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Agreement # AID/DPE-5920-A-00-5056-00

PA 162 124

Country Report Series

Costa Rica

**Quality Control of
Primary Health Care
in Costa Rica**

FINAL REPORT

**QUALITY CONTROL
OF PRIMARY HEALTH CARE
IN COSTA RICA**

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PRICOR (Under a Cooperative Subagreement from the Office of
Health, Bureau for Science and Technology,
Agency for International Development)
National Research Council/Ford Fellowship
BOSTID (CRG Grant No. RGA-CR-1-87-71).

May 7, 1988

¹Very special recognition is given to Dr. Carlos Valerin, (Director General of Health), Dr. Hugo Villegas, (National Representative for PAHO), Dr. Carlos Ferrero, (PAHO Regional Advisor in Health Information Systems), Dr. John Wyon (Harvard School of Public Health), and Dr. Donald Shepard (Harvard Institute for International Development), without whose support and creativity this project would not have been possible. We give our thanks to INISA and to all other individuals in the Costa Rica Health System who worked in the project.

The Ministry of Health has stated a group of policies and strategies for health. The General Director of Health is putting them into operation. The process of technical - and administrative decentralization has been completed - the stages of basic data for the diagnostic of the health - attention and the processes of programming, management and control.

This document is a report on the project on Quality - Control of the health services applied to Primary Health - Care. It was prepared by th Ministry of Health in Costa - Rica and the Institute for International Development of Harvard University, with the previous agreement of PRICOR.

A group of professional were involved in this project and they have invested a lot of time and efforts. We - sincerely appreciate what was done by all of them and we - expect that this effort will allow a better local of health for Costa Rica and other countries of the world.

Very truly yours,


Dr. Carlos E. Valerín Arias
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In 1975 the Harvard Institute for International Development (HIID), whose goal is to strengthen the participation of the University in projects overseas, committed itself to improving the health systems of developing countries. Dr. Derek Bok, the President of Harvard, is a strong supporter of the efforts of HIID to develop an active Latin American and Caribbean Health Program. The main goal of HIID's Health Program in Latin America and the Caribbean, and throughout the Third World, is to help develop national health care systems, and thereby improve the health of the populations in need of better health care.

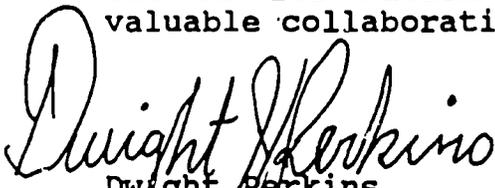
The initial stage of the project, "Quality Control of Primary Health Care in Costa Rica", which is presented in this document, reflects our interest in designing and applying quantitative methods which will enable the authorities of Costa Rica to identify the existing problems in health care delivery at the regional level.

The sampling method used in this project, Lot Quality Assurance Sampling (LQAS), has proven to be both innovative and valuable for assessing the quality of basic services provided by the Primary Health Care system to the Costa Rican population.

The second phase of the project is currently underway in Costa Rica. Its goal is to identify possible causes of the problems identified during phase one. For example, the quality of services with respect to measles vaccination will be analyzed, and solutions will be designed and implemented to address the problems identified.

Not only will Costa Rica benefit as a result of this project, but other countries who are interested in applying LQAS methodology will also benefit.

I would like to sincerely thank the Ministry of Health of Costa Rica for its support of this project. In addition, I would like to express my gratitude both to PRICOR for subcontracting one of its nation studies to HIID, and to PAHO/WHO for its valuable collaboration.


Dwight Perkins
Director

PREFACE

Over the past decade, national and international commitment to extending basic health services to underserved urban and rural populations in developing countries has led to major investment in primary health care (PHC) and child survival program strategies. However, these programs continue to face persistent problems with underutilization of services, lack of knowledge and acceptance of home-based interventions, and at times, inadequate quality of services provided. Typically, program managers lack specific information about how service delivery activities and support functions such as supervision, are routinely carried out.

While surveys and evaluations have tended to focus on measuring program inputs (such as training and supplies), outputs (such as number of services delivered) and impacts (such as changes in morbidity rates), relatively little attention has been devoted to analyzing the performance of the activities that produce a given outcome. Yet, opportunities to improve the effectiveness of PHC and child survival programs at the operational level clearly depend on strengthening these service delivery and support processes.

Responding to the need for better information on the process of service delivery, the Agency for International Development has launched, through the Primary Health Care Operations Research Project (PRICOR) Project, a major international effort to document and analyze the activities of PHC programs in developing countries. PRICOR was established in 1981 under a cooperative agreement with the AID Office of Health to help developing countries improve their PHC and child survival programs through practical, decision-oriented management studies and operations research. In its second phase, a major PRICOR objective is to develop new and innovative ways of identifying and diagnosing discrete problems in the process of service delivery that will lead to measurable improvements in program performance.

PRICOR staff now are refining and applying a systems analysis approach that allows program managers to accurately describe how key components of the PHC program actually operate and to identify the specific weak points and bottlenecks that impede effective delivery of PHC services at the peripheral level. The systems analysis relies on direct observations, key informant interviews, limited surveys, and other rapid assessment methods to provide decisionmakers with a comprehensive picture of program strengths and failures. By shifting the focus from input and outcome measures to process indicators, systems analysis provides concrete data that lead to tangible improvements, through immediate corrective action or short, problem-solving studies.

The PRICOR Country Report series presents the efforts of PRICOR staff and investigators from collaborating institutions to apply in some dozen countries practical methodologies for observing and measuring how PHC service delivery activities are being carried out. This volume presents a PRICOR country study conducted in Costa Rica by the Harvard Institute for International Development which adapted the industrial sampling technique of Lot Quality Acceptance Sampling (LQAS) for use in identifying substandard service delivery performance in health posts.

LQAS is an innovative way of identifying problems in the delivery of basic health services in developing countries. Given the complexity of primary health care systems, it is very difficult to identify weak or problematic areas where systems analysis can be focused. PRICOR views LQAS as a useful screening tool for identifying problematic health posts and service delivery components to which a more in-depth systems analysis methodology can be applied to pinpoint the causes of inadequate performance.

As is true for all analytical methods, sampling is a major concern in the application of systems analysis. A quick statistically sound method for collecting information is needed. Since LQAS uses a relatively small sample size, PRICOR has supported the testing of the LQAS methodology as one possible solution to the sampling problems in systems analysis. The use of LQAS is a potentially valuable method by which the systems analysis process can be shortened and made more efficient.

David D. Nicholas, M.D., M.P.H.
Director
PRICOR Project



TABLE OF CONTENTS

| | |
|--|----|
| INTRODUCTION | 1 |
| SAMPLING FRAME | 4 |
| PREPARATION AND UPDATE OF THE MAPS | 5 |
| SELECTION OF INTERVIEWERS | 6 |
| COMPILATION OF INFORMATION | 7 |
| QUALITY CONTROL TEAM | 8 |
| RESULTS | 10 |
| HOME VISITS | 10 |
| VACCINATIONS | 12 |
| I. Screening Health Facilities According to Ministry of Health Standards | 12 |
| First Polio and DPT Doses | 13 |
| Second and Third Polio and DPT Doses: | 15 |
| Measle: | 16 |
| II. Evaluation of Vaccination According to WHO Atandards: | 16 |
| REFERRAL OF PREGNANCIES | 17 |
| REFERRAL OF NEWBORNS | 17 |
| ORAL REHYDRATION THERAPY | 18 |
| ANNEXES | 20 |
| ANNEX 1 OPERATING CHARACTERISTIC CURVE | 21 |
| ANNEX 2 PROBABILITIES FOR A SAMPLE = 28. | 22 |
| ANNEX 3 TABLE 1: COVERAGE AT THE REGIONAL AND NATIONAL LEVEL | 23 |
| ANNEX 4 LIST OF HEALTH FACILITIES BY TOTAL NUMBER OF SERVICES FOUND TO BE DEFECTIVE: 1987 | 38 |
| ANNEX 5 LIST OF HEALTH FACILITIES CLASSIFIED AS HAVING ACCEPTABLE OR DEFECTIVE POLIO VACCINATIONS: 1987 | 40 |
| ANNEX 6 LQAS PROJECT: PRIMARY HEALTH CARE QUALITY CONTROL MINISTRY OF HEALTH HARVARD UNIVERSITY (HIID) LIST OF DEFECTS FOR EACH HEALTH FACILITY IN 28 OBSERVATIONS OF POLIO VACCINATIONS 1987 | 56 |
| ANNEX 7 LQAS PROJECT: PRIMARY HEALTH CARE QUALITY CONTROL MINISTRY OF HEALTH, HARVARD UNIVERSITY (HIID) LIST OF DEFECTS FOR EACH HEALTH FACILITY IN 28 OBSERVATIONS OF POLIO VACCINATIONS: 1987 | 74 |

A

| | | |
|----------|---|-----|
| ANNEX 8 | PROCESSING THE DATA | 93 |
| | COMPUTER PROGRAMS RUN | 94 |
| | D.B.F. FILES | 96 |
| | F.R.M. REPORTS | 98 |
| ANNEX 9 | INSTRUMENTS USED | 101 |
| | INFORMATION SOURCES MOST USED | 101 |
| ANNEX 10 | Calculating Coverage Proportions and Confidence Intervals with LQAS Data | 102 |
| ANNEX 11 | A Hypothetical Application of LQAS | 104 |

INTRODUCTION ²

Aside from the known decline in infant mortality, morbidity, and disease following the establishment in 1972 of the Primary Health Care program began in Costa Rica, there has never been a systematic assessment of the quality of the services offered to the country nor a check into whether or not these services have been executed both correctly and within the proper time frames.

As the Ministry of Health (MOH) is aware that an inspection of the quality of health care services should help bring about a more efficient and effective use of available resources, the MOH decided to develop this present project in collaboration with the Harvard Institute for International Development (HIID), and the Pan American Health Organization under a Cooperative Agreement with PRICOR.

The essential purpose of this project is to evaluate the Primary Health Care Program at the most decentralized level of organization, namely, health areas, while testing a new rapid method of health facility evaluation: Lot Quality Assurance Sampling (LQAS). The data collected in the project was intended to detect whether or not Health Areas (HA) were performing up to the standards of the MOH and the World Health Organization (WHO) and to permit the calculation of precise coverage proportions both at the national and regional levels of organization.

² The work upon which this presentation is based was performed in part under a subagreement with the Center for Human Services under its Cooperative Agreement No. DPE-5920-00-A-5056-00 with the U.S. Agency for International Development.

LQAS should be contrasted with the EPI cluster sampling method of evaluation presently used by the Extended Immunization Program (EPI) of WHO which can be used to determine coverage at either national or regional levels. LQAS is able to systematically determine the quality of services offered in each and every peripheral administrative unit or HA and at every progressively more centralized level of organization. It is important to note that whereas LQAS requires small samples (in this project n=28) EPI cluster sampling requires samples of 210.

Another advantage of LQAS is that the same information used to measure coverage can also be used to evaluate the quality of health records in the HA's.

In specific terms, the goal of the project was to classify 60 of 700 HA's throughout Costa Rica according to their quality of health service coverage by the following services: delivery of the complete series of polio, DPT, and measles vaccinations; competent use of oral rehydration therapy; referrals of pregnant women and new borns to doctors; and, home visits by community health workers (CHW) in each of the Primary Care Areas selected. Adequate coverage was assumed to be 80% or better; the lowest quality coverage was assumed to be 50% or less. LQAS has been designed as a rapid assessment technique that classifies health areas with the lowest coverage (i.e., $\leq 50\%$) from those areas with excellent coverage (i.e., $\geq 80\%$). Thus, areas in which the population is under the greatest risk can be identified for a concerted investment aimed at improving services and reducing health risks. Correspondingly, HAs with high levels of coverage also need to be

identified in order to avoid unnecessary investment into HAs that do not need it. The areas with coverage levels between 50% and 80% are neither adequate nor the highest priority for improvement. Accordingly, the closer an HA is to either 50% or 80%, the greater the likelihood that it will be classified as substandard or adequate, respectively. In this study with a sample of 28, there is only a 5% chance that HAs with coverage $\leq 50\%$ or $\geq 80\%$ will be misclassified. This level of error is obtained using the following decision rule. An HA is classified as below standard if more than 9 of 28 children have inadequate coverage for a given activity. See Annex 11 for a discussion of Lot Quality Acceptance Sampling.

The results of this project will allow for the identification of any of the services that are problematic in each HA and the portions of the regional and national populations affected by these problems.

The names of each HA are arranged in Annex 4 according to Health Center and region, and their status as either acceptable or deficient for each service examined.³ The coverage proportion for each Primary Health Care service in all 60 HAs and their respective confidence intervals are listed in Table 1.⁴

³Health Areas (HAs) are administered by Health Centers (HCs). Each HC is responsible for administration of about 9 HAs. HCs are administered by Health Regions who in turn are administered by the MOH from San Jose.

⁴During 1988, a set of deficient Areas will be diagnosed in order to identify the causes of the substandard service delivery. At that time, a plan of action will be implemented in an attempt to eliminate these problems. During the life of the project the changes to the HAs will also be evaluated to determine whether improved service delivery occurred.

The project randomly selected a sample of 28 children under 3 years of age from each of the 60 HAs. Although this sample size is larger than the number which we expect to be used regularly by the Costa Rican National Primary Care system, it was selected for this first test of LQAS since both Type I and Type II classification errors were less than 5%. In total, 1680 children from 39 rural and 21 urban Areas from the 6 different regions of the country were randomly selected to be studied (See Annex 1 for the Operating Characteristic Curve applicable to this sampling design).

The number of HAs selected to be studied was determined by the budgetary limits of the project. Nevertheless, the project's measure of coverage by each PHC Service at both national and regional levels yield small confidence intervals ($\pm 2\%$) thus indicating their precision.

SAMPLING FRAME

Copies of maps from the most recent census, 1984, were used as the project's sampling frame. This decision was made for two reasons:

- 1) The majority of the hand drawn maps normally made by HAs were out-of-date and, therefore, it was highly probable that many families in target HAs would not be listed in them. Thus, these maps were eliminated from the study.
- 2) The project's sampling frame had to be independent of the health system since the study was intended to evaluate the health information system, and determine the proportion of families that had been identified by each HA's health worker.

PREPARATION AND UPDATE OF THE MAPS

A team consisting of a map maker and a permanent member of the project staff visited each of the 60 HAs and, with the help of the CHW delineated the portion of the map produced by the 1984 census which represented his/her HA. The boundaries of these catchment areas were assessed for face validity by supervisors. The team then updated the maps to ensure that all families (to the extent possible) were included in the maps. A combination of supplemental information sources were used. Firstly, the hand drawn maps found in each HA were used since CHWs may have located houses that escaped census takers. Secondly, CHWs were interviewed since houses they located were not always transferred to their own maps. Thirdly, the project team reconnoitered the project area to visually validate the map. New houses were added as necessary. On one occasion, a map produced by the malaria campaign near the Nicaraguan border was used.

After the maps were updated, they were organized into a sampling frame in the following manner.

- 1) Each house in a given Area was assigned a unique number.
- 2) The total number of houses in each Area was divided by 28 (the size of the sample) in order to obtain the sampling interval. To identify the first house to visit, a number between 1 and the sampling interval was randomly chosen. The subsequent 27 sampling points were selected by adding the number of the house just sampled to the sampling interval. For example, if the first sample point is house 5 and the interval is 10, then

the second sampling point was house 15, the third house 25 and so forth.

- 3) Arrows were drawn on the maps to designate the direction in which an interviewer should go in the case that there were no children under three years of age found in one of the indicated houses. The average number of houses visited by a given interviewer before finding a child under the age of 3 was 3 houses.

SELECTION OF INTERVIEWERS

Three interview teams were organized for collection of the LQAS data. Each group consisted of three interviewers, a supervisor and a chauffeur (5 people to a group). The selection of the interviewers and supervisors was made in the following manner:

- 1) For two days, the project advertized the job of interviewer in the national newspaper with the largest circulation. Interested individuals were requested to call a telephone number.
- 2) During two days, 40 candidates were shortlisted from the telephone calls for a personal interview. Eligible candidates were experienced interviewers who had used maps in the field, had completed college, and were available for extended periods of work outside of the Capital of San Jose for as much as two weeks at a time.
- 3) From the 40 candidates interviewed personally, 20 were selected for training.

- 4) The 20 candidates selected were trained by the project staff in interviewing techniques and in the preferred manner to use the LQAS questionnaire. The form and function of the Primary Health Care Program was explained briefly ⁵ and the documents which they would need to consult while in the field, such as the family health records, the vaccination notebooks, the household registers, the individual control cards, control cards for pregnancies, and other such items, were shown and explained to them.
- 5) At the end of the training course, the candidates were given both a practical and a written exam to select the 12 strongest candidates. These 12 were organized into 9 interviewers, and 3 supervisors; 2 substitutes were also identified.

COMPILATION OF INFORMATION

Each group of interviewers was given a set of updated maps (at regular intervals), a set of questionnaires⁶, assigned a vehicle and a chauffeur, and sent to the appropriate HAS to conduct the LQAS sample. Following the arrows marked out on the maps, the home to be interviewed was located. If no children under the age of three were found in any one of the indicated houses, the interviewer proceeded to follow the

⁵ The history and function of the Primary Health Care System were explained to the interviewers so they would be able to understand the crucial role of their work in the development of the PHC system.

⁶ Questionnaires were pre-tested and revised many times before being used. All pretesting occurred in marginal areas of San Jose.

direction indicated by the arrows on the map until a household with a child in the proper age range was located. At least 10% of all houses were revisited by supervisors to determine whether this procedure was being followed correctly. No discrepancies were found.

After the mothers of the children in each of the 28 households of an Area were interviewed, the questionnaires were taken to the archives of that Area in order to verify the data collected. Such a verification was implicit in the design of the questionnaire in order that the degree of correspondence between the experiences of families in households and the records of these experiences in HAs could be determined.

QUALITY CONTROL TEAM

In order to determine the reliability of the data, a quality control team was formed. Using the same questionnaire, the team reinterviewed 10% of the mothers previously interviewed. Therefore, 3 mothers from each of the 60 Areas were reinterviewed.

Mothers to be reinterviewed were identified by randomly selecting three questionnaires from each lot of 28. For example: the 28 questionnaires for each HA were numbered consecutively. Next, if 10 interviews were performed by one interviewer, a random number was taken between 1 and 10. The same procedure was followed to select one questionnaire from each of the other two interviewers.

After the three interviews were selected, the corresponding mothers were reinterviewed. Their responses were also checked in the HA's archives. Subsequently, a measure of quality was made consisting of

the number of responses that coincided between the original and second interview as a numerator and the total number of questions as a denominator.

In order to perform these quality control calculations, the questions were organized into five categories: empirical, subjective, those which classified HAs as either acceptable or deficient, all interview questions, and those which were used to verify the quality of the health information system.⁷ Using a very simple formula (number of responses verified divided by number of questions), the quality of each of the interviews was determined. Results of 90% were considered acceptable.⁸

When the quality was less than 90%, the supervisor of the appropriate interview team was notified and shown the problem questions. They were instructed to contact the appropriate interviewer and explain the error. The goal was to prevent the same error from being committed in subsequent interviews. Some 11 HAs exhibited data quality scores less than 90%, thus, requiring the quality control group to return to these 11 Areas to collect a second time the appropriate category of data. In all cases the faulty data consisted of those

⁷Empirical questions depended on observable facts; subjective questions relied on either the opinions or memories of mothers.

⁸ The data obtained for the weight and height of the children was of such a low quality that it was excluded from the study. Mothers tended not to remember when their children were weighed and measured, and CHWs tended not to record the dates they performed these activities.

FIGURE 1A

Group 1

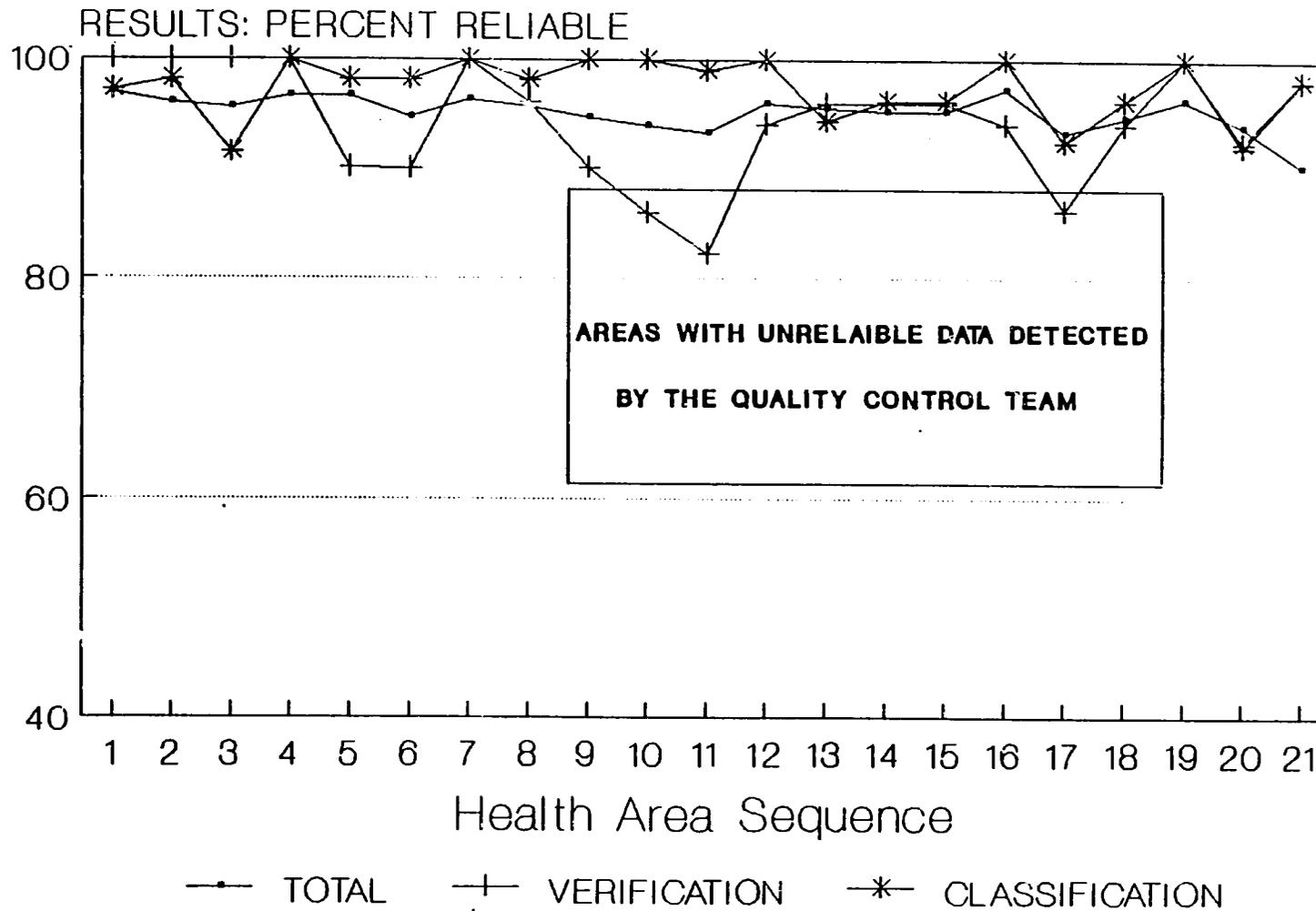


FIGURE 1B

Group 2

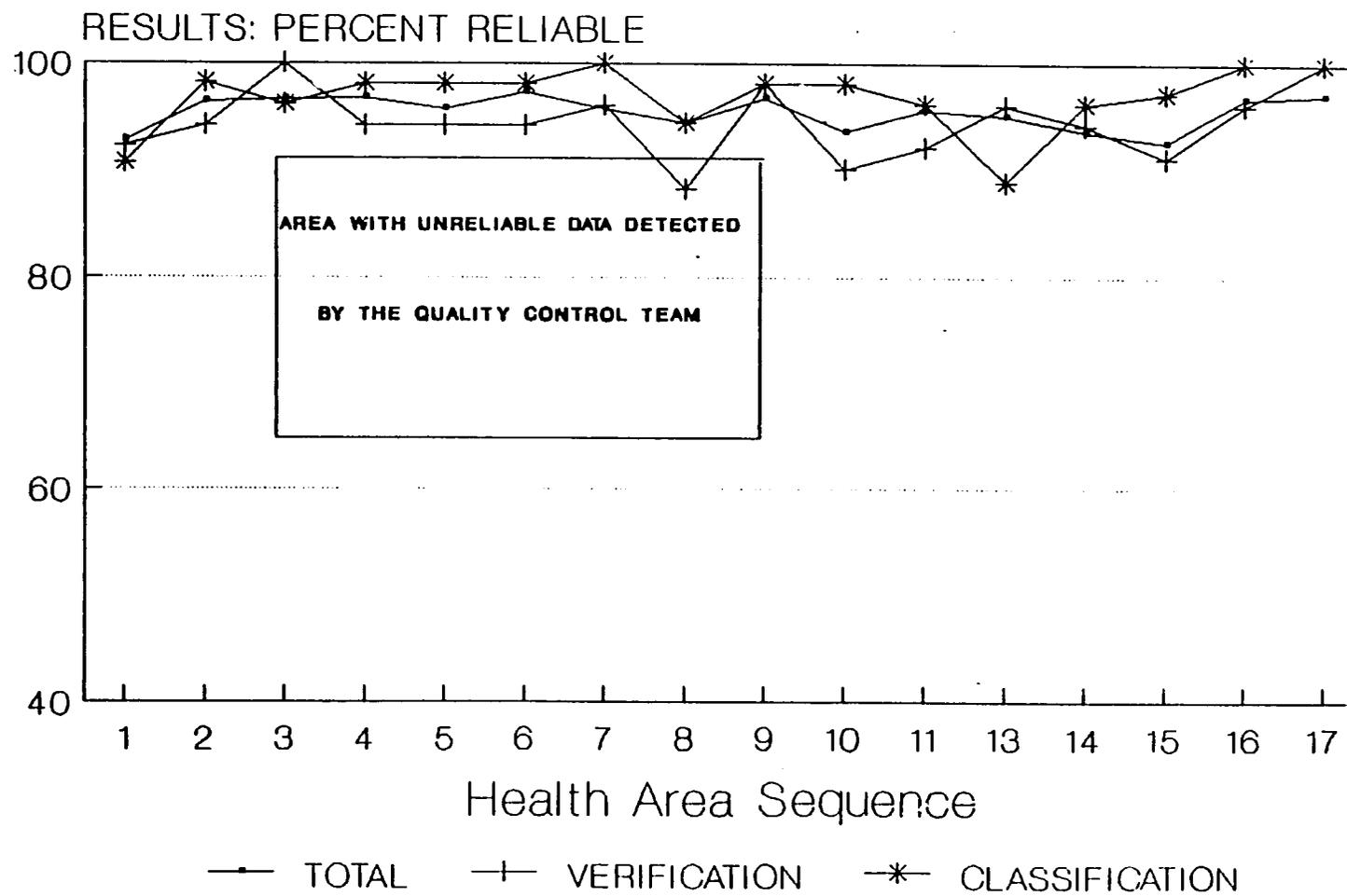
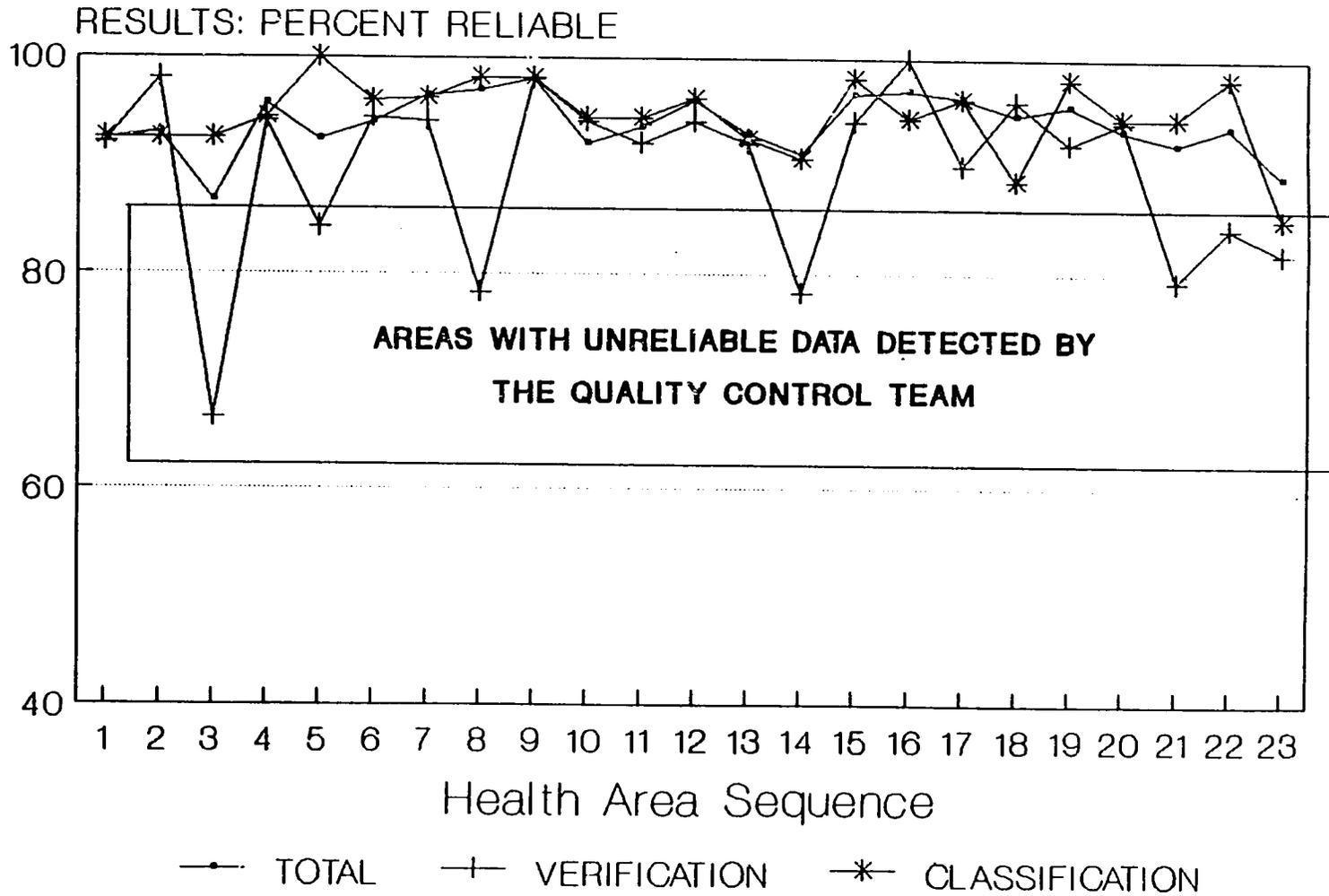


FIGURE 1C

Group 3



42

portions of the questionnaire in which health records were contrasted with interview data (Figure 1abc).⁹

RESULTS

In response to the needs of the Ministry of Health, the project evaluated the following activities of the Primary Health Care Program:

- 1) Home Visits by CHWs
- 2) Vaccinations (Polio 1,2,3; DPT 1,2,3; Measles)
- 3) Referral of Pregnancies to a Doctor
- 4) Referral of New Borns to a Doctor
- 5) Oral Rehydration Therapy (knowledge, use, preparation)

Each of these five activities are discussed separately in the following sections.

HOME VISITS

Two criteria were used to evaluate this activity. The first

⁹ In addition to the already mentioned function of the quality control team, it had the additional responsibility of randomly selecting from the health archives of each HA 28 families with children under three years of age. The family health archives were used as the sources of information to fill out LQAS questionnaires, (the same questionnaires used for the HAs).

These data were collected in order to develop LQAS methodology and to study its economics when archives rather than household data are used for assessing coverage. This study will be presented to the authorities of the Ministry in the coming months. If the results of this comparison prove to be reliable when compared to the household study, this approach will be used in order to avoid the costs of the household study.

criterion was liberal. Any home in which the Household Register¹⁰ indicated no visit at all during the 4 months preceding the interview were considered as homes not adequately covered by the health worker. The 4 month interval was chosen for the project since the Ministry requires a minimum of three visits annually to each household. Households which did not have a Household Register were not judged as deficient under this criterion. In other words, the CHW was given the benefit of the doubt. National coverage by this activity was 78% (CI:+2%). However, 13 of the 60 Areas evaluated were operating below the MOH standards (See Annex 3 for list of the number of defective households in the sample of 28 children of each HA).

The second criterion was conservative. For this set of HA classifications, any household that either had not been visited during a 4 month interval or that did not have a Household Register was considered deficient. The results using this criterion were worse. National Coverage was 34% (CI:±5%). Only 7 Areas were classified as acceptable.

An important observation arises from having performed the analysis using two criteria. The difference in the results is primarily due to the fact that 44% of the houses interviewed had no Household Register. Only 22% of the homes visited had a Household Register that indicated a visit more than four months prior to the interview. Given these results, the following questions arose: Are 44% of the families not covered? If they are, why didn't they have a Household Register?

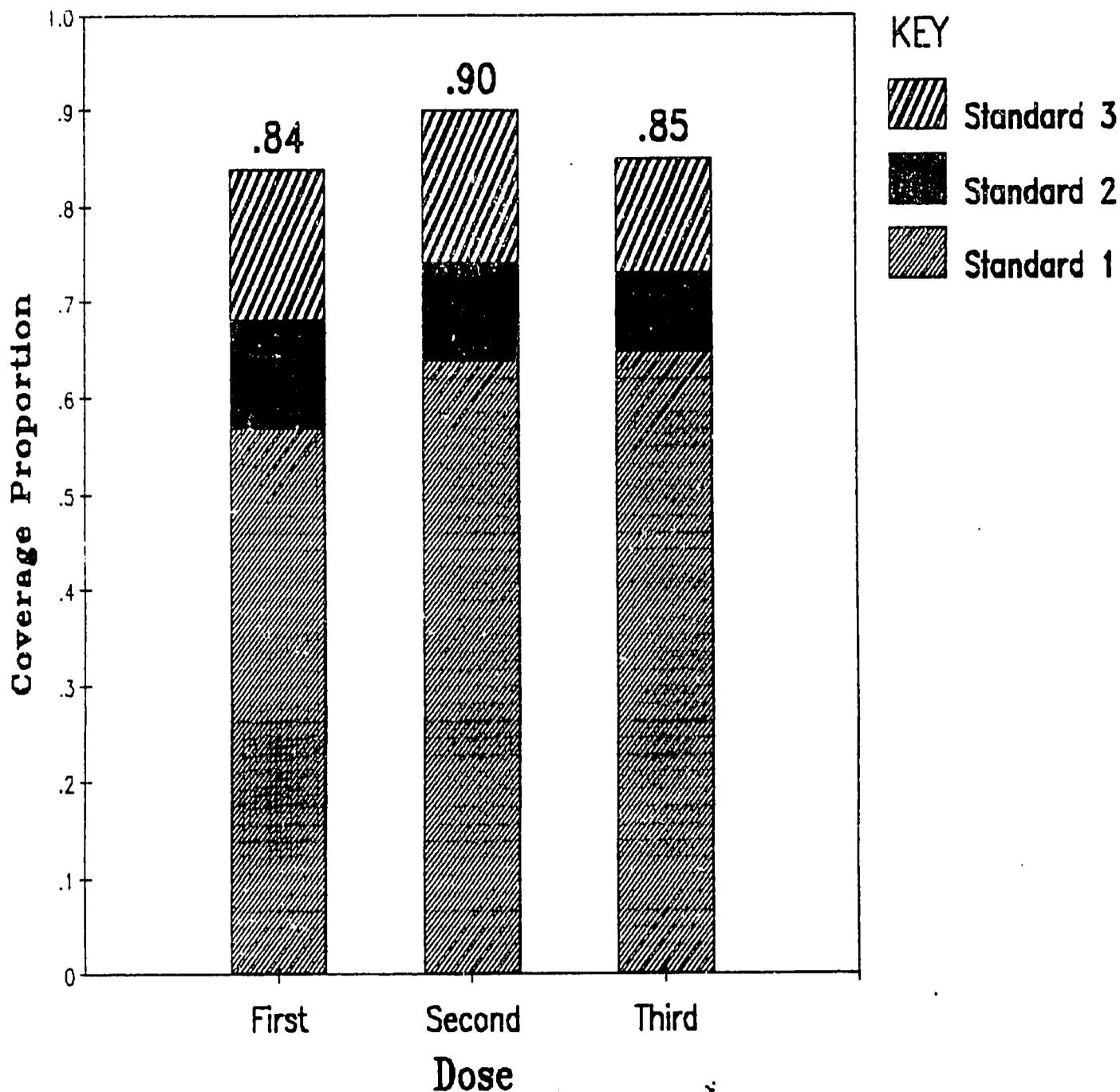
¹⁰ The Household Register is a Ministry of Health form found in the home in which the health worker writes the date of his last visit and signs his name.

FIGURE 2

POLIO VACCINATION COVERAGE IN COSTA RICA

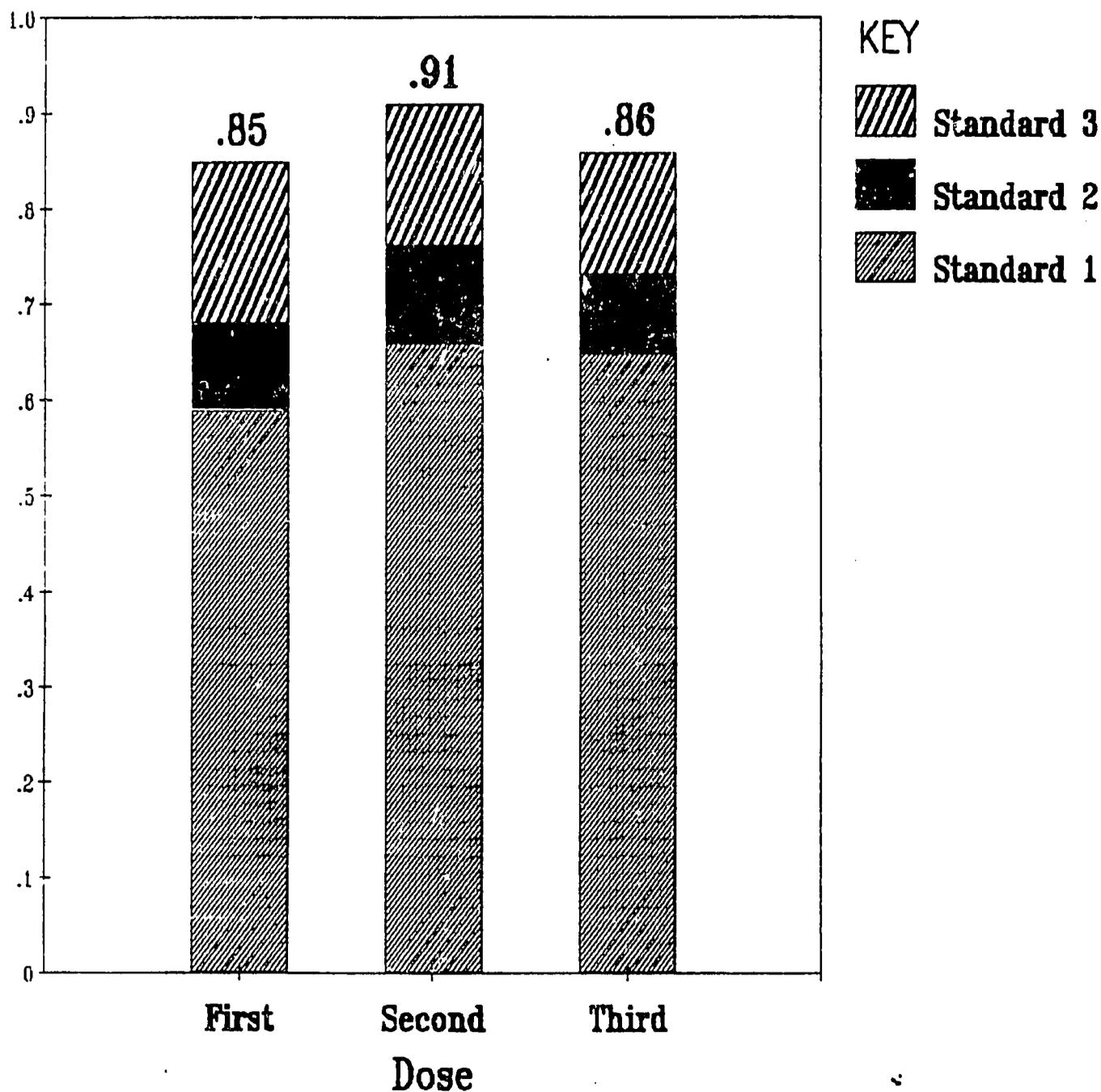
USING 3 STANDARDS:

LQAS Data Analysis



3 Standards: 1.5-2.5 Mo., 1.5-3 Mo., 1.5-5.5 Mo.

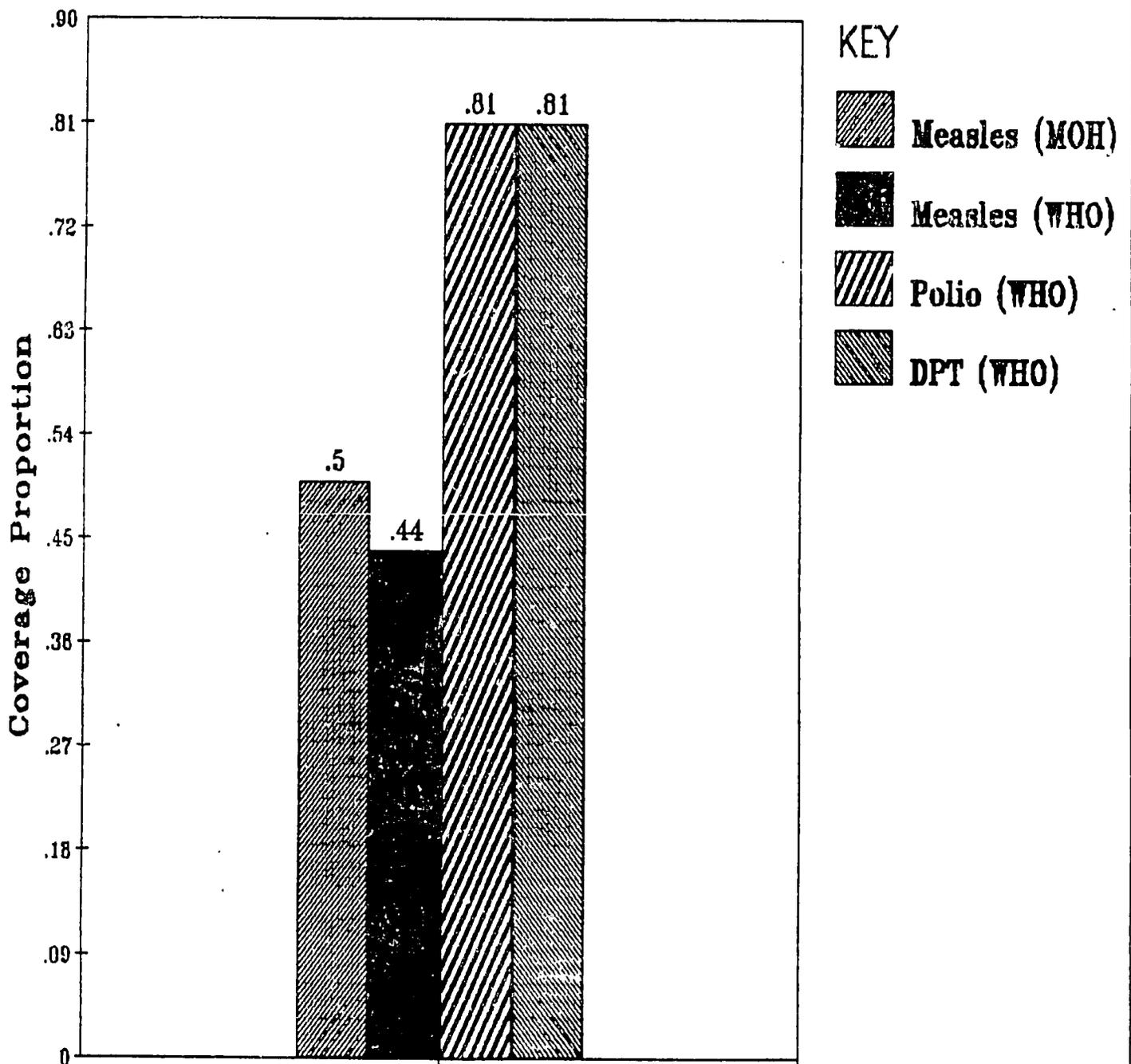
FIGURE 3
DPT VACCINATION COVERAGE
IN COSTA RICA
USING 3 STANDARDS:
LQAS Data Analysis



3 Standards: 1.5-2.5 Mo., 1.5-3 Mo., 1.5-5.5 Mo.

FIGURE 4

MEASLES VACCINATION COVERAGE USING MINISTRY OF HEALTH CRITERIA AND ALL VACCINATION COVERAGE BY W.H.O. INTERNATIONAL STANDARDS



WHO Standards: Complete Vaccination by 11 Mo.
Measles: (MOH) 6-12 Months, (WHO) within First Year

These and other related questions will be examined in the diagnosis stage of the project, 1988-1989.

VACCINATIONS

Two types of assessments were performed: one was based on MOH standards and another based upon the international standards established by WHO.

I. Screening Health Facilities According to Ministry of Health Standards

According to MOH standards, all children should receive 3 doses of DPT vaccination, 3 doses of polio vaccination and one dose of measles vaccination within the 11 months of life according to the following schedule:

- 1) DPT: The first dose should be received at two months of age. The second and third doses should be received at two month intervals (see Figure 2).
- 2) Polio: The same standards hold for Polio as for DPT (see Figure 3).
- 3) Measles: One dose should be received between 6 and 11 months of age (see Figure 4).

Vaccination cards of all children were examined to determine

whether or not they had been vaccinated in accordance with the MOH standard. Boosters were not considered.

Regional and national coverages for each vaccination are listed in Table 1 with their corresponding confidence intervals. The number of defective children in each HA's sample of 28 appears in Annex 4. The performance of each HA for each vaccination is listed according to their Health Center and Region in Annex 5.

First Polio and DPT Doses

The formal MOH norms were modified for analytic purposes since one cannot expect a dose of, say, polio 1 to be administered exactly at two months of age. Three standards were applied to evaluate the first dose of DPT and Polio vaccination. All of the coverage proportions reported have been weighted by the number of children in a given HA.

Standard 1: Children vaccinated between the ages of 1.5 and 2.5 months inclusive, were considered acceptable. This rule extends the MOH standard by ± 15 days. National coverage with Polio 1 was 57% (CI: $\pm 2\%$), and 59% (CI: $\pm 2\%$) for DPT. Some 47 HAs were substandard in polio coverage and 44 HAs were substandard for DPT coverage.

Standard 2: The lower age limit remained at 15 months, as in Standard 1; the upper bounds was increased by an additional 2 weeks. Therefore, the acceptable age interval to have received the vaccinations was 1.5 to 3 months of age.

Accordingly, national coverage was 68% (CI:±2%) for both the first dose of polio and the first dose of DPT. Some 33 HAs were deficient in polio coverage and 27 HAs were deficient in DPT coverage.

Standard 3: This standard was established by assuming that a child should at the very least be vaccinated during the CHW's visit to the family. The minimum number of visits of a CHW to a household according to MOH standards is four visits annually (1 visit every 4 months). Therefore, if we assume that the last visit of the CHW was one day prior to the minimum age at which a child should receive the first vaccination, (i.e., 1.5 months of age), the child would be eligible for the vaccination during the next visit (i.e., at 5.5 months of age) four months later. Thus, the acceptable age interval at which a child can be vaccinated is 1.5 - 5.5 months.

Standard 3 raises a potential problem for the health system. Children who are first seen by the CHW when they are younger than 1.5 months of age need to wait until the next visit before being vaccinated. If these children wait for the CHW's following visits to receive their second and third polio and DPT doses at intervals of 5.5 months, they will not be able to complete the vaccination series before their birthday. Indeed they would be 16.5 months of age before receiving the third dose. Nevertheless, Standard 3 established a practical norm for evaluating vaccinations. National coverage by Polio 1 was 84% (CI:±2%); two HAs were defective. DPT coverage was 85%

(CI:±2%); one HA was defective. See Annex 3 for a summary of coverage statistics, and Annex 5 for a list of deficient HAs.

Second and Third Polio and DPT Doses:

The previous three standards were also used for evaluating the second and third doses of Polio and DPT vaccinations. For example, according to standard 1 (1.5 - 5.5 months) if a child received the first dose of DPT at the age of 2 months, the second dose would have to be received when the child is between 3.5 and 4.5 months in order for the coverage to be considered as acceptable. Using standard 2 (1.5 - 3 months), the vaccinations would be acceptable if the child is between 3.5 and 5 months. For standard 3 (1.5 - 4 months), the child should be between 3.5 months and 6 months. National coverage according to each standard was calculated as follows: (standard 1) 64% (CI:±2%), (standard 2) 75% (CI:±2%), and (standard 3) 91% (CI:±2%) for the second dose of DPT (See Annex 3).

According to standard 1, 33 HAs were deficient in polio 2 coverage; by standard 2, 12 deficient HAs were substandard; by standard 3 all HAs were acceptable. The same distribution of substandard HAs was found for the second dose of DPT with the exception of standard 1 in which 31 HAs were deficient.

The analysis of coverage for the third dose of both polio and DPT used the same three standards. The calculations of national polio 3 coverage using standards 1, 2 and 3, respectively, were 65% (CI:±2%), 73% (CI:±2%) and 85% (CI:±2%); DPT coverage proportions were 65% (CI:±2%), 73% (CI:±2%) and 91% (CI:±2%), respectively (See Annex 3).

The number of HAs determined deficient for the third polio and DPT doses were also similar. For polio 3 Standard 1, 33 HAs were deficient; by Standard 2, 17 HAs were substandard, and one HA was not acceptable by Standard 3.

See Annex 5 for a listing of HAs deficient in their coverage with the second and third doses of polio and DPT (see Figure 2-3 for a summary of the results).

Measles

According to MOH standards, only children vaccinated within the period between 6 and 11 months were considered acceptable.

By this standard, national coverage was 50% (CI:±2%). This low level of coverage was homogenous throughout the country. Regional coverage proportions are as follows: 54% (CI:±5%) for South Central, 52% (CI:±7%) for North Central, 46% (CI:±7%) for the Huetar North, 49% (CI:±5%) for Chorotega, 45% (CI:±8%) for the Huetar Atlantica, and 50% (CI:±6%) for Brunca.

A detailed summary of these statistics at the national and regional levels is given in Figure 4, Annexes 3 and 4. See Annex 6 for a list of Coverage proportions by Health Center. In this regard, the Health Centers of Liberia and Sarapiquí exhibited the greatest deficiency, 35% and 38%, respectively. Annex 5 lists the names of all deficient HAs.

II. Evaluation of Vaccination According to WHO Standards

WHO's vaccination standards recommend that a child should receive 3 doses of polio and DPT vaccination within the first 11 months of life,

with at least a one month interval between doses, and 1 dose of measles vaccination between 9 and 12 months of age. To evaluate coverage according to this standard, only children between the ages of 12 and 35 months were included (see Figure 4 for a summary of the results).

National coverage for the complete polio series was 81% (CI:±2%). Coverage for the DPT series was also 81% (CI:±2%). Coverage by measles vaccination was 44% (CI:±3%).

REFERRAL OF PREGNANCIES:

If a mother had visited a physician at least once during the 9 months of pregnancy, (according to WHO standards), coverage was considered to be acceptable. If a mother never visited a doctor during the entire pregnancy, coverage was judged to be deficient.

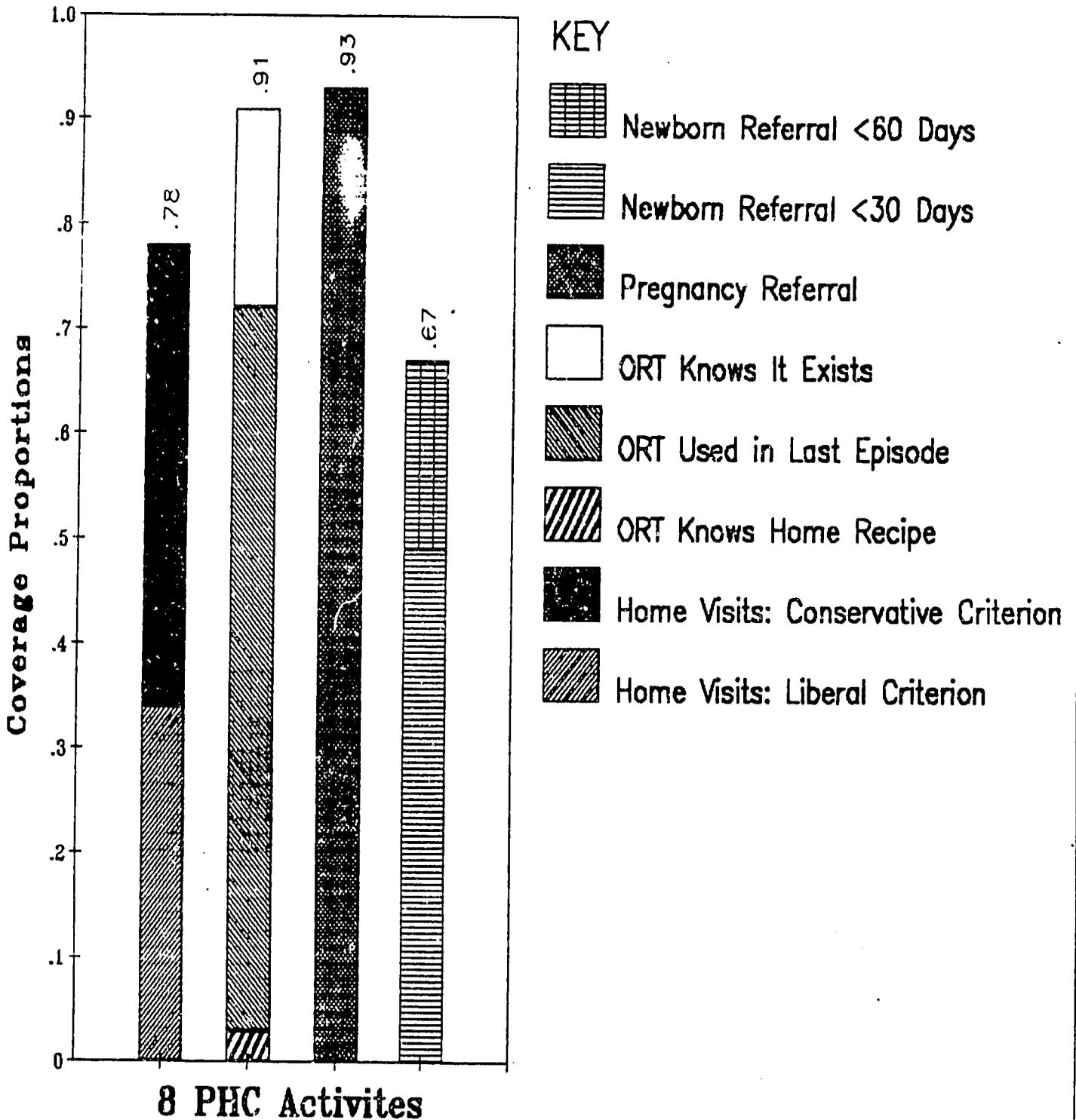
For this service coverage was high. Some 93% (IC:±1%) of all pregnancies had been referred to a doctor. In addition, not one of the 60 HAs analyzed were deficient in this service. The percentage of coverage at the regional and Health Center level can be found in Figure 5, Annexes 3 and 6.

REFERRAL OF NEWBORNS:

Two standards were used to assess this activity. Standard 1: According to WHO standards all children should visit a physician within 30 days of birth. Children that had actually visited a physician within the first month of birth were considered as acceptable coverage.

Some 52 HAs were deficient. By standard 1, the national coverage was 49% (IC:±2%). Using standard 2, coverage increased to 67%

FIGURE 5
**COVERAGE WITH 3 PHC ACTIVITIES:
 HOME VISITS, ORT, AND
 PREGNANT WOMEN AND NEWBORN REFERRAL
 IN COSTA RICA**



(IC: \pm 2%). Of the 60 HAs studied, 25 were deficient (See Figure 5, Annexes 3 and 5).

ORAL REHYDRATION THERAPY:

This service was evaluated using MOH standards. See Figure 5 for a summary of the results. According to the Primary Health Care Program, CHWs should:

- 1) Distribute packages of oral rehydration products in all of the households in their HA with children under 6 years of age.
- 2) Educate these families about the importance of oral rehydration therapy in the prevention of diarrhea.

The following indicators were used to evaluate this activity.

- 1) The proportion of mothers that were knowledgeable about the existence of oral rehydration salt envelopes.
- 2) The proportion of mothers that had used ORT envelopes during the child's last episode of diarrhea.
- 3) The proportion of mothers that knew how to prepare the household ORT mixture.

At the national level, 91% (IC: \pm 1%) of the mothers knew that ORT envelopes existed. Some 72% (IC: \pm 2%) of the mothers had actually used these packets during their child's last case of diarrhea. Only 3% (IC: \pm 1%) knew how to prepare the household solution (See Annex 3).

None of the 60 HAs were defective with respect to the first indicator. All mothers knew ORT packets existed. Some 17 HAs were

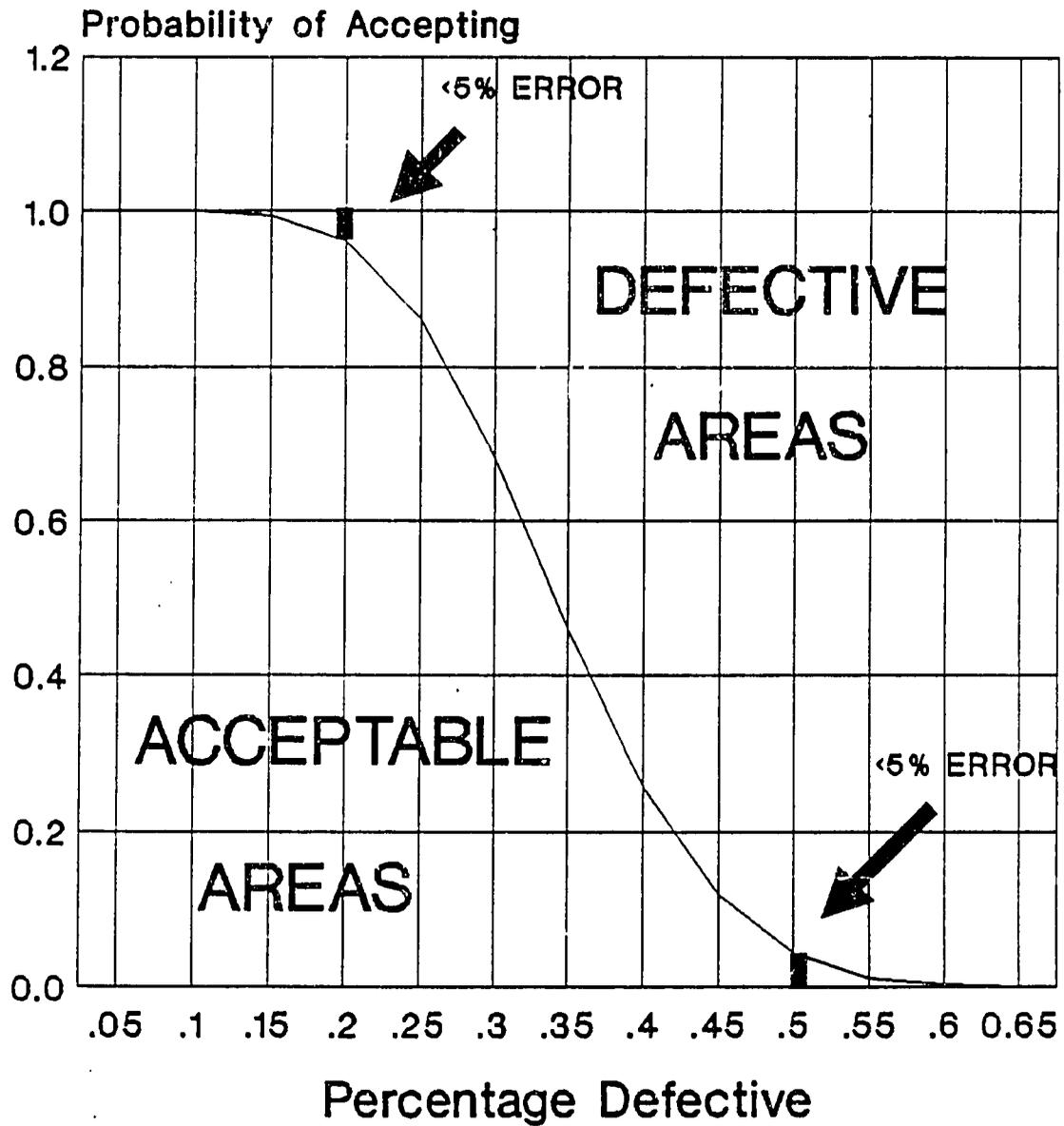
substandard in the use of oral rehydration therapy. All 60 were defective in regards to the mother's knowledge of how to prepare the household mixture. The names of defective HAs are listed in Annex 5. The results for regional and Health Center levels are given in Annexes 3 and 6, respectively.

ANNEXES

ANNEX 1

OPERATING CHARACTERISTIC CURVE

Sample = 28, 9 Defects Permitted



Both alpha and beta errors are 5%

N = 28

| d | Cumulative Probabilities for Values of p with d Defects | | | | | | | | | | | | | | | | | | |
|----|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | .5 | .10 | .15 | .20 | .25 | .30 | .35 | .40 | .45 | .50 | .55 | .60 | .65 | .70 | .75 | .80 | .85 | .90 | .95 |
| 0 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .002 | .011 | .052 | .238 |
| 1 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .020 | .000 | .000 | .000 | .000 | .000 | .001 | .004 | .017 | .061 | .187 | .459 |
| 2 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .001 | .004 | .016 | .055 | .160 | .377 | .695 |
| 3 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .001 | .004 | .016 | .055 | .160 | .377 | .695 |
| 4 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .001 | .003 | .014 | .047 | .135 | .315 | .587 |
| 5 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .002 | .009 | .031 | .092 | .220 | .428 | .678 | .885 | .982 |
| 6 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .001 | .006 | .024 | .074 | .182 | .365 | .600 | .818 | .951 | .995 |
| 7 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .001 | .006 | .024 | .074 | .182 | .309 | .528 | .750 | .910 | .982 | .999 |
| 8 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .001 | .004 | .018 | .058 | .148 | .309 | .528 | .750 | .910 | .982 | .999 | 1.000 |
| 9 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .003 | .012 | .044 | .119 | .259 | .461 | .682 | .862 | .961 | .994 | 1.000 | 1.000 |
| 10 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .003 | .012 | .044 | .119 | .259 | .461 | .682 | .862 | .961 | .994 | 1.000 | 1.000 |
| 11 | .000 | .000 | .000 | .000 | .000 | .001 | .005 | .022 | .070 | .172 | .340 | .551 | .753 | .897 | .971 | .995 | 1.000 | 1.000 | 1.000 |
| 12 | .000 | .000 | .000 | .000 | .000 | .003 | .014 | .050 | .135 | .286 | .487 | .695 | .857 | .951 | .989 | .999 | 1.000 | 1.000 | 1.000 |
| 13 | .000 | .000 | .000 | .000 | .001 | .008 | .034 | .102 | .235 | .425 | .636 | .813 | .926 | .979 | .996 | 1.000 | 1.000 | 1.000 | 1.000 |
| 14 | .000 | .000 | .000 | .000 | .004 | .021 | .074 | .187 | .364 | .575 | .765 | .898 | .966 | .992 | .999 | 1.000 | 1.000 | 1.000 | 1.000 |
| 15 | .000 | .000 | .000 | .001 | .011 | .049 | .143 | .305 | .513 | .714 | .865 | .950 | .986 | .997 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 16 | .000 | .000 | .000 | .005 | .029 | .103 | .247 | .449 | .660 | .828 | .930 | .978 | .995 | .999 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 17 | .000 | .000 | .002 | .015 | .068 | .191 | .384 | .601 | .787 | .908 | .969 | .992 | .998 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 18 | .000 | .000 | .006 | .039 | .133 | .313 | .539 | .741 | .881 | .956 | .986 | .997 | .999 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 19 | .000 | .001 | .018 | .090 | .252 | .472 | .691 | .852 | .942 | .982 | .996 | .999 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 20 | .000 | .005 | .049 | .182 | .400 | .635 | .818 | .926 | .976 | .994 | .999 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 21 | .000 | .018 | .115 | .322 | .572 | .780 | .900 | .969 | .991 | .998 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 22 | .002 | .055 | .235 | .499 | .736 | .887 | .961 | .989 | .997 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 23 | .012 | .142 | .413 | .685 | .865 | .953 | .966 | .997 | .999 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 24 | .049 | .305 | .623 | .840 | .945 | .984 | .996 | .999 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 25 | .163 | .541 | .813 | .939 | .983 | .996 | .999 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 26 | .412 | .785 | .937 | .985 | .997 | .999 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 27 | .762 | .948 | .989 | .998 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 28 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |

ANNEX 2: PROBABILITIES FOR A SAMPLE=25

22

ANNEX 3

TABLE 1: COVERAGE AT THE REGIONAL AND NATIONAL LEVEL

KEY:
 Ac. = Number of acceptable areas
 Def. = Number of defective Areas
 s1-s3 = See note below which defines standards 1-3
 NB = New Born
 Child. = Children

LEVEL OF COVERAGE FOR THE ENTIRE COUNTRY

| Vaccinations | Rural | | Urban | | National | | Total | Coverage Weighted | Confidence Interval |
|--------------|-------|------|-------|------|----------|------|-------|-------------------|---------------------|
| | Ac. | Def. | Ac. | Def. | Ac. | Def. | | | |
| Polio 1:s1 | 6 | 33 | 7 | 14 | 13 | 47 | 60 | 57% | 2% |
| Polio 1:s2 | 15 | 24 | 12 | 9 | 27 | 33 | 60 | 68% | 2% |
| Polio 1:s3 | 37 | 2 | 21 | 0 | 58 | 2 | 60 | 84% | 2% |
| Polio 2:s1 | 14 | 25 | 13 | 8 | 27 | 33 | 60 | 64% | 2% |
| Polio 2:s2 | 28 | 11 | 20 | 1 | 48 | 12 | 60 | 74% | 2% |
| Polio 3:s3 | 39 | 0 | 21 | 0 | 60 | 0 | 60 | 90% | 2% |
| Polio 3:s1 | 15 | 24 | 12 | 9 | 27 | 33 | 60 | 65% | 2% |
| Polio 3:s2 | 23 | 16 | 20 | 1 | 43 | 17 | 60 | 73% | 2% |
| Polio 3:s3 | 38 | 1 | 21 | 0 | 59 | 1 | 60 | 85% | 2% |
| DPT 1:s1 | 9 | 30 | 7 | 14 | 16 | 44 | 60 | 59% | 2% |
| DPT 1:s2 | 20 | 19 | 13 | 8 | 33 | 27 | 60 | 68% | 2% |
| DPT 1:s3 | 38 | 1 | 21 | 0 | 59 | 1 | 85 | 85% | 2% |
| DPT 2:s1 | 18 | 21 | 11 | 10 | 29 | 31 | 60 | 66% | 2% |
| DPT 2:s2 | 29 | 10 | 19 | 2 | 48 | 12 | 60 | 76% | 2% |
| DPT 2:s3 | 39 | 0 | 21 | 0 | 60 | 0 | 60 | 91% | 1% |
| DPT 3:s1 | 14 | 25 | 11 | 10 | 25 | 35 | 60 | 65% | 2% |
| DPT 3:s2 | 27 | 12 | 19 | 2 | 46 | 14 | 60 | 73% | 2% |
| DPT 3:s3 | 38 | 1 | 21 | 0 | 59 | 1 | 60 | 86% | 2% |
| Measles | 2 | 37 | 0 | 21 | 2 | 58 | 60 | 50% | 2% |
| Polio:WHO | 34 | 5 | 18 | 3 | 52 | 8 | 60 | 81% | 2% |
| DPT:WHO | 34 | 5 | 19 | 2 | 53 | 7 | 60 | 81% | 2% |
| Measles:WHO | 0 | 39 | 0 | 21 | 0 | 60 | 60 | 44% | 3% |

| | | | | | | | | | |
|-----------------------------------|----|----|----|----|-------|----|-----|----|--|
| Visits | | | | | | | | | |
| Standard 1 | 28 | 11 | 19 | 2 | 47 13 | 60 | 78% | 2% | |
| Standard 2 | 7 | 32 | 0 | 21 | 7 53 | 60 | 34% | 5% | |
| Used ORT | 30 | 9 | 13 | 8 | 43 17 | 60 | 72% | 2% | |
| Familiar with ORT | 39 | 0 | 21 | 0 | 60 0 | 60 | 91% | 1% | |
| Can Prepare ORT Home Recipe | 0 | 39 | 0 | 21 | 0 60 | 60 | 3% | 1% | |
| Referrals: Pregnancies | 39 | 0 | 21 | 0 | 60 0 | 60 | 93% | 1% | |
| Child.<30 days | 3 | 36 | 5 | 16 | 8 52 | 60 | 49% | 2% | |
| Child.<60 days | 18 | 21 | 17 | 4 | 35 25 | 60 | 67% | 2% | |

■ Polio & DPT (based on the standards of the Ministry of Health):

Standard 1: DPT and Polio doses should be given within an interval of 1.5 & 2.5 months of each other

Standard 2: DPT and Polio doses should be given within and interval of 1.5 & 3 months of each other

Standard 3: DPT and Polio doses should be given within an interval of 1.5 & 5.5 months of each other

- Polio & DPT (based on the WHO Standard): Considers children who received the three Polio and DPT doses before completion of the first 11 months of life, with a one month interval between doses, as acceptable.

- Measles (Ministry's Standard): Considers children who received the three doses of Polio and DPT after 6 months and before 12 months of age as acceptable.

- Measles (WHO Standard): Considers children who received the doses after 9 months of age and before 12 months of age.

- Visits:

Standard 1: Each household in which the household register showed that there had not been at least one visit in the four months prior to the date of the interview was considered not covered.

Standard 2: We used the same standard as above but we also counted as defective all households which did not possess a household register at the time of the interview.

- Use of ORT: Proportion of mothers who had used ORT during their child's last case of diarrhea.

- Knowledge of ORT:

Proportion of mothers who knew of the existence of ORT.

- Knowledge of Preparation of ORT:

Proportion of mothers who knew how to prepare the home recipe of ORT.

Region 1: South Central

| Vaccines | Rural | | Urban | | Region | | Total | Coverage Weighted | Confidence Interval |
|---------------|-------|------|-------|------|--------|------|-------|----------------------|------------------------|
| | Ac. | Def. | Ac. | Def. | Ac. | Def. | | | |
| Polio 1:s1 | 1 | 5 | 2 | 8 | 3 | 13 | 16 | 62% | 5% |
| Polio 1:s2 | 4 | 2 | 7 | 3 | 11 | 5 | 16 | 74% | 4% |
| Polio 1:s3 | 6 | 0 | 10 | 0 | 16 | 0 | 16 | 90% | 3% |
| Polio 2:s1 | 2 | 4 | 8 | 2 | 10 | 6 | 16 | 71% | 4% |
| Polio 2:s2 | 6 | 0 | 9 | 1 | 15 | 1 | 16 | 81% | 4% |
| Polio 2:s3 | 6 | 0 | 10 | 0 | 16 | 0 | 16 | 94% | 2% |
| Polio 3:s1 | 5 | 1 | 7 | 3 | 12 | 4 | 16 | 71% | 4% |
| Polio 3:s2 | 5 | 1 | 10 | 0 | 15 | 1 | 16 | 78% | 4% |
| Polio 3:s3 | 6 | 0 | 10 | 0 | 16 | 0 | 16 | 88% | 3% |
| <hr/> | | | | | | | | | |
| DPT 1:s1 | 3 | 3 | 3 | 7 | 6 | 10 | 16 | 64% | 5% |
| DPT 1:s2 | 5 | 1 | 7 | 3 | 12 | 4 | 16 | 75% | 4% |
| DPT 1:s3 | 6 | 0 | 10 | 0 | 16 | 0 | 16 | 89% | 3% |
| DPT 2:s1 | 4 | 2 | 8 | 2 | 12 | 4 | 16 | 72% | 4% |
| DPT 2:s2 | 6 | 0 | 9 | 1 | 15 | 1 | 16 | 82% | 4% |
| DPT 2:s3 | 6 | 0 | 10 | 0 | 16 | 0 | 16 | 94% | 2% |
| DPT 3:s1 | 3 | 3 | 7 | 3 | 10 | 6 | 16 | 70% | 4% |
| DPT 3:s2 | 5 | 1 | 10 | 0 | 15 | 1 | 16 | 78% | 4% |
| DPT 3:s3 | 6 | 0 | 10 | 0 | 16 | 0 | 16 | 88% | 3% |
| <hr/> | | | | | | | | | |
| Measles | 1 | 5 | 0 | 10 | 1 | 15 | 16 | 54% | 5% |
| <hr/> | | | | | | | | | |
| WHO Standard: | | | | | | | | | |
| Polio | 6 | 0 | 10 | 0 | 16 | 0 | 16 | 85% | 4% |
| DPT | 6 | 0 | 10 | 0 | 16 | 0 | 16 | 84% | 4% |
| Measles | 0 | 6 | 0 | 10 | 0 | 16 | 16 | 45% | 6% |
| <hr/> | | | | | | | | | |
| Visits: | | | | | | | | | |
| Standard 1 | 1 | 5 | 8 | 2 | 9 | 7 | 16 | 71% | 4% |
| Standard 2 | 0 | 6 | 0 | 10 | 0 | 16 | 16 | 23% | 3% |

| | | | | | | | | | |
|-----------------------------------|---|---|----|----|----|----|----|-----|----|
| Used ORT | 6 | 0 | 8 | 2 | 14 | 2 | 16 | 74% | 4% |
| Familiar With ORT | 6 | 0 | 10 | 0 | 16 | 0 | 16 | 90% | 3% |
| Can Prepare ORT Home Recipe | 0 | 6 | 0 | 10 | 0 | 16 | 16 | 5% | 2% |
| Referrals: Pregnancies | 6 | 0 | 10 | 0 | 16 | 0 | 16 | 96% | 2% |
| Child.<30days | 0 | 6 | 1 | 9 | 1 | 15 | 16 | 50% | 5% |
| Child.<60days | 4 | 2 | 8 | 2 | 12 | 4 | 16 | 69% | 4% |

Region 2: North Central

| Vaccines | Rural | | Urban | | Region | | Total | Weighted Coverage | Confidence Interval |
|--------------|-------|------|-------|------|--------|------|-------|-------------------|---------------------|
| | Ac. | Def. | Ac. | Def. | Ac. | Def. | | | |
| Polio 1:s1 | 1 | 2 | 2 | 3 | 3 | 5 | 8 | 61% | 6% |
| Polio 1:s2 | 1 | 2 | 2 | 3 | 3 | 5 | 8 | 71% | 6% |
| Polio 1:s3 | 3 | 0 | 5 | 0 | 8 | 0 | 8 | 82% | 5% |
| Polio 2:s1 | 2 | 1 | 3 | 2 | 5 | 3 | 8 | 72% | 6% |
| Polio 2:s2 | 3 | 0 | 5 | 0 | 8 | 0 | 8 | 81% | 5% |
| Polio 2:s3 | 3 | 0 | 5 | 0 | 8 | 0 | 8 | 94% | 4% |
| Polio 3:s1 | 2 | 1 | 3 | 2 | 5 | 3 | 8 | 70% | 6% |
| Polio 3:s2 | 3 | 0 | 5 | 0 | 8 | 0 | 8 | 83% | 5% |
| Polio 3:s3 | 3 | 0 | 5 | 0 | 8 | 0 | 8 | 92% | 4% |
| <hr/> | | | | | | | | | |
| DPT 1:s1 | 1 | 2 | 2 | 3 | 3 | 5 | 8 | 63% | 6% |
| DPT 1:s2 | 1 | 2 | 2 | 3 | 3 | 5 | 8 | 71% | 6% |
| DPT 1:s3 | 3 | 0 | 5 | 0 | 8 | 0 | 8 | 82% | 5% |
| DPT 2:s1 | 1 | 2 | 3 | 2 | 4 | 4 | 8 | 73% | 6% |
| DPT 2:s2 | 3 | 0 | 5 | 0 | 8 | 0 | 8 | 82% | 5% |
| DPT 2:s3 | 3 | 0 | 5 | 0 | 8 | 0 | 8 | 93% | 3% |
| DPT 3:s1 | 3 | 0 | 2 | 3 | 5 | 3 | 8 | 71% | 6% |
| DPT 3:s2 | 3 | 0 | 5 | 0 | 8 | 0 | 8 | 81% | 5% |
| DPT 3:s3 | 3 | 0 | 5 | 0 | 8 | 0 | 8 | 91% | 4% |
| <hr/> | | | | | | | | | |
| Measles | 0 | 3 | 0 | 5 | 0 | 8 | 8 | 52% | 7% |
| <hr/> | | | | | | | | | |
| WHO Standard | | | | | | | | | |
| Polio | 3 | 0 | 4 | 1 | 6 | 2 | 8 | 77% | 6% |
| DPT | 3 | 0 | 3 | 2 | 7 | 1 | 8 | 78% | 6% |
| Measles | 0 | 3 | 0 | 5 | 0 | 8 | 8 | 45% | 7% |
| <hr/> | | | | | | | | | |
| Visit | | | | | | | | | |
| Standard 1 | 2 | 1 | 5 | 0 | 7 | 1 | 8 | 85% | 4% |
| Standard 2 | 0 | 3 | 0 | 5 | 0 | 8 | 8 | 11% | 4% |

| | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|-----|----|
| Used ORT | 2 | 1 | 4 | 1 | 6 | 2 | 8 | 74% | 6% |
| Familiar With ORT | 3 | 0 | 5 | 0 | 8 | 0 | 8 | 93% | 3% |
| Can Prepare ORT Home Recipe | 0 | 3 | 0 | 5 | 0 | 8 | 8 | 2% | 2% |
| Referrals: Pregnancies | 3 | 0 | 5 | 0 | 8 | 0 | 8 | 97% | 2% |
| Child.<30days | 0 | 3 | 0 | 5 | 0 | 8 | 8 | 52% | 7% |
| Child.<60days | 2 | 1 | 5 | 0 | 7 | 1 | 8 | 76% | 6% |

Region 3: North Huetar

| Vaccines | Rural | | Urban | | Region | | Total | Weighted Coverage | Confidence Interval |
|--------------|-------|------|-------|------|--------|------|-------|-------------------|---------------------|
| | Ac. | Def. | Ac. | Def. | Ac. | Def. | | | |
| Polio 1:s1 | 0 | 6 | 0 | 0 | 0 | 6 | 6 | 47% | 8% |
| Polio 1:s2 | 0 | 6 | 0 | 0 | 0 | 6 | 6 | 56% | 8% |
| Polio 1:s3 | 6 | 0 | 0 | 0 | 6 | 0 | 6 | 77% | 6% |
| Polio 2:s1 | 0 | 6 | 0 | 0 | 0 | 6 | 6 | 51% | 8% |
| Polio 2:s2 | 2 | 4 | 0 | 0 | 2 | 4 | 6 | 64% | 7% |
| Polio 3:s3 | 6 | 0 | 0 | 0 | 6 | 0 | 6 | 86% | 5% |
| Polio 3:s1 | 0 | 6 | 0 | 0 | 0 | 6 | 6 | 53% | 8% |
| Polio 3:s2 | 0 | 6 | 0 | 0 | 0 | 6 | 6 | 61% | 7% |
| Polio 3:s3 | 6 | 0 | 0 | 0 | 6 | 0 | 6 | 79% | 6% |
| <hr/> | | | | | | | | | |
| DPT 1:s1 | 0 | 6 | 0 | 0 | 0 | 6 | 6 | 48% | 8% |
| DPT 1:s2 | 1 | 5 | 0 | 0 | 1 | 5 | 6 | 58% | 8% |
| DPT 1:s3 | 6 | 0 | 0 | 0 | 6 | 0 | 6 | 79% | 6% |
| DPT 2:s1 | 0 | 6 | 0 | 0 | 0 | 6 | 6 | 54% | 8% |
| DPT 2:s2 | 2 | 4 | 0 | 0 | 2 | 4 | 6 | 68% | 7% |
| DPT 2:s3 | 6 | 0 | 0 | 0 | 6 | 0 | 6 | 87% | 5% |
| DPT 3:s1 | 0 | 6 | 0 | 0 | 0 | 6 | 6 | 55% | 8% |
| DPT 3:s2 | 4 | 2 | 0 | 0 | 4 | 2 | 6 | 65% | 7% |
| DPT 3:s3 | 6 | 0 | 0 | 0 | 6 | 0 | 6 | 82% | 6% |
| <hr/> | | | | | | | | | |
| Measles | 0 | 6 | 0 | 0 | 0 | 6 | 6 | 46% | 7% |
| <hr/> | | | | | | | | | |
| WHO Standard | | | | | | | | | |
| Polio | 6 | 0 | 0 | 0 | 6 | 0 | 6 | 77% | 8% |
| DPT | 6 | 0 | 0 | 0 | 6 | 0 | 6 | 78% | 7% |
| Measles | 0 | 6 | 0 | 0 | 0 | 6 | 6 | 43% | 9% |
| <hr/> | | | | | | | | | |
| Visits | | | | | | | | | |
| Standard 1 | 6 | 0 | 0 | 0 | 6 | 0 | 6 | 86% | 5% |
| Standard 2 | 2 | 4 | 0 | 0 | 2 | 4 | 6 | 57% | 8% |

| | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|-----|----|
| Used ORT | 5 | 1 | 0 | 0 | 5 | 1 | 6 | 74% | 7% |
| Familiar With ORT | 6 | 0 | 0 | 0 | 6 | 0 | 6 | 92% | 4% |
| Can Prepare ORT Home Recipe | 0 | 6 | 0 | 0 | 0 | 6 | 6 | 3% | 3% |
| Referrals: Pregnancies | 6 | 0 | 0 | 0 | 6 | 0 | 6 | 89% | 5% |
| NB <30 days | 0 | 6 | 0 | 0 | 0 | 6 | 6 | 49% | 8% |
| NB <60 days | 2 | 4 | 0 | 0 | 2 | 4 | 6 | 63% | 7% |

Region 4: Chorotega

| Vaccines | Rural | | Urban | | Region | | Total | Weighted Coverage | Confidence Interval |
|---------------|-------|------|-------|------|--------|------|-------|-------------------|---------------------|
| | Ac. | Def. | Ac. | Def. | Ac. | Def. | | | |
| Polio 1:s1 | 1 | 8 | 2 | 3 | 3 | 11 | 14 | 56% | 5% |
| Polio 1:s2 | 5 | 4 | 2 | 3 | 7 | 7 | 14 | 68% | 5% |
| Polio 1:s3 | 8 | 1 | 5 | 0 | 13 | 1 | 14 | 83% | 4% |
| Polio 2:s1 | 4 | 5 | 2 | 3 | 6 | 8 | 14 | 61% | 5% |
| Polio 2:s2 | 7 | 2 | 5 | 0 | 12 | 2 | 14 | 71% | 5% |
| Polio 3:s3 | 9 | 0 | 5 | 0 | 14 | 0 | 14 | 86% | 3% |
| Polio 3:s1 | 2 | 7 | 2 | 3 | 4 | 10 | 14 | 62% | 5% |
| Polio 3:s2 | 7 | 2 | 5 | 0 | 12 | 2 | 14 | 72% | 4% |
| Polio 3:s3 | 9 | 0 | 5 | 0 | 14 | 0 | 14 | 86% | 3% |
| <hr/> | | | | | | | | | |
| DPT 1:s1 | 2 | 7 | 1 | 4 | 3 | 11 | 14 | 57% | 5% |
| DPT 1:s2 | 6 | 3 | 3 | 2 | 9 | 5 | 14 | 68% | 5% |
| DPT 1:s3 | 8 | 1 | 5 | 0 | 13 | 1 | 14 | 84% | 4% |
| DPT 2:s1 | 5 | 4 | 0 | 5 | 5 | 9 | 14 | 61% | 5% |
| DPT 2:s2 | 7 | 2 | 4 | 1 | 11 | 3 | 14 | 71% | 5% |
| DPT 2:s3 | 9 | 0 | 5 | 0 | 14 | 0 | 14 | 88% | 3% |
| DPT 3:s1 | 2 | 7 | 2 | 3 | 4 | 10 | 14 | 63% | 5% |
| DPT 3:s2 | 7 | 2 | 4 | 1 | 11 | 3 | 14 | 73% | 4% |
| DPT 3:s3 | 9 | 0 | 5 | 0 | 14 | 0 | 14 | 88% | 3% |
| <hr/> | | | | | | | | | |
| Measles | 1 | 8 | 0 | 5 | 1 | 13 | 14 | 49% | 5% |
| <hr/> | | | | | | | | | |
| WHO Standard: | | | | | | | | | |
| Polio | 8 | 1 | 4 | 1 | 12 | 2 | 14 | 82% | 4% |
| DPT | 8 | 1 | 4 | 1 | 12 | 2 | 14 | 82% | 4% |
| Measles | 0 | 9 | 0 | 5 | 0 | 14 | 14 | 45% | 6% |
| <hr/> | | | | | | | | | |
| Visits | | | | | | | | | |
| Standard 1 | 8 | 1 | 5 | 0 | 13 | 1 | 14 | 82% | 4% |
| Standard 2 | 1 | 8 | 0 | 5 | 1 | 13 | 14 | 31% | 5% |
| <hr/> | | | | | | | | | |

| | | | | | | | | | |
|-----------------------------------|---|---|---|---|----|----|----|-----|----|
| Used ORT | 6 | 3 | 1 | 4 | 7 | 7 | 14 | 70% | 5% |
| Familiar With ORT | 9 | 0 | 5 | 0 | 14 | 0 | 14 | 93% | 3% |
| Can Prepare ORT Home Recipe | 0 | 9 | 0 | 5 | 0 | 14 | 14 | 2% | 1% |
| Referals: Pregnancies | 9 | 0 | 5 | 0 | 14 | 0 | 14 | 95% | 2% |
| Child.<30days | 2 | 7 | 4 | 1 | 6 | 8 | 14 | 45% | 5% |
| Child.<60days | 2 | 7 | 4 | 1 | 6 | 8 | 14 | 66% | 5% |

Region 5: Huertar Atlantica

| Vaccines | Rural | | Urban | | Region | | Total | Weighted Coverage | Confidence Interval |
|--------------|-------|------|-------|------|--------|------|-------|-------------------|---------------------|
| | Ac. | Def. | Ac. | Def. | Ac. | Def. | | | |
| Polio 1:s1 | 0 | 6 | 0 | 0 | 0 | 6 | 6 | 47% | 8% |
| Polio 1:s2 | 2 | 4 | 0 | 0 | 2 | 4 | 6 | 58% | 8% |
| Polio 1:s3 | 6 | 0 | 0 | 0 | 6 | 0 | 6 | 80% | 6% |
| Polio 2:s1 | 3 | 3 | 0 | 0 | 3 | 3 | 6 | 63% | 7% |
| Polio 2:s2 | 5 | 1 | 0 | 0 | 5 | 1 | 6 | 72% | 7% |
| Polio 3:s3 | 6 | 0 | 0 | 0 | 6 | 0 | 6 | 88% | 5% |
| Polio 3:s1 | 2 | 4 | 0 | 0 | 2 | 4 | 6 | 57% | 7% |
| Polio 3:s2 | 3 | 3 | 0 | 0 | 3 | 3 | 6 | 67% | 7% |
| Polio 3:s3 | 5 | 1 | 0 | 0 | 5 | 1 | 6 | 79% | 6% |
| <hr/> | | | | | | | | | |
| DPT 1:s1 | 0 | 6 | 0 | 0 | 0 | 6 | 6 | 48% | 7% |
| DPT 1:s2 | 2 | 4 | 0 | 0 | 2 | 4 | 6 | 59% | 7% |
| DPT 1:s3 | 6 | 0 | 0 | 0 | 6 | 0 | 6 | 79% | 6% |
| DPT 2:s1 | 4 | 2 | 0 | 0 | 4 | 2 | 6 | 66% | 7% |
| DPT 2:s2 | 5 | 1 | 0 | 0 | 5 | 1 | 6 | 75% | 6% |
| DPT 2:s3 | 6 | 0 | 0 | 0 | 6 | 0 | 6 | 90% | 4% |
| DPT 3:s1 | 2 | 4 | 0 | 0 | 2 | 4 | 6 | 59% | 7% |
| DPT 3:s2 | 3 | 3 | 0 | 0 | 3 | 3 | 6 | 68% | 7% |
| DPT 3:s3 | 5 | 1 | 0 | 0 | 5 | 1 | 6 | 78% | 6% |
| <hr/> | | | | | | | | | |
| Measles | 0 | 6 | 0 | 0 | 0 | 6 | 6 | 45% | 8% |
| <hr/> | | | | | | | | | |
| WHO Standard | | | | | | | | | |
| Polio | 3 | 3 | 0 | 0 | 3 | 3 | 6 | 71% | 9% |
| DPT | 3 | 3 | 0 | 0 | 3 | 3 | 6 | 69% | 9% |
| Measles | 0 | 6 | 0 | 0 | 6 | 0 | 6 | 36% | 9% |
| <hr/> | | | | | | | | | |
| Visits | | | | | | | | | |
| Standard 1 | 5 | 1 | 0 | 0 | 5 | 1 | 6 | 80% | 6% |
| Standard 2 | 1 | 5 | 0 | 0 | 1 | 5 | 6 | 43% | 8% |

| | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|-----|----|
| Used ORT | 3 | 3 | 0 | 0 | 3 | 3 | 6 | 66% | 7% |
| Familiar With ORT | 6 | 0 | 0 | 0 | 6 | 0 | 6 | 84% | 6% |
| Can Prepare ORT Home Recipe | 0 | 6 | 0 | 0 | 0 | 6 | 6 | 2% | 2% |
| Referalls: Pregnancies | 6 | 0 | 0 | 0 | 6 | 0 | 6 | 87% | 5% |
| Child.<30days | 0 | 6 | 0 | 0 | 0 | 6 | 6 | 55% | 8% |
| Child.<60days | 4 | 2 | 0 | 0 | 4 | 2 | 6 | 66% | 7% |

Region 6: Brunca

| Vaccines | Rural | | Urban | | Region | | Total | Coverage Weighted | Confidence Interval |
|--------------|-------|------|-------|------|--------|------|-------|----------------------|------------------------|
| | Ac. | Def. | Ac. | Def. | Ac. | Def. | | | |
| Polio 1:s1 | 3 | 6 | 1 | 0 | 4 | 6 | 10 | 55% | 6% |
| Polio 1:s2 | 3 | 6 | 1 | 0 | 4 | 6 | 10 | 65% | 6% |
| Polio 1:s3 | 8 | 1 | 1 | 0 | 9 | 1 | 10 | 84% | 4% |
| Polio 2:s1 | 3 | 6 | 0 | 1 | 3 | 7 | 10 | 58% | 6% |
| Polio 2:s2 | 5 | 4 | 1 | 0 | 6 | 4 | 10 | 68% | 6% |
| Polio 3:s3 | 9 | 0 | 1 | 0 | 10 | 0 | 10 | 88% | 4% |
| Polio 3:s1 | 4 | 5 | 0 | 1 | 4 | 6 | 10 | 62% | 6% |
| Polio 3:s2 | 5 | 4 | 0 | 1 | 5 | 5 | 10 | 68% | 6% |
| Polio 3:s3 | 9 | 0 | 1 | 0 | 10 | 0 | 10 | 82% | 5% |
| <hr/> | | | | | | | | | |
| DPT 1:s1 | 3 | 6 | 1 | 0 | 4 | 6 | 10 | 59% | 6% |
| DPT 1:s2 | 5 | 4 | 1 | 0 | 6 | 4 | 10 | 67% | 6% |
| DPT 1:s3 | 9 | 0 | 1 | 0 | 10 | 0 | 10 | 86% | 4% |
| DPT 2:s1 | 4 | 5 | 0 | 1 | 4 | 6 | 10 | 62% | 6% |
| DPT 2:s2 | 6 | 3 | 1 | 0 | 7 | 3 | 10 | 72% | 6% |
| DPT 2:s3 | 9 | 0 | 1 | 0 | 10 | 0 | 10 | 90% | 4% |
| DPT 3:s1 | 4 | 5 | 0 | 1 | 4 | 6 | 10 | 61% | 6% |
| DPT 3:s2 | 5 | 4 | 0 | 1 | 5 | 5 | 10 | 69% | 6% |
| DPT 3:s3 | 9 | 0 | 1 | 0 | 10 | 0 | 10 | 83% | 5% |
| <hr/> | | | | | | | | | |
| Measles | 0 | 9 | 0 | 1 | 0 | 10 | 10 | 50% | 6% |
| <hr/> | | | | | | | | | |
| WHO Standard | | | | | | | | | |
| Polio | 8 | 1 | 1 | 0 | 9 | 1 | 10 | 81% | 6% |
| DPT | 8 | 1 | 1 | 0 | 9 | 1 | 10 | 82% | 6% |
| Measles | 0 | 9 | 0 | 1 | 0 | 10 | 10 | 44% | 7% |
| <hr/> | | | | | | | | | |
| Visits | | | | | | | | | |
| Standard 1 | 6 | 3 | 1 | 0 | 7 | 3 | 10 | 75% | 5% |
| Standard 2 | 3 | 6 | 0 | 1 | 3 | 7 | 10 | 56% | 6% |

| | | | | | | | | | |
|-----------------------------------|---|---|---|---|----|----|----|-----|----|
| Used ORT | 8 | 1 | 0 | 1 | 8 | 2 | 10 | 73% | 6% |
| Familiar With ORT | 9 | 0 | 1 | 0 | 10 | 0 | 10 | 92% | 3% |
| Can Prepare ORT Home Recipe | 0 | 9 | 0 | 1 | 0 | 10 | 10 | 5% | 2% |
| Referrals: Pregnancies | 9 | 0 | 1 | 0 | 10 | 0 | 10 | 90% | 4% |
| Child.<30days | 1 | 8 | 0 | 1 | 1 | 9 | 10 | 47% | 6% |
| Child.<60days | 4 | 5 | 0 | 1 | 4 | 6 | 10 | 63% | 6% |

ANEXO 11
CUESTIONARIO PARA HOGARES CON NIÑOS

PUESTO O CENTRO DE SALUD

NOMBRE DEL AUXILIAR O ASISTENTE

1. IDENTIFICACION EN LA OFICINA (1-4)

PRESENTACION: Buenos días/tardes/noches:

Estamos haciendo un estudio para el Ministerio de Salud acerca de los hogares que son visitados por el auxiliar o asistente del (puesto/centro) de salud.

¿En esta casa hay algún recién nacido o algún chiquito menor de 3 años?

SI NO HAY NIÑOS: COMPLETE EL CUADRO ABAJO, Y PREGUNTE SI HAY EN LA CASA MAS CERCANA SIGUIENDO LA FLECHA DEL MAPA. SI ES EL PRIMER HOGAR, ENTREVISTELO CON EL FORMULARIO AMARILLO.

SI HAY NIÑOS: COMPLETE EL CUADRO ABAJO Y USE ESTE FORMULARIO.

¿Podría concedernos unos minutos y darnos algunos datos? Toda la información que Ud. nos dé es confidencial y su participación es voluntaria. Si Usted lo desea puede negarse a contestar cualquiera de las preguntas. ¿Podría comenzar la entrevista?

2. CODIGO _____ (5-10)
R. / C S / P S / POS.

3. PUNTO MUESTRAL _____ (1-12)

4. ENTREVISTADOR _____ (13-14)

5. SUPERVISOR _____ (15)

6. HAY NIÑOS < 3 AÑOS 1 (16)

7. PRIMER HOGAR ENTREVISTADO _____ (17)
SI = 1 NO = 2

| HOGARES OCUPADOS | HORA DE CONTACTO | | RESULTADO Y OBSERVACIONES E, NN, D, CH, AU, OR |
|------------------|------------------|---------|---|
| | PRIMER | SEGUNDO | |
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |
| 11. | | | |
| 12. | | | |
| 13. | | | |
| 14. | | | |

E = ENTREVISTADA

8. HORA AL LLEGAR A HOGAR 1 (18-21)

____ : ____
HORAS MIN

RESUMEN DE HOGARES:

9. TOTAL CONTACTOS _____ (22-23)

10. NN= NO HAY NIÑOS _____ (24-25)

11. D = DESCONOCE SI HAY NIÑOS _____ (26)

NO RESPUESTA:

12. CH = RECHAZO _____ (26)

13. AU = AUSENCIA _____ (28)

14. OR = OTRA RAZON _____ (29)
(ESCRIBA EN OBSERVACION)

15. RECORRIDO VERIFICADO POR SUPERVISOR.

SI 1 (30)
NO 2

I. INFORMACION DEL HOGAR

REGISTRO 2

| | |
|---|---|
| 101. UBICACION DEL HOGAR (VER MAPA) | PROVINCIA-CANTON ___ ___ (1-3) DISTRITO ___ ___ (4-5) |
| 102. HOGAR NUMERO (VER CARATULA) | CODIGOS ___ ___ (6-7) |
| 103. FECHA DE ENTREVISTA | DIA ___ ___ MES ___ ___ (8-11) |
| 104. HORA DE INICIO DE LA ENTREVISTA | HORAS ___ ___ MIN ___ ___ (12-15) |
| 105. Cómo se llama el jefe del hogar? _____ | |
| 106. Cómo se llama el asistente o la auxiliar del (puesto/centro) de salud que visita esta casa? | MISMO NOMBRE QUE EN CARATULA..... 1 (16) |
| NOMBRE: _____ | OTRO NOMBRE..... 2 NO SABE EL NOMBRE..... 3 NADIE LO VISITA..... 4 <i>PASE A 110</i> |
| 107. Más o menos cuántas veces al año viene (el asistente/la auxiliar)? | VECES (SOLO HA VENIDO 1 VEZ =98) ___ ___ (17-18) |
| 108. Hace cuántos meses fue la última visita del (asistente/auxiliar)? | MESES (14=14 O MAS) ___ ___ (19-20) |
| 109. Podría enseñarme la hojita donde (él/ella) anota cada visita? | HOJA ENSEÑADA 1 (21) HOJA EXTRAVIADA 2 HOJA DESCONOCIDA 3 |
| 110. COPIAR DE LA HOJA DE VISITAS O DEL CARNET DE VACUNAS O DE LA PUERTA O EN ULTIMO CASO PREGUNTANDO. HOGAR # _____ LOCALIDAD/MANZANA _____ | |
| | FECHA ULTIMA VISITA → (EN BLANCO SI NO APLICA) ___ ___ / ___ ___ / ___ ___ (22-27) DIA MES AÑO |
| 111. Qué opina Usted sobre la importancia de las visitas del (asistente/auxiliar) para la salud de su familia? Cree que son de mucha, alguna, poca o ninguna importancia? | MUCHA..... 1 (28) ALGUNA 2 POCA 3 NINGUNA 4 |
| 112. Desde hace cuánto tiempo viven Ustedes en esta casa? SI MENOS DE 1 AÑO PREGUNTE CUANTOS MESES? (AÑOS ___ X 12 = ___ MESES) | MESES (96 = 8 AÑOS Y MAS) ___ ___ (29-30) |
| (2 x 12 = 24) (3 x 12 = 36) (4 x 12 = 48) (5 x 12 = 60) (6 x 12 = 72) (7 x 12 = 84) | |
| 113. Cuánto tiempo se tarda normalmente de aquí al (puesto/centro) de salud? | HORAS ___ MIN ___ ___ (31-33) |
| 114. Cuántas personas viven en esta casa? | # DE PERSONAS ___ ___ (34-35) |
| 115. Ahora le voy a preguntar de los adultos de este hogar. Cuántos mayores de 18 años viven aquí? | # DE ADULTOS ___ ___ (36-37) |

116. Y de estos mayores de 18 años, cuántos saben leer y escribir? # DE ADULTOS ALFABETOS ___ (38-39)

117. Y de estos mayores de 18 años, cuántos tienen estudios en colegio secundario o técnico? ADULTOS CON SECUNDARIA ___ (40-41)

118. Por favor dígame si en casa tienen:

| | SI | NO | |
|--|----|----|------|
| 119 Electricidad? | 1 | 2 | (42) |
| 120 Cocina eléctrica o de gas? | 1 | 2 | (43) |
| 121 Televisión? | 1 | 2 | (44) |
| 122 Refrigerador | 1 | 2 | (45) |
| 123 Lavadora? | 1 | 2 | (46) |
| 124 Teléfono? (NUMERO ___ ___ ___ ___ ___) | 1 | 2 | (47) |

125. De dónde vino el agua que usaron en esta casa la semana pasada?

| | | |
|--------------------|---|------|
| TUBO EN LA CASA | 1 | (48) |
| TUBO FUERA DE CASA | 2 | |
| CARRO CISTERNA | 3 | |
| POZO CON BOMBA | 4 | |
| POZO SIN BOMBA | 5 | |
| OTRA FUENTE | 6 | |

126. Qué clase de servicio sanitario tiene esta casa?

| | | |
|-------------------------|---|------|
| NINGUNO | 1 | (49) |
| LETRINA O HUECO | 2 | |
| CLOACA O TANQUE SEPTICO | 3 | |

127. Y qué hacen con la basura generalmente?

| | | |
|-----------------------|---|------|
| LA TIRAN | 1 | (50) |
| LA QUEMAN O ENTIERRAN | 2 | |
| HAY RECOLECCION | 3 | |

128. ANOTAR LA HORA EN ESTE MOMENTO HORAS ___ MIN ___ (51-54)

"SI ES HOGAR SIN NIÑOS MENORES DE 3 AÑOS, REVISE QUE EL CUESTIONARIO ESTE COMPLETO, DE LAS GRACIAS, Y TERMINE".

VERIFICACION EN EL ARCHIVO DEL CENTRO O PUESTO DE SALUD

129. HAY FICHA FAMILIAR PARA ESTA FAMILIA?

| | SI | NO | N.A. | |
|--|----|----|------|------|
| | 1 | 2 | | (55) |

130. LA FECHA DE LA ULTIMA VISITA COINCIDE CON 110?

| | | | | |
|--|---|---|---|------|
| | 1 | 2 | 8 | (56) |
|--|---|---|---|------|

131. COINCIDE EL NUMERO DE PERSONAS EN EL HOGAR (PREGUNTA 114)?

| | | | | |
|--|---|---|---|------|
| | 1 | 2 | 8 | (57) |
|--|---|---|---|------|

4/0

II. DATOS DE LA MADRE

REGISTRO 3

201. Cuántos recién nacidos o chiquitos menores de 3 años hay en esta casa? NUMERO DE NIÑOS < 3 AÑOS _____ (11)

202. Dígame por favor (el nombre/los nombres de todos estos chiquitos empezando por el mayor):
(ANOTE AMBOS NOMBRES)

NIÑO 1 NIÑO 4
NIÑO 2 NIÑO 5
NIÑO 3 NIÑO 6

EN SU TABLA DE NUMEROS AL AZAR, TACHE LOS NUMEROS NECESARIOS HASTA TENER UNO QUE LE PERMITA ELEGIR A UNO DE LOS NIÑOS DE ARRIBA. ENCIERRE EN UN CIRCULO EL NOMBRE DEL ELEGIDO.

LA ENTREVISTA QUE SIGUE DEBE SER CON LA MADRE DEL NIÑO UNICO O DEL ELEGIDO.

203. En qué fecha nació.... NN? _____ / _____ / _____ (12-7)
DÍA MES AÑO

204. Por favor dígame cuántos años cumplió Ud. en su último cumpleaños? AÑOS CUMPLIDOS _____ (8-9)

205. Cuál fue el año o grado más alto que Ud. ganó en todos sus estudios? (10-11)

| | | | |
|--|---------------|---|-------|
| | AÑOS | | |
| | NINGUNO | 0 | _____ |
| | PRIMARIA | 1 | _____ |
| | SECUNDARIA | 2 | _____ |
| | UNIVERSITARIA | 3 | _____ |

(LOS COLEGIOS TECNICOS EQUIVALEN A SECUNDARIA)

206. Cuántos hijos que nacieron vivos ha tenido Ud. en toda su vida? (12-13)

INDAGUE: Ha olvidado alguno que no vive con Ud. o que murió? HIJOS NACIDOS VIVOS _____

207. Y cuántos de sus hijos están vivos? HIJOS VIVOS _____ (14-15)

208. Esta Ud. embarazada actualmente? (16)

| | | |
|---------|----------------|--|
| SI | 1 → PASE A 211 | |
| NO | 2 | |
| NO SABE | 3 | |

209. Ud. o su esposo se han operado para no tener más hijos? (17)

| | | |
|-----------------|----------------|--|
| ESTERILIZADA | 1 → PASE A 211 | |
| NO ESTERILIZADA | 2 | |

210. Ud. o su esposo están usando algún método para no quedar embarazada? ¿Cuál método? (18)

| | | |
|----------------|---|--|
| NINGUNO | 0 | |
| PASTILLA | 1 | |
| INYECCION | 2 | |
| DIU/T DE COBRE | 3 | |
| CONDON | 4 | |
| VAGINALES | 5 | |
| RITMO | 6 | |
| RETIRO | 7 | |
| OTRO | 8 | |

211. Alguna vez se ha hecho Ud. el papanicolaou o prueba para el cáncer de la matriz? (19)

| | | |
|---------|----------------|--|
| SI..... | 1 | |
| NO..... | 2 → PASE A 213 | |

212. Más o menos en qué fecha se hizo el ultimo papanicolaou? MES _____ AÑO _____ (20-23)

| | | | |
|---|---------|---|------|
| 213. Está Ud. unida, casada, o cuál es su estado civil? | SOLTERA | 1 | (24) |
| | CASADA | 2 | |
| | UNIDA | 3 | |
| | OTRO | 4 | |

| | | | |
|--|----------------------------------|---|------|
| 214. Qué remedios le(s) da Ud. a su(s) chiquito(s) cuando tiene (n) diarrea? | MENCIONO SUERO DE REHIDRATAACION | 1 | (25) |
| | NO LO MENCIONO | 2 | |

TEXTUAL:

.....

.....

INDAGUE: Algún otro remedio o comida o bebida especial?

| | | | |
|--|----------|----------------|------|
| 215. Conoce Ud. el suero oral para la diarrea? | SI | 1 | (26) |
| | NO..... | 2 → PASE A 301 | |

| | | | |
|---|----------------|----------------|------|
| 216. Si tiene este suero en la casa, podría mostrarme un sobre por favor? | MOSTRO..... | 1 → PASE A 218 | (27) |
| | NO LO ENCONTRO | 2 → PASE A 218 | |
| | NO TIENE..... | 3 | |

| | | | |
|---|-----------------------------------|-------|------|
| 217. Más o menos desde hace cuánto tiempo no tiene este suero en la casa? | MESES (8 = 8 O MAS O NUNCA TIENE) | | (28) |
| | | _____ | |

| | | | |
|--|------------------|---|------|
| 218. Cuando no tiene el sobre, sabe Ud. preparar suero casero para la diarrea? Cómo lo prepara? RESPUESTA CORRECTA: 3 CUCHARADAS DE AZUCAR Y UN POCO DE SAL EN 1 LITRO DE AGUA. | NO SABE | 1 | (29) |
| | SABE, INCORRECTO | 2 | |
| | SABE, CORRECTO | 3 | |

SI LA RESPUESTA ES INCORRECTA DAR LA FORMULA CORRECTA.

| | | |
|---|--|---------|
| 301. Cuando estaba embarazada de NN Cuántas veces fue a control médico? | VECES (8=8 O MAS) ____ | (1) |
| 302. Dónde se mejoró deNN? | HOSPITAL/CLINICA DE LAS CCSS 1 CENTRO/PUESTO DE SALUD 2 CLINICA PRIVADA 3 HOGAR 4 OTRO 5 | (2) |
| 303. Ha llevado a..... NN a control médico? | SI..... 1 NO..... 2 → PASE A 305 | (3) |
| 304. Qué edad tenía... NN cuándo le llevó a control médico la primera vez? | MESES CUMPLIDOS ____ | (4-5) |
| 305. Le dió Ud. el pecho a ... NN? | SI..... 1 NO..... 2 → PASE A 307 | (6) |
| 306. Cuántos meses en total le dió el pecho? | MESES (AUN LE DA = 98) ____ | (7-8) |
| 307. Y a qué edad comenzó... NN a tomar leche en chupón? | MESES CUMPLIDOS ____ (NUNCA = 98) ' PASE A 309 | (9-10) |
| 308. Actualmente toma leche en chupón? | SI..... 1 NO..... 2 | (11) |
| 309. Qué edad tenía... NN la última vez que le pesó alguien del (puesto/centro)? (EN CASA O EN LA CONSULTA) | EDAD EN MESES (NUNCA = 98) ____ | (12-13) |
| 310. Qué edad tenía ... NN la última vez que le midió alguien del (puesto/centro) de salud? (EN LA CASA O EN LA CONSULTA) | EDAD EN MESES (NUNCA = 98) ____ | (14-15) |
| 311. Y hace cuánto tiempo fue la última vez que... NN estuvo con diarrea? DIARRREA = 3 O MAS CAQUITAS LIQUIDAS EN 1 DIA. | MENOS DE 7 DIAS 1 1-3 SEMANAS 2 1-3 MESES 3 4 MESES O MAS 4 NUNCA 5 → PASE A 314 | (16) |
| 312. Le dio Ud. suero oral para la diarrea esa vez? | SI..... 1 NO..... 2 → PASE A 314 | (17) |
| 313. Cuántos sobres de suero oral le dió? | NUMERO DE SOBRES (LE DIO FORMULA CASERA = 98) ____ | (18-19) |
| IV. VACUNAS: | | |
| 314. Tiene... NN una marquita en el hombro de la vacuna contra la tuberculosis o BCG? SI HAY DUDA MIRAR EL HOMBRO DERECHO DEL NIÑO | SI..... 1 NO..... 2 | (20) |
| 315. Y cuántas veces le han puesto una inyección en la nalga con la vacuna triple o DPT? | DOSIS ____ | (21) |
| 316. Y cuántas veces le han dado en la boca las gotas de vacuna para la polio? | DOSIS ____ | (22) |
| 317. Cuántas veces le han puesto la inyección con la vacuna para el sarampión? | DOSIS ____ | (23) |

318. Me podría mostrar el carnet con las vacunas de NN?

MOSTRO CARNET 1 (24)
 NO LO ENCONTRO 2 PASE A 324
 NO TIENE 3 PASE A 324

COPIE EN EL CUADRO LAS FECHAS DEL CARNET:
 (COPIE SOLAMENTE LAS FECHAS ESCRITAS CON EL BOLIGRAFO)

| VACUNA | DOSIS 1 | DOSIS 2 | DOSIS 3 | REFUERZO | REGISTRO 5 |
|------------------------------|----------------------------|--|---|--|------------|
| 319. B.C.G. | ___/___/___ día mes año |  |  |  | (1-6) |
| 320. D.P.T. | ___/___/___ día mes año | ___/___/___ día mes año | ___/___/___ mes año | ___/___/___ día mes año | (7-30) |
| 321. POLIO | ___/___/___ día mes año | ___/___/___ día mes año | ___/___/___ día mes año | ___/___/___ día mes año | (31-54) |
| 322. SARAMPION | ___/___/___ día mes año |  |  |  | (55-60) |
| 323. SARAMPION RUBEOLA | ___/___/___ día mes año |  |  |  | (61-66) |

324. ANOTE LA HORA EN ESTE MOMENTO

HRS ___ MIN ___

(67-70)

REVISE CUIDADOSAMENTE EL CUESTIONARIO,
 DE LAS GRACIAS Y TERMINE LA ENTREVISTA.

VERIFICACION EN EL ARCHIVO DEL CENTRO O PUESTO DE SALUD

REGISTRO 6

| | SI | NO | NA | |
|--|----|----|----|------|
| 401. ESTA EL NIÑO EN LA FICHA FAMILIAR? | 1 | 2 | 8 | (1) |
| 402. TRES O MENOS MESES DE DIFERENCIA CON FECHA DE ULTIMO PESO? (PREGUNTA 309) | 1 | 2 | 8 | (2) |
| 403. TRES O MENOS MESES DE DIFERENCIA CON FECHA DE ULTIMA MEDIDA? (PREGUNTA 310) | 1 | 2 | 8 | (3) |
| 404. COINCIDE FECHA DE BCG? (PREGUNTA 319) | 1 | 2 | 8 | (4) |
| 405. COINCIDE FECHA DE DPT1? (PREGUNTA 320) | 1 | 2 | 8 | (5) |
| 406. COINCIDE FECHA DE DPT2? (PREGUNTA 320) | 1 | 2 | 8 | (6) |
| 407. COINCIDE FECHA DE DPT3? (PREGUNTA 320) | 1 | 2 | 8 | (7) |
| 408. COINCIDE FECHA DE DPT REFUERZO? (PREGUNTA 320) | 1 | 2 | 8 | (8) |
| 409. COINCIDE FECHA DE POLIO 1? (PREGUNTA 321) | 1 | 2 | 8 | (9) |
| 410. COINCIDE FECHA DE POLIO 2? (PREGUNTA 321) | 1 | 2 | 8 | (10) |
| 411. COINCIDE FECHA DE POLIO 3? (PREGUNTA 321) | 1 | 2 | 8 | (11) |
| 412. COINCIDE FECHA DE POLIO REFUERZO? (PREGUNTA 321) | 1 | 2 | 8 | (12) |
| 413. COINCIDE FECHA DE SARAMPION? (PREGUNTA 322) | 1 | 2 | 8 | (13) |
| 414. COINCIDE FECHA DE SAFAMPION-RUBEOLA (PREGUNTA 323) | 1 | 2 | 8 | (14) |

OBSERVACIONES DEL ENTREVISTADOR

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OBSERVACIONES DEL SUPERVISOR

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OTRAS OBSERVACIONES

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