحد)

الثاني

الثالث

الحصبة.....

العناية بالام

هل عندك كرت الحمل ؟

- ١- ايوه () لازم اشوف انكرت
٢- ضيعته..... () روجى الى رقم (٣٢)
٣- لا () روجى الى رقم (٣٢)

٢٩- شوفي في كرت الام واكتبي كم مرة هي لقحت للكرزاز في المكان الفاضي

- ١- مرة واحدة ()
٢- مرتين او اكثر..... ()
٣- ولا مرة..... ()

٣٠- هل في انكرت مكان عشان تكتبي زيارة المرده الحامل لدكتور قبل الولادة

- ١- أيود..... ()
٢- لا () روجى الى رقم (٣٢)

٣١- اذا أيود اكتبى كم مرده هي زارت الدكتور قبل الولاده

- ١- مرده واحده ()
٢- مرتين أو أكثر ()
٣- ولا مرده..... ()

٣٢- في ولادة (اسم الطفل) من انذى قطع وربط السرار (الحبل السرى)

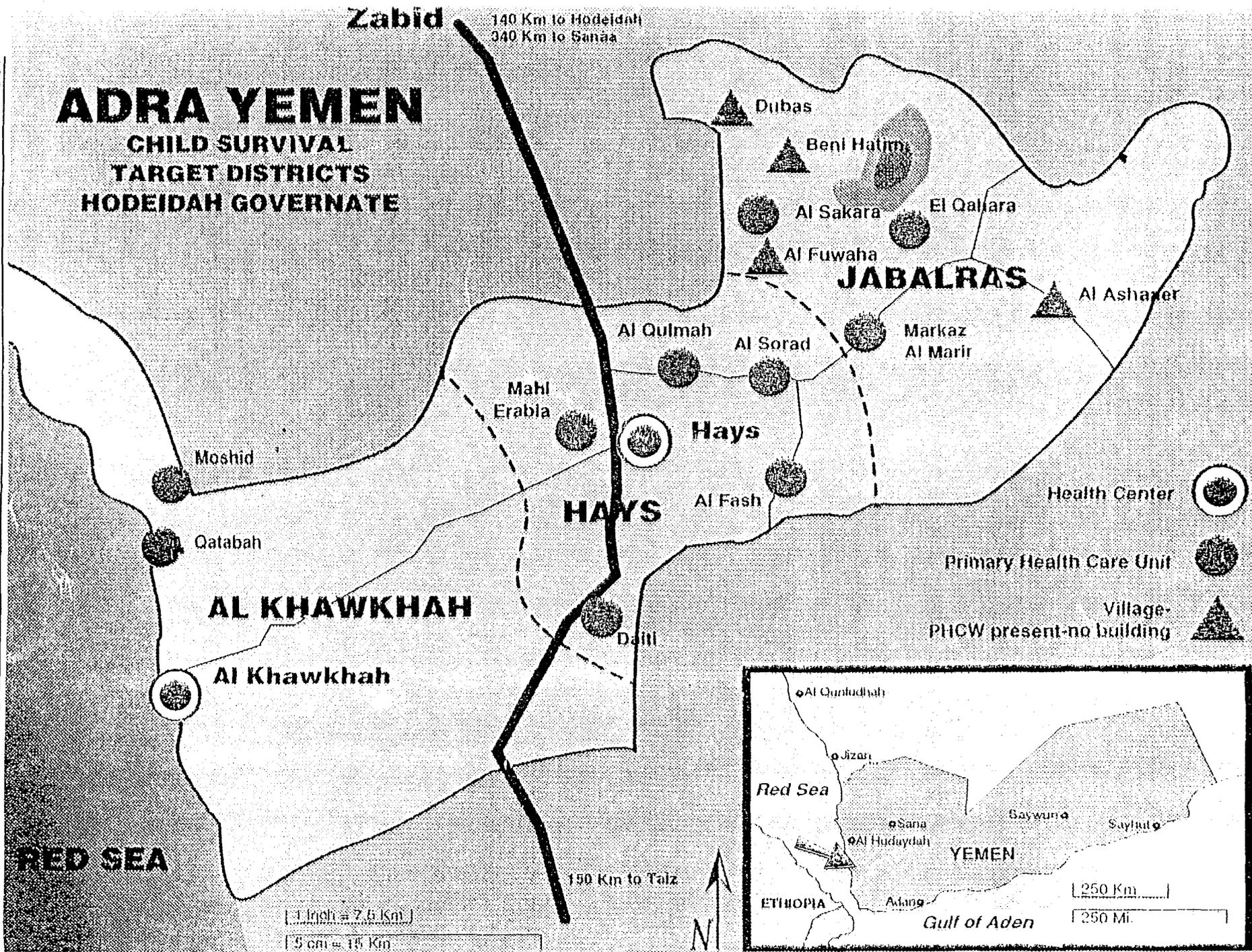
- ١- بنفسى ()
٢- واحدة من اهلى ()
٣- ولادة بمولده ()
٤- الدكتور / ممرضة / القابلة ()
٥- مارفش ()
٦- اي حد ثاني ()

Appendix C. Population Data

CLUSTER	DISTRICT	VILLAGE	POPULATION 3% annual increase from 86 census	SUPERVISOR/ Core Team Member
DAY ONE				
1	Hais	Hais	10,977	Obeidah / 2
2	Hais	Hais	10,977	Balqis / 1
3	Hais	Hais	10,977	Obeidah/Balqis / 1,2
20	Jabal Ras	Al Hamili	511	Fathaya / 3
24	Jabal Ras	Karaya	311	Latifa / 5
28	Jabal Ras	Wadi Alshe'b	476	Safia / 3
29	Hais	Al Wali	240	Taqia / 6
DAY TWO				
7	Hais	Tashaina	298	Taqia / 6
8	Hais	Beit Magara	504	Latifa / 6
12	Khokha	Khokha	10,651	Safia / 5
13	Khokha	Khokha	10,651	Obeidah / 5
21	Jabal Ras	Al Kada	1,219	Balqis / 1,2
22	Jabal Ras	Dihbashia	1,185	Fathaya / 3
DAY THREE				
4	Hais	Kidha	236	Balqis / 6
9	Hais	Al Kadha	986	Latifa / 1,3
10	Hais	Jumina	591	Obeidah / 5
11	Hais	Al Fash	776	Fathaya / 2
23	Jabal Ras	Hodeid	799	Taqia / 6
30	Jabal Ras	Al Qahra'	1,228	Safia / 1,3
DAY FOUR				
14	Khokha	Khokha	10,651	Obeidah / 1,4
17	Khokha	Aljasha	1,043	Balqis / 1,4
25	Jabal Ras	Majareen	310	Fathaya/Safia / 2,3
26	Jabal Ras	Al Thahra	787	Taqia/Latifa / 5,6
27	Jabal Ras	Al Mleasheb	239	4 Teams / 2,3,5,6
DAY FIVE				
5	Hais	Beit Okeish	392	Balqis / 6
6	Hais	Beit Al Bazaz	137	Taqia / 6
15	Khokha	Khokha	10,651	Obeidah / 1,4
16	Khokha	Qataba	3,272	Latifa / 2,5
18	Khokha	Hanjala	142	Fathaya / 2,5
19	Khokha	Moshaig	1,717	Safia / 3

Core Team Members

1	Abbas	4	Jennifer
2	Becky	5	Joyce
3	Edwin	6	Marge/Roger



Appendix E. Training Schedule of Supervisor and Interviewers

Day One - Sunday, October 8, 1995 - Core Team Training

Introduction and general remarks - Greg Bratcher, ADRA/Yemen Country Director

Purpose and type of survey

Explanation of Random Sampling

Selection of sample clusters

Review of each question on the questionnaire

Day Two - Wednesday, October 11, 1995 - Supervisor Training

Introduction of ADRA and Child Survival Project - Ed Dysinger, Project Director

Review of administrative details

Overview of the purpose of the survey

Roles of supervisors/interviewers

Survey methodology: Cluster sampling technique, mapping, validation, age specifications, community protocols and taboos

Review of questionnaire

Day Three - Thursday, October 12, 1995 - Supervisor/Interviewer Training

Introduction of ADRA and Child Survival Project - Ed Dysinger, Project Director

Review of administrative details

Introduction of each participant

Overview of the purpose of survey

Roles of supervisors/interviewers

Review of questionnaire

Day Four - Sunday, October 15, 1995 - Supervisor/Interviewer Training

Question and answer session regarding practice interviews from the weekend

Completion of questionnaire review

Survey methodology: Cluster sampling technique, mapping, validation, age specifications

Role plays of interviews after discussing good/bad techniques

Day Five - Monday, October 16, 1995 - Supervisor/Interviewer Training

Continued role plays of interviews

Field practice of household selection

Collation of questionnaires

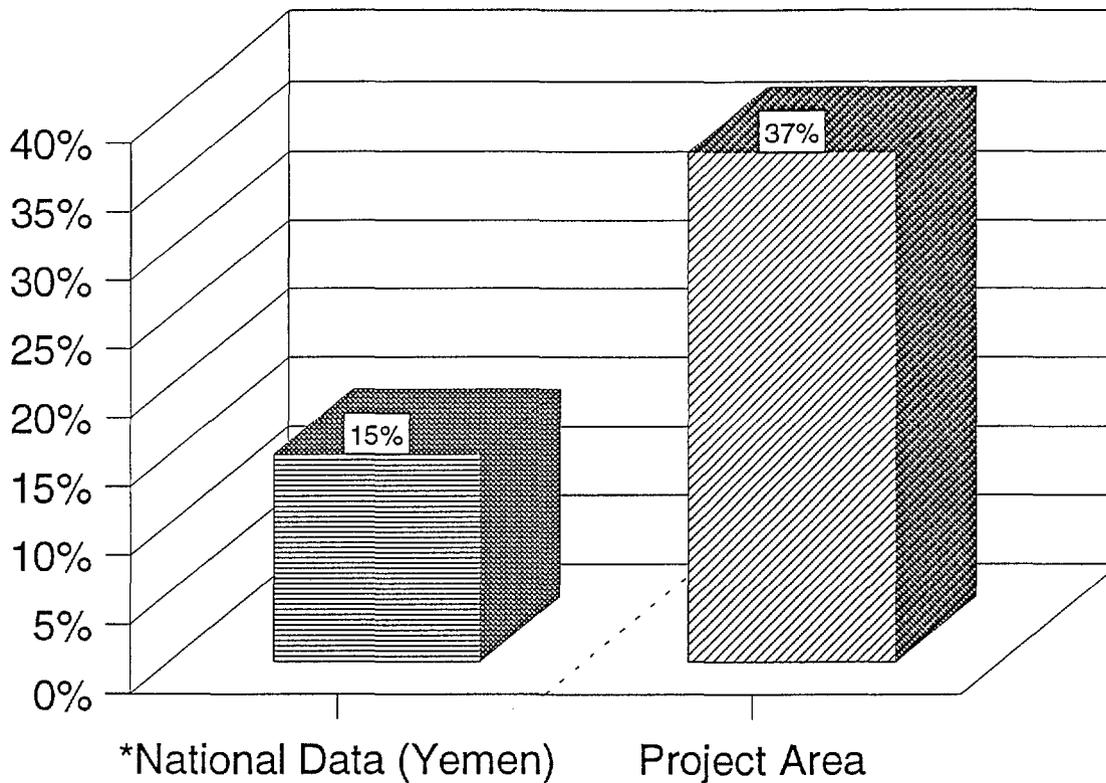
Appendix F. Key Effect Indicators

Intervention	Key Effect Indicators	Baseline Survey Results
Literacy/ Small Income Generation	% literacy among women	5.8%
	# of families involved in small income generation projects	68
CDD	% infants/children (<24 months) with diarrhea in the past 2 weeks given the same amount/more breast milk	73.8%
	% infants/children (<24 months) with diarrhea in the past 2 weeks given the same amount/more fluids other than breast milk	60.7%
	% infants/children (<24 months) with diarrhea in the past 2 weeks given the same amount/more food	29.0%
	% infants/children (<24 months) with diarrhea in the past 2 weeks treated with ORT	28.3%
	% mothers of infants/children (<24 months) who know two or more correct symptoms indicating the need to seek trained health care	67.7%
EPI	% of children 12-23 months who received OPV3	17.0%
	% of children 12-23 months who received measles vaccine	11.1%
	% change between DPT1 and DPT3 doses for children 12-23 months	20.0%
	% of mothers who received 2 doses of TT before the birth of her youngest child (<24 months)	14 of 20 with cards (4.7% of all mothers with child <24 months)
Nutrition	% of children 12-23 months showing moderate or severe malnutrition on ht/wt	not obtained
	% of infants/children (<24 months) breast fed within the first 8 hours after birth	62.3%
	% of infants/children (<4 months) who are being given only breast milk	37.0%
	% of infants/children 20-24 months who are still breast feeding (and being given solid/semisolid foods)	62.5%
	% of infants/children 5-9 months being given solid/semisolid foods	69.5%

Appendix G. Graphs (Important Findings)

Indicator: Percent of infants <4 months who are being given only breast milk.

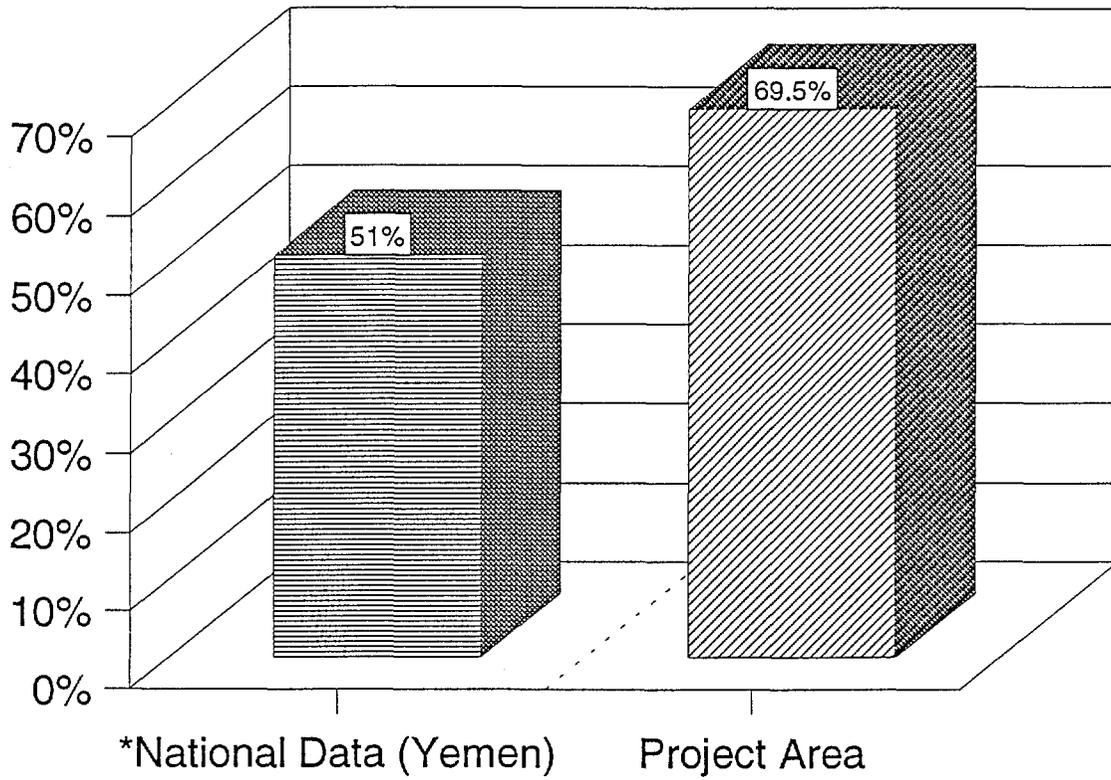
Exclusive Breast Feeding



**State of the World's Children, UNICEF, 1996.*

Indicator: Percent of infants between 5 - 9 months who are being given solid or semi-solid foods.

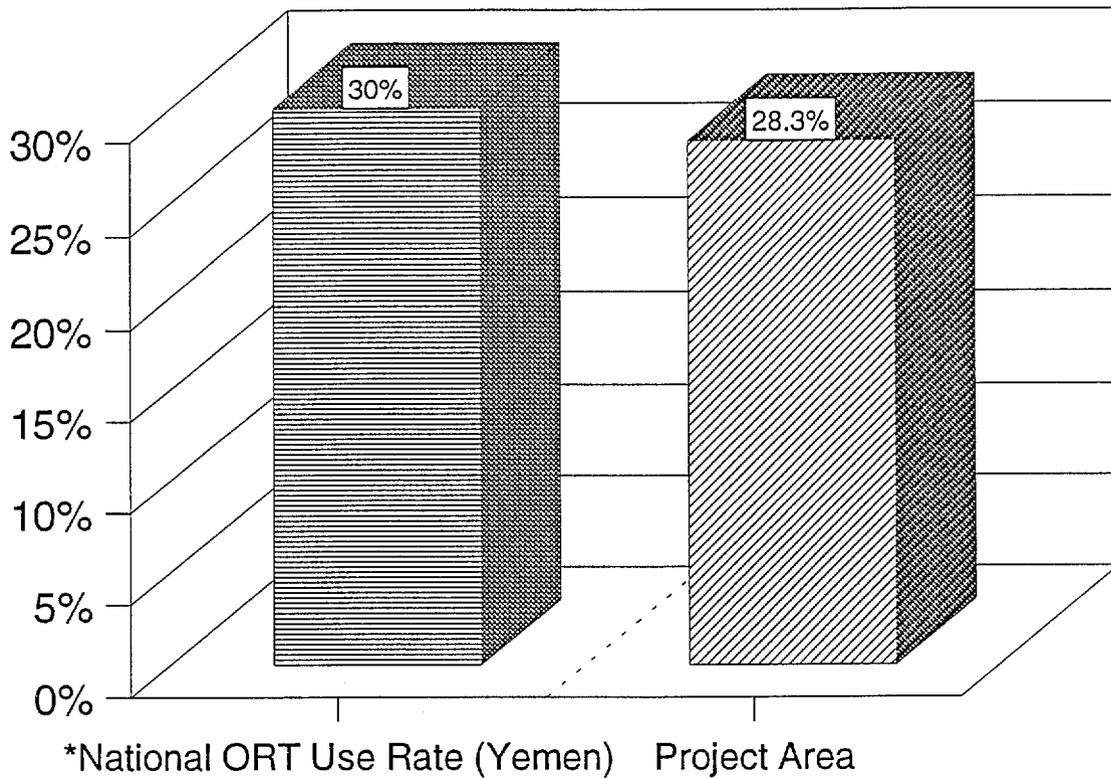
Introduction of Foods



**State of the World's Children, UNICEF, 1996.*

Indicator: Percent of infants/children < than 24 months with diarrhea in the past two weeks who were treated with ORT.

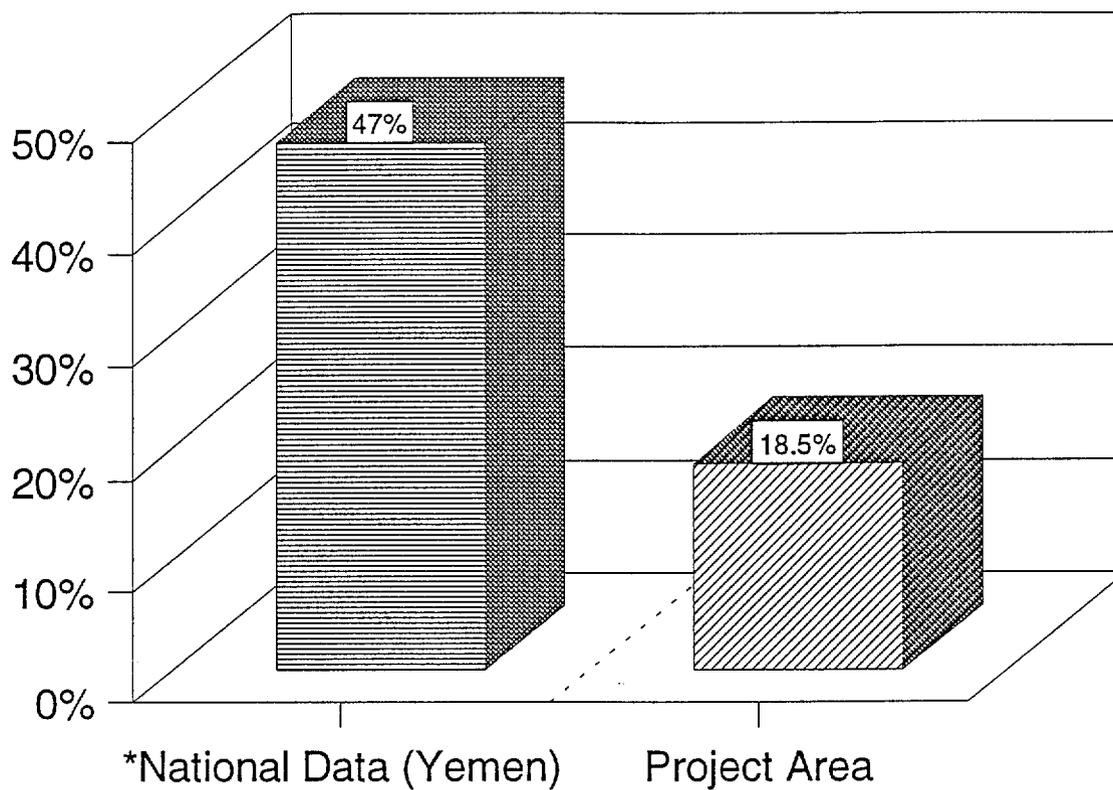
ORT Usage



**State of the World's Children, UNICEF, 1996.*

Indicator: Percent of children 12-23 months who received DPT1.

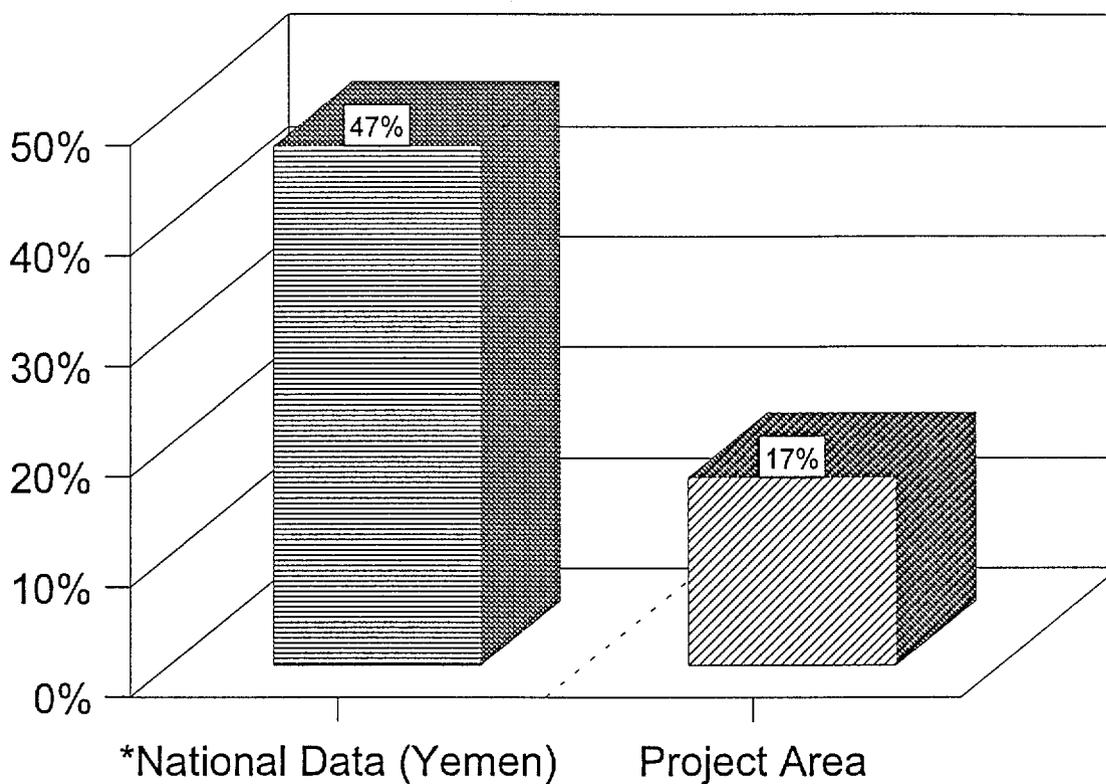
EPI Access (Card)



* *State of the World's Children*, UNICEF, 1996.

Indicator: Percent of children 0-23 months who received OPV 3.

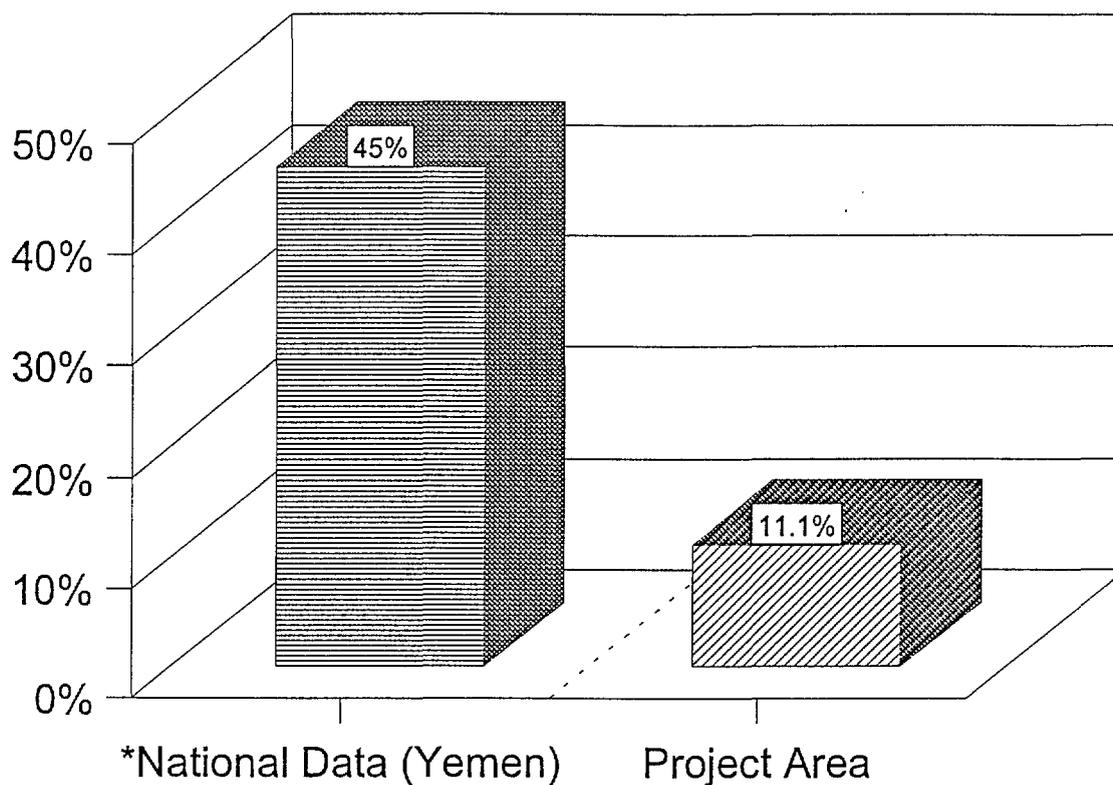
EPI Coverage (Card)



* *State of the World's Children*, UNICEF, 1996.

Indicator: Percent of children 12-23 months who received measles vaccine.

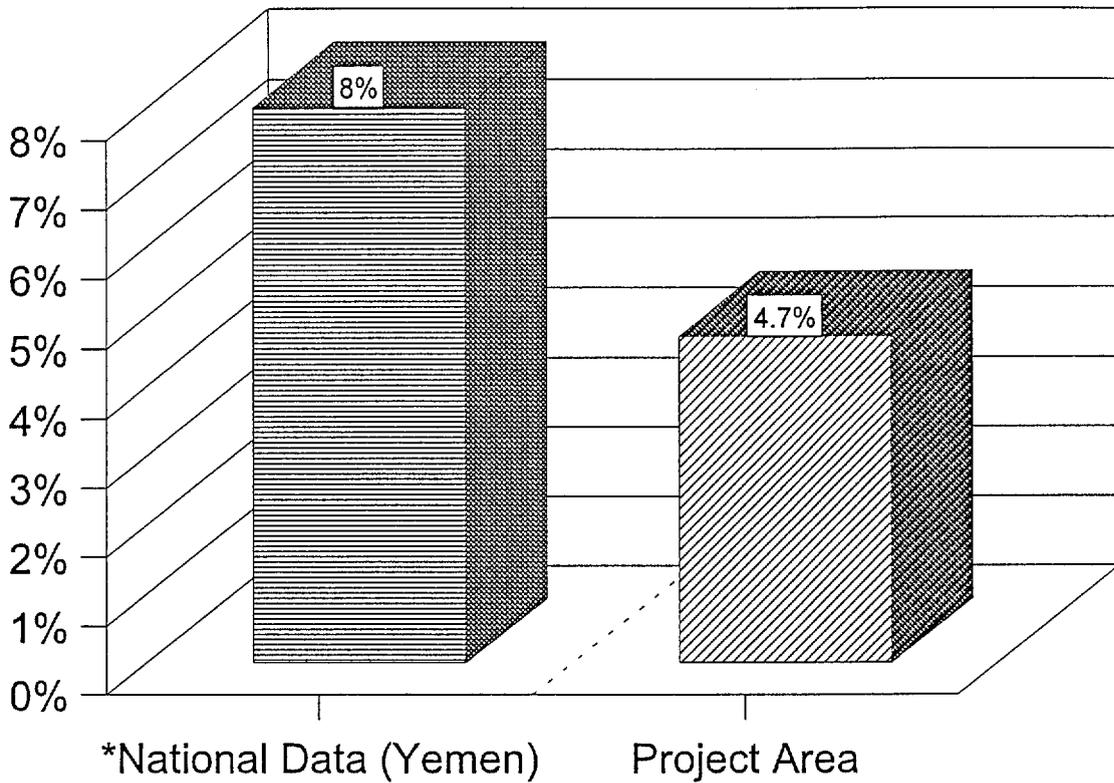
Measles Coverage (Card)



* *State of the World's Children*, UNICEF, 1996.

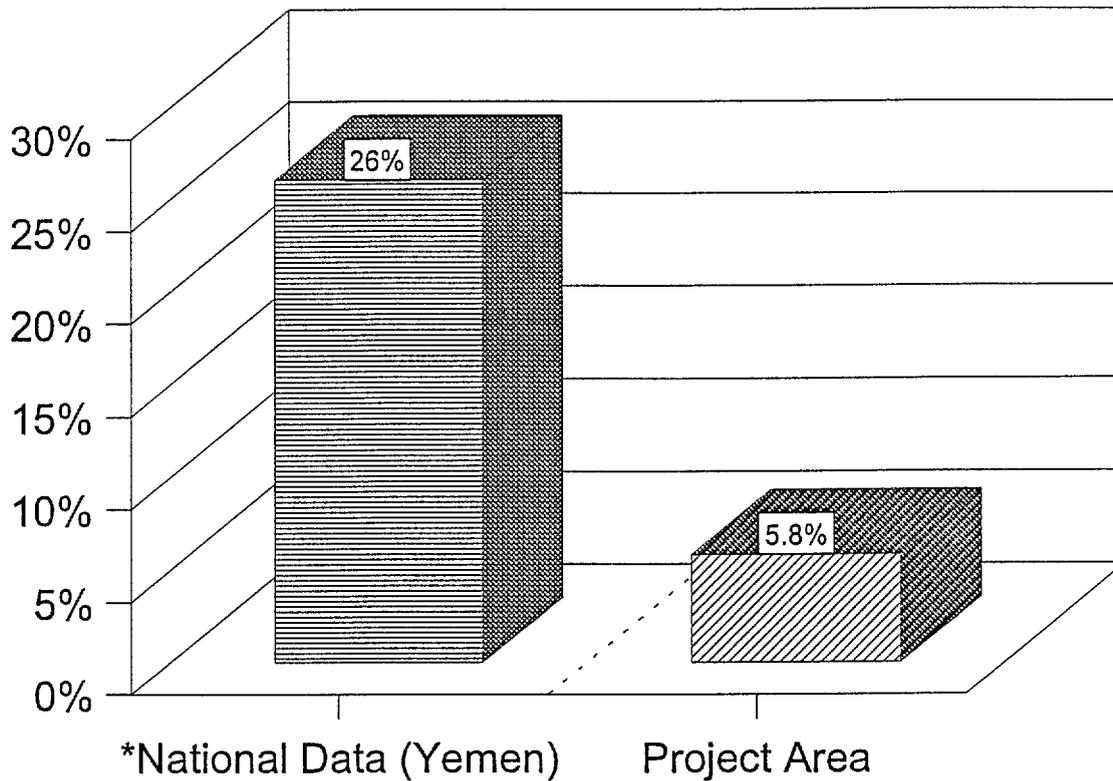
Indicator: Percent of mothers who received 2 doses of TT vaccine (card).

TT Coverage (Card)



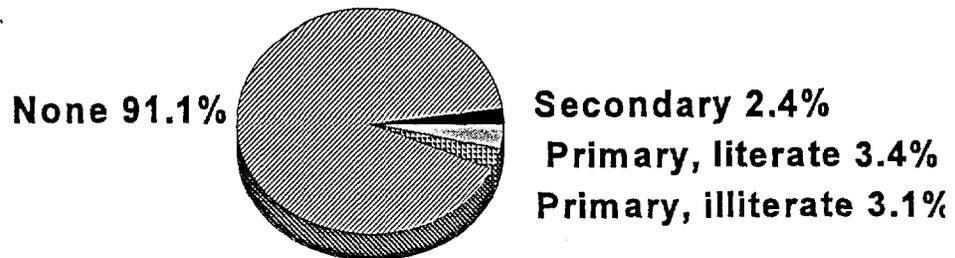
* *State of the World's Children*, UNICEF, 1996.

• Female Literacy Rate

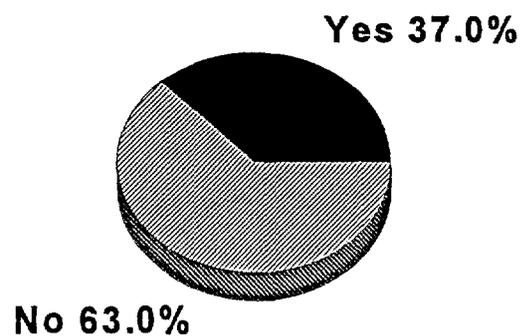


* *State of the World's Children*, UNICEF, 1996.

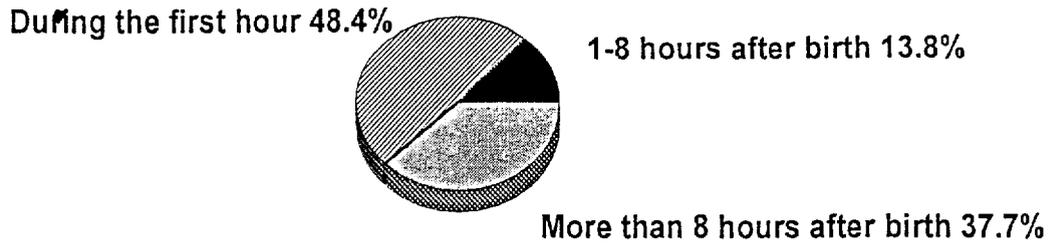
Education Level of Mother



Does Mother Work away from Home?



Time of Initial Feeding after Birth



Mothers with Growth Monitoring Card

