

# **BASICS** **TRIP REPORT**

## **Evaluation of Data to Assess Changes in Process of Integrated Health Care and Impact on Children under Age 1**

***BASICS is a USAID-Financed Project Administered by  
The Partnership for Child Health Care, Inc.***

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**EVALUATION OF DATA TO ASSESS CHANGES IN PROCESS  
OF INTEGRATED HEALTH CARE AND IMPACT  
ON CHILDREN UNDER AGE 1**

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## **ACRONYMS**

<b>ARI</b>	<b>Acute Respiratory Infection</b>
<b>BASICS</b>	<b>Basic Support for Institutionalizing Child Survival</b>
<b>LAC</b>	<b>Latin America and the Caribbean</b>
<b>MOH</b>	<b>Ministry of Health</b>
<b>POSAIN</b>	<b>Proceso de Sistematizacion, Analisis y Organizacion de Atencion Integral del Niño</b>

## **I. BACKGROUND**

One of the areas identified for Basic Support for Institutionalizing Child Survival (BASICS) project support in Honduras is in integrated child health care. The Ministry of Health (MOH) intends to extend the integrated child health care process to three of the eight health regions next year. This process, developed with the technical assistance of the Latin American Center for Perinatology and Management Sciences for Health, began in 1991 with four health centers and now covers twenty health centers and over 200 communities. At the heart of the process is an attempt to use weight gain as a means for assessing and responding to failing health in children under the age of one year. The process, however, has never been evaluated. Unfortunately, there were no baseline surveys from which to assess changes. What exists is data from four communities covering 1992 and 1993 which allows a comparison among four communities from one year to the next.

## **II. SCOPE OF WORK**

The purpose of this trip was to evaluate the data that have been collected from four communities in 1991 and 1992 to assess changes during this period in the process of integrated health care as well as to assess the impact on children under the age of one year.

## **III. METHODOLOGY**

The information from the 1991 and 1992 cohorts was analyzed. Furthermore, in order to establish some baseline against which to measure, we attempted to obtain information from the 1987 nutritional survey to see if that survey had information on weight for age for children under the age of one year.

## **IV. FINDINGS**

The raw data which we analyzed is available in the LAC BASICS Regional Office.

There was an overall increase in the completion of the form used for POSAIN from 1991 to 1992 from around 75 percent completion to around 90 percent of the information related to diet, vitamin A intake and developmental steps of children.

Of the potential total of twelve controls per child, 29 percent were realized in 1991 and 50 percent in 1992 in both regions. The second through the ninth months were the most regularly controlled in 1992, with 64 percent of all children being weighed between sixty and ninety days of life. The form was filled out accurately in around 80 percent of the cases in 1991 and in more than 95 percent in 1992. Vaccination coverage rose in the test villages from around 85 percent of all

children under the age of one year fully vaccinated in 1991 to almost 100 percent.

Overall malnutrition fell in the four test villages from 41 percent at one year of age in 1991 to 30 percent at one year of age in 1992.

Inadequate growth (defined as lack of expected growth since previous visit) by age per year was as follows:

1991

Age—	0	1	2	3	4	5	6	7	8	9	10	11
Poor Growth	8%	0%	8%	14%	17%	35%	46%	43%	41%	58%	61%	56%
Malnour.	0%	3%	5%	8%	7%	18%	15%	23%	24%	27%	38%	41%

1992

Age—	0	1	2	3	4	5	6	7	8	9	10	11
Poor Growth	5%	6%	4%	15%	21%	32%	45%	49%	59%	64%	64%	67%
Malnour.	7%	6%	5%	8%	10%	10%	11%	15%	15%	25%	30%	30%

There is not a great deal of difference in terms of growth faltering. What is notable is the difference in the degree to which growth faltering has led to malnutrition. One hypothesis is that POSAIN interventions resulted in improved response to growth faltering.

The analysis of growth faltering was carried out looking at eight risk factors:

- **general causes** (low birth weight, inadequate birth interval, other malnourished children, prematurity and sibling who died under the age of five years);
- **diet** (no breastfeeding, inadequate breastfeeding, artificial milk, non-exclusive breastfeeding in children under the age of six months, lack of weaning foods in older children);
- **child care** (mother is not the caretaker, mother does not feed the child, mother is not the one who prepares the child's meals, child does not have his own food, the child does not eat before other family members);
- **disease episodes** (colds, diarrhea, ARIs, dermatitis, and others);
- **socio-economic characteristics** (education of mother, participation of mother in community activities, economic resources of mother);

- household hygiene (water not boiled, hands not washed after defecating and/or before preparing food);
- feeding during illness episodes (breastfeeding discontinued, other foods suspended, did not increase diet, did not feed at least five times per day).

The following chart lays out the causes of growth faltering in the four communities and represents the analysis of around 150 children each year:

Causes	1991	1992
General Causes	16.5%	10.5%
Diet	25.7%	24.4%
Child care practices	16.2%	14.3%
Disease episodes	58.3%	55.9%
Socio-economic characteristics	37.8%	34%
Household hygiene	7.8%	15.6%
Feeding during illness episodes	18.2%	20.9%

As can be seen, the major risk factor is illness, over 80 percent of which is acute respiratory infection and diarrhea. This, however, is both a cause and an effect of growth faltering. Among social and economic characteristics, the second greatest risk factor, the non-participation of the mother in community activities, was the most common. The third greatest risk factor was the child's diet; among the various factors the most common was the use of artificial milk. Other factors were less important.

The analysis suggests some areas of potential intervention as discussed below.

Although there is no baseline data for evaluation of POSAIN, there is general data for children in Honduras based on the 1987 nutrition survey. At that time, according to Dr. Fidel Barahona, Director of the MOH Science and Technology Unit, the percentage of children more than two standard deviations below the norm in the 12-23 month age group was 46.2. This is the closest measure to the 11 month group evaluated in POSAIN. This is a national average. The overall malnutrition for all children under the age of five years in Region 2 was 37.3 percent and in Region 5, 55.2 percent. At the very least, we can say that the children evaluated in the POSAIN villages are better off than the national average. Given that these are very poor villages (over 90 percent of houses have dirt floors) and that these are in the two poorest regions of the country, there is reason to be hopeful concerning POSAIN.

## **V. CONCLUSIONS**

**There is evidence of improvement in the nutritional status of children in the four villages in which POSAIN was evaluated in 1991 and 1992. Unfortunately, there is no baseline data suggesting what nutritional status was in these same villages prior to the intervention. Nevertheless, data from other surveys suggests that POSAIN has had an impact.**

**Not surprisingly, the principal risk factor associated with growth faltering is infection, either diarrheal disease or acute respiratory infection. Disease, of course, is both a cause and an effect of growth faltering.**

**Areas of potential intervention are in mothers' education (increasing community participation), nutritional education and encouraging increased, appropriate feeding during diarrhea.**

## **VI. RECOMMENDATIONS**

**POSAIN should be further evaluated.**

## **APPENDIX A**

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Data Relayed by Telephone from Dr. Fidel Barahona based on the 1987 National Nutrition Survey.

Malnutrition (more than one standard deviation below the norm but with statistical cleaning of the extremes, making this equivalent to <2SD below the norm)

### Global at National Level

	0-11 months	12-23 months	24-35 months	36-47 months	48-59 months
Weight/Age	8.5%	46.2%	41.7%	45.3%	47.3%
Height/Age	16.4%	48.2%	43.2%	59.4%	60.6%
Wt/Height	0.9%	16.8%	7.3%	0%	0.8%

### Global Data for Regions 2 and 5

	Region 2	Region 5
Weight/Age	37.3	57.9
Height/Age	51.9	55.7
Weight/Height		