REPORT ON BASELINE SURVEY

Adventist Development and Relief Agency International

Tegucigalpa, Honduras

Child Survival VIII Project

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EXECUTIVE SUMMARY

I. INTRODUCTION

A. Background Information

ADRA, a PVO with its headquarters in Silver spring, Maryland, is implementing a child Survival VIII project in six marginal communities in the zone of influence of two metropolitan health centers (San Francisco and El Eden) on the west side of Tegucigalpa, the capital of Honduras. The project has received an A.I.D. grant from the Bureau for Food and Humanitarian Assistance, Office of Private and Voluntary Assistance @HA/PVC) to implement CS activities from October 1, 1992 to September 30, 1995.

Although health statistics for the metropolitan region are better than other health regions, these composite statistics do not accurately describe the marginal areas where conditions are as poor as any deprived are in the country. For example, the composite IMR for the Metropolitan Health Region is 59 per 1,000 live births. However, MSP statistics also show that the IMR exceeds 100 per 1,000 live births for Honduran households with no ready access to potable water, adequate sanitation and maternal education higher than grade 5 exceed. These indicators precisely describe the conditions of households in the marginal communities of Tegucigalpa and, specifically, in the project area.

In the project area, diarrhea and IRA occupy the highest place among CS morbidity causes. The Encuesta National de Nutrition 1987 showed that ARI represented 31 percent of reported illness, calculated on the number of episodes in the 15 days prior to the survey. The average number of diarrhea1 episodes per child per year in the project area has been reported as eight, and 17 percent of these episodes last more than six days (Regional Nutrition Study, 1987). Sixty percent of women in the project area do not receive even one antenatal consultation. Sixty-six percent of children under one have not been vaccinated against measles (Metropolitan Region Health Statistics, 1990). Nutrition deficiencies are a related cause in 60 percent of under-one deaths in the project area (UNICEF/Honduras).

The project proposal targeted the following CS activities:

Growth Monitoring/Nutrition	30%
ORT	20%
Acute Respiratory Infections	20%
Immunizations	10%
Maternal Care	10%
Vitamin A	10%

The project approach is to reinforce the community organizations and household ability to prevent basic mother and children health problems, increasing their knowledge and modifying their practices. In addition, plans were to strengthen MOH primary health care (PHC) services by providing managerial/logistical support and technical training for MOH personnel and thus improve capacity to implement PHC in concert with communities after project assistance is phased out.

In 199 1, A.I.D. required PVOs with FHA/PVC Child Survival grants to conduct a 30cluster survey, as part of the implementation process, using a standardized questionnaire developed by JHU. As part of this required process, the Johns Hopkins University Survey Trainer, Victor Lara, came to ADRA/Honduras for three major purposes:

1. To explain to the organization the standardized questionnaire as well as the purpose of each question.
2. To train ADRA/Honduras survey supervisors and interviewers in the conduct of a standard WHO 30-cluster survey.
3. To train ADRA/Honduras staff to manually tabulate, analyze and develop a report from the completed survey questionnaires. In addition, ADRA/Honduras invited one staff member of its headquarters to be part of the training process. Additionally, AID/FHA/PVC required that ADRA pay the costs of the survey trainer's transportation and per diem, while JHU paid the costs of the survey trainer's salary and the trainer's office costs in Peru.

B. Objective of the Survey

The method of choice for these kind of surveys is a 30cluster sampling technique. The study population consists of mothers of children under the age of 24 months living in per-urban Tegucigalpa, the ADRA Honduras 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 and establish whether the project was successful in communicating to the mothers, through village-based volunteers, certain action messages about key CS interventions.

A population-based sample survey is one method of obtaining rates, i.e., data relative to denominators which are an important part of the project's health information system. The 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/Honduras with information about the following issues:

- Knowledge of mothers of children under two years of age about major threats to infant, maternal and child health; ways to prevent immunizable diseases: proper treatment of diarrheai diseases (ORT); the value of growth monitoring; appropriate nutrition/weaning practices; and information about maternal care and child spacing.

- 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 dropout rates between series antigens.

The survey establishes estimates of child survival knowledge and assesses the extent of practices (K & P) of the project's primary health care interventions. The data collected will help ADRA do two things:

1. Evaluate project plans described in the CSVJII proposal in order to develop the DIP.
2. Plan, manage and assess project activities targeted towards changing behaviors at the household level.

C. Schedule of Activities in Tegucigaipa and Valle de Angeles

December 1992- January 1993: ADRA staff prepares for the survey which includes identification of technical resources and coordination between HQ and field office, selecting supervisors and interviewers, determining costs and logistics of both training for and conduct of the survey, and communication and coordination with the survey trainer prior to his arrival at the project site on February 1.

February 1-4: Final preparation of the survey, including finalizing Spanish translation of the survey questionnaire.

February 5: Preparation for survey training.

February 7-9: Training of supervisors, survey teams, and field test of the questionnaire.

February 10-12: Implementation of the survey in six settlements of peri-urban Tegucigalpa, Honduras.

February 14: Hand tabulation of survey results and data entry into EPI/INFO5.1b software program.

February 15-16: Finalizing of survey draft report.

February 17: Feedback to ADRA National program managers in Tegucigalpa; feedback to MOH and USAID.

March 1993: Feedback by ADRA program managers to communities surveyed.

IL METHODOLOGY

A. The Questionnaire

The questionnaire, which contains 54 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 A.I.D. requires of all PVO CSVIII 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. ADRA/Honduras, in cooperation with the PVO CSSP Survey Trainer Consultant, Victor Lara, further customized the standardized survey questionnaire making the finalized questionnaire appropriate to the actual CSVIII project interventions and the project area.

The first two questions ask about the age of the respondent (mothers) and her child under 24 months of age. Questions 3-6 collect data regarding mother's literacy, employment and who cares for the child when the mother is away from home. Questions 7-15 deal with breastfeeding and other feeding practices. Question 16-19 ask questions concerning the child's attendance at growth monitoring sessions. Questions 20-29 refer to mother's response to diarrheal disease and management of the child with diarrhea. Questions 30-34 refer to mother's response to acute respiratory infections management of the child. Questions 35-40 concern the immunization status of the child. Finally, questions 41-54 are about prenatal cam, family planning and maternal nutrition.

The questionnaire was originally written in English and sent to the ADRA/Honduras field office. ADRA/Honduras staff customized the questionnaire with the Survey Trainer for the project area See Annex 1 for questionnaire in Spanish.

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, and **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 **(inthiscased=** .l). 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 x 1.96)(.5 x .5)/(.1 x .l)
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 are 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. a, 1982). In general, when using a **30-cluster** sample survey, the sample size used should be approximately double the value n, when: **n = (z x z)(pq)/(d x d).** In this case, a sample size of 300 (10 per cluster) was selected so as to ensure that sub-samples 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 +/- z(square root of {pg/n})

where **p =** proportion in population found **from** survey, **z** = statistical certainty chosen (if 95% certainty chosen, then **z** = 1.96), **q** = 1 - **p, and 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 +/- 1.96(square root of { .37 x .63/297})
(z = 1.96)

1.96 = .37 +/- .03 (or, 34% to 40%)

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

C. Selection of the Sample

The sample consisted of 300 women with children O-23 months of age in six communities in influence area of the Flor de1 Campo and San Francisco health centers. Ten women were selected in each of 30 randomly selected ***communities*** (cluster sites) following the process described in The EPI Coverage Survev training manual (WHO, Geneva, October 1988).

Once the survey teams reached the designated cluster ***sire,*** 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/Honduras staff preselected supervisors and interviewers for training. Surveyors consisted of students from the School of Nurses of the Adventist Hospital of Valle de Angeles. The training of supervisors and interviewers took place in three days. Prior to the first day of training, the PVO CSSP Survey Trainer and ADRA/Honduras staff went over the training curriculum and delegated responsibility for various classes that the ADRA/Honduras staff was capable of conducting.

The first training day was dedicated to survey administration, methodology, and understanding the questionnaire. ADRA staff and the PVO CSSP Survey Trainer conducted the following classes:

1. Purpose and objectives of the survey.
2. Selection of the sample size.
3. Selection of the starting household and survey direction.
4. Community protocols and taboos.
5. Review of the customized questionnaire.

The second day of training concentrated on interviewing technique, familiarization with the questionnaire through role play and the roles of the supervisor and interviewers. These sessions were conducted by the ADRA/Honduras staff with the assistance of the PVO CSSP Survey Trainer.

The final day of training commenced with a field test of the survey questionnaire. Several peripheral communities of the city of Tegucigaipa were preselected by ADRA staff for the test. Each supervisor and surveyor interviewed two mothers of children O-23 months old.

E. Conduct of the Interviews

The survey was conducted over two consecutive days, February 10-l 1. Six survey areas were randomly selected by ADRA/Honduras staff upon arrival of the survey trainer. The teams to survey each area were also selected.

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 he survey area so that, in the case of missing or contradictory information, the mother could be visited again the same day.

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 bc held in confidence and that the information would be used to help health workers plan health activities. The interviewers were required to sign each form verifying that it had been read to the mother and that she had consented to participate. In order to ensure confidentiality, the PVO CSSP Survey Trainer urged the ADRA Project manager that all identifiers on the questionnaire be discarded/destroyed upon completion of the survey.

F. Method for Data Analysis

February 14 was dedicated to manual data tabulation. The ADRA/Honduras Health Coordinator and the PVO CSSP Survey Trainer supervised the hand tabulation.

A 20-person team made up of supervisors and interviewers were available full-time for hand tabulation. Manual tabulation required a half day of dedicated tabulation. The hand tabulators sat around large tables in the training rooms and

the program officers' office space in the ADRA office. The questionnaires were organized by sets of 15, and each set of questionnaires was circulated between each of the tabulators. The tabulators each recorded the responses to one question at a time going through each of the 300 survey questionnaires until all the responses to that particular question had been tabulated. The tabulators were organized in analysis teams for each survey module and the teams were trained to analyze the results of the questions they had each tabulated and then write out the analysis tabulation sheets to be reported to the large group.

For the first draft of the survey report the ADRA staff obtained frequency distributions for each of the questions and a few key cross tabulations. EPI/INFO was used to cross tabulate the results with the child's age and to complement the hand tabulation.

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 proiect area who receive the full set of immunizations by age 12 months is 50% plus/minus 10 percent

Once the frequency tables and some cross tables were finalized, the results of the survey were discussed between all supervisors, managers and members of the Baseline Survey team in order to develop the first draft of the survey report. The consensus of the group was recorded and provided the basis for the results and discussion sections of this survey report.

III. RESULTS

The following answers were given for the 54 questions. 335 questionnaires were manually tabulated and entered into EPI/INFO for analysis. No questionnaires were removed from the analysis.

Identification Module

1. The mean age reported by mothers surveyed is 26.77 years. 3.9% of the mothers (13 of 335) are under 18 years old. 4.5% of the mothers (21 of 335) are over 38 years old. See Figure 1 in Annex 1 for mother's age-group distribution.

MOTHER'S AGE	FREQUENCY	PERCENT	CUM.
16	6	1.8%	1.8%
17	8	2.4%	4.2%
18	13	3.9%	8.1%
19	12	3.6%	11.6%
20	22	6.6%	18.2%
21	17	5.1%	23.3%
22	17	5.1%	28.4%
23	27	8.1%	36.4%
24	15	4.5%	40.9%
25	20	6.0%	46.9%
26	24	7.2%	54.0%
27	17	5.1%	59.1%
28	19	5.7%	64.8%
29	16	4.8%	69.6%
30	14	4.2%	73.7%
31	8	2.4%	76.1%
32	15	4.5%	80.6%
33	13	3.9%	84.5%
34	9	2.7%	87.2%
35	5	1.5%	88.7%
36	6	1.8%	90.4%
37	11	3.3%	93.7%
38	6	1.8%	95.5%
39	2	0.6%	96.1%
40	4	1.2%	97.3%
42	2	0.6%	97.9%
43	2	0.6%	98.5%
45	4	1.2%	100.0%
58	1	0.3%	100.0%
TOTAL	335	**100.0%**	

Sum = 8967.00
Mean = 26.77
Standard deviation = 6.45

2. 17.4% (58) of children in the survey are under four months of age. 58.4% (155 out of 335) of the children in the survey are under the age of one year. 53.7% (180 out of 335) of the children in the survey are 12-23 months of age. The mean age of children in the survey is 10.31 months. See Figure 3 in Annex 1 for children age-group distribution.

Mother's Education and Occupation Module

3. 8.4% (28 out of 335) of mothers surveyed reported that they had no format education. 9.6% (32 out of 335) mothers reported that they had attended primary school, but could not read. 59.1% (198 mothers) reported that they had attended primary school and could read. 77 (23% mothers) reported that they had either a secondary or higher level of education.

Knowledge Indicator: Mother's Literacy

The percent of mothers who are literate is 82%.

In summary, 18% of mothers stated that they could not read. Of the 275 mothers who stated that they could read, 59.1% could read only at the primary level. See Figure 2 in Annex 1 for mother's literacy.

4. 16.15% (54) of mothers reported that they were generally away from home during the day. The remaining 83.9% stayed close to the home during the day.

5. 83.9% (281) of mothers stated that they had no income-generating work. 6.3% (21) of mothers stated that they earn income from selling foods. 3.9% (13) of mothers stated that they eam income working as an employee. 3.9% (13) of mothers stated that they earn income as a salaried person. 6% (20) of mothers reported earning income from categories not listed in the questionnaite.

6. 40.4% (135 out of 335) of mothers reported that they took the child with them when they left home. 40.7% reported that they left their children with relatives, and 26.6% stated that older children took care of the child when the mother was away from home. 7.5% (24) of mothers left their children with the husband or partner, and 5.4% (18) of mothers left their children with a neighbor or friend. Only one child was reported to be left at a nursery.

Breastfeeding/Nutrition Module

7. 7 1.6% (240) of mothers reported that they were breastfeeding their child.

BREASTFEEDING	FREQUENCY	PERCENT	CUM.
Yes	240	71.6%	71.6%
No	95	28.4%	100.0%
TOTAL	335	100.0%	

Appropriate Infant Feeding Practices: Persistence of Breastfeeding

The percent of children between 20 and 24 months who are still breastfeeding (and being given solid/semi-solid foods) is 1.49%.

Of the mothers who were not breastfeeding their child, 22 (96.6%) reported that they had breastfed the child in the past,

8. Of the 95 mothers who were not breastfeeding their child, 22 (90.6%) reported that they had breastfed the child int he **past,**

PERSISTENCE OF BREASTFEEDING	FREQUENCY	PERCENT	CUM.
Yes	87	90.6%	90.6%
No	8	9.4%	100.0%
TOTAL	**95**	**100.0 %**	

9. Appropriate infant Feeding Practices: Initiation of Breastfeeding

The percent of children who were breastfed within first eight hours after birth is 79%.

211 mothers (64.3% of 328) reported that they had breastfed their child within one hour after delivery and 49 between one and eight hours after delivery (14.9%). 58 mothers (17.7%) reported breastfeeding more than eight hours after delivery, and 10 mothers (3.0%) stated that they did not remember when they **first** breastfed their child after delivery. See Figure 5 in Annex 1.

BREASTFEEDING INITIATION	FREQUENCY	PERCENT	CUM.
1 hour after delivery	211	64.3%	64.3%
From l-8 hours after delivery	49	14.9%	79.3%
More than 8 hours after delivery	58	17.7%	97.0%
Do not remember	10	3.0%	100.0%
TOTAL	328	**100.0%**	

10. **Appropriate** Infant Feeding Practices: Exclusive Breastfeeding

The percent of infants 0 through 3 months who are being exclusively breastfed is 3.2%.

Of the children 0, 1, 2 and 3 months of age (59 children), 18.6% (11 children) were being exclusively breastfed. In other words, they were not being given any of the food/fluid categories listed in question 10 **(10a-10i).**

EXCLUSIVE BREASTFEEDING	FREQUENCY	PERCENT	CUM.
No	**48**	**81.4%**	81.4%
Yes	11	18.6%	100.0%
TOTAL	**59**	**100.0%**	

Those 11 children are only the 3.2% of 335 children in the sample. See Figure **6** in Annex 1.

Appropriate Infant Feeding Practices: Introduction of Foods

The percent of infants between 5 and 9 months who are being given solid and semi-solid foods is 19.7%.

Of the children 5, 6, 7 and 8 months of age (72 children), 91.7% had been introduced solid or semisolid foods In other words, they were being given at least one of the non-fluid categories listed in question 10 **(10c-10i).**

WEANING	FREQUENCY	PERCENT	CUM.
No	**6**	**8.3%**	**8.3%**
Yes	**66**	**91.7%**	100.0%
TOTAL	**72**	**100.0%**	**I**

Those 66 children are the 19.72% of **335** children in the sample. See Figure 7 n Annex 1.

Of the children in the survey 4 months of age and older (276 children), 75% were being given a food enriched with vitamin A, 92.4% were being given a food enriched with protein, 91.3% were given high energy foods and 83.7% were given food enriched with iodized salt.

	FREQUENCY	PERCENT	CUM.
Vitamin A			
0	69	25.0%	25.0%
1	207	75.0%	100.0%
TOTAL	276	**100.0%**	
Protein			
0	21	7.6%	7.6%
1	255	92.4%	100.0%
TOTAL	276	**100.0%**	
HiCal			
0	24	8.7%	8.7%
1	252	91.3%	100.0%
TOTAL	**276**	**100.0%**	
Iodine			
0	45	16.3%	16.3%
1	231	83.7%	100.0%
TOTAL	276	**100.0%**	

11. 5.4% (18 mothers) responded not knowing what to do to continue breastfeeding during the first four days of a child's life.

	FREQUENCY	PERCENT	CUM.
Not know	18	5.4%	5.4%
Yes	316	94.6%	100.0%
TOTAL	**334**	**100.0%**	

17.0% (57 mothers) stated that frequent sucking was an action a mother could do to continue to breastfeed. 20% (20 mothers) responded to this question with breastfeeding as soon as possible after delivery as an action to continue breastfeeding during the first months of a child's life. 6.3% (21 mothers) reported that exclusive breastfeeding was an action a mother could take to continue to breastfeed during the first four months of a child's life. 3.9% (13 mothers) stated that the good care of breasts or nipples was an action a mother could take to continue to breastfeed during the first four months of a child's life. #.O% (10 mothers) responded with "avoiding bottle feeding."

87.4% (294 of 335 mothers) stated an action other than the actions listed in question 11. Of these, 227 mothers (77.2%) stated that liquids and 56 (20%) stated that eating good foods was an action a mother could take to continue to breastfeed during the first four months of life.

12. When asked when a mother should start giving a child foods in addition to breast milk, 50.3% (168 out of 335 mothers) responded with an age between four and six months, 18.3% (6 1 mothers) indicated an age earlier than four months and 28.4% indicated an age six months or later. Ten mothers (3%) stated that they did not now when. In summary, 50% (166 mothers) did not know that mothers should give their children food in addition to breast milk between four and six months of age.

13. When asked what the additional foods to breast milk should be, 45.1% (151 of 335) responded with a food rich in vitamin A, 37.3% (125 of 335) stated that a mother should add oil to the child's food, 9.0% (30 mothers) responded with a food rich in iron, 54.2% (125) responded with a category other than those listed in question 13.

14. When asked which vitamins help to prevent "night blindness", 18.2% (61 mothers) responded correctly, vitamin A, and 81.8% responded incorrectly.

	FREQUENCY	PERCENT	CUM.
+	61	18.2%	18.2%
	274	81.8%	100.0%
TOTAL	335	**100.0%**	

15. When asked which foods contain vitamin A to prevent "night blindness", 97.9% (328 mothers) responded with breastfeeding, 96.5% (324 mothers) responded with egg yolks and 95.5% (320 mothers) stated that meat and fish contained vitamin A to prevent "night blindness." 93.1% (312 mothers) responded with green leafy

vegetables and only 28.1% stated that they didn't know which foods contained vitamin A in order to prevent "night blindness."

Growth Monitoring Module

16. 70.7% (237 of 335) in the survey had a growth monitoring card for their child. 6.9% (23) stated that they had lost their child's growth monitoring card and 22.4% (75) stated that they never had a growth monitoring cad for their child.

	FREQUENCY	PERCENT	CUM.
Yes	**237**	**70.7%**	**70.7%**
Lost	23	6.9%	77.6%
No	75	22.4%	100.0%
TOTAL	335	100.0 %	

17. Of the 237 mothers who had growth monitoring cads, 72 children (30.3%) had a cad which indicated that they had been weighed in the four months prior to the survey. In other words, 27.3% of the 335 children in the survey had been weighed in the four months prior to the survey.

	FREQUENCY	PERCENT	CUM.
+	72	30.3%	30.3%
-	166	69.7%	100.0%
TOTAL	**238**	**100.0%**	

18. Of the 238 mothers who had growth monitoring cards, 236 responses were recorded for this question. 142 children (60.2%) had a card which included records of vitamin A capsules.

	FREQUENCY	PERCENT	CUM.
Yes .	**142**	**60.2%**	**60.2%**
No	94	39.8%	100.0%
TOTAL	**236**	**100.0%**	

19. Of the 142 children with records of vitamin A, only 8 records included doses of vitamin A; all of them were the **first** doses. Two of the children received the fast dose at 4 and 6 months respectively.

Diarrheal Disease Module

20. 30.2% (101 of 334) of the mothers surveyed stated that their child had diarrhea within the two weeks prior to the survey.

DIARRHEA	FREQUENCY	PERCENT	CUM.
Yes	101	30.2%	30.2%
No	233	69.8%	100.0%
TOTAL	334	100.0%	

21. Of the 101 children with diarrhea during the two weeks prior to the survey, 90 were still being breastfed. Of these 90 children, 17 were given more breast milk than usual and 55 were given the same amount of breast milk as usual.

Management of Diarrheal Diseases: Continued Breastfeeding

The percent of children with diarrhea during the last two weeks who were given the same amount or more breast milk is 32%.

As recommended by Rapid Child Survival Indicators: Responses #1 and #2 to question 21 divided by number of "yes" responses to question 7 minus number of #5 responses to question 21: 72/(240-15)=72/225=32%. See Figure 8 in Annex 1.

BREAST GAVE	FREQUENCY	PERCENT	CUM.
More	17	16.2%	16.2%
Same	55	52.4%	68.6%
-	12	11.4%	80.0%
stop	6	5.7%	85.7%
Not Breast	14	14.3%	100.0%
TOTAL	101	100.0%	

11.4% (12 of 105 mothers) gave their child less breast milk than usual during diarrhea, and 5.7% (6 of 105 mothers) stopped giving their chid breast milk

completely during the diarrhea episode. In summary, 17.1% (18 of 105) gave less breast milk or stopped giving breast milk completely.

22. Of the 10 1 children with diarrhea during the two weeks prior to the survey, 77 were being given fluids other than breast milk. Of the 10 1 children, 29.1% (30 children) were given more fluids than usual and 27% were given the same amount of fluids as usual.

Management of Diarrheal Diseases: Continued Fluids

The percent of children with diarrhea during the last two weeks who were given the same amount or more fluids other than breast milk is 71.25%

As recommended by Rapid Child **Survival** Indicators: Responses **#1** and **#2** to question 22 divided by number of "yes" responses to question 20 minus number of **#5** responses to question 22: **57/(101-21)** = **57/80** = 71.25%. See figure 9 in Annex 1.

	FREQUENCY	PERCENT	CUM.
More	30	29.1%	29.1%
Same	27	26.2%	55.3%
Less	20	19.4%	74.8%
stop	3	4.9%	79.6%
Only Breastfed	21	20.4%	100.0%
TOTAL	101	**100.0%**	

26% (27 of 101 mothers) gave their child less food than usual during diarrheal and 8.7% (6 of 101 mothers) **stopped** giving their **child** food completely during the diarrheal episode. In summary, 34.7% (30 of 101) gave less food or stopped giving food completely during their child's **diarrheal** episode.

24. Management of **Diarrheal** Diseases: ORT Usage

The percent of children with diarrhea during the last two weeks who were treated with ORS is 38.6%

As recommended by Rapid Child Survival Indicators: "Yes" responses of b,c,d, divided by total "yes" responses to question 20: (34+4+1)/101 = 39/101 = 38.6%. See Figure 11 and 12 in Annex 1.

Of the 101 children with diarrhea during the two weeks prior to the survey 35.7% (39 of 101) received medicines as treatment for diarrhea. 32.7% (34 of 101 children) received an ORS sachet. 3.8% (4) received a sugar/salt solution.

11.5% (12 mothers) did not give any treatment for their child's diarrhea, and 31.7% (33 mothers) gave something other than the categories listed in question 24.

25. Of the 101 mothers of children with diarrhea during the two weeks prior to the survey, 50.5% (52 mothers) sought advice or treatment for their child's diarrhea.

	FREQUENCY	PERCENT	CUM.
Yes	52	50.5%	50.5%
No	51	49.5%	100.0%
TOTAL	103	100.0%	

26. Of the 52 mothers who sought advice or treatment for their child's diarrhea, 27 (51.9%) sought advice from relatives for their child's diarrhea, 17 (32.7%) went to a health center and 8 (15.4%) mothers went to a private physician. Seven (7) mothers (13.5%) went to a general hospital. Only one mother sought advice or treatment from a community health worker, one mother from a traditional healer and one from a traditional birth attendant.

27. 105 mothers (31.3%) prolonged diarrhea as a sign/symptom that would cause them to seek advice or treatment for their child's diarrhea. 73 mothers (21.8%) stated "fever" as a sign/symptom and 72 mothers (21.5%) stated that vomiting was a sign/symptom that cause them to seek advice or treatment for their child's diarrhea. 70 mothers (20.9%) mentioned dehydration, 18.8% mentioned weakness. 53 mothers (15.8%) stated that loss of appetite and 16 mothers (4.8%) stated that vomiting was a sign/symptom that caused them to seek advice or treatment for their child's diarrhea. 13.4% of mothers mentioned signs/symptoms other than those listed in question 27.

28. 73 mothers (21.8%) stated that giving the child smaller more frequent feeds is an important action when the child has diarrhea. 18 mothers (5.4%) stated that giving more to food is an important action, and 12 mothers (3.6%) responded with giving the child foods with high caloric content as important actions to take when the child has diarrhea.

259 mothers (77.3%) gave an answer other than the categories listed in question 28. Other actions included giving certain liquids, medicines and taking the child to the physician.

29. 146 of 335 mothers (43.6%) stated that smaller and frequent feeds is an important action to take when the child is recovering from a diarrheal episode. 42 mothers (12.5%) stated that an important action is to give more food. Only 20 of 335 mothers (6%) mentioned to provide foods with high caloric content.

161 of 335 mothers (48.1%) gave an answer other than the categories listed in question 29 where taking better care of the child and hygiene were reported as iltlportant

Pneumonia Control Module

30. 166 of the 335 mothers surveyed (49.6%) reported that their child had been ill with cough or difficult breathing in the two weeks prior to the survey.

	FREQUENCY	PERCENT	CUM.
Yes	166	49.6%	49.6%
No	169	50.4%	100.0%
TOTAL	335	**100.0%**	

31. Out of 166 children with cough or difficult breathing, 98 (57.7%) experienced rapid (fast) difficult breathing (dyspnea).

32. Out of 98 children that experienced rapid difficult breathing, 721 mothers (73.5%) sought treatment when the children were ill with these respiratory problems.

	FREQUENCY	PERCENT	CUM.
Yes	72	73.5%	73.5%
No	26	26.5%	100.0% - 1
TOTAL	98	**100.0%**	

33. Of the 72 mothers that sought treatment, 31 (43.7%) sought advice from the CESAMO (health center) for their child's respiratory problem, 24 mothers (33.8%) went to a private physician and 10 mothers (14.1%) mothers went to a hospital. 19 mothers of 72 (26.8%) sought treatment from a relative or a friend. Only one person sought advice from a community health work, a pharmacy and a healer.

Pneumonia Control: Medical Treatment

The percent of mothers who sought medical treatment for a child with acute lower respiratory infection (ALRI) is 56.12%.

As recommended by Rapid Child Survival Indicators: "Yes" responses of b and c to question 33 divided by total "yes" responses to question 31: **(31+24)/98** = **55/97** = 56.12%. See Figure 13 in Annex 1.

34. 174 of 335 mothers (51.9%) stated "fast or difficult breathing" as a sign/symptom and 115 mothers (34.3%) stated "fever" was a sign/symptom that caused them to seek advice or treatment for their child's respiratory infection. 86 mothers (25.7%) stated that cough, and 60 (17.9%) refer to "loss of appetite" as the sign/symptom that caused them to seek advice. Only two mothers mentioned chest indrawing. 61 mothers mentioned a sign/symptom of other than those listed in question 34.

Immunization Module

35. 326 of 335 mothers (97.3%) stated that their child had received at least one immunization. 7 of 335 mothers (2.1%) stated that their child had not received any immunizations.

36. Immunization Knowledge: Timeliness of Measles

The percent of mothers who know that measles vaccine should be given at nine months is 53.1%.

178 of 335 mothers stated that a child should receive its measles vaccine at age nine months. 30% of mothers stated they did not know when a child should receive the measles vaccine. 16% stated other responses different from nine months. In summary, 48% of mothers did not know that a child should receive the measles vaccine at nine months of age. See Figure 14 in Annex 1.

37. Immunization Knowledge: Tetanus Toxoid Protection

The percent of mothers who know that tetanus toxoid protects both mother and child is 40.9%.

137 of 335 mothers stated that the main reason why pregnant women need to be vaccinated with the tetanus toxoid vaccine is to protect both the mother and child. 4.5% (15 mothers) stated that the main reason for the TT vaccine was to protect the woman against tetanus, and 23.9% (80) stated that the main reason was to protect the newborn infant. 96 mothers stated that they did not know. In summary, 59% of mothers did not know about tetanus toxoid protection. See Figure 15 in Annex 1.

38. 206 mothers (61.5%) stated that a pregnant woman needs mote than two tetanus toxoid injections to protect the newborn infant from tetanus, and 57 mothers (17%) stated that a pregnant woman needs two TT injections. In summary, 78.5% of mothers stated that a pregnant woman needs at least two TT injections to protect the newborn infant from tetanus. 73 mothers did not know how many TT injections a pregnant woman needs.

39. 293 mothers (87.5%) had an immunization card for their child. 23 mothers (6.9%) stated that they had lost their child's immunization card, and 19 (5.7%) stated that they never had a card for their child.

40. The immunization status for children 12-23 months of age is based on immunization card actually seen by the interviewers. There are 112 children in the survey 12-23 months of age

The following are coverage figures for BCG, OPV, DPT, and measles:

Vaccination Coverage (Card): EPI Access

DPT1 RECORDED	EPI ACCESS
122 children	87.8%

Vaccination Coverage (Card): EPI Coverage

DPT3 RECORDED	EPI COVERAGE
109 children	78.4%

Vaccination Coverage (Card): Measles Coverage

MEASLES RECORDED	MEASLES COVERAGE
115 children	82.7%

Vaccination Coverage (Card): Overall Drop Out Rate

BCG COVERAGE	MEASLES COVERAGE	DROP OUT RATE
87.1%	82.7%	5%

BCG Status

AGE GROUP	NO BCG	YES BCG	TOTAL
12-23 months	18 (12.9%)	121 (87.1%)	139 children

OPV status

OPV 1, 2 & 3: 112 children 12-23 months of age

OPV1		OPV1,2		OPV 1,2,3		DROP OUT	
Freq. #	Percent #	Freq. #	Percent #	Freq. #	Percent %	D.O. Frequency (#OPV1-#OPV3)	D.O. Rate (#OPV1-#OPV3) / #OPV1
125	89.9%	120	86.3%	114	82%	11	8.7%

DPT Status

DPT 1, 2 & 3: 112 children 12-23 months of age

DPT1		DPT1,2		DPT1,2,3		DROP OUT	
Freq. #	Percent %	Freq. #	Percent %	Freq. #	Percent %	D.O. Frequency (#DPT1-#DPT3)	D.O. Rate (#DPT1-#DPT3) / #DPT1
122	87.8%	119	85.6%	109	78.4%	13	10.7%

Measles Status

AGE GROUP	NO MEASLES	YES MEASLES	TOTAL
12-23 months	24 (17.3%)	115 (82.7%)	139 children

Full Immunized Status

(BCG + OPV123 + DPT123 + Measles)

AGE GROUP	NOT FULL IMMUNIZED	FULLY IMMUNIZED	TOTAL
12-23 months	46 (33.1%)	93 (66.9%)	139 children

See Figure 16-24 in Annex 1.

Maternal Care Module

41. Maternal Care!: Maternal Card

The percent of mothers with a maternal card is 40.6%.

136 of 335 mothers **surveyed** had maternal vaccination cards. **51 (15.2%)** reported having lost their maternal health card, while 148 (44.2%) stated that they did not have a maternal health card. See Figure 25 in Annex 1.

	FREQUENCY	PERCENT	CUM.
Yes	136	40.6%	40.6%
Lost it	51	15.2%	55.8%
No	148	44.2%	100.0%
TOTAL	335	100.0%	

42. Maternal Care: Tetanus Toxoid Coverage (Card)

The percent of mothers who have received at least two doses of TT vaccines is 32.2%.

Of the 136 mothers who had a maternal health card, 108 (79.4$) had at least two TT injections indicated on the card. 2 1 mothers (15.4%) had one TT injection indicated on the card. See Figure 25 in Annex 1.

43. Of the 136 maternal health cards looked at by interviewers in the survey, 29 (21.3%) had a space to record antenatal care visits. The other 107 cards did not have spaces to record antenatal visits.

44. Maternal Care: One or More Antenatal Visits (Card)

The percent of mothers who reported at least one prenatal visit during last birth is 4.4%.

Of the 29 maternal cards with spaces to record antenatal visits, 13 (44.8%) indicated that the mother had ma& at least two antenatal visits. Two cards indicated that the mothers had made one antenatal visit 14 cards (48.3%) did not have any register. See Figure 26 in Annex 1.

45. 20 of 335 mothers (6%) stated that they were pregnant.

46. Of the 316 mothers who stated that they were not pregnant, 248 (78.5%) stated that they did not want to have a child in the next two years, 52 mothers (16.5%) did want to have a child in the next two years, and 16 mothers (5.1%) did not know if they did or did not.

47. Maternal Care: Modem Contraceotive Usage

Of mothers who desire no more children in the next two years, the percent using modern birth control is 28.03%.

Of the 264 mothers who either did not want to have a child in the next two years or did not know if they did or did not., 96 (36.4%) stated that they were using a

method to avoid/postpone getting pregnant The remaining I68 mothers stated that they were not using any method (63.6%). See Figure 26 in Annex 1.

48. Of the 96 mothers who stated that they were using a method to avoid getting pregnant, 74 (97.9%) were using a modem method. In other words, they indicated one of the first seven methods listed in question 48. Of the 74 mothers using a modem method, 45 mothers (46.9%) were using oral contraceptive, 26 mothers (27.1%) were using IUDs, 12 mothers (12.5%) had tubal ligations, 9 referred to be using condoms and one mother was using injectable hormones.

Two (2) of the 96 mothers (2.1%) stated that they were using the breastfeeding as a contraceptive method.

49. Maternal Care Knowledge: Timeliness of Antenatal Care

The percent of mothers who know that antenatal care should begin by third trimester is 9.19%.

When asked how soon after a woman knows she is pregnant should she see a health professional, 297 of 335 mothers (88.7%) indicated a time period within the first trimester of pregnancy, 11 mothers (3.3%) indicated a time period within the second trimester and 4 mothers (1.2%) indicated a time period within the third trimester. Two (2) mothers (0.6%) indicated that there was no need to see a health professional during pregnancy and 21 mothers (6.3%) stated that they did not know when a pregnant woman should see a health professional. See Figure 27 in Annex.

50. When asked what foods are good for a woman to eat to prevent pregnancy anemia, 159 mothers (47.5%) indicated a protein food rich in iron and 131 mothers (39.1%) indicated a green leafy vegetable rich in iron. 120 mothers (35.8%) indicated a food type other than the categories listed in question 50 and 88 mothers (26.3%) stated that they did not know which foods would help prevent anemia.

51. When asked how much weight should a woman gain during pregnancy, 15 of 335 mothers (4.5%) indicated lo-12 kilos, 17 mothers (5.1%) indicated the gain weight of baby and 197 mothers (58.8%) stated that they did not know how much weight a woman should gain during pregnancy. 106 of 335 (31.6%) mothers indicated an answer other than the categories listed in question 51.

52. 287 of 335 mothers (85.9%) stated that they visited a health site for prenatal care and 47 mothers (14.4%) stated that they never visited a health site for prenatal care.

53. 187 of 335 mothers (55.8%) surveyed stated that they ate more food than usual during pregnancy and 97 mothers (29%) stated that they ate the same as usual during pregnancy. In summary, 84.8% of mothers stated that they ate either more or the same a usual during pregnancy.

    47 mothers (14%) stated that they ate less food than usual during pregnancy and 4 mothers stated that they did not know.

54. When asked who tied and cut the cord at the child's delivery, ,302 of 335 (90.1%) indicated a health professional (physician, nurse or midwife), 20 mothers (6%) indicated a traditional birth attendant, 5 mothers (1.5%) indicated a member of her family and 5 mothers stated that they did not remember. Two mothers stated that they themselves had tied and cut the cord. One (1) mother (0.3%) indicated someone other than the categories listed in this question.

IV. DISCUSSION AND RECOMMENDATIONS

Age Distribution

12% of the mothers surveyed were over the age of 35 years. The Honduras MOH states that the risks of childbearing are greatest when the mother-to-be is under 15 years or over 45. However, WHO and UNICEF states that the risk of childbearing are greatest when the mother-to-be. is under 18 years or over 35.

56% of mothers are between 21 and 30 years. No mothers younger than 16 were found during the survey. Evidently, mothers are very young and their obstetric risk is reduced but their reproductive risk is very high.

Over 63.8% of the children in the survey were under 12 months of age. One possible explanation for the large number of infants under 12 months of age is that many mothers are spacing births less than two years apart

In summary, ADRA/Honduras should emphasize birth spacing at least two years apart and avoid pregnancies below the age of 18 or above the age of 35 to reduce the dangers of child bearing.

Education and Occuoation

Over 82% of the mothers surveyed can read; however, of those, the majority (90%) can read only at the primary level. Two different groups could be targeted: Those who can read at the primary level and those who cannot read. For those mothers who can read, ADRA/Honduras can develop simple written health messages. For those mothers who cannot read, ADRA/Honduras should train VHWs or other community members in counseling techniques. This group could also be reached by the VHWs using adult learning methodologies: for example, demonstrations, role plays, pictorial presentations and through discussions. ADRA/Honduras could also explore the possibility of using radio messages to reach rural non-readers.

The survey was done during the morning and afternoons of working days. Survey supervisors observed that may homes were closed and many homes were only with children; those homes were out of the sample since mothers were absent. Of those present, only 16% of the mothers were away from home during the day. It is probable that this data reflects information of those who are not working. Many of these mothers leave children with relatives and older siblings.

In order for VHWs to reach mothers, home visits need to take place in the evenings or on "free" days when mothers have less work at home. In order for VHWs to reach relatives and husbands, VHWs could explore such avenues as market days, eider's meetings, church and women's group meetings. In order for health messages to reach older siblings, ADRA/Honduras shouid work with the school health services program.

83.9% of mothers do not partake in some form of income-generating work ADRA/Honduras could assume, therefore, that, in general, mothers can afford primary health care (PHC) services. ADRA/Honduras Child Survival project should intensify activities that promote awareness regarding child and maternal care. These activities include adequate nutrition for mother and child including exclusive breastfeeding, maternal care, immunizations, family planning/child spacing, home management of diarrhea and growth monitoring.

Breastfeeding/Nutrition

The Honduran MOH and ADRA breastfeeding messages state that mothers should exclusively breastfeed during the first four to six months of life, that mothers should introduce foods in addition to breast milk between four to six months of age, that infants should start to breastfeed as soon as possible after birth and that breastfeeding should continue well into the second year of a child's life and for longer if possible.

Breastfeeding practices need to be reinforced. Only 19% of the 59 children in the 0, 1, 2, and 3 month age group in the survey were being exclusively breastfed. This represents

only 3.2% of the mothers currently breastfeeding their children. However, 92% of the 72 children in the 5, 6, 7, and 8 month age group had been given solid or semisolid foods. About 50.3% of mothers, when asked, knew that children should be introduced to foods other than breast milk between four and six months of age; 18.3% indicated an age for food introduction earlier than four months. A problem, therefore, is the early introduction of food and fluids other than breast milk in the project area in almost all of the infants. ADRA/Honduras should emphasize the benefits of exclusive breastfeeding during the first four to six months by targeting mothers, VHWs, TBAs, and professional health workers.

79% of mothers breastfed their child within the first eight hours after birth. ADRA/Honduras should continue emphasis on benefits of early initiation of breastfeeding after delivery during the training of TBAs, VHWs and public health workers.

Almost all of the children in the survey had been breastfed at some time. However, at the time of the survey, 7 1.6% were still being breastfed. Of the 23 children in the 20, 21, 22, and 23 month age group, 5 were still being breastfed. Mothers will be encouraged to continue breastfeeding up until the child is 24 months of age. AD&I/Honduras will reinforce the benefits of prolonged breastfeeding during training of VHWs, TBAs, and the communities themselves. All health workers in the project area should receive instruction on the benefits of breastfeeding for the first two years of a child's life.

ADRA/Honduras CSVIII proposal states in its project design a program objective related to both exclusive breastfeeding (EBF) and weaning. We recommend to modify the proposed statement and to use one indicator for EBG and another for weaning. We suggest:

Baseline Indicator for EBF

The percent of infants 0 through 3 months who are being exclusively breastfed is currently 3.2%.

A level of increase of three times will put this indicator to 10% in 1995.

Baseline Indicator for Weaning Practices

The percent of infants between five and nine months who are being given solid and semi-solid foods is currently 19.7%.

A level of increase of one time will put this indicator to 40% in 1995.

The UMCEF and WHO breastfeeding message is that to ensure the regular supply of breast milk, the mother should breastfeed as soon as possible after birth, care for her breasts/nipples, allow frequent sucking to stimulate production, exclusively breastfeed for the first four months of life, avoid bottle feeding of the baby and attempt to relactate if she stopped breastfeeding. Of these actions to ensure the supply of breast milk, only 17% of mothers knew to allow frequent sucking and about 20% knew to breastfeed as soon as possible to stimulate production. Few mothers knew about the other actions to ensure the supply of breast milk. Many mothers mentioned eating good foods and drinking liquids as actions to ensure the regular supply of breast milk Mothers in the project area need to hear and understand the benefits of this health message. VHWs, TBAs as'well as professional health workers should be encouraged to bring this message to mothers and to the community as a whole.

It appears that most mothers are giving their children foods enriched with calories, protein, vitamin A and iron, even when it seems that there is little knowledge about vitamin A. It is not clear from the survey, however, the quality and quantity of foods given to the children. ADRA/Honduras, therefore, could continue to work towards promoting and encouraging mothers to provide adequate foods of good nutritional value. Strategies should include the transference of information to mothers (cooking/mixing practices) about the need to increase the frequency and density of weaning stuffs. ADRA/Honduras, in collaboration with the MOH should promote the daily administration of simple mixes (three recipes for each of the following groups: 6-9 months, 9-12 months, 12-18 months) that include basic local sources of protein, fat, carbohydrates and other micronutrient (iron, vitamin A and iodine).

Growth Monitoring and Vitamin A

The ADRA/Honduras CSVIII project objective as stated in the proposal is related to an impact indicator - "decrease level of malnutrition." Survey data shows that approximately 70.7% of he mothers in the survey had a growth monitoring card for their child. Of the children with growth monitoring cards, only one-third of them had been weighed in the four months preceding the survey (30.3%).

Since impact indicators for the project are going to be difficult, expensive and time-consuming to measure, we suggest, in order to take full advantage of the baseline survey data, to modify the program objective and to use:

The percent of children with growth monitoring card who had been weighed in the four months preceding the survey is currently 30%.

A level of increase of one time will put this indicator to 60% in 1995.

ADRA/Honduras should provide cards to all children under the age of three years in the project areas through community groups and should encourage mothers to safeguard the cards. **ADRA/Honduras** also could train health workers and encourage mother's groups and community leaders to ensure that all children under two years are weighed and that weights are recorded on the child's growth monitoring card. Professional health workers need to be trained to better coordinate PHC activities to assure that children are weighed and that weights are recorded. Close daily contact of the **ADRA** staff with the MOH CESAMO staff will assure that procedures and instruments (growth monitoring cards) are standard. We suggest ADRA/Honduras do not oroduce a growth monitoring card different from the one currently used bv the MOH. This will only cause confusion with the community and **ADRA/MOH** staff and will increase the costs of the activity.

The vitamin A coverage for the first does is around 3.28, only 8 children from 335. Special efforts should be devoted to this component. We recommend to contact the Director of the International Eye Foundation of Honduras, Maria Antonieta Dominique-King (phone: 331531) to request technical assistance, training materials and other supplies, if the project is interested in developing vitamin A activities. Special efforts should be devoted in the areas of training of supervisors and **VHWs** and monitoring of logistics and in followup of children between adequate age intervals.

ADRA/Honduras CSVIII proposal states in its project design a program objective related to vitamin A. We recommend to modify the proposed statement and to use the following indicator:

The percent of infants 12 through 60 months who are receiving a megadose of vitamin a is currently 3.2%.

A level of increase of three times will put this indicator to 10% in 1995.

Diarrheal Diseases

The **MOH/Honduras** diarrhea messages **stress** the importance of giving extra fluids and continued feeding during the diarrheal episode and providing extra foods when the child is recovering from diarrhea.

More than 30% of the children in the survey had diarrhea. Approximately only 32% of the children int he survey continued breastfeeding during the diarrheal episode, and close to 71% of the children continued receiving fluids. Only 54% of children continued with foods during diarrhea, and only 3.2% of mothers knew that a child should receive more foods or high calorie foods after the diarrheal episode. **ADRA/Honduras** could provide messages for **VHWs** to bring to mothers in the project areas that stress the importance of

continued breastfeeding, giving more fluids and continued feeding during a child's diarrhea.

The MOH also stresses the dangers of using medicines to treat diarrhea. Approximately more than one-third of the mothers in the survey were giving ORT to their children during diarrhea Almost half the mothers were also giving their child medicine for the diarrhea. Of those mothers giving ORT, about 10% were giving a sugar/salt solution (SSS); the rest were providing ORS or other kinds of home available fluids.

One of the project objectives outlined in the proposal is to reduce the number of diarrheal episodes. This is an impact indicator and the strategy to obtain this information should include morbidity surveillance sites which will require additional technical assistance and special investments in training and in specialized resources to handle this system. We recommend the use of effectiveness indicators as recommended by WHO and UNICEF such as:

The percent of children with diarrhea during the last two weeks who were treated with ORS is currently 38.6%.

This indicator could be increased to at least 50% during the life of the project.

In the project areas, ADRA/Honduras could place special emphasis on the use of ORS to treat diarrhea and on the dangers of using medicines for diarrhea Main educational efforts should be concentrated on to improve the dietary management of the diarrhea, meaning the use of food and home fluids to treat diarrhea and avoid dehydration.

As part of the case management, strategies could include the reinforcement of the Oral Rehydration Units that the MOH have in each community. The logistics and availability of ORS could improve the management of cases with ORT in each community.

Few mothers in the survey (20%) stated signs or symptoms related to dehydration as those that would cause them to seek advice or treatment for their child's diarrhea. Signs and symptoms most frequently mentioned were prolonged diarrhea (31.3%). ADRA/Honduras and the MOH stresses, in order, 1) dehydration, 2) fever, 3) loss of appetite, 4) vomiting, 5) passing several watery stools in one or two hours, and 6) blood in the stool as signs that a mother should seek qualified medical help for her child. Health messages could be provided by ADRA/Honduras emphasizing signs related to dehydration as the most important signs that a child needs medical help during diarrhea. AD&I/Honduras should plan to train VHWs and other community members to emphasize this message to mothers. Strategies could include reinforcement of knowledge of

volunteers working in the Oral Rehydration Units in order to transfer the information about alarm signs to mothers when they receive the ORS sachet and instructions of use.

Pneumonia Control

Almost half the surveyed children had been ill with cough or difficult breathing. Out of these children, almost 70% had symptoms compatible with ALRI. Almost 75% of mothers sought advice for the illness of their children and almost 56.12% obtained medical treatment. From the survey data, it is not possible to make assumptions of the severity of the problems. We can state that there are many cases, but more data is needed to have a clear profile of the problem. However, we are observing that of those children with ALRI, almost half have access to medical services.

ADRA/Honduras should further study the possibility of supporting the MOH and other medical services in the area, helping them to better organize the demand of the service in the impact area and reinforcing the MOH referral services and training the MOH staff. The WHO/PAHO training modules for supervisors and managers could be used to provide update information to MOH and ADRA/Honduras. Additional efforts should be made to reinforce mothers' knowledge regarding the recognition of children with pneumonia and the identification of places that can be used for referral of children.

Immunizations

The access of the population to this program is exceptionally good. 87% of children have had contact with the program, using the BCG or DPT'l vaccine. If we use the property of an immunization card, the proportion increases to 97.3%.

Antigen-specific immunization coverage rates for the 12-23 months age group are exception as well; 78% using the DPT3 vaccine or 82% using the measles vaccine. These percentages represent population-based coverage rate for the surveyed children as recorded on the immunization card. The rate of children fully immunized (BCG + OPV123 + DPT123 + Measles) in the CSVIII baseline survey (66.9%) is lower than the xX% national EPI coverage estimate of 1992. The national objective for full immunization coverage of children during the first year of life is 80%. The ADRA/Honduras CSVIII project objective as stated in the proposal is for 60% of children in each community to be immunized with measles vaccine by the end of the first year of life.

We recommend to use the indicator of percent of infants fully immunized and increase the objective to 80%.

In the surveyed population, the difference between the first and third OPV is about 8.7%. and between the first and third DPT is approximately 10.7%. Special efforts could be directed to reduce these dropout rates and missing opportunities. ADRA/Honduras should

focus intervention in the group of children below 11 months and increase the involvement of parents in the identification of newborns and the followup of the children in each community (baby tracking systems for EPI). ADRA/Honduras could work in collaboration with the MOH to provide routine immunization services to those parents' groups requesting vaccinations. ADRA/Honduras should train VHWs to counsel mothers and reinforce the message on the importance of completion of the EPI schedule during a child's first year of life.

Overall knowledge of mothers about the timing and purpose of immunizations **needs** to be reinforced. For example, only 53% of mothers stated that a child should receive the measles vaccine at age nine months. ADRA/Honduras should continue to reinforce messages about the timing and benefits of immunizations for both the mother and child.

Maternal Care

Around 40% of mothers surveyed had maternal health cards. Of those mothers with cards, however, most had received two TT injections.

Only 21% of mothers had cards with spaces to record antenatal visits and only 4% had made antenatal visits. In order to better estimate access to antenatal care and TT coverage of pregnant women, all women of childbearing age in the project should receive primary health care cards.

78.5% of mothers did not want to have more children within the two years following the survey, but only 28% were using a modem method of family planning. Looking at the 335 mothers in the survey, only 74 are using a modem method of contraception. The CSVIII project established an objective for thii component to increase prenatal consultation. We suggest to modify the statement of the same indicator to:

The percent of mothers who report at least one prenatal visit during last birth is currently 4.4%.

The indicator could be increased several times to 50% for 1995.

An additional indicator to be used in this program could be:

Of mothers who desire no more children in the next two years, the percent using modern birth control is currently 28.03%.

Mothers' knowledge of appropriate maternal nutrition practices is very low. ADRA/Honduras should include in its program promotion of maternal nutrition in its PHC activities in order to obtain adequate levels of knowledge and practices regarding appropriate maternal nutrition.

A high percentage of deliveries (90%) were attended by health professionals. This highlights the importance of working with the medical services available in the intervention area in the communication efforts regarding prenatal care.

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