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FCA/PVC CHILD SURVIVAL PROGRAM

ANNUAL REPORT FY 1991

**Andean Rural Health Care CSVI
PVO Country Project for Bolivia
October 1, 1990 - September 30, 1993**

**Submitted to AID
November 5, 1991**

A.I.D. CSVI ANNUAL REPORT
ANDEAN RURAL HEALTH CARE

CSVI, CSV, and CSVI that are not submitting a Mid-term or Final Evaluation this year should answer the following questions. Answers need not be lengthy. 30-40 pages maximum, excluding the CDD Curricula/Messages is appropriate for the Annual Report. Where no changes have occurred, or where questions are not relevant to the country project, state: "no change," or "not relevant."

I. Changes in Project Design

A. Statement of Country Project Objectives

In the case of CSVI projects, please indicate if objectives have changed since the Detailed Implementation Plan (DIP).

There has been no change in objectives since the DIP submission.

B. Location and Size of the Priority Population Living in the Child Survival Impact Area(s)

Please indicate any changes in the location or number of persons in the target population (infants 0-11 months, children 12-35 months, women of reproductive age) from your DIP or last Annual Report description.

There have been no changes in the location or number of persons to be served since the DIP was submitted. We have increased the home visitation schedule to include three more communities in the Carabuco project area. With these additions, all 31 communities in the jurisdiction are now being served through our census-based approach. In the Mallco Rancho area we have increased home visitation to include two more communities bringing the total to eight. Expansion to the final three communities in Mallco Rancho will be completed before the mid-term evaluation. Plans are underway to expand our project into the Ancoraimas area, serving approximately 18,000 people and the Sipe Sipe area serving over 9,000 people, by March 1992.

C. Health Problems Which the Project Addresses

Please indicate any changes in project focus from your previous DIP or last Annual Report description.

There have been no changes.

D. Child Survival Interventions

Indicate any changes in type or scope of child survival interventions this past year.

Key elements in our strategy for nutritional improvement continue to be nutrition education and promoting the use of locally available nutritious foods. Increased attention by project field staff is being given to the nutritional rehabilitation of children under three years of age identified by staff as malnourished. A locally popular cereal-based drink called Api is now being promoted for malnourished weaning age children in the Carabuco project area. It is administered under the supervision of the community health auxiliaries and is promoted in conjunction with careful monitoring of nutritional status. In Mallco Rancho, field staff are in the process of designing a nutritional rehabilitation program. In addition, a central focus of the 1991 ARHC Annual Meeting in Bolivia will be nutritional rehabilitation program development and implementation in project sites.

E. Strategies for Identifying and Providing Service to Individuals at Higher Risk

Please indicate any changes which your project has taken this past year in its approach to women with high risk pregnancies, and to children who are malnourished or have chronic diarrhea, or incomplete immunization for age, placing them at higher risk.

There have been no changes made in the interventions previously described in the DIP.

II. Human Resources and Collaboration

A. Attach job descriptions and resumes of any new staff who have joined your project in the past year. Provide an updated organizational chart, if relevant.

Several new people joined our staff within the last year. An important addition is Dr. Carolina Solle Hilari, a German-born physician hired in April 1991 to serve as project director of the Carabuco site. In the La Paz National Office, Jennifer Luna, an epidemiologist trained at Tulane University, was hired in July 1991 as a full-time staff member to revise our health information systems. She is concentrating her efforts on the Carabuco site at the moment.

Staff additions to the Mallico Rancho site include: Patricia Camacho (dentist), Gregoria Yujra (auxiliary nurse), Juan Camacho (promoter), Lucy Rojas (statistician), and Javier Saavedra (office caretaker). Job descriptions are not currently available for these staff persons.

During the past year, the International Office at Lake Junaluska, NC created a Program Assistant position and hired Sara Espada in August 1991. She will provide needed program support, including selected AID-funded Child Survival activities.

Attachment 1 includes copies of the updated job descriptions of our three new key staff. The Organizational Chart attached to the DIP has not undergone any changes.

B. Indicate all technical assistance the country project received in support of Child Survival field activities this past fiscal year (e.g. PVO Headquarters/Regional Office local or A.I.D. sponsored technical assistance, workshops, etc.).

In June 1991 David Shanklin, Program Director and Dr. Henry Perry, Program Advisor had the opportunity to travel to Coolfont, Virginia for the A.I.D. sponsored Child Survival Project conference. Dr. Perry also participated in a Child Survival workshop on survey research methods at Johns Hopkins University in September 1991.

Dr. Orlando Taja, our Mallico Rancho Program Director, traveled to Atlanta, GA in June 1991 for the "Second Millennium Conference" sponsored by INMED and to Tegucigalpa, Honduras in August 1991 for the Latin American meeting of A.I.D. supported Child Survival Projects.

Dr. John Wyon, Professor Emeritus, Harvard School of Public Health, made two trips to Bolivia during the past year to provide technical assistance in health information systems and general project management. Ms. Daisy Ferrufino, clinical nutritionist for the Gastroenterological Institute of Cochabamba, provided guidance on the development of a potential nutrition rehabilitation intervention in the Mallico Rancho service area.

C. Describe community activities undertaken this past year to support CS project; identify the number of active community health committees.

During the past year, our local project directors maintained ongoing communication with community leaders and met with community leaders as requested. At least twice annually our field staff are required to participate in meetings held with leaders from all of the communities to share ideas, concerns and suggestions. Communities also are asked to participate in the planning of activities and in the oversight of community health posts. During the previous baseline survey (Mallico Rancho in October 1990) and evaluation (Carabuco in November 1990) we also specifically sought community opinions regarding the quality and scope of activities, and the health-related priorities of the community.

We continue to encourage community support through user fees for some services and medicines (while not denying services to indigent patients). Extended discussions with community leaders also have been held concerning health services which community members want, but find expensive to administer. Communities in which we work do not

maintain active health committees. Rather than force communities to adopt a committee structure which they themselves would not choose, we are currently working within the existing community organizational structure, and attempt to reach consensus through this approach.

D. Linkages to Other Health and Development Activities

Please indicate any new linkages this fiscal year between Child Survival project components and other in-country health development activities; describe new agreements with governments and collaboration with other groups not previously described in project reports to A.I.D.

We have made contacts during the past year with CARE, a fellow member of the PROCOSI Child Survival Network, and with CORDEPAZ, the Regional La Paz Department Development Corporation, which have resulted in plans for the construction of water systems in five of our Carabuco area communities. We also contracted with an in-country consultant to: assess selected small community development project concepts, including greenhouse construction and village banking opportunities; and, develop two grant applications for community development projects to be funded by in-country sources.

After several years of negotiations between several PVO networks in Bolivia and the Bolivian government, it is now possible for ARHC to formally sign an agreement with the Ministry of Foreign Relations. Following that, new agreements will be renewed with the Ministry of Health and the Regional Health Offices.

III. Progress in Health Information Data Collection

A. Baseline Survey

Only projects which have not previously discussed the results of their baseline survey in the DIP or other reports need to answer the following questions.

When did you undertake a baseline survey? What was the cost of the survey to your project? How many weeks did it take to complete the task? What was the overall sample size? How long did it take, on average, to interview one mother or one household?

In October 1990 we conducted a baseline survey in the 11-community Malloco Rancho area. The purpose of this survey was to measure selected health-related knowledge and practices of mothers of children under two years of age. In all, 237 maternal interviews were completed and analyzed. Health post records were not studied, resulting in what we believe to be an underestimate of service coverage for some measures (such as immunizations). Results of a recent evaluation of these health post records for the same period of time are forthcoming.

The survey was directed by Dr. Marcelo Castrillo of the Johns Hopkins Child Survival Support Project. The total cost of the survey was \$1,160 and does not include the consultant services provided by the PVO/CSSP. Three weeks were required to complete training, data collection and preliminary analysis. On average, it took approximately 25 minutes to conduct each household interview.

Current plans call for baseline surveys to be conducted in the areas of Ancoraimes and Sipe Sipe during March 1992. A total of 59 communities will be surveyed. The MOH and community leaders and members will be fully informed of, and will provide input to these data collection efforts prior to activities beginning. Technical assistance will be provided by the two project field directors, the International Program Director, the Bolivian Program Director and the Program Technical Advisor.

A survey was conducted in the 31-community Carabuco area as part of the final evaluation of our CSIII grant (previously reported to AID). This cluster sample survey collected data from mothers and health post records on 273 children to determine the coverage and impact of CSIII. Survey results also serve as baseline measures of the CSVI grant.

Did you use any technical assistance in questionnaire design, sampling data collection, preparation for data entry, or tabulation? Was the TA useful? Describe interesting findings of your baseline survey. How were these findings communicated to the communities, and to project health workers? Did you re-design your program to take into account the new information obtained in your surveys?

As mentioned above, technical assistance was provided for the Mallco Rancho baseline survey by the Johns Hopkins Child Survival Support Project. Dr. Marcelo Castrillo was responsible for leading the development of questionnaire and sampling design, data collection, data entry, and analysis. We found the technical assistance highly useful.

Findings of our baseline survey are summarized in the attached final survey report. Survey staff were directly involved in data tabulations and analysis, providing immediate feedback to workers. Findings have not been shared with communities in any systematic fashion. Information provided by the survey has served as a useful planning and evaluation tool during the past year and guided the development of the project's coming Annual Plan.

Please attach a copy, in English, of your baseline survey report and a copy, in English, of the survey instrument.

Copies of the survey report and instrument are provided in Attachment 2.

B. Routine Data Collection

Only CSVI (FY90) projects are requested to answer the following questions about their project monitoring system.

Was the system at the community level for collection of data on the family useful for identifying and directing services to the high-risk child?

Community health workers are visiting each home with children under 24 months at least every two months. These visits result in the routine assessment of nutrition and health status of individual children, and in this way high-risk children are identified. High-risk is defined as those whose weight has remained stationary or decreased since the last home visit or who present symptoms of illness. Community volunteers also are being trained to assume some of the responsibility for registering vital events as well as detecting, treating and referring selected illnesses. Paid community workers will assume a supervisory role with these community volunteers, as well as continuing with a routine schedule of home visits and high-risk followup. We consider this system a highly effective means of identifying and directing services to high-risk children.

What is the system at the clinic level to maintain records on the family or on the individual?

Records of each home visit as well as growth and vaccination charts for each child are consolidated into a family folder for each family in the project area. Patients seen by project staff are recorded in a patient log book which contains the following information: date, name, community, house number, sex, age, brief description of treatment, initials of the health care provider, and whether the patient was seen in the clinic or out in the community. Patients seen by staff out in the communities are registered in the home visitation form, which is both logged in the general patient log book and also filed in the family folder.

Does the clinic record-keeping system identify individuals needing follow-up service?

Yes, needed patient follow-up services are identified during clinic outpatient care, and the appropriate health auxiliaries notified. Thus, each case of inadequate growth or detection of disease is then followed up in the home and an individualized action plan is drawn up with the family.

What is the system for reporting information on the activities of community health workers?

The activities of the community health workers are recorded on the home visitation forms. The health workers also are responsible for the monthly reporting of specified summary statistics to the project office, and for periodic reporting of these data to communities through community meetings.

Each year, A.I.D. requires all CS projects to report certain project inputs (expended funds, number of training sessions held) and outputs (number of persons trained, number of ORS packets distributed) in the A.I.D. Health and Child Survival Questionnaire. Your CS project may also have decided to collect indicators of the impact of your project on immunization coverage, health services utilization, mother's health knowledge and practice, or disease reduction. Which indicators have been the most difficult for your project staff to collect and why? What is your PVO doing to improve the staff's skills in data collection?

The single most difficult measure to collect in program sites has been the accurate description of causes of death. Standardized verbal autopsy forms and protocols have been implemented in both project areas, but accurate reports of cause of death remain problematic. In addition, incidence and prevalence measures of diarrheal disease and upper respiratory infections have been difficult to collect. A high number of cases go unreported each year due to the lack of knowledge of reportable symptoms on the part of mothers. However, at this time there is no clear solution to these reported problems. We continue to provide ongoing training and education to field staff concerning disease diagnosis and maternal education. Finally, we are experiencing difficulty in the accurate estimation of in/out migratory patterns of our service areas, partly due to the difficulty of defining migration and partly due to the increasing mobility of the population.

Does your project monitor any service performance and sustainability indicators (such as number of scheduled clinic sessions actually held, or percent of trained VHWs still active)? Please give examples.

ARHC maintains a number of performance and sustainability indicators. For example, monthly plans for home visitation for each health auxiliary are used to insure a regular visitation pattern for all families. There is continuous monitoring of field staff by supervisory field personnel who periodically attend home visits and group education activities. During these visits the methods of health workers are reviewed. If problems are noted, they are immediately shared and retraining of the workers is provided. In addition, field staff submit monthly summary statistics describing the range of services provided and number of people receiving these services.

Have you initiated an active surveillance system capable of detecting and investigating cases of acute paralysis in children below 15? Do you carry out other case-finding activities? Please describe.

We have not initiated an active surveillance system for detecting and investigating cases of acute paralysis in children below 15. However we do monitor nutritional and health status through routine home visits and include questions about illness symptomology and vaccination schedules. Thus, as a general rule we do not screen for selected diseases through campaigns or surveillance activities, but rather stay in constant contact with the communities through the home visitation program.

Who are the individuals who have responsibility for collection, compilation and analyses of data?

Health auxiliary workers and supervisory field personnel collect, compile and analyze data from the field. Our field directors at each site are responsible for compilation of the data, and assuring the collection of high quality information. Nathan Robison, National Director, is responsible for analysis and supervision of the whole system.

Who are the individuals who have responsibility for monitoring the quality of data in the project HIS?

Field supervisors and field project directors are directly responsible for the review and monitoring of project data quality. In addition, the recently hired HIS Specialist is taking a direct role in the improvement of the data collection and reporting system by streamlining data collection instruments and including only those data elements which are critical for case management and project reporting purposes.

Please describe the feedback of all this information to the people who collect the information, to CHWs, and to communities in the project's impact area(s).

Substantial tabulation and analysis at the community level is conducted by the auxiliary health workers. Additional feedback to the staff is done by way of the periodic discussions of the monthly reports and by active participation in project surveys and evaluations. The auxiliary health workers and project directors provide periodic feedback to communities approximately every six months during meetings with community members and leaders.

Approximately what proportion of your expenditures since October 1990 has been spent on the projects' health information system.

Approximately \$4,000 have been expended to support revisions to the current health information systems. This represents about 2 percent of the total project budget during the first year.

IV. Improvements in Program Quality and Technical Effectiveness

CSIV, CSV and CSVI projects not submitting a Mid-term or Final Evaluation this year should describe:

A. Lessons learned this past year in implementation of Child Survival activities.

ARHC's community-based impact-oriented approach continues to demonstrate its effectiveness. For example, our mortality analysis at the micro level (project level)

provides useful data on the identification of the most prevalent, preventable and treatable diseases and in targeting scarce program resources. We have also found that field staff participation in baseline surveys and project evaluations reinforces their understanding and skills related to the ARHC methodology.

Three other areas continue to be problematic. First, we continue to face difficulty in the utilization and retention of community health volunteers. Second, entry into new project service areas has proceeded more slowly than anticipated. Finally, initial efforts to make projects more self-sustaining reinforce our belief that this requires a concerted long-term commitment, well beyond the three year grant period.

B. New steps that have been taken to strengthen technical quality of health programming since the last project report to A.I.D.

The hiring of new technical staff in both Bolivia and the International Office have resulted in improved program quality. We have also created the position of Program Advisor for Quality Assurance, Evaluation and Planning to assist in the continued improvement of our program services. Further, we are strengthening our in-country staff capability to conduct periodic project surveys and evaluations. Finally, we are currently developing a proposal seeking PROCOSI support entitled, Program for Excellence. The purpose of this grant is to institutionalize ongoing quality assurance activities within the organization.

V. Work Schedule

CSIV, CSV and CSVI projects not submitting a Mid-term or Final Evaluation this year should respond to the appropriate items in this section:

A. Identify any problems and/or constraints to implementation encountered since October 1990. Discuss the strategies which will be tried for overcoming these constraints.

Expansion into new areas has been slow. Current plans call for conducting baseline surveys in both new service areas during March 1992. This will be immediately followed by initial staff training and the conduct of censuses in selected communities.

The hiring, training and placement of community volunteer health workers has been particularly slow and time consuming. Plans to overcome this constraint include clarifying the role of volunteers during the upcoming 1991 ARHC Annual Meeting to be held in Bolivia in early December 1991. Results of this meeting will then inform activities during the next year.

B. Attach work plan outlining critical activities to be carried out for fiscal year 1991/1992.

Attachment 3 illustrates the revised DIP work schedule.

VI. Changes in Project Expenditures and Justification for Budget Changes

A. Every CSIV, CSV and CSVI project should complete a pipeline analysis. The attachment shows the required format (1991 Annual Report Form A). However, please produce this on you own spreadsheet system, if it simplifies reporting.

Please find the pipeline analysis attached as Attachment 4. This analysis is based upon a revised budgetary schedule as noted in section B below.

B. In the case of budget revisions, CSIV projects need to provide a justification for any major changes form the budget submitted with a the Second Annual Report; budget revisions from the First Annual Report; CSVI projects should provide a justification for any budget revisions from the original budget proposal. (Please note that certain budgetary changes are permissible within the parameter of your cooperative agreement with A.I.D.) Please make sure any changes you are initiating are acceptable and do not require an amendment to your grant.

Attachment 5 summarizes approved budgetary revisions to the project submitted to A.I.D. in June 1991. Attachment 6 includes a memorandum which provides the rationale for these approved changes.

VII. Sustainability

CSIV, CSV, and CSVI projects not submitting a Mid-term or Final Evaluation this year, should respond to all items in this section.

A. Recurrent costs

What are the projected costs and revenues that you expect will need to be maintained after A.I.D. CS funding ends?

Currently most communities are unable to financially support the health care system, and place health care lower on their list of most pressing community priorities, which often include agricultural and economic development projects. At the same time, we expect to see continued demand for our services, and a willingness on the part of community members to pay for selected curative services. Given that the current project

budget already includes ARHC support, MOH support, and local financial support (in addition to A.I.D. support), we expect that we will need to cover most A.I.D. costs at the end of the grant period. This represents a sum of approximately \$235,000 per year.

Identify project component (sic) that you believe the community will not be able to continue after the A.I.D. CS funding terminates.

The community will not be able to support field staff salaries. In addition, critical central office support will be impossible to generate from local community activities.

Identify project components the government may not be able to absorb by the end of CS funding.

The MOH is expected to contribute to the cost of running the program, including selected salary support, and the provision of some medical supplies and staff continuing education. However, it is highly unlikely that the MOH will be able or willing to support other necessary field staff, logistical expenses, and administrative support.

B. Strategies for Reducing Sustainability Concerns

Please describe your project's approach to creating sustainable health programs, outputs, or benefits in your local communities.

Community support is encouraged through user fees for some services and medicines, while not denying services to indigent patients. Extended discussions are held with community leaders on health services which community members want, but find expensive to administer. During project surveys and evaluations, we specifically seek community opinions regarding the quality and scope of activities, and the health related priorities of the community.

Community members are encouraged to pay for selected services, including the purchase of medicines, consultations, hospitalization and deliveries at health clinics. Individuals probably will continue to be resistant to pay directly for preventative education services. Therefore, we first intend to develop a fully self-supporting medical supplies component to our project. Second, we will request fees for certain high demand services and procedures. Third, we will pilot test community development projects which have the potential for partial support of community health workers in the future. This latter concept will be pursued consistent with securing additional external assistance. Community input to these and other plans for sustainability will be solicited as part of the project field directors ongoing communications with community leaders.

Another aspect of promoting sustainable programs is collaboration with local agencies. We maintain collegial relations with the staff of the MOH district office and encourage activities intended to strengthen MOH capacity. We plan to support selected child survival continuing education activities in conjunction with the MOH. In turn, the MOH will provide support to our program in the form of basic salaries for selected

program staff, the placement of a graduating medical student on mandatory rotation for one year in our central health clinics, and selected material support (vaccines, Vitamin A supplements, and anti-parasitic medication).

ARHC coordinates with existing services which support community groups such as Mothers Clubs to provide health and nutrition education, growth monitoring and vaccination coverage. Other such groups include CARITAS in Carabuco, and World Vision in Mallo Rancho.

With the move into Ancoraimes, we expect to work closely with the Bolivian Methodist Church in the delivery of health services. We have a positive, long-term relationship with the Church and receive some limited financial support through this institution.

Please describe any training your organization has undertaken this past fiscal year to increase the PVO staff's understanding of organization costs and improve skills in cost recovery and price setting.

During the past year ARHC has implemented a process of annual planning, which includes the development of project objectives, activities, schedule and budget. It is during this process that project staff have become exposed to the estimated costs of providing health services. It is our hope and intention to build upon this growing awareness with activities to strengthen cost recovery and project sustainability.

During May a workshop was held in Carabuco to identify weaknesses with the current medical supplies program, and develop steps to remedy these problems. An important part of this process is the strengthening of the cost recovery component.

C. Cost Recovery Activities

Describe any cost recovery mechanisms implemented by your project in this past year.

Dental services are now being provided on a fee-for-service basis in both Carabuco and Mallo Rancho. Medicines continue to be sold and we hope to see full cost recovery for medicines by the end of the project through the support of both the MOH and user fees.

Community volunteers are being trained to support health worker activities and reduce the number of needed paid field staff. In addition, we are focusing energy on developing field protocols for health care which optimize the identification of high-risk cases and minimize the number of visits required by paid staff.

What effect did this cost recovery activity have on your organization's reputation in the community?

Currently this process has had no effect on community attitudes toward the projects, but there is some concern expressed from selected community members regarding the possibility of continued and unsustainable increased costs of curative services.

Did the cost recovery activity result in creating inequities in service delivery?

Every attempt is made to provide adequate health care to all community members. In indigent cases services are provided free of charge or bills are delayed until the patient is able to pay.

Estimate the dollar amount of cost recovery obtained this past fiscal year. Does the cost recovery venture generate enough revenues to justify the effort and funds required to implement it?

An estimated \$16,000 will be recovered during this current fiscal year. Although much more needs to be done, this amount justifies efforts to strengthen cost recovery. It is our hope that communities will be able to cover up to one-third of the total health care costs by the end of the project, although much remains to be done.

For what purpose are you using the funds that are obtained through cost recovery?

These funds are used for local program support including the purchase of medicines and supplies.

Comment on the financial success and community acceptability of income generation activities implemented by your project in the past fiscal year.

During the past year ARHC has not been engaged in the development of income generation activities.

ATTACHMENT 1
JOB DESCRIPTIONS

- 1. Carabuco Project Director**
- 2. Health Information System Specialist**
- 3. Program Assistant - Lake Junaluska Office**

CONSEJO DE SALUD RURAL ANDINO

DESCRIPCION DE FUNCIONES

CARGO : Directora Ejecutiva del Programa - CARABUCO

REPORTA AL : Director Nacional

RESPONSABILIDADES GENERALES: Colaborar con el Director Nacional del Consejo de Salud Rural Andino (CSRA) y además, desempeñar el cargo de Director Ejecutivo del Proyecto con base en Carabuco, Provincia Camacho del Departamento de La Paz.

RESPONSABILIDADES ESPECIFICAS:

- I. Colaborar con el Director Nacional en el desarrollo de Programas en Bolivia.
 1. Estar informado y participar en el desarrollo de la misión, políticas, objetivos, metas y programas del Consejo de Salud Rural Andino.
 2. Proveer liderazgo en la implementación y mejoramiento de la metodología con base censal de atención de salud en el área rural.
 3. Proveer liderazgo en el desarrollo e implementación de políticas dirigidas a maximizar el autosostenimiento de los programas de campo.
 4. Promover, dentro del marco de los recursos y tiempo disponible, actividades indirectamente relacionadas con salud que contribuyen al desarrollo integral de las comunidades.
 5. Asistir en la búsqueda de recursos financieros y en la preparación de proyectos.
 6. Interpretar el programa a personas y grupos interesados.
- II. Desempeñar el cargo de Director Ejecutivo en el Proyecto de Carabuco, Provincia Camacho, La Paz.
 1. Llevar a cabo las políticas del CSRA.
 2. Ser responsable de implementar la metodología de atención en salud con base censal.
 3. Elaborar y presentar al Director Nacional el Plan de Trabajo Anual para su revisión y aprobación seis meses antes del inicio del año fiscal.

4. Asistir en la preparación del presupuesto anual de Carabuco cuya presentación deberá ser por lo menos seis meses antes del inicio del año fiscal.
5. Ser responsable de la ejecución del Plan de Trabajo aprobado dentro de los límites del Presupuesto aprobado.
6. Ser responsable de la contratación, despido o promoción del personal Boliviano o extranjero de Carabuco, como así también de las evaluaciones periódicas del desempeño de funciones.
7. Organizar y dirigir las actividades técnicas, educativas y administrativas de todo el personal de Carabuco con descripciones de funciones escritas y sobre la base del plan de trabajo.
8. Organizar y dirigir las actividades médicas del Centro de Salud Hospital de Carabuco y sus puestos sanitarios.
9. Organizar y Supervisar la capacitación del personal de Carabuco.
10. Supervisar las actividades, responsabilidades y Derechos de todo el personal de Carabuco.
11. Ser responsable de la Administración de los activos y recursos del Proyecto.
12. Conocer la actividad financiera del Proyecto.
13. Presentar Informes descriptivos, analíticos, estadísticos y financieros de acuerdo al plan pre-establecido y cuando así lo requiera el CSRA.
14. Reunirse periódicamente con representantes del CSRA para evaluar el progreso hacia la consecución de las metas y objetivos.
15. Reunirse periódicamente con dirigentes comunitarios para conocer sus necesidades e informar sobre actividades del proyecto.
16. Representar, al Proyecto juntamente con el Director Nacional del CSRA, ante entidades públicas y privadas.
17. Desarrollar y mantener convenios con centros de referencia para pacientes de escasos recursos económicos y velar por la calidad de la atención en dichas instituciones.

18. Mantener buenas relaciones de trabajo con las autoridades gubernamentales del Ministerio de Salud, otras organizaciones no-gubernamentales, la Iglesia Metodista en Bolivia y otras instituciones y redes cuyas metas estén relacionadas a las metas de ARHC.
19. Planificar y supervisar Equipos de Trabajo, Voluntarios en salud y el Programa de donación de Medicamentos y suministros en coordinación con las oficinas del CSRA en La Paz y Lake Junaluska.

NR/DS/CH 04/03/91/v.2

DESCRIPCION DE FUNCIONES

CARGO : Especialista en Sistemas de Información en Salud

REPORTA AL: Coordinador Nacional del CSRA

RESPONSABILIDADES GENERALES:

Es responsable, juntamente con los directores de programas, por el diseño, implementación y evaluación de los sistemas de información del CSRA.

TAREAS ESPECIFICAS:

1. Rediseñar los Sistemas de Información de cada programa.
 1. Conocer a fondo la filosofía y metodología del sistema de prestación de servicios de salud en base a censo familiar y seguimiento de evento vitales.
 2. Coordinar estrechamente con los directores de programa y del personal técnico de la institución, tanto local como de la oficina de Lake Junaluska, en la reformulación de los sistemas de información.
 3. Coordinar con personal del MPSSP donde sea necesario.
 4. Efectuar las diversas etapas del rediseño mediante una estrecha coordinación con los equipos de campo.
 5. Reformular y validar los formularios de los sistemas.
 6. Elaborar un manual completo de los sistemas de información.
 7. Homologar los sistemas de información de los diferentes programas con relación a las necesidades particulares de cada región.
 8. Representar al CSRA en reuniones y actividades de coordinación relativo a sistemas de información.
 9. Desarrollar mecanismos para retroalimentar la información al personal y a las comunidades.

II. Implementar el sistema de información en los diferentes programas del CSRA en Bolivia.

1. Organizar e implementar la capacitación del personal para el manejo del sistema de información.
2. Supervisar el funcionamiento del sistema de información de los diferentes programas del CSRA.
3. Desarrollar un mecanismo para la consolidación de la información proveniente de los diferentes programas.

III. Presentar informes mensuales resumiendo logros y problemas.

NR 21/08/91

PROGRAM ASSISTANT

**ANDEAN RURAL HEALTH CARE
518 LAKESHORE DRIVE
LAKE JUNALUSKA, NC 28745
(704) 452-3544**

POSITION TITLE: Program Assistant
ACCOUNTABLE TO: Program Director
STATUS: Non-exempt, negotiable hours

GENERAL RESPONSIBILITIES:

Responsible for assisting the Program Director and other staff and volunteers working in the program area.

SPECIFIC DUTIES:

Management and filing related to the Health Volunteers program

Support activities of both the Work-Amigos Team Program and the medical supplies program

Establish and maintain a technical library

Assist Program Director with proposal development

Assist Program Director in budget preparation

General typing for Program Director, Program Advisor, Work-Amigos Team Coordinator and Medical Supplies Coordinator

Coordinate volunteers needed for any program-related projects

Maintain program files

Assist Program Director in coordinating communication with the Bolivian National Office

Be responsible for domestic and international FAX communications

Respond to requests for information on any program related activities

Edit newsletter in Spanish for Bolivian field staff

Other tasks as requested by the Program Director.

SKILLS AND QUALITIES DESIRED:

- Should be dependable and pleasant to work with
- Able to draft correspondence, text as requested with limited supervision required
- Experience in working with computerized spread sheets
- Familiarity with Micro-Soft Word for Windows and Word Perfect, or willingness to learn
- Strong editing skills
- Able to work occasional nights and weekends
- Able to travel to Bolivia occasionally
- Spanish speaking/writing skills

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8/91

ATTACHMENT 2
BASELINE SURVEY
(MALLCO RANCHO)

**FINAL REPORT ON SURVEY ASSISTANCE
TO APSAR, ANDEAN RURAL HEALTH
CARE/BOLIVIA K&P SURVEY**

Cochabamba, Bolivia

April, 1991

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University

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Mr. Nathan Robinson, National Coordinator ARHC/Bolivia
Mr. Simon Saavedra, ARHC field staff
Orlando Taja, M.D. Executive Director Asociacion de Programas de Salud en Area Rural APSAR/ARHC/Bolivia
Catalina Ventura, Auxiliary Nurse, ARHC field staff

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I. EXECUTIVE SUMMARY

A Knowledge and Practices survey (K&P) was carried out in the Mallco Rancho "health area", according to the Bolivian Ministry of health's regionalization of services, from October 1 - 18, 1990. This work was achieved in cooperation between the private voluntary organization Andean Rural Health Care (ARHC) and the PVO Child Survival Support Program (PVO CSSP), Institute for International Programs of The Johns Hopkins University School of Hygiene and Public Health.

The purposes of the survey were to obtain baseline information on the knowledge and practices of the mothers of children under two years of age in Mallco Rancho and its surrounding communities concerning child survival activities, and to identify the actual health care providers most commonly used by the family for common childhood problems.

The CS VI project is being implemented by APSAR (Asociacion de Programas de Salud en Area Rural), a local organization which is responsible for the ARHC initiative. The ARHC Child Survival project received \$700,000 in A.I.D. funding from the Bureau for Food for Peace and Voluntary Assistance/Office of Private and Voluntary Cooperation (FVA/PVC) to implement CS activities in two project areas (including Mallco Rancho) from October 1, 1990 to September 31, 1993.

The questionnaire was initially design at the PVO/CSSP office in Baltimore, MD in consultation with ARHC headquarters and then refined in Bolivia. The field team received training in 30 cluster sample surveys so that ARHC staff can carry out this type of survey on a regular basis to measure project progress.

The objectives of the survey were accomplished within two weeks. The APSAR/ARHC field team discussed the results extensively in order to design the detailed implementation plan for the upcoming period.

II. INTRODUCTION

A. Background

The APSAR/ARHC Child Survival project is located in Mallco Rancho, province of Quillacollo in the department of Cochabamba. The Malku Rancho health area is composed of the town of the same name and ten surrounding communities, and is populated primarily by farmers. Agricultural production is not modernized due to a lack of agricultural infrastructure. Thus, seasonal changes in the weather have a great impact on the peasant economy. In fact,

the valley of Cochabamba has been very dry for the last three years.

The current Child Survival (CS) project is an expansion of the Andean Rural Health Care program that was initiated in the department of La Paz. The CS project in Mallco Rancho is composed of 12 people, of whom five are health professionals. A small hospital has been constructed in the town of Mallco Rancho, which functions as the team headquarters in the area.

Project activities include:

- Complete registration of the target population, vital events registration, and regular home visits
- Immunizations
- Growth monitoring
- Oral Rehydration Therapy
- Health education, and the promotion of exclusive breast feeding
- Prenatal care, TT vaccination with vitamin and iron supplementation
- Primary health care for children and adults

B. Objectives of the Baseline Survey.

The method of choice for this kind of surveys is a 30 cluster sampling technique. The study population consists of mothers (or caretakers) of children under the age of 24 months living in the PVO project area. By restricting the sample to mothers of children less than 24 months of age, repeat surveys can ascertain the project's ability to reach children born during the life of the project, and establish whether the project was successful in communicating to the mothers 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 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 APSAR/ARHC/Bolivia with information about the following issues:

- Knowledge of mothers of children under two years of age about major threats to infant and child health, and ways to prevent immunizable diseases, proper treatment of diarrheal diseases (ORT), the value of growth monitoring and healthy nutrition, and treatment of acute respiratory infections
- Actual practices of mothers with regard to the intervention areas mentioned above
- Target groups for health education action messages
- Children aged 12-23 months, the coverage rates of BCG, DPT3, OPV3, and measles vaccines by the age of 12 months
- The estimated incidence of diarrheal diseases and acute respiratory infections in the two weeks previous to the survey.

The survey establishes-baseline estimates of child survival knowledge and practices at the beginning of the project's primary health care interventions. The data collected will help APSAR/ARHC plan, manage, assess any progress made during the project and evaluate its activities.

Finally, this survey is part of an attempt by the PVO Child Survival Support Program to develop a simple and quick methodology for sample surveys which can be administered by PVO field projects at low cost without or with limited outside technical assistance. Therefore, one of the prime goals of this survey was to train APSAR/ARHC field staff in the preparation and implementation of this rapid assessment technique. Data analysis and the compilation of a preliminary report are considered integral components of the survey, and it was set as a goal to have both completed four days after the execution of the survey.

C. Geographic Area and Population

Mallco Rancho is a Canton of the province of Quilacollo which is in the department of Cochabamba. The town of Mallco Rancho is a 45 minutes from the City of Cochabamba which is the third largest city of Bolivia. The entire area is a valley and at one time was the main crop producing region of Bolivia. Although Mallco Rancho is near the city it is still considered rural with agriculture the main source of income of its inhabitants.

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- October 10 - 12, 1990 PVO Implements of the survey in Mallico Rancho and its surrounding communities.
- October 13 - 16, 1990 Manual tabulation of the results and data entry into EPI/INFO software program.
- APSAR staff and Castrillo analyze the results, draw conclusions and make recommendations. Finalize the survey draft report.
- PVO feedback to the community leaders and surveyors.
- October 17 - 18 , 1990 Dr. Castrillo returns to the city of La Paz and meets with Dr. Ana Maria Aguilar to discuss the survey results.
- October 20, 1990 Return to Baltimore, MD.

III. METHODOLOGY

A. The questionnaire

The questionnaire (see annex 1), which contains 41 questions, was designed to collect information from mothers of children under twenty four months old, which would be relevant for planning and evaluation of APSAR/ARHC child survival project. The questions were developed and selected by staff and PVO CSSP, with the assistance of US and international experts for the various intervention areas (see annex 2) and in cooperation with ARHC field and headquarters staff.

The first five questions ask about the age of mothers and children, and mother's education; questions 6 - 9 collect data regarding mother's employment and who takes care of the child while the mother is working away from the home; questions 10 - 14 deal with breast-feeding and other nutrition practices; questions 15 - 23 refer to mother's response to diarrheal disease and management of the child with diarrhea; questions 24 - 28 are about treatment of acute respiratory infections; questions 29 - 34 concern the immunization status of the child; questions 35 - 37 refer to the growth observation on the child's health card; and finally, questions 38 - 39 are about prenatal care and where the delivery took place. The last two questions (40 and 41) are open ended, and were requested by APSAR/ARHC in order to

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determine the community use and opinion of the APSAR/ARHC program. APSAR/ARHC will analyze these responses to questions 40 and 41 which are not included in the present report.

The questionnaire was originally written in English then sent to the US ARHC office, and later it was translated into Spanish and sent to the Bolivia office. After the first meeting with the field staff and interviewers, it was clear that the Spanish questionnaire would need to be translated into Quechua, the native language of the area. All interviewers were bilingual (Spanish/Quechua). The translation to Quechua was done by two local school teachers. A third person translated the questionnaire from Quechua back into Spanish to verify the quality and accuracy of the questions in Quechua. With both versions and the original in Spanish, the final version in Quechua was re-edited. It should be pointed out that the questionnaire was always in Spanish, and the questions in Quechua were used when the mother was not fluent in Spanish.

B. Determination of Sample Size

The survey covers multiple aspects of child survival interventions, each with different sample size requirements. The sample size in this survey is sufficient to detect anticipated changes in rates; i.e. the rates of a baseline survey are to be compared to the expected rates at the end of the project. The selected rates for child survival are given by the indicators for monitoring and evaluating child survival activities. Immunization coverage is one of the key indicators for monitoring/evaluating CS. The coverage rate at the initiation and the proposed rates aimed by the project are the basis for the following calculations.

Sample sizes were calculated with the following formula:

$$n = z^2 (p \cdot q / d^2)$$

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

The value of p was defined by the intervention that needed the largest sample size. The value d depends on the purpose of the survey; i.e. if the purpose is to find rate differences from 10% to 20%, it is 10% difference, this divided by 2 (5%) gives the precision desired, the following sample sizes were needed:

d	0.25	0.40
0.05	288	367
0.06	200	256
0.075	128	164
0.10	72	92

The APSAR/ARHC immunization coverage is 85% and its objective for the end of the project is 95%. In other terms, this can be expressed as: $95 - 85 / 2 = 5$, which is the precision desired (5%). In this particular case, the sample size was 99 mothers to be interviewed; for example, only those children with diarrhea in the last two weeks who answered the questions regarding diarrhea management. It was necessary to increase the sample size in order to ensure statistical certainty for each question and subgroup of questions.

Example: $n = 1.96 (.85 \times .15 / .0025)$
 $n = 100$

In order to reach the necessary sample size of 100 in all questions and subgroups of questions it is usually considered appropriate (based on empirical findings) to use sample size of no less than 210. In this case the goal was set for 230 interviews. As described in section D, the estimated total population of children under 24 months of age was 273.

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

$$95\% \text{ confidence limit} = p \pm z \sqrt{(pq/n)}$$

Where: p = proportion in population; and z = statistical certainty chosen

Example: the proportion of children that were ever immunized (accessibility) is 85.5% with a confidence limit of:

$$\begin{aligned} 95\% \text{ confidence limit} &= 85.5 \pm 1.96 \sqrt{(85.5 \times 14.5 / 237)} \\ &= 85.5 \pm 4.5 \\ &\text{or } 81\% \text{ to } 90\% \end{aligned}$$

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C. Method for Data Analysis

In agreement with APSAR/ARHC Bolivia, the project manager, survey trainer, and field staff both conducted manual tabulations of the survey data, as well as using the Centers for Disease Control's (CDC) EPI/INFO. This was done in order to acquaint the field team with both processes of data analysis. This permitted all staff be involved, including those who have no computer knowledge or access. EPI/INFO is a user-friendly and easy-to-learn system, and sufficient for the kind of analysis needed in this survey.

D. Selection of Sample

The sample consisted of women 15 to 49 with children under 2 years (i.e. 24 months) of age.

According to data collected by the project at the submission of the proposal for child survival funds, there are 5,603 inhabitants in Mallco Rancho and its surrounding communities. The estimated number of mothers of children under two years old was 273, and the sample needed for the survey was 230. Thus, it was necessary to sample all mothers of children under 24 months old in order to fulfill the sampling requirements for the survey, instead of using the 30 cluster sampling method.

The rule was to visit every household in the community and interview every mother of children under two years old. A map was used to define the areas for the interviewers and to avoid duplication.

IV. THE SURVEY

A. Training of Supervisors and Interviewers

The training of interviewers and supervisors took place in four days. The APSAR/ARHC staff had pre-selected five supervisors and 12 interviewers. All spoke and read Quechua fluently. Two supervisors who came from another area were not fluent in Quechua, so they went to the communities with a translator. Interviewers were required to have at least a secondary education.

The first day was dedicated to training the supervisors and APSAR/ARHC staff in the survey technique. By request of the APSAR/ARHC Executive Director, the training included the 30 cluster sampling technique, since this technique could be used in future surveys. Mrs. Adela Asbun, the health project manager in Mallco Rancho, was worked closely with the PVO/CSSP survey

trainer, and used some of the reference materials about the survey, which were brought to Bolivia by the survey trainer.

The next two days of joint training of interviewers and supervisors focused both on understanding the questionnaire, and on the proper way to ask the questions without introducing biases (refer to annex 3 for training schedule and manual).

The initial work plan had to be slightly altered. The time initially allowed for training the interviewers was one day, but after the first day the interviewers were still wary of performing the survey, hence, another day was given to more practice.

The final day of training started with a field test of the questionnaire in the morning. A peripheral area of the City of Cochabamba was chosen for the test (about 10 Km from Mallco Rancho). This area was selected for two main reasons: first, to practice the selection of a cluster, since this was the only opportunity to practice such a technique, and secondly, to practice random selection of households within the cluster, which would not be used in the Mallco Rancho survey.

Each supervisor and interviewer completed at least three questionnaires. In the afternoon the team exchange experiences. The group discussed problems that had been found during the field test, and clarified misunderstandings.

B. The Interviews

The survey was conducted during three consecutive days; Wednesday October 10 to Friday October 12. Each morning, all interviewers and supervisors met at the Mallco Rancho hospital. A short meeting was carried out to explain the areas to be interviewed and to discuss the recommendations of the day before. Five groups of two or three interviewers went out from the hospital. The supervisors were responsible for the identification of the communities and starting points. The supervisors observed at least one complete interview of each interviewer, each questionnaire was checked for completeness within one hour after the end of the interview, so that, in the case of missing or contradictory information, the mother could be visited again the same day. The high motivation of the team permitted covering a considerable area in the proposed time frame.

V. SURVEY RESULTS

A. Data Analysis

One day was dedicated to data tabulation. A chart of the questions and pre-coded answers was printed out on a large computer sheet, giving enough room for separate hand tabulation of each question (see annex 7). All questionnaires were divided among eight tabulators at a large table. The bulk of questionnaires were then circulated until everyone finished their part. This process took approximately four hours. Two other staff members entered the data into EPI/INFO; APSAR/ARHC had set up an IBM computer/printer to be used by the survey team. The staff obtained frequency distributions for each of the questions. In some cases the results were stratified by the child's age. EPI/INFO was used to carry out the calculations to get Tier II indicators for immunization coverage (see annex 4).

Once the frequency tables and some cross tables were finalized, the field team got together in the Mallco Rancho hospital to discuss the survey results for two consecutive days. Dr. Javier Baldomar and Mr. Simon Saavedra from the Carabuco and Montero child survival projects received practical training in the entire survey process. The final step in the survey was to draw conclusions from the survey and provide feedback to the staff.

B. Results of the Baseline Survey

The following answers were given for the 41 questions. 237 records were entered into EPI/INFO, no records were removed from calculations.

1. Mean age of the mother in years:

Total	=	229
Missing values	=	8
Sum	=	6361.00
Mean	=	27.78
Standard deviation	=	6.18

Distribution of interviewed women by age group:

Years	Freq	Percent
<= 19	14	6.1%
20 - 24	69	30.1%
25 - 29	62	27.1%
30 - 34	45	19.7%
>= 35	39	17.0%
Total	229	100.0%

2. Mean age of the child in months:

Total	=	237
Missing values	=	0
Sum	=	2453.00
Mean	=	10.35
Standard deviation	=	6.38

Distribution of children by age group:

Months	Freq	Percent
<= 2	38	16.0%
3 - 5	26	11.0%
6 - 11	71	30.0%
12 - 17	63	26.6%
>= 18	39	16.5%
Total	237	100.0%

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4. Population of interviewed mothers of children under 2 years old by community:

	Freq	Percent
Mallco Rancho	27	11.4%
Viloma	54	22.8%
Vilomilla	13	5.5%
Chaupisuyo	23	9.7%
Wachaca	17	7.2%
Wankawa	14	5.9%
Chinchilla	5	2.1%
Payacollo	25	10.5%
Sauce Rancho	29	12.2%
Quirus Rancho	26	11.0%
Mallco Chapi	4	1.7%
Total	237	100.0%

5. Highest educational level attended by the mother:

	Freq	Percent
1 None	24	10.3%
2 Primary/doesn't read	40	17.2%
3 Primary/reads	120	51.7%
4 Secondary	43	18.5%
5 Other	5	2.2%
Total	232	100.0%
Missing values	5	

7. Mother has income generation activity:

	Freq	Percent
Yes	110	46.4%
No	127	53.6%
Total	237	100.0%

8. Location of mother's income generation activity:

Current selection: mothers carrying out income generation activities = 110

	Freq	Percent
At home	35	31.8%
Away from home	75	68.2%
Total	110	100.0%

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9. Who takes care of the child when the mother is away from home (multiple answers allowed):
Current selection: mothers carrying out income generation activities away from home = 75

	Freq	Percent
Child goes w/mother	59	78.7%
Older children	20	26.7%
Relatives	14	18.6%
Husband	8	10.7%
Neighbors	2	2.7%
Maid	1	1.3%
Other	1	1.3%
Friends	0	0.0%

10. Mothers currently breast feeding by age of their children:

Age group in months	Breast-feed		Total
	Yes	No	
<= 2	38	0	38
	>100.0%	0.0%	> 16.1%
3 - 5	25	1	26
	>96.2%	3.8%	> 11.0%
6 - 11	60	11	71
	>84.5%	15.5%	> 30.1%
12 - 17	42	21	63
	>66.7%	33.3%	> 26.7%
>= 18	7	31	38
	>18.4%	81.6%	> 16.1%
Total	172	64	236
	72.9%	27.1%	
Missing values			= 1

11. Have you ever breast-fed your child:
Current selection: mothers currently not breast-feeding = 64

	Freq	Percent
Yes	62	95.4%
No	2	4.6%
Total	64	100.0%

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12. How old was the child when you stopped breast-feeding:
 Current selection: mothers currently not breast-feeding and
 mothers who ever breast-fed = 62

Month	Freq	Percent	Cum.
1	2	3.4%	3.4%
2	1	1.7%	5.1%
4	3	5.1%	10.2%
6	1	1.7%	11.9%
7	1	1.7%	13.6%
8	6	10.2%	23.7%
9	4	6.8%	30.5%
10	1	1.7%	32.2%
11	2	3.4%	35.6%
12	7	11.9%	47.5%
13	5	8.5%	55.9%
14	8	13.6%	69.5%
15	7	11.9%	81.4%
16	4	6.8%	88.1%
17	5	8.5%	96.6%
20	1	1.7%	98.3%
24	1	1.7%	100.0%
Total	59	100.0%	
Missing values	=		3
Sum	=		704.00
Mean	=		11.93
Standard deviation	=		4.60

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13. How old was the child when you experience return of menses:
 Current selection: mothers currently breast-feeding = 172

Month	Freq	Percent	Cum.
1	7	13.5%	13.5%
2	6	11.5%	25.0%
3	7	13.5%	38.5%
4	2	3.8%	42.3%
5	5	9.6%	51.9%
6	4	7.7%	59.6%
7	3	5.8%	65.4%
8	7	13.5%	78.8%
9	1	1.9%	80.8%
10	1	1.9%	82.7%
11	1	1.9%	84.6%
12	6	11.5%	96.2%
15	1	1.9%	98.1%
16	1	1.9%	100.0%

Total | 52 100.0%

Missing values = 120

Sum = 307.00

Mean = 5.90

Standard deviation = 4.02

(women reported their menses did not return or, did not respond)

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Current selection: mothers currently not breast-feeding but ever breast-fed = 62

Month	Freq	Percent	Cum.
1	6	10.7%	10.7%
2	5	8.9%	19.6%
3	3	5.4%	25.0%
4	3	5.4%	30.4%
5	4	7.1%	37.5%
6	5	8.9%	46.4%
8	7	12.5%	58.9%
11	2	3.6%	62.5%
12	8	14.3%	76.8%
13	1	1.8%	78.6%
14	4	7.1%	85.7%
15	4	7.1%	92.9%
16	1	1.8%	94.6%
17	1	1.8%	96.4%
18	1	1.8%	98.2%
24	1	1.8%	100.0%

Total 56 100.0%

Missing values = 6 (women reported their menses did not return or, did not respond)

Sum = 465.00

Mean = 8.30

Standard deviation = 5.49

14.1. Age of child when mother first gave Water, juices:

Current selection: mothers currently breast-feeding = 172

Month	Freq	Percent	Cum.
1	46	32.2%	32.2%
2	13	9.1%	41.3%
3	35	24.5%	65.7%
4	26	18.2%	83.9%
5	14	9.8%	93.7%
6	6	4.2%	97.9%
7	2	1.4%	99.3%
8	1	0.7%	100.0%

Total 143 100.0%

Missing values = 29

Sum = 409.00

Mean = 2.86

Standard deviation = 1.65

- 46'

14.1. Age of child when mother first gave Water, juices:
 Current selection: mothers currently not breast-feeding but
 ever breast-fed = 62

Month	Freq	Percent	Cum.
1	18	29.0%	29.0%
2	7	11.3%	40.3%
3	20	32.3%	72.6%
4	11	17.7%	90.3%
6	4	6.5%	96.8%
7	1	1.6%	98.4%
8	1	1.6%	100.0%

Total | 62 100.0%
 Sum = 175.00
 Mean = 2.82
 Standard deviation = 1.64

14.2. Age of child when mother first gave bananas, oranges:

Months	Freq	Percent	Cumm
1	4	2.2%	2.2%
2	13	7.1%	9.3%
3	45	24.6%	33.9%
4	41	22.4%	56.3%
5	29	15.8%	72.1%
6	36	19.7%	91.8%
7	7	3.8%	95.6%
8	3	1.7%	97.3%
10	2	1.1%	98.4%
12	3	1.6%	100.0%

Total | 183 100.0%
 Missing values = 54
 Sum = 819.00
 Mean = 4.48
 Standard deviation = 1.87

- 42'

14.3. Age of child when mother first gave green leafs/carrots:

Months	Freq	Percent	Cumm
1	1	0.6%	0.6%
2	4	2.5%	3.1%
3	15	9.3%	12.4%
4	24	14.9%	27.3%
5	19	11.8%	39.1%
6	43	26.7%	65.8%
7	7	4.3%	70.1%
8	21	13.0%	83.1%
9	6	3.7%	86.8%
10	1	0.6%	87.4%
11	1	0.6%	88.0%
12	15	9.3%	97.3%
13	1	0.6%	97.9%
14	1	0.6%	98.5%
17	1	0.6%	99.1%
18	1	0.6%	99.7%
Total	161	100.0%	
Missing values	=		76
Sum	=		1037.00
Mean	=		6.44
Standard deviation	=		2.97

14.4. Age of child when mother first gave potatoes/rice:

Months	Freq	Percent	Cumm
2	1	0.6%	0.6%
3	20	11.2%	11.8%
4	32	17.9%	29.7%
5	28	15.6%	45.3%
6	35	19.6%	64.9%
7	13	7.3%	72.2%
8	22	12.3%	84.5%
9	10	5.6%	90.1%
10	1	0.6%	90.7%
11	2	0.9%	91.6%
12	15	8.4%	100.0%
Total	179	100.0%	
Missing values	=		58
Sum	=		1109.00
Mean	=		6.20
Standard deviation	=		2.53

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14.5. Age of child when mother first gave meat/eggs:

Months	Freq	Percent	Cumm
0	1	0.6%	0.6%
2	1	0.6%	1.2%
3	9	5.4%	6.6%
4	24	14.5%	21.1%
5	25	15.1%	36.2%
6	38	22.9%	59.1%
7	23	13.9%	73.0%
8	14	8.4%	81.4%
9	9	5.4%	86.8%
10	3	1.8%	88.6%
11	3	1.8%	90.4%
12	11	6.6%	97.0%
13	2	1.2%	98.2%
14	1	0.6%	98.8%
18	2	1.2%	100.0%
Total	166	100.0%	
Missing values	=		71
Sum	=		1103.00
Mean	=		6.64
Standard deviation	=		2.82

14.6. Age of child when mother first gave cooking oil/sugar/honey:

Months	Freq	Percent	Cumm
1	14	7.8%	7.8%
2	8	4.4%	12.2%
3	27	15.0%	27.2%
4	38	21.1%	48.3%
5	22	12.2%	60.5%
6	35	19.4%	79.9%
7	12	6.7%	86.6%
8	10	5.6%	92.2%
9	4	2.2%	94.4%
10	1	0.6%	95.0%
11	2	1.1%	96.1%
12	6	3.3%	99.4%
15	1	0.6%	100.0%
Total	180	100.0%	
Missing values	=		57
Sum	=		902.00
Mean	=		5.01
Standard deviation	=		2.56

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15. Estimate of diarrhea prevalence in the last two weeks:

Age group in months	Diarrhea		Total
	Yes	No	
<= 2	8	30	38
	>21.1%	78.9%	> 16.0%
3 - 5	12	14	26
	>46.2%	53.8%	> 11.0%
6 - 11	33	38	71
	>46.5%	53.5%	> 30.0%
12 - 17	44	19	63
	>69.8%	30.2%	> 26.6%
>= 18	24	15	39
	>61.5%	38.5%	> 16.5%
Total	121	116	237
	51.1%	48.9%	

Chi square = 25.15
 Degrees of freedom = 4
 p value = 0.00004702

16. During the child's diarrhea, mother breast fed child:
 Current selection: mothers currently breast-feeding and
 children w/diarrhea in the last two weeks = 81

	Freq	Percent
More than usual	2	2.5%
Same as usual	66	81.5%
Less than usual	13	16.0%
Stopped completely	0	0.0%
Total	121	100.0%

17. During the child's diarrhea, mother provided liquids
 Current selection: children w/diarrhea in the last two weeks
 = 121

	Freq	Percent
More than usual	19	15.7%
Same as usual	51	42.1%
Less than usual	28	23.1%
Stopped completely	23	19.0%
Total	121	100.0%

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18. During the child's diarrhea, mother provided foods:
 Current selection: children w/diarrhea in the last two weeks
 = 121

	Freq	Percent
More than usual	8	7.0%
Same as usual	36	31.3%
Less than usual	50	43.5%
Stopped completely	21	18.3%
Total	115	100.0%
Missing values	6	

19. During the child's diarrhea, the treatment the mother provided (multiple answers allowed):
 Current selection: children w/diarrhea in the last two weeks
 = 121

	Freq	Percent
ORT	45	37.2%
Home solutions	5	4.1%
Antidiarrheal medicines	36	29.7%
Other	49	40.5%
Nothing	25	20.7%

20. During the child's diarrhea, mothers who sought advice:
 Current selection: children w/diarrhea in the last two weeks
 = 121

	Freq	Percent
Yes	73	60.7%
No	47	39.3%
Total	120	100.0%
Missing values	1	

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21. From whom did you receive advice to treat the child's diarrhea (multiple answers allowed):
Current selection: mothers of children w/diarrhea who sought for advice = 73

	Freq	Percent
Health center	53	72.6%
Pharmacy	12	16.4%
Private doctor	7	9.6%
Village Health Worker	5	6.8%
Traditional healer	2	2.7%
Traditional Birth Attendant	2	2.7%
Relative	10	13.7%
Other	16	21.9%

22. What is the most important action you would take when the child has diarrhea (multiple answers allowed):

	Freq	Percent
Take the child to the HC	177	74.7%
Give more liquids	43	18.1%
Feed the child more frequently and small quantities	11	4.6%
Stop liquids intake	5	2.1%
Stop foods intake	2	0.8%
Other	67	28.3%
Don't know	5	2.1%

23. What signs and symptoms would cause you to seek for advice when the child has diarrhea (multiple answers allowed):

	Freq	Percent
Vomiting	49	20.7%
Fever	110	46.4%
Signs of dehydration	43	18.1%
Diarrhea for more than a day	120	50.6%
Blood in the stools	36	15.2%
Other	60	25.3%
Don't know	23	9.7%

24. Child had a cough in the last two weeks:

Age group in months	Cough		Total
	Yes	No	
<= 2	12	26	38
	>31.6%	>68.4%	> 16.1%
3 - 5	13	13	26
	>50.0%	>50.0%	> 11.0%
6 - 11	34	36	70
	>48.6%	>51.4%	> 29.7%
12 - 17	35	28	63
	>55.6%	>44.4%	> 26.7%
>= 18	19	20	39
	>48.7%	>51.3%	> 16.5%

Total 113 123 236
47.9% 52.1%

Missing values = 1

Chi square = 5.60

Degrees of freedom = 4

p value = 0.23067069

25. Have you sought advice for the child's cough:

Current selection: children w/cough in the last two weeks = 113

	Freq	Percent
Yes	64	56.6%
No	49	43.4%
Total	113	100.0%

26. From whom did you seek for advice for the child's cough:
(multiple answers allowed)

Current selection: mothers of children w/cough who sought for advice = 64

	Freq	Percent
Health Center	42	65.6%
Pharmacy	10	15.6%
Private doctor	1	1.6%
Village Health Worker	5	7.8%
Traditional healer	4	6.2%
Traditional Birth Attendant	0	0.0%
Relative	16	25.0%
Other	8	12.5%

27. If you thought your child has pneumonia, where would you seek advice or treatment (multiple answers allowed):
Current selection: all mothers = 237

	Freq	Percent
Health center	161	67.9%
Pharmacy	9	3.8%
Private doctor	17	7.2%
VHW	11	4.6%
Traditional healer	3	1.2%
TBA	2	0.8%
Relative	5	2.1%
Other	11	4.6%
Don't know	6	2.5%

28. Signs and symptoms of pneumonia reported by the mother (multiple answers allowed):
Current selection: all mothers = 237

	Freq	Percent
Fast and difficult breathing	66	27.8%
Chest indrawing	2	0.8%
Lost of apatite	40	16.9%
Fever	78	32.9%
Cough	180	75.9%
Other	38	16.0%
Don't know	29	12.2%

29. Child ever received an immunization:

	Freq	Percent
Yes	201	85.5%
No	34	14.5%
Total	235	100.0%
Missing values	2	

30. Do you have the child's immunization card:

	Freq	Percent
Yes	151	74.0%
Yes, but lost it	49	24.0%
Child is not registered	4	2.0%
Total	204	100.0%
Missing values	33	

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31. Immunization coverage in an under two surveyed population according to the MOH immunization card kept by the mother was as follows:

Table 31.1
Oral Polio Vaccine status among children under 24 months old by age group in months.

Age group	Total <24 mo	OPV							
		1st	%	2nd	%	3rd	%	4th	%
Less 12 mo	134	89	66.4%	64	47.7%	42	31.3%	7	5.2%
12-23 mo	103	57	55.5%	49	47.7%	37	36.0%	5	4.9%
Total	237	146	61.6%	113	47.7%	79	33.4%	12	5.1%

Table 31.2
DPT (diphtheria/tetanus/pertussis) immunization status among children under 24 months old by age group in months.

Age group	Total <24 mo	DPT					
		1st	%	2nd	%	3rd	%
Less 12 mo	134	67	50.0%	49	36.6%	34	25.4%
12-23 mo	103	53	51.5%	43	41.8%	31	30.1%
Total	237	120	50.6%	92	38.8%	65	27.4%

Table 31.3
Measles immunization status among children under 24 months old by age group in months.

Age group	Total	Meas	%
less 12 mo	134	6	4.5%
12-23 mo	103	33	32.0%
Total	237	39	16.5%

Table 31.4
BCG immunization status among children under
24 months old by age group in months.

Age group	Total	BCG	%
less 12 mo	134	79	59.0%
12-23 mo	103	40	38.8%
Total	237	119	50.2%

Table 31.5
Fully immunized (3DPT, 3OPV, and one dose of measles
vaccine and BCG) immunization status among
children under 24 months old by age group in months.

Age group	Total	Fully immu.	%
less 12 mo	134	4	3.0%
12-23 mo	103	22	21.4%
Total	237	26	11.0%

32. At what age should the child receive the measles vaccine:

	Freq	Percent
Don't know	85	36.5%
before nine months	92	39.5%
at nine months	39	16.7%
more than nine months	17	7.3%
Total	233	100.0%
Missing values	4	

33. Do you know why a pregnant woman needs to be vaccinated against tetanus (multiple answers allowed):

	Freq	Percent
Don't know	142	59.9%
To protect the newborn	76	32.1%
To protect herself	46	19.4%
Other	2	0.8%

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34. How many doses of TT does a pregnant woman need to protect the newborn against tetanus:

	Freq	Percent
One	23	9.7%
Two	32	13.6%
More than two	49	20.8%
None	0	0.0%
Don't know	132	55.9%
Total	236	100.0%
Missing values	1	

35. In Mallco Rancho there is a program to regularly weigh children, is the child enrolled in this program:

	Freq	Percent
Yes	144	61.0%
Yes, but lost the card	42	17.8%
Child not registered	50	21.2%
Total	236	100.0%
Missing values	1	

36. According to the MOH's "Road to Health" chart, how many times has the child been weighted:
Current selection: children with the "Road to Health" chart = 144

	Freq	Percent
None	38	26.4%
One	28	19.4%
Two	16	11.1%
Three	11	7.6%
Four	17	11.8%
More than four	34	23.6%
Total	144	100.0%

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37. Weight by age curve according to the MOH's growth monitoring card:
 Current selection: children with "road to health chart" and two weighing or more = 78

Age group	Growth curve			Total
	-	↓	↑	
< 6 months	3	0	21	24
>	12.5%	0.0%	87.5%	> 30.8%
6-17 months	7	3	32	42
>	16.7%	7.1%	76.2%	> 53.8%
> 18 months	1	1	10	12
>	8.3%	8.3%	83.3%	> 15.4%
Total	11	4	63	78
	14.1%	5.1%	80.8%	

38. Who tied and cut the cord when the child was born:

	Freq	Percent
Herself	1	0.4%
Family member	85	36.0%
Neighbor	7	3.0%
TBA	20	8.5%
Health/profess.	118	50.0%
Other	3	1.3%
Don't know	2	0.8%
Total	236	100.0%
Missing values	1	

52

38.1 Age of the mother by the person who tied and cut the cord:

mother age group	fam.mem+ neighb	TBA	health/ prof.	Total
<= 19	3	2	9	14
	> 21.4%	14.3%	64.3%	> 6.3%
20 - 24	26	4	35	65
	> 40.0%	6.2%	53.8%	> 29.0%
25 - 29	26	4	32	62
	> 41.9%	6.5%	51.6%	> 27.7%
30 - 34	19	4	21	44
	> 43.2%	9.1%	47.7%	> 19.6%
>= 35	18	5	16	39
	> 46.2%	12.8%	41.0%	> 17.4%
Total	92	19	113	224
	41.1%	8.5%	50.4%	
Missing values =				13
Chi square =				5.24
Degrees of freedom =				8
p value =				0.73134076

38.2 Education of the mother by the person who tied and cut the cord:

mother's education	fam.mem/ neighb.	TBA	health/ prof.	Total
doesn't read	27	14	22	63
	> 42.9%	22.2%	34.9%	> 27.3%
primary/ reads	52	5	63	120
	> 43.3%	4.2%	52.5%	> 51.9%
secondary/ higher	14	1	33	48
	> 29.2%	2.1%	68.8%	> 20.8%
Total	93	20	118	231
	40.3%	8.7%	51.1%	
Missing values =				6
Chi square =				26.64
Degrees of freedom =				4
p value =				0.00002355

39. What did they put after cutting the cord:

	Freq	Percent
Sterile solution	59	25.0%
Non-sterile solution	7	3.0%
Don't know	98	41.5%
Nothing	72	30.5%
Total	236	100.0%

51

40. People who attended the hospital among interviewed families:
Visited Freq Percent

	Freq	Percent
yes	159	67.4%
no	77	32.6%
Total	236	100.0%

41. Question 41 was an open question regarding the opinion the community members had about the service given by the hospital (question 40). Therefore, the responses will be analyzed by APSAR staff.

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The following are the main findings of the survey:

C. Summary of results

Mother's education and activities:

Approximately 27% of the mothers can not read; and 57% of the women had only received primary education.

Near half of the mothers (46%) carry out income generation activities; 68% of them perform these activities away from home; 78% of them take their children with them, and 18% leave their children at home with some relative.

Breast Feeding practices:

Almost all mothers (99%) breast-feed their children, 72.9% are currently breast-feeding, and 27.1% had ever breast-fed their children. The average length of breast-feeding time is 12 months,

The estimated time for exclusive breast-feeding is 2.4 months, when mothers start with liquids and juices. At an average age of 4.5 months, children begin receiving fruits and semisolid foods; other food is introduced at 6 months of age.

Diarrhea management:

Half of the mothers (51%) reported their children had experienced diarrhea in the two weeks prior to the survey. 81.5% of the mothers reported that they continued breast-feeding their children as usual, and none stopped completely,

19% of the mothers stopped giving liquids completely when the child had diarrhea; just 15.7% gave them more fluids than usual,

18.3% of the mothers reported that stopped providing foods completely when the child had diarrhea, and 43.5% gave less foods. Only 38.3% gave more foods or the same as usual.

37.2% of the mothers said they treated their children with ORT, and 4.1% said they used home solutions. However, 29.7% reported they gave medicines to their children with diarrhea.

40.5% of the mothers reported treated diarrhea "other" than ORT, ORS or antibiotics. The option "other" was specified in the survey questionnaire, the APSAR field team must analyze these responses to find out what the "other" practices consists of.

The same applies to questions 21, 22, 23, and 28. In each case, the APSAR staff need to define what the term "other" means, by analyzing the detailed responses.

72.6% reported they received advice from the health center to treat the child's diarrhea.

Only 18.1% of the mothers mentioned that the signs and symptoms of dehydration would cause them to seek outside advice or treatment for the child.

Acute respiratory infections:

The prevalence of children under two years with a cough in the last two weeks was 47.9%, and 56.6% of the mothers sought advice on treating the child's cough.

Of those mothers who sought advice, 65.6% reported they went to a health center.

Mothers were not very knowledgeable about the main signs and symptoms of pneumonia, 27.8% mentioned fast and difficult breathing, and only 0.8% mentioned chest indrawing.

Childhood immunizations:

151 children under two years old (74%) presented an immunization card at the time of the survey, of those:

85% of children have ever been immunized, or have access to immunizations.

98% of the mothers reported receiving an immunization card for their children, but 24% have lost it.

OPV 66.4% of infants under 12 months old had received the first dose of OPV, and 31.3% have completed the third dose by October 1990 (table 31.1).

- 55.5% of children 12 to 23 months old had received the first dose of OPV, and 36.0% have completed the third dose by October 1990 (table 31.1).

DPT 50.0% of infants under 12 months old had received the first dose of DPT, and 30.1% have completed the third dose by October 1990 (table 31.2).

51.5% of children 12 to 23 months old had received the first dose of DPT, and 30.1% have completed the third dose by October 1990 (table 31.2).

Measles 4.5% of infants under 12 months old had received a single dose of measles vaccine, and 32.0% of children 12 to 23 months old received a single dose of measles vaccine by October 1990 (table 31.3).

BCG 59.0% of infants under 12 months old had received a single dose of BCG vaccine, and 38.8% of children 12 to 23 months old received a single dose of BCG vaccine by October 1990 (table 31.4).

Full 3.0% of infants under 12 months old have completed the schedule of immunizations, and 21.4% of children 12 to 23 months old have completed the schedule of immunizations by October 1990 (table 31.5).

16.7% of the interviewed mothers knew that the measles vaccine should be given at age nine months.

59.9% of the mothers did not know why a pregnant woman needs to be vaccinated with TT, but 34.4% said that a pregnant woman needs two doses of more of TT.

TT 60% of the mothers do not know the purpose of tetanus toxoid immunization.

Only 10% of interviewed women knew how many doses of TT are needed to protect the newborn.

Growth monitoring:

144 children (61%) presented a growth monitoring card at the time of the survey, of those:

12.5% of children age less than six months showed a curve with an horizontal or negative trend, 23.8% for children age 6-17 months, and 16.6% for children age 18 months or more.

Perinatal

Half of the deliveries (50%) are attended in a health facility or by trained professionals, a third (36%) are attended by a relative; while TBAs attend just 8.5% of the deliveries.

Cross-tabulation indicates a relation between who attended the delivery with the age and education of the mother. Younger and more educated women prefer to be attended by health professionals.

D. Implications of the Data for the Project

The results of the survey will be used to correct and adjust the project objectives of the child survival detailed implementation plan for the upcoming year.

In a very general terms, community education should play a more important role as a key CS strategy. It is not enough to get high coverage rates. Community involvement and understanding must be included in these goals.

It is important to develop a training curriculum as to how to improve health communications with mothers, and develop a supervision plan to ensure that the health messages are getting across. Most of the mothers did not know what certain vaccines protected against, or when a child should receive a certain dose of the vaccine. Although many mothers mentioned ORT, few mentioned basic principles of diarrheal management, such as administering more liquids or feeding more frequently in small quantities. The training curriculum at the community level should be focussed on simple health messages.

VI. SURVEY COSTS

Survey costs were divided between Cochabamba local costs, and PVO CSSP assistance. The local cost of the K&P survey in Cochabamba Bolivia was \$1,160 distributed as follows (in U.S. dollars)

Per diem for interviewers x 10 days x \$10.00 day	1,000
Transportation/fuel	80
Materials (photocopies, pencils, etc)	80

Total local survey costs	\$1.160

The assistance provided by PVO CSSP is \$5,260 (airfare, per diem, and 14 days in country training).

VII. DISCUSSION.

Approximately 80% of mothers need to receive health education messages in a very clear and simple way, given their educational limitations. For training sessions or any activity with the women, the team should understand that these mothers will not attend to any meeting or event without their children.

The other caretakers are older children and relatives, suggesting that in rural communities like Mallco Rancho, younger children will not stay with other people than relatives and family members. Therefore, health messages should be directed to the family in general and primary/secondary school since older children very often take care of their younger siblings.

Breast feeding practices and weaning: almost all mothers breast-feed their children in rural areas like Mallco Rancho. The exclusive breast-feeding period is difficult to establish in this survey, but the mean time for stopping breast-feeding is 12 months (SD 4.6).

Liquids are introduced to the infant's diet at two months of age, then carbohydrates, fruits and proteins are introduced gradually until the six month. This suggests that nutrition education should be focussed on the exclusive breast-feeding time and the weaning process.

Diarrhea management: the estimated point prevalence of diarrhea among children less than 24 months old was 51%, when broken down by age-group, the percentages of diarrhea is slightly higher among older children. The WHO manual for CDD surveys, cites 20% as a normal finding for children under 5 years old. The percentage of diarrhea found in Mallco Rancho is more than two times higher than WHO's citation.

42% of the mothers gave less liquids or stopped completely during the child's diarrhea, and 61% gave less foods or stopped completely. This percentages suggest that education on the dietary management of the child with diarrhea should play a more important role.

When observing the questions regarding treatment of diarrhea, 37% mentioned ORT, but 40% "other", as mentioned above, this should be examined to find the local believes and customs regarding diarrhea treatment. Herbal teas (mates) play an important role in the bolivian culture, this may be the basis for home treatment with liquids.

More than 70% of the mothers mentioned the health center for advice or treatment of their children, suggesting that the health center plays an important role in the region.

ARI: The percentage of children coughing during the last two weeks is 48%. There is no pattern when braking down by age.

As in the questions about diarrhea, mothers rely on the health center.

Childhood Immunizations: The Bolivian Ministry of Health's schedule of immunization recommends the first dose of BCG and OPV at birth; three doses of OPV and DPT at second, third and sixth months; and measles vaccine at nine months.

The survey in Mallco Rancho shows the immunization status according to the MOH's vaccination card. The initial doses for OPV vaccine (at birth) was not properly filled out in most of the cards, probably because is a new procedure. The first dose of OPV in the tables represents the first OPV vaccine the child has received at birth or any time thereafter.

According to the "State of the World's Children" (UNICEF, 1991) the Bolivia immunization coverage for children under five years old in 1989 was as follows: BCG 70%, DPT3 40%, Polio3 50%, and Measles 70%.

The present survey provides baseline information, to begin CS

activities in Mallco Rancho. The immunization coverage rates for the 12 to 23 months group are: BCG 39%, DPT3 30%, Polio3 36%, and Measles 32%. These percentages represent population based coverage rates for the surveyed children, as recorded on the vaccination card.

The immunization coverage for children 12 to 23 months old are below the national rates. The immunization expected coverage by the end of the project should exceed the survey rates and focus on fully immunizing a child before his/her first birthday.

In the surveyed population the difference between the first and fourth of OPV is more than 50% in the age 12-23 months group. The "initial" dose of OPV was added to the immunization schedule in 1990. The field team should learn how to interpret the results of OPV immunization including the initial dose.

The MOH schedule calls for only 3 doses of DPT, and the difference between the first and third dose in the 12-23 group is about 20%. Education should promote less of a difference and more efforts for tracking by the end of the project.

The survey found 32% in the age group 12-23 months have received measles vaccine, and looking at age specific distribution by month (see annex 6) the majority do not receive it in the ninth month as recommended. This should also be an emphasis for both education and tracking.

Distribution of BCG by month of immunization shows that BCG is seldom given at birth, therefore more staff training and community education is needed.

Only 3% of children receive measles vaccine at 9 months of age, and 16.7% of the interviewed mothers reported that the appropriate age for measles vaccine is at 9 months. This is a key finding for education and tracking.

One of the findings is that the community appears to have a poor knowledge of the MOH's immunization schedule. Looking at the immunization results by age of the child in the month distribution does not follow a pattern fitting the recommended antigen schedule. This suggests that children are immunized mostly during campaigns and not because parents are bringing their children to be immunized on schedule (see annex 6).

Community education stressing the EPI schedule and the importance of having the child fully immunized before age 12 months would improve the immunization coverage. Also, mothers need more education on the importance of retaining the immunization card for school entry.

A. Comments on possible problems and biases.

The small population size required the project to sample the entire population of mothers of children under two years of age. However, when APSAR/ARHC expands the project to other areas near Mallco Rancho, it will be possible to survey the entire project area using the 30 cluster sample technique.

It is important to consider possible interviewer bias in a survey such as this one, where the interviewers are lay people, trained only for short period of time. Interviewers need to ask questions in a standard manner, and not lead mothers to a certain answer. In the Mallco Rancho survey, the interviewers were very quiet and shy. This influenced the decision to extend training one more day in order to instill more self confidence to the interviewers. After intensive practice, this problem was partially overcome.

Another minor problem of this survey was that a small percentage of the population spoke just Quechua. Many technical words could not be translated. To solve this problem, some less complicated terms were used in some of the questions, making the questionnaire much simpler but less precise. Fortunately most of the population was bilingual, reducing the problem to a minimum.

Problem were found in the wording of the following questions:

Question 7: This should be adapted to rural communities where most of the people carry out activities away from home that do not generate any income.

Question 14: The majority of the mothers in the rural areas made a very poor distinction of the quality of the food for their children, and had considerably difficulty recalling the weaning period of the child.

Questions 16, 17, 18: This question need an option for those mothers who are exclusively breast-feeding their children.

Questions 19, 21, 22, 23, and 28: The APSAR/ARHC staff needs to further analyze and tabulate what "other" means. At least 15-20% of the mothers gave responses that were coded by the interviewers as other. These answers need to be examined to see if the questions can be improved, or if the problem was

in the coding by the interviewers.

B. General Impressions

The APSAR/ARHC team and the survey trainer expressed satisfaction with the process and outcome of the survey. The survey purposes were fully accomplished and in a timely manner. The field team as well as the people who came from other CS projects understood the survey process, and felt confident that eventually they will be able to carry out similar studies in their own settings.

The final interpretation was certainly the most difficult and most productive time of the whole survey. The team could really see their own achievements and constraints; it was also possible to identify areas for improvement and team training needs. The openness with which the APSAR/ARHC field team discussed the results facilitated this process.

**Knowledge and Practicess Survey Questionnaire
Andean Rural Health Care/BOLIVIA**

**ALL QUESTIONS ARE TO BE ADDRESSED TO THE MOTHER (WOMEN 14
- 49 YEARS OLD) WITH A CHILD UNDER TWO (24 MONTHS OLD OR
LESS)**

1. Name of the mother _____ Age (years) _____

Name of child under two _____

2. Date of birth _ / _ / _ (day/month/year)

3. Age (months) _____

Name of Head of Household _____

Address _____

4. Community _____

5. Date of interview _ / _ / _ Re-scheduled interview _ / _ / _

Name of interviewer _____ Appointment _ / _ / _

Signature of supervisor _____ Date _ / _ / _

6. What was the highest educational level you attained?

- 1. none []
- 2. primary reads []
- 3. primary does not read []
- 4. secondary []
- 5. other []

7. Do you do any "income generating work"?

- 1. yes []
- 2. No [] (go to 10)

8. Is your main income generating work done at home or away from home?

- 1. away from home []
- 2. at home []

9. Who takes care of (name of the child) while you are working?
(multiple answers possible; record each answer)

- 1. mother takes child with her []
- 2. husband/partner []
- 3. older child(ren) []
- 4. relatives (specify) _____ []
- 5. neighbours []
- 6. friends []
- 7. nursery school []
- 8. other(specify) _____ []

10. Are you breastfeeding (name of the child)?

1. yes [] (go to 13)

2. No []

11. Did you ever breastfeed (name of the child)?

1. Yes []

2. No [] (go to 13)

12. How old was (name of the child) when you stopped breastfeeding?

_____ months

13. How long after (name of the child)'s birth did you experience return of your menses?

_____ months

14. How old was (name of the child) when you first gave the following foods:

1. water, juices, soft drinks _____ months

2. bananas, oranges, fruits _____ months

3. leafy green, carrots _____ months

4. potatoes, rice _____ months

5. meat, eggs, beans _____ months

6. cooking fat, sugar, honey _____ months

=====

15. Has (name of the child) had diarrhoea during the last two weeks?

1. yes []

2. no [] (go to 22)

3. do not know [] (go to 22)

16. During (name of the child)'s diarrhoea, did you breast-feed: (read the choices to the mother)

1. more than usual []

2. less than usual []

3. same as usual []

4. stopped completely []

5. not breastfeeding []

17. During (name of the child)'s diarrhoea, did you provide (name of child) with fluids other than breast-milk? (read the choices to the mother)

1. more than usual []

2. less than usual []

3. same as usual []

4. stopped completely []

18. During (name of the child)'s diarrhoea, did you provide (name of child) with solid/semisolid foods?
(read the choices to the mother)

- 1. more than usual []
- 2. less than usual []
- 3. same as usual []
- 4. stopped completely []

19. When (name of the child) had diarrhoea, what treatments, if any, did you use?
(multiple answers possible; record all answers)

- 1. ORS packet []
- 2. home prepared fluids [] specify _____
- 3. anti-diarrhoea medicine or antibiotics [] specify _____
- 4. nothing []
- 5. other [] specify _____

20. When (name of the child) had diarrhea, did you seek advice or treatment for the diarrhea?

- 1. yes []
- 2. no [] (go to 22)

21. From whom did you seek advice or treatment for the diarrhoea of (name of the child)?
(multiple answers possible; record each answer)

- 1. health center []
- 2. pharmacy []
- 3. private doctor []
- 4. community health worker []
- 5. traditional healer []
- 6. traditional birth attendant []
- 7. relatives (specify) [] _____
- 8. other (specify) [] _____

22. What are important actions you should take for (name of child) if (name of the child) has diarrhoea?
(multiple answers possible; record all answers)

- 1. take the child to the aid post or health center []
- 2. give the child more to drink than usual []
- 3. give the child smaller more frequent feeds []
- 4. withhold fluids []
- 5. withhold foods []
- 6. other (specify) _____ []
- 7. do not know []

- 23 What signs/symptoms would cause you to seek advice or treatment for (name of the child)'s diarrhoea?
(multiple answers possible; record all answers)
- 1. vomiting []
 - 2. fever []
 - 3. dry mouth, sunken eyes, decreased urine output []
 - 4. diarrhoea continues for more than one day []
 - 5. blood in stool []
 - 6. other (specify) _____ []
 - 7. do not know []

- =====
24. Has (name of the child) been ill with a severe cough in the last 2 weeks?
- 1. yes []
 - 2. no [] (go to 27)

25. Did you seek advice or treatment for (name of the child)'s severe cough?
- 1. yes []
 - 2. no [] (go to 27)

26. From whom did you seek advice or treatment for (name of child)'s severe cough?
(multiple answers possible; record all answers and go to 28)
- 1. health center []
 - 2. pharmacy []
 - 3. private doctor []
 - 4. community health worker []
 - 5. traditional healer []
 - 6. traditional birth attendant []
 - 7. relatives (specify) [] _____
 - 8. other (specify) [] _____

27. If you thought (name of the child) had cough, where would you go to seek advice or treatment?
- 1. health center []
 - 2. pharmacy []
 - 3. private doctor []
 - 4. community health worker []
 - 5. traditional healer []
 - 6. traditional birth attendant []
 - 7. relatives (specify) [] _____
 - 8. other (specify) [] _____

28. What are the signs/symptoms of pneumonia that would cause you to take (name of child) to a health facility?
(Multiple answers possible; record all answers)
- 1. fast or difficult breathing []
 - 2. chest indrawing []
 - 3. loss of appetite []
 - 4. fever []
 - 5. cough []
 - 6. other (specify) _____ []
 - 7. do not know []

=====

29. Has (name of the child) ever received any immunizations?

1. yes []
2. no [] (go to 32)

30. Do you have an immunization card for (name of child)?

1. yes [] (must see card)
2. no [] (go to 32)
3. Lost it [] (go to 32)

31. Look at the vaccination card and record the dates of all the immunizations in the space below

BCG - / - / - -

OPV 1st - / - / - -
 2nd - / - / - -
 3rd - / - / - -

DPT 1st - / - / - -
 2nd - / - / - -
 3rd - / - / - -

Measles - / - / - -

32. At what age should (name of the child) receive measles vaccine?

_____ specify in months

33. Can you tell me why pregnant women need to be vaccinated with tetanus toxoid vaccine?

(multiple answers possible; record all answers)

1. to protect the woman against tetanus []
2. to protect the child at birth against tetanus []
3. to protect both mother/newborn against tetanus []
4. other (specify) _____ []
5. do not know []

34. How many tetanus toxoid injections does a pregnant woman need to protect the newborn infant from tetanus?

1. one []
2. two []
3. more than two []
4. none []
5. do not know []

=====

35. In Mallku Ranchu there is a program to frequently weigh children. Is (name of the child) registered in this program?

1. Yes [] (must see growth chart)
2. No [] (go to 38)
3. Lost it [] (go to 38)

36. (look at chart) Since November 1989, how many times has (name of child) attended Growth Monitoring sessions for weighing?

- 1. Zero []
- 2. One []
- 3. Two []
- 4. Three []
- 5. Four []
- 6. More than four. []

37. (Look at card) For (name of child)'s last two growth monitoring sessions, indicate if (name of child)'s trend is:

- 1. upwards []
- 2. horizontal []
- 3. downwards []
- 4. doesn't have 2 controls []

38. At the delivery of (name of child), who tied and cut the cord?

- 1. yourself []
- 2. family member []
- 3. neighbour []
- 4. traditional birth attendant []
- 5. health professional (physician, nurse, midwife) []
- 6. other (specify) _____ []
- 7. do not know []

39. What did they put on the stump (umbilicus)?

- 1. sterile (iodine, alcohol, medicine from health worker) []
- 2. non-sterile (ashes, mud, dung, palm wine, etc) []
- 3. do not know []
- 4. nothing []

40. Has any member of your family received attention from a health program based in Mallcu Rancho which is run by APSAR (Asociacion de programas de Salud del area rural) ?

- 1. yes []
- 2. no []

41. Please tell me what do you think of the service

ATTACHMENT 3
WORK SCHEDULE

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DIP SECTION G: COUNTRY SCHEDULES OF ACTIVITIES

Organization ARHC

Country BOLIVIA

Project Area CARABUCO-ANCORAIMES

SCHEDULE OF ACTIVITIES BY QUARTER (Check box to specify quarter and year)

	Year 1				Year 2				Year 3			
	1	2	3	4	1	2	3	4	1	2	3	4
1. Personnel in Position - specify e.g.												
Project Manager												
Technical Coordinator												
Community/village health workers CARABUCO ANCORAIMES												
Health Information System												
Other Support												
2. Health Information Systems (HIS) - specify e.g.												
Consultants/contract to design HIS												
Develop and test HIS												
Baseline survey Ancoraimes												
Design/preparation												
Data collection and analysis												
Dissemination and feedback to community and project management												
Registration/Record/System												
Design/preparation												
Implementation												
Dissemination & feedback to community & Project Management												
3. Training - specify e.g.												
Design ANCORAIMES												
Training of trainers												
Training manual and materials												
Training sessions												
Evaluation of knowledge of skills												
4. Procurement Of Supplies												

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DIP SECTION G: COUNTRY SCHEDULES OF ACTIVITIES

Organization ARHC

SCHEDULE OF ACTIVITIES BY QUARTER (Check box to specify quarter and year)

Country BOLIVIA
PROJECT AREA CARABOCO-ANCORAIMES

	Year 1				Year 2				Year 3			
	1	2	3	4	1	2	3	4	1	2	3	4
6. Service Delivery to be Initiated												
AREA 1 CARABOCO												
ORT												
Immunization												
Nutrition												
Breastfeeding/Weaning Education												
Vitamin A												
Maternal Nutrition												
Growth Monitoring Promotion												
High Risk Birth Prevention												
Other <u>ARI</u>												
AREA 2 ANCORAIMES												
ORT												
Immunization												
Nutrition												
Breastfeeding/Weaning Education												
Vitamin A												
Maternal Nutrition												
Growth Monitoring Promotion												
High Risk Birth Prevention												
Other <u>ARI</u>												
6. Technical Assistance Visits Scheduled												
HQ/HO/Regional office visits												
Local Consultants												
External technical assistance												
7. Progress Reports Required												
Annual project reviews												
Annual reports												
Midterm evaluation												
Final evaluation												

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DIP SECTION G: COUNTRY SCHEDULES OF ACTIVITIES

Organization ARHC

Country BOLIVIA

PROJECT AREA MALICO RANCHO - SIPE SIPE

SCHEDULE OF ACTIVITIES BY QUARTER (Check box to specify quarter and year)

	Year 1				Year 2				Year 3			
	1	2	3	4	1	2	3	4	1	2	3	4
1. Personnel in Position - specify e.g.												
Project Manager												
Technical Coordinator												
Community/village health workers <i>MALICO RANCHO SIPE SIPE</i>												
Health Information System												
Other Support												
2. Health Information Systems (HIS) - specify e.g.												
Consultants/contract to design HIS												
Develop and test HIS												
Baseline survey <i>MALICO RANCHO SIPE SIPE</i>												
Design/preparation												
Data collection and analysis												
Dissemination and feedback to community and project management												
Registration/Record/System												
Design/preparation												
Implementation												
Dissemination & feedback to community & Project Management												
3. Training - specify e.g.												
Design <i>SIPE SIPE</i>												
Training of trainers												
Training manual and materials												
Training sessions												
Evaluation of knowledge of skills												
4. Procurement Of Supplies												

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DIP SECTION G: COUNTRY SCHEDULES OF ACTIVITIES

Organization ARHC

SCHEDULE OF ACTIVITIES BY QUARTER (Check box to specify quarter and year)

Country BOLIVIA

PROJECT AREA MALICO RANCHO - SIPE SIPE

	Year 1				Year 2				Year 3			
	1	2	3	4	1	2	3	4	1	2	3	4
5. Service Delivery to be Initiated												
AREA 1 <u>MALICO RANCHO</u>												
ORT												
Immunization												
Nutrition												
Breastfeeding/Weaning Education												
Vitamin A												
Maternal Nutrition												
Growth Monitoring Promotion												
High Risk Birth Prevention												
Other <u>ARI</u>												
AREA 2 <u>SIPE SIPE</u>												
ORT												
Immunization												
Nutrition												
Breastfeeding/Weaning Education												
Vitamin A												
Maternal Nutrition												
Growth Monitoring Promotion												
High Risk Birth Prevention												
Other <u>ARI</u>												
6. Technical Assistance Visits Scheduled												
HQ/HO/Regional office visits	—		—		—		—					—
Local Consultants												
External technical assistance												
7. Progress Reports Required												
Annual project reviews					—		—		—			—
Annual reports					—		—		—			—
Midterm evaluation								—				
Final evaluation												—

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ATTACHMENT 4
PIPELINE ANALYSIS

The pipeline analysis report is pending, and will be submitted at the earliest possible date upon the return to work of the ARHC accountant now on sick leave.

ATTACHMENT 5
BUDGETARY REVISIONS

Total Summary Project Budget by Specific Site

	YEAR 1		YEAR 2		YEAR 3		TOTAL		GRAND
	AID	PVO	AID	PVO	AID	PVO	AID	PVO	TOTAL
<u>Country Budget</u>									
1. Carabuco	41,610	26,966	39,110	26,651	19,855	60,971	100,575	114,588	215,163
2. Mallco Rancho / Sipe Sipe	26,580	10,350	58,934	36,240	35,316	35,818	120,830	82,408	203,238
3. Ancoraines	10,000	6,000	35,031	26,511	35,031	29,811	80,062	62,322	142,384
4. Escoma District	0	4,000	6,500	7,800	6,500	7,800	13,000	19,600	32,600
5. Quillacallo	0	4,000	13,000	9,800	13,000	9,800	26,000	23,600	49,600
6. La Paz office	60,314	39,412	60,912	35,912	50,212	36,412	171,438	111,736	283,174
subtotal	138,504	90,728	213,487	142,914	159,914	180,612	511,905	414,254	926,159
indirect costs	13,851	9,073	21,349	14,291	15,091	18,061	51,191	41,425	92,616
TOTAL COUNTRY	152,355	99,801	234,836	157,205	175,905	198,673	563,096	455,679	1,018,775
<u>Headquarters Budget</u>									
Junaluska office	61,600	12,500	42,859	30,500	20,000	40,500	124,459	83,500	207,959
indirect costs	6,160	1,250	4,285	3,050	2,000	4,050	12,445	8,350	20,795
TOTAL HEADQUARTERS	67,760	13,750	47,144	33,550	22,000	44,550	136,904	91,850	228,754
GRAND TOTAL	220,115	113,551	281,980	190,755	197,905	243,223	700,000	547,529	1,247,529

Budget -- Lake Junaluska Headquarters

	YEAR 1		YEAR 2		YEAR 3		TOTAL		GRAND
	AID	PVO	AID	PVO	AID	PVO	AID	PVO	TOTAL
I. Procurement									
D. Public Health Consultant (1.8 pers. mo.)	2,500	0	5,000	2,000	5,000	2,000	12,500	4,000	16,500
subtotal Procurement	2,500	0	5,000	2,000	5,000	2,000	12,500	4,000	16,500
IV. Other Program Costs									
A. Personnel									
1. Technical									
a. Program Support Officer (8 pers. mo.)	35,000	5,000	27,859	15,000	10,000	25,000	72,859	45,000	117,859
b. Program Advisor	8,100	0	0	0	0	0	8,100	0	8,100
2. Administrative									
a. Accountant (4.8 pers. mo.)	5,750	2,750	3,500	5,000	1,750	4,250	11,000	12,000	23,000
b. Secretary (6 pers. mo.)	5,750	3,250	3,500	5,500	1,750	4,750	11,000	13,500	24,500
subtotal personnel	54,600	11,000	34,859	25,500	13,500	34,000	102,959	70,500	173,459
B. Travel (3 trips per year @ \$1,500 per trip)	4,500	1,500	3,000	3,000	1,500	4,500	9,000	9,000	18,000
TOTAL LAKE JUNALUSKA HEADQUARTERS	61,600	12,500	42,859	30,500	20,000	40,500	124,459	83,500	207,959

	YEAR 1		YEAR 2		YEAR 3		TOTAL		GRAND
	AID	PVO	AID	PVO	AID	PVO	AID	PVO	TOTAL:
I. Procurement									
A. Equipment									
1. computer	0						0	0	0
2. telephone	1,102						1,102		1,102
subtotal equipment	1,102						1,102		1,102
C. Services									
1. design of educational and HIS information system	2,500						2,500	0	2,500
subtotal services	2,500						2,500	0	2,500
D. Consultants									
1. Local									
a. Vitamin A assessment	0						0		0
2. External TA									
a. Vitamin A assessment design	0						0		0
b. HIS	0	1,000					0	1,000	1,000
c. nutrition	500	2,500					500	2,500	3,000
subtotal consultants	500	3,500	0	0	0	0	500	3,500	4,000

	YEAR 1		YEAR 2		YEAR 3		TOTAL		GRAND
	AID	PVO	AID	PVO	AID	PVO	AID	PVO	TOTAL
II. Evaluation									
A. consultant/contact			10,000	0			10,000	0	10,000
B. staff support	0	2,000	5,000	2,000	4,000	2,500	9,000	6,500	15,500
C. external audit	4,800	4,000		4,000		4,000	4,800	12,000	16,800
subtotal evaluation	4,800	6,000	15,000	6,000	4,000	6,500	23,800	18,500	42,300
IV. Other Program Cost									
A. Personnel									
1. Technical									
a. technical specialist (health information, systems development) (12 pers. no.)	7,000	0	7,000	0	12,000	0	26,000	0	26,000
subtotal technical personnel	7,000	0	7,000	0	12,000	0	26,000	0	26,000
2. Administrative									
a. National Coordinator (12 pers. no.)	8,182	7,182	8,182	7,182	8,182	8,182	24,546	22,546	47,092
b. general administrator (11 pers. no.)	5,500	4,500	5,500	4,500	5,500	5,500	16,500	14,500	31,000
c. supplies manager (11 pers. no.)	3,150	2,150	3,150	2,150	3,150	3,150	9,450	7,450	16,900
d. accountant (12 pers. no.)	2,940	1,940	2,940	1,940	2,940	2,940	8,820	6,820	15,640
e. two secretaries	7,344	7,254	7,344	7,254	7,344	7,344	22,032	21,852	43,884
f. two office assistants	2,796	2,796	2,796	2,796	2,796	2,796	8,388	8,388	16,776
subtotal admin. personnel	29,912	25,822	29,912	25,822	29,912	29,912	89,736	81,556	171,292

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	YEAR 1		YEAR 2		YEAR 3		TOTAL		GRAND
	AID	PVO	AID	PVO	AID	PVO	AID	PVO	TOTAL
IV.B. Travel and Per Diem									
1. Incountry Travel									
a. National Coordinator 6 trips/year LP-CBBA	800		800		800		2,400	0	2,400
c. technical specialist 6 trips/year LP-CBBA	600		600		600		1,800	0	1,800
d. general administrator	600		600		600		1,800	0	1,800
subtotal incountry travel	2,000		2,000		2,000		6,000	0	6,000
2. Per Diem in Country									
a. National Coordinator 60 days @ \$15/day	900		900		900		2,700	0	2,700
b. technical specialist 80 days @ \$10/day	800		800		800		2,400	0	2,400
c. general administrator 60 days @ \$10/day	600		600		600		1,800	0	1,800
subtotal per diem in country	2,300	0	2,300		2,300		6,900	0	6,900
3. International Travel									
a. 1 trip to US/year	3,600		0		0		3,600	0	3,600
b. per diem	900		0		0		900	0	900
subtotal international travel	4,500		0		0		4,500	0	4,500

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Budget -- La Paz Central Office (page 4 of 4)

	YEAR 1		YEAR 2		YEAR 3		TOTAL		GRAND
	AID	PVO	AID	PVO	AID	PVO	AID	PVO	TOTAL:
IV.C. Other Direct Costs									
1. Vehicle Use/Maintenance	150	150	150	150			300	300	600
2. Telephone Use	370	330	370	330			740	660	1,400
3. Postage	370	330	370	330			740	660	1,400
4. Office Rent	1,170	1,170	1,170	1,170			2,340	2,340	4,680
5. Subscriptions	40	10	40	10			80	20	100
6. Office Supplies	700	0	700	0			1,400	0	1,400
7. Water / Electricity	150	0	150	0			300	0	300
8. Furniture/Equip. Maint.	250	0	250	0			500	0	500
9. Computer Maintenance	250	250	250	250			500	500	1,000
10. Photocopier Expense	250	250	250	250			500	500	1,000
11. Office Maintenance	400	0	400	0			800	0	800
12. Annual Directors Meet.	600	600	600	600			1,200	1,200	2,400
13. Phone Service Hookup	1,000	1,000		1,000			1,000	2,000	3,000
subtotal other direct costs	5,700	4,090	4,700	4,090	0	0	10,400	8,180	18,580
LA PAZ CENTRAL OFFICE TOTAL	60,314	39,412	60,912	35,912	50,212	36,412	171,438	111,736	283,174

Budget -- Carabuco (page 1 of 4)

	YEAR 1		YEAR 2		YEAR 3		TOTAL		GRAND
	AID	PVO	AID	PVO	AID	PVO	AID	PVO	TOTAL
I. Procurement									
A. Equipment									
1. bicycles		3,750					0	3,750	3,750
2. computers			0				0	0	0
3. vehicle						20,000	0	20,000	20,000
subtotal equipment	0	3,750	0	0	0	20,000	0	23,750	23,750
B. Supplies									
1. Medicines, med. supplies		5,000		4,000		3,000	0	12,000	12,000
2. Child survival supplies	1,000		1,000		1,000		3,000	0	3,000
3. Educational materials	750		750		750		2,250	0	2,250
subtotal supplies	1,750	5,000	1,750	4,000	1,750	3,000	5,250	12,000	17,250

	YEAR 1		YEAR 2		YEAR 3		TOTAL		GRAND
	AID	PVO	AID	PVO	AID	PVO	AID	PVO	TOTAL
IV. Other Program Costs									
A. Personnel									
1. Technical									
a. program director (6 pers. no.)	5,000	2,000	4,000	3,000	3,000	4,000	12,000	9,000	21,000
b. MOH physician (12 pers. no.) (salary supplement)		1,800		1,800		1,800	0	5,400	5,400
c. 1 rural health technician (full-time)		6,600		6,600		6,600	-	19,800	19,800
d. 8 auxiliary nurses	14,704	2,000	13,704	3,000	4,352	12,352	32,760	17,352	50,112
e. MOH graduate nurse (12 pers. no.) (salary supplement)		1,200		1,200		1,200	0	3,600	3,600
subtotal technical personnel	19,704	13,600	17,704	15,600	7,352	25,952	44,760	55,152	99,912
2. Administrative									
a. accountant (6 pers. no.)	2,940	0	2,940	0	1,470	1,470	7,350	1,470	8,820
b. secretary (6 pers. no.)	3,672	0	3,672	0	1,836	1,836	9,180	1,836	11,016
c. office assistant (6 pers. no.)	1,398	0	1,398	0	699	699	3,495	699	4,194
d. driver (full-time)	2,796	0	2,796	0	1,398	1,398	6,990	1,398	8,388
e. groundskeeper (full-time)	0	1,416	0	1,416	0	1,416	0	4,248	4,248
subtotal, admin. personnel	10,806	1,416	10,806	1,416	5,403	6,819	27,015	9,651	36,666

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	YEAR 1		YEAR 2		YEAR 3		TOTAL		GRAND
	AID	PVO	AID	PVO	AID	PVO	AID	PVO	TOTAL
IV. (continued)									
A. Personnel (continued)									
3. Transportation									
a. use and maintenance of two vehicles	7,600	2,000	5,600	3,435	4,600	5,000	17,800	10,435	28,235
b. public transportation		200		200		200		600	600
subtotal transportation	7,600	2,200	5,600	3,635	4,600	5,200	17,800	11,035	28,835
B. Travel and Per Diem									
1. other La Paz staff to Carabuco	500	0	500	0	500	0	1,500	0	1,500
2. staff in Carabuco to La Paz	250	0	250	0	250	0	750	0	750
subtotal, in country travel & per diem	750	0	750	0	750	0	2,250	0	2,250

Budget -- Carabuco (page 4 of 4)

	YEAR 1		YEAR 2		YEAR 3		TOTAL		GRAND
	AID	PVO	AID	PVO	AID	PVO	AID	PVO	TOTAL
IV. (continued)									
C. Other Direct Costs									
1. Telephone	150	150	0	0			150	150	300
2. Office Rent	850	850	320	320			1,170	1,170	2,340
3. Subscriptions			80	80			80	80	160
4. Office Supplies			400	300			400	300	700
5. Water / Electricity			50	50			50	50	100
6. Furniture/Equip. Maint.			200	100			200	100	300
7. Printing			300	0			300	0	300
8. Office Maintenance			150	150			150	150	300
9. Training, Staff			750	750			750	750	1,500
10. Training, Volunteers			250	250			250	250	500
subtotal, other direct costs	1,000	1,000	2,500	2,000			3,500	3,000	6,500
TOTAL FIELD COSTS, CARABUCO	41,610	26,966	39,110	26,651	19,855	60,971	100,575	114,588	215,163

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Budget -- Ancoraines (page 1 of 3)

	YEAR 1		YEAR 2		YEAR 3		TOTAL		GRAND
	AID	PVO	AID	PVO	AID	PVO	AID	PVO	TOTAL
I. Procurement									
A. Equipment									
1. bicycles	0	1,000	0	1,500	0	0	0	2,500	2,500
subtotal equipment	0	1,000	0	1,500	0	0	0	2,500	2,500
B. Supplies									
1. medicine, med. supplies	0	5,000	0	5,000	0	5,000	0	15,000	15,000
2. child survival	1,000	0	1,000	0	1,000	0	3,000	0	3,000
3. educational materials	500	0	750	0	750	0	2,000	0	2,000
4. training supplies	500	0	750	0	750	0	2,000	0	2,000
subtotal supplies	2,000	5,000	2,500	5,000	2,500	5,000	7,000	15,000	22,000
IV. Other Program Costs									
A. Personnel									
1. Technical									
a. Program Director (6 pers. mo.)	7,000	0	7,000	0	7,000	0	21,000	0	21,000
b. MOH physician (12 pers. mo.)	0	0	0	1,800	0	1,800	0	3,600	3,600
c. 1 rural health technician (full-time)	0	0	3,300	3,300	3,300	3,300	6,600	6,600	13,200
d. auxiliary nurses	0	0	4,800	4,800	7,200	7,200	12,000	12,000	24,000
e. MOH graduate nurse (12 pers. mo.) (salary supplement)	0	0	0	1,200	0	1,200	0	2,400	2,400
subtotal, technical personnel	7,000	0	15,100	11,100	17,500	13,500	39,600	24,600	64,200

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Budget -- Ancoraines (page 2 of 3)

	YEAR 1		YEAR 2		YEAR 3		TOTAL		GRAND
	AID	PVO	AID	PVO	AID	PVO	AID	PVO	TOTAL
IV.A. (continued)									
2. Administrative									
a. accountant (6 pers. mo.)	0	0	1,470	1,470	1,470	1,470	2,940	2,940	5,880
b. secretary (6 pers. mo)	0	0	1,836	1,836	1,836	1,836	3,672	3,672	7,344
c. office assistant (6 pers. mo.)	0	0	699	699	699	699	1,398	1,398	2,796
d. driver (full-time)	0	0	1,398	1,398	1,398	1,398	2,796	2,796	5,592
e. groundskeeper (full-time)	0	0	708	708	708	708	1,416	1,416	2,832
subtotal admin. personnel	0	0	6,111	6,111	6,111	6,111	12,222	12,222	24,444
3. Transportation									
a. use and maintenance of two vehicles	1,000	0	7,000	2,600	4,600	5,000	12,600	7,600	20,200
b. public transportation	0	0	0	200	0	200	0	400	400
subtotal transportation	1,000	0	7,000	2,800	4,600	5,200	12,600	8,000	20,600
B. Travel and Per Diem									
a. La Paz staff to Ancoraines	0	0	500	0	250	0	750	0	750
b. Ancoraines staff to La Paz	0	0	250	0	500	0	750	0	750
subtotal, incountry travel & per diem	0	0	750	0	750	0	1,500	0	1,500

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	YEAR 1		YEAR 2		YEAR 3		TOTAL		GRAND
	AID	PVO	AID	PVO	AID	PVO	AID	PVO	TOTAL
IV. (continued)									
C. Other Direct Cost									
a. workshops for 60 community volunteers 5 days @ \$5 per day	0	0	1,500	0	1,500	0	3,000	0	3,000
b. workshops for auxiliary nurses 9 persons X 18 days per year X \$5 per day	0	0	810	0	810	0	1,620	0	1,620
c. transportation for aux. nurse training 9 persons X \$70 per trip X 4 trips	0	0	1,260	0	1,260	0	2,520	0	2,520
subtotal other direct cost	0	0	3,570	0	3,570	0	7,140	0	7,140
TOTAL FIELD COST, ANCORAIMES	10,000	6,000	35,031	26,511	35,031	29,811	80,062	62,322	142,384

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Budget -- Escoma District

	YEAR 1		YEAR 2		YEAR 3		TOTAL		GRAND
	AID	PVO	AID	PVO	AID	PVO	AID	PVO	TOTAL
I. Procurement									
A. Equipment									
1. audiovisual equipment			0		0		0	0	0
2. Supplies									
1. child survival			1,500		1,500		3,000	0	3,000
2. educational materials			500		500		1,000	0	1,000
3. training supplies			500		500		1,000	0	1,000
ubtotal equipment and supplies	0	0	2,500	0	2,500	0	5,000	0	5,000
IV. Other Program Costs									
A. Personnel									
1. Technical									
a. District Medical Director (salary supplement)		4,000		4,000		4,000	0	12,000	12,000
b. District Statistician (salary supplement)		0		1,800		1,800		3,600	3,600
ubtotal personnel	0	4,000	0	5,800	0	5,800	0	15,600	15,600
A3. Transportation									
a. vehicle use and maintenance (MOH vehicle)			1,000	1,000	1,000	1,000	2,000	2,000	4,000
B. Travel and Per Diem									
1. per diem for MOH personnel			1,500	1,000	1,500	1,000	3,600	2,000	5,000
C. Other Direct Cost									
1. training cost									
a. workshops for district personnel			1,500		1,500		3,000		3,000
ubtotal -- transportation, travel, other direct cost	0	0	4,000	2,000	4,000	2,000	8,000	4,000	12,000
TOTAL ESCOMA DISTRICT	0	4,000	6,500	7,800	6,500	7,800	13,000	19,600	32,600

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Budget -- Mallico Rancho / Sipe Sipe (page 1 of 4)

	YEAR 1		YEAR 2		YEAR 3		TOTAL		GRAND
	AID	PVO	AID	PVO	AID	PVO	AID	PVO	TOTAL
I. Procurement									
A. Equipment									
1. vehicle				20,000			0	20,000	20,000
2. bicycles		1,250					0	1,250	1,250
3. computer			0				0	0	0
4. photocopier	0						0	0	0
5. phone line	1,600						1,600	0	1,600
subtotal equipment	1,600	1,250	0	20,000	0	0	1,600	21,250	22,850
B. Supplies									
1. medicines, med. supplies	0	5,000	0	5,000	0	5,000	0	15,000	15,000
2. child survival	1,000	0	1,000	0	1,000	0	3,000	0	3,000
3. educational materials	0	0	750	0	750	0	1,500	0	1,500
4. training supplies	0	0	750	0	750	0	1,500	0	1,500
subtotal supplies	1,000	5,000	2,500	5,000	2,500	5,000	6,000	15,000	21,000

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	YEAR 1		YEAR 2		YEAR 3		TOTAL		GRAND
	AID	PVO	AID	PVO	AID	PVO	AID	PVO	TOTAL
IV. Other Program Costs									
A. Personnel									
1. Technical									
a. Program Director (6 pers. mo.)	12,000	0	12,000	0	6,000	6,000	30,000	6,000	36,000
b. MOH physician (12 pers. mo.) (salary supplement)		1,800		1,800		1,800	0	5,400	5,400
c. 1 rural health technician (full-time)				6,600		6,600	0	13,200	13,200
d. auxiliary nurses	6,264	0	12,528	0	12,528	0	31,320	0	31,320
e. MOH graduate nurse (12 pers. mo.) (salary supplement)	0	1,200	0	1,200	0	1,200	0	3,600	3,600
subtotal technical personnel	18,264	3,000	24,528	9,600	18,528	15,600	61,320	28,200	89,520
2. Administrative									
a. accountant (12 pers. mo.)	1,300	0	5,880	0	2,940	2,940	10,120	2,940	15,060
b. secretary	0	0	7,344	0	3,672	3,672	11,016	3,672	14,688
c. office assistant (12 pers. mo.)	0	0	2,800	0	1,400	1,400	4,200	1,400	5,600
d. driver (12 pers. mo.)	0	0	2,796	0	1,398	1,398	4,194	1,398	5,592
e. groundskeeper (12 pers. mo.)	1,416	0	1,416	0	708	708	3,540	708	4,248
subtotal, administrative personnel	2,716	0	20,236	0	10,118	10,118	33,070	10,118	43,188

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	YEAR 1		YEAR 2		YEAR 3		TOTAL		GRAND
	AID	PVO	AID	PVO	AID	PVO	AID	PVO	TOTAL
IV.A. (continued)									
3. Transportation									
a. use and maintenance of two vehicles	2,000	0	7,200	0	2,200	5,000	11,400	5,000	16,400
b. public transportation	0	100	0	100	0	100	0	300	300
subtotal, transportation	2,000	100	7,200	100	2,200	5,100	11,400	5,300	16,700
C. Other Direct Costs									
1. Training									
a. workshops for 50 community volunteers 5 days @ \$15 per day	0	0	1,250	0	1,250	0	2,500	0	2,500
b. workshops for nurses, 8 persons X 18 days/yr X \$5 per day	0	0	720	0	720	0	1,440	0	1,440
subtotal, training	0	0	1,970	0	1,970	0	3,940	0	3,940

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Budget -- Mallco Rancho / Sipe Sipe (page 4 of 4)

	YEAR 1		YEAR 2		YEAR 3		TOTAL		GRAND
	AID	PVO	AID	PVO	AID	PVO	AID	PVO	TOTAL
IV.C. (continued)									
2. Office Expenses									
a. postage		340	200	0			200	340	540
b. telephone		0	950	0			950	0	950
c. office / rental	1,000		0	950			1,000	950	1,950
d. office / supplies		150	450	0			450	150	600
e. water / electricity		460	500	0			500	460	960
f. printing		50	300	450			300	500	800
g. office maintenance			100	140			100	140	240
subtotal, office expenses	1,000	1,000	2,500	1,540			3,500	2,540	6,040
TOTAL FIELD COSTS MALLCO RANCHO / SIBE SIBE	26,580	10,350	58,934	36,240	35,316	35,818	120,830	82,408	203,238

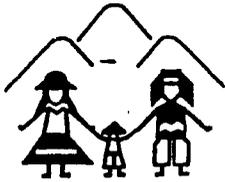
9/10

Budget -- Quillacallo District

	YEAR 1		YEAR 2		YEAR 3		TOTAL		GRAND
	AID	PVO	AID	PVO	AID	PVO	AID	PVO	TOTAL
I. Procurement									
A. Equipment									
1. audiovisual equipment			0		0		0	0	0
B. Supplies									
1. child survival			4,000		4,000		8,000	0	8,000
2. educational materials			1,250		1,250		2,500	0	2,500
3. training supplies			1,250		1,250		2,500	0	2,500
subtotal equipment and supplies	0	0	6,500	0	6,500	0	13,000	0	13,000
IV. Other Program Costs									
A. Personnel									
1. Technical									
a. District Medical Director (salary supplement)		4,000		4,000		4,000	0	12,000	12,000
b. District Statistician (salary supplement)		0		1,800		1,800		3,600	3,600
subtotal personnel	0	4,000	0	5,800	0	5,800	0	15,600	15,600
A3. Transportation									
a. vehicle use and maintenance (MOH vehicle)			2,000	2,000	2,000	2,000	4,000	4,000	8,000
B. Travel and Per Diem									
1. per diem for MOH personnel			2,000	2,000	2,000	2,000	4,000	4,000	8,000
C. Other Direct Cost									
1. training cost									
a. workshops for district personnel			2,500		2,500		5,000		5,000
subtotal -- transportation, travel, other direct cost	0	0	6,500	4,000	6,500	4,000	13,000	8,000	21,000
TOTAL QUILLACALLO DISTRICT	0	4,000	13,000	9,800	13,000	9,800	26,000	23,600	49,600

ATTACHMENT 6

MEMORANDUM



ANDEAN RURAL HEALTH CARE

Promoting *Hope Through Health* In the Rural Areas of Bolivia

ARHC health programs
In Bolivia:

Carabuco Health Area
on Lake Titicaca
31 villages
10,000 people

Mallco Rancho Health Area
near Cochabamba
11 villages
5,600 people

Montero near Santa Cruz
Villa Cochabamba
6,500 people

New health programs
where we will work
because of the new AID
child survival grant:

Ancoraimes Health Area
on Lake Titicaca
37 villages
18,100 people

Sipe Sipe Health Area
near Cochabamba
14 villages
9,400 people

Without your help,
working together with
Andean Rural Health Care,
these 49,600 people will
have *no* medical care.

Chair, Board of Directors
Bonnie Jones Gehweiler

Executive Director, USA
Martha M. Edens, CFRE

Medical Director, USA
Henry B. Perry, III, M. D.,
Ph.D., M.P.H.

National Coordinator of Projects,
Bolivia
Nathan C. Robison

Project Coordinators, Bolivia
Dardo Chavez, M. D.
Orlando Taja, M.D., D.D.S., M.P.H.

June 14, 1991

Mr. Ed Thomas, SER/OP
Agency for International Development
Room 1500 SA-14
Washington, DC 20523

Dear Mr. Thomas:

With this letter I am requesting that selected funds provided through our AID Child Survival VI grant (number OTR-0500-A-00-0088-00) be reprogrammed. This will help us to better serve our target population and meet the costs of the project as they are now unfolding. This request incorporates: 1.) required changes to the original budget due to errors of including equipment purchases over \$500 in the AID portion of the budget; and, 2.) budget changes previously requested in my letter to you of March 5, 1991. Thus, this letter summarizes all of our requested changes to the budget.

These modification changes are based on an extensive review of our plans for implementing the grant, consistent with the submitted Detailed Implementation Plan (DIP). We are proposing only that certain funds be reprogrammed and we are neither requesting additional funds nor an extension to the contract period. Provided below is the amount of funding that we request to be reprogrammed, the original line items of these funds, the line items against which we would like to apply these funds, and a brief rationale for these changes.

Funding Amount

Original
Line Item

Proposed New
Allocation

\$ 19,800

Various
Equipment
Expenses

Lake Junaluska
Program Personnel
and Selected Other
Direct Costs

P. O. Box 216 (9 Lakeshore Drive), Lake Junaluska, NC 28745 Telephone: 704/452-3544

af

Rationale

Several pieces of equipment were proposed to be purchased using AID funds during the three year project. Since these are not allowable AID expenses, we are requesting that these funds be reprogrammed to cover other essential project costs. Originally the proposed equipment included:

La Paz Office computer (year 1)	\$ 4,000
Carabuco computer (year 2)	3,500
Mallco Rancho photocopier (year 1)	2,800
Mallco Rancho computer (year 2)	3,500
Escoma audiovisual equipment (years 2 and 3)	2,000
Quillacollo audiovisual equipment (years 2 and 3)	<u>4,000</u>
TOTAL	\$19,800

We propose that these expenditures be reprogrammed to cover the following expenses:

Lake Junaluska Program Advisor for Evaluation and Quality Assurance	\$ 8,100
La Paz Office Other Direct Costs	4,700
Carabuco Other Direct Costs	3,500
Mallco Rancho Other Direct Costs	<u>3,500</u>
TOTAL	\$19,800

The Lake Junaluska Program Advisor (Dr. Henry Perry) will provide essential support in the strengthening of the quality of the project's technical intervention, as well as participate in project evaluation activities. The remaining Other Direct Costs (ODC's) are essential annual expenses related to the administration of the project and are expected to be expended over the latter year and one-half of the project period. These expenses are summarized in Attachments 1 and 2. (Please note in Attachment 1 that we are requesting only support for ODC's exclusive of the telephone service hookup - \$1,000 - which is a one-time cost requested to be covered elsewhere in this modification request.)

<u>Funding Amount</u>	<u>Original Line Item</u>	<u>Proposed New Allocation</u>
\$ 6,359	Indirect Costs (miscalculated)	Lake Junaluska Program Support Officer

Rationale

The approved indirect rate for this grant is 10 percent. However it was mistakenly calculated and approved at a rate of 11.11 percent. The difference between these two rates is \$6,359. We are requesting that this amount be applied against the salary of the Lake Junaluska Program Support Officer, who was hired at a considerably higher rate (\$49,000) than was proposed in the original grant budget request (\$35,000).

<u>Funding Amount</u>	<u>Original Line Item</u>	<u>Proposed New Allocation</u>
\$ 6,500	Lake Junaluska Public Health Consultant	Lake Junaluska Program Support Officer

Rationale

This represents a partial reprogramming of the \$9,000 consultant support for Year 1, for the same reason cited above. These funds will be expended over the first year and one-half of the grant period.

\$ 8,500	La Paz Office Consultants	International travel, audit and selected Other Direct Costs
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Rationale

This also represents a partial reprogramming of the \$9,000 consultant support for Year 1, in order to cover expenses not included in the original proposal. These expenses would include two international trips by Bolivian program staff to our International (Lake Junaluska) Office (@ \$1,500 per trip), an audit of the Bolivian portion of the program required by AID in fulfillment of our grant (@ \$4,800), and selected La Paz Office ODC's for Year 1 (@ \$700) shown in Attachment 1, for a total of \$8,500.

\$ 5,000	La Paz Office Evaluation Staff	Selected Other Direct Costs
----------	--------------------------------	-----------------------------

Rationale

It is now anticipated that evaluation activities will begin early in Year 2 of the grant. There are sufficient funds in Year 2 to cover these costs. As a result, we request that these Year 1 funds be reprogrammed to cover selected La Paz Office Other Direct Costs during the first year and one-half of the project, as shown in Attachment 1.

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<u>Funding Amount</u>	<u>Original Line Item</u>	<u>Proposed New Allocation</u>
\$10,000	La Paz Office Other Program Costs - Technical Program Specialist	Lake Junaluska Program/Personnel

Rationale

The Technical specialist proposed in the originally approved budget has been hired. However, this person was hired at a later date than was anticipated, and additional funding for this position has been secured from an in-country source. As a result, we would like to reprogram \$5,000 of the Year 1 line item estimate of \$12,000, and \$5,000 of the Year 2 estimate in order to cover the costs of crucial Lake Junaluska support staff, including the Accountant (\$5,000) and the Secretary (\$5,000), to be expended over the first year and one-half of the grant.

The total amount that we request AID to consider for reprogramming is \$56,159. I thank you in advance for your consideration of this request, and look forward to your response.

Sincerely yours,



David Shanklin
Program Director

cc: John McEnaney
Regina Coleman
DS/dr

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ATTACHMENT 1

OTHER DIRECT COST

<u>Line Item</u> <u>Support</u>	<u>Proposed AID Support</u>	<u>Proposed PVO</u>
<u>La Paz Office:</u>		
Vehicle Use/Maintenance	150	150
Telephone Use	370	330
Postage	370	330
Office Rent	1,170	1,170
Subscriptions	40	10
Office Supplies	700	0
Water/Electricity	150	0
Furniture/Equipment Maintenance	250	0
Computer Maintenance	250	250
Photocopier Expense	250	250
Office Maintenance	400	0
Annual Directors Meeting	600	600
Telephone Service Hookup	<u>1,000</u>	<u>1,000</u>
	\$ 5,700	\$ 4,090

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ATTACHMENT 2

OTHER DIRECT COSTS

<u>Line Item</u> <u>Support</u>	<u>Proposed AID Support</u>	<u>Proposed PVO</u>
<u>Carabuco:</u>		
Telephone	150	150
Office Rent	1,170	1,170
Subscriptions	80	80
Office Supplies	400	300
Water/Electricity	50	50
Furniture/Equipment Maintenance	200	100
Printing	300	0
Office Maintenance	150	150
Training, Staff	750	750
Training, Volunteers	<u>250</u>	<u>250</u>
	\$ 3,500	\$ 3,000
<u>Mallco Rancho:</u>		
Postage	200	340
Telephone	950	0
Office/Rental	1,000	950
Office/Supplies	450	150
Water/Electricity	500	460
Printing	300	500
Office/Maintenance	<u>100</u>	<u>140</u>
	\$ 3,500	\$ 2,540

ANDEAN RURAL HEALTH CARE PROGRAMS

MANUAL ON DIARRHEA

APSA
ASOCIACION DE PROGRAMAS
DE SALUD DEL AREA RURAL
COCHABAMBA - BOLIVIA



MALLCO-RANCHO MARCH: 1991
COCHABAMBA-BOLIVIA

MANUAL ON DIARRHEA

PREPARED BY:

COMMUNITY HEALTH WORKERS

REVISED AND ILLUSTRATED:

ANDEAN RURAL HEALTH CARE PROGRAMS

DR. ORLANDO TAJA K. EXECUTIVE DIRECTOR

MS. ADELA ASBUN A. WORK TEAM COORDINATOR

MR. MACLOVIO MAMANI AUXILIARY NURSE

MR. LUCIANO CESPEDES AUXILIARY NURSE

MALICO RANCHO - MARZO 1991
COCHABAMBA - BOLIVIA

Forward

The purpose of the present manual on diarrhea, prepared by the community health workers, is to provide information and orientation on ways to approach and avoid diarrheal disease. We believe that the terminology and language presented here is simple and appropriate for all levels (of the community), especially since the manual was written by health workers who come from the communities they serve. At the same time, we would like to point out that it is composed of their own expressions and demonstrates their varying levels of health training they have received from Andean Rural Health Care, which is oriented toward creating sustainable health program in the future for communities, not to mention integrated community development activities according to the needs of each community.

The community health workers come from different communities of the Mallco Rancho service area, which includes the county of Mallco Rancho and some adjacent communities.

The contents of the present manual are almost exclusively from the community health workers. The training team participated in all revisions, diagrams, and production.

Let us present the community health workers and the communities they represent.

- Orlando Vargas	Mallco Rancho
- Juan Camacho	Viloma
- Magaly Rojas	Mallco Rancho
- Wilson Almanza	Coachaca Chico
- Antonieta Quiroz	Sauce Rancho
- Zenon Almanza	Mallco Chapi
- Alicia Chitali	Coachaca Chico
- Arminda Coca	Sauce Rancho
- Angel Quiroz	Mallco Chapi
- Cecilio Gonzales	Chinchilla
- Andrea Rojas	Coachaca Chico
- Angel Romero	Payacollo
- Eliodoro Molina	Vilomilla
- Ricardo Guzman	Quirus Rancho
- Freddy Rocha	Caramarca
- Efrain Rojas	Coordinador de los Educadores

This manual on "Diarrhea" is testimony of the abilities of the community health workers, which has been in the works since October 1990 to the present date.

MINISTERIO DE SALUD
TRAINING TEAM
ANDEAN RURAL HEALTH CARE PROGRAMS
MALLCO RANCHO, MARCH 1991

INTRODUCTION

Diarrhea is a burning problem in this country and at the top of the health agenda.

To introduce this first manual which is titled "Diarrhea", prepared by the community health workers of Mallco Rancho, we want to express in simple terms: the concepts of the illness, symptoms which are presented, the way to approach it at a community level and at home, and how to identify serious cases in order to refer them to the nearest hospital or clinic.

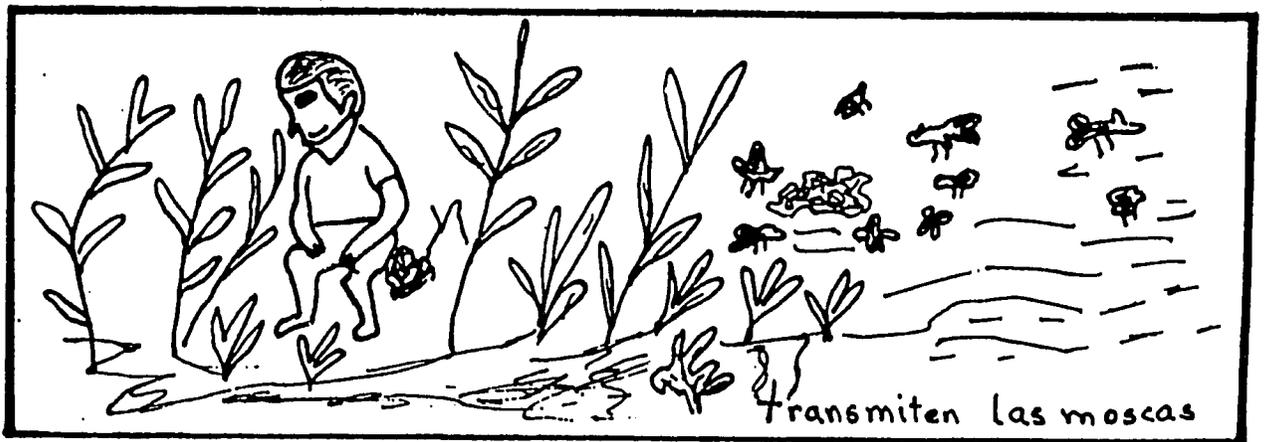
We should also point out that the fundamental objective of this manual is to provide orientation on preventive measures or ways to avoid this illness that attacks children, principally of the lower socio-economic classes.

Andean Rural Health Care Training Team

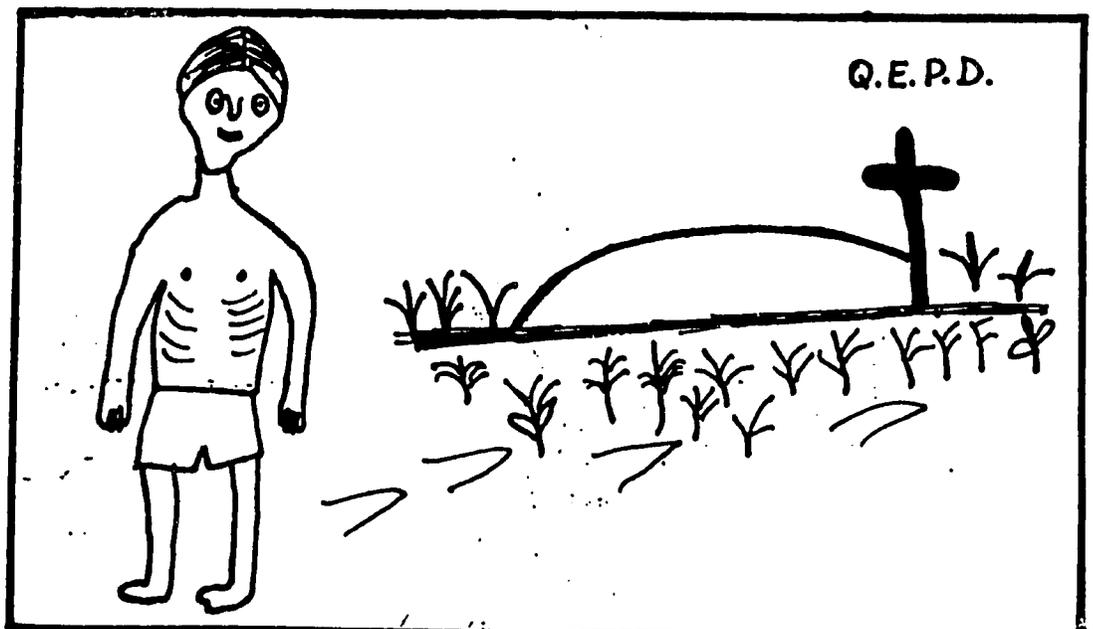
Avoid unnecessary deaths, and in the future be able to see our children healthy and taking advantage of their good health. M. Rojas

What is Diarrhea

Diarrhea is a liquid deposit (feces) occurring more than three times a day. It is produced when fecal germs or bacteria are introduced to the mouth and digestive system where their reproduction is very rapid, causing an inflammation of the intestines and the loss of a great amount of water and salts from the body.



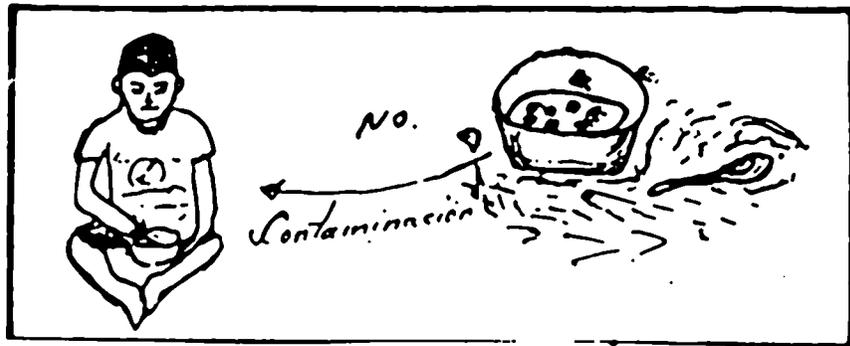
Diarrhea is an illness found frequently in the infant population (babies), is the principal cause of death of the children of Bolivia and, also occurs in our communities.



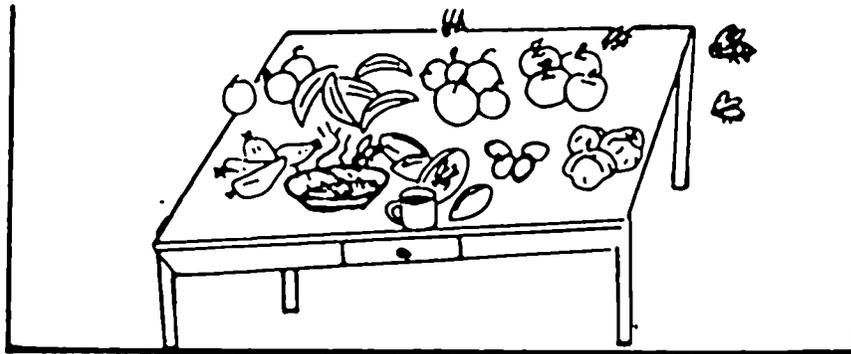
CAUSES

Diarrhea is provoked by different causes, for example:

- When we consume contaminated (dirty) foods.



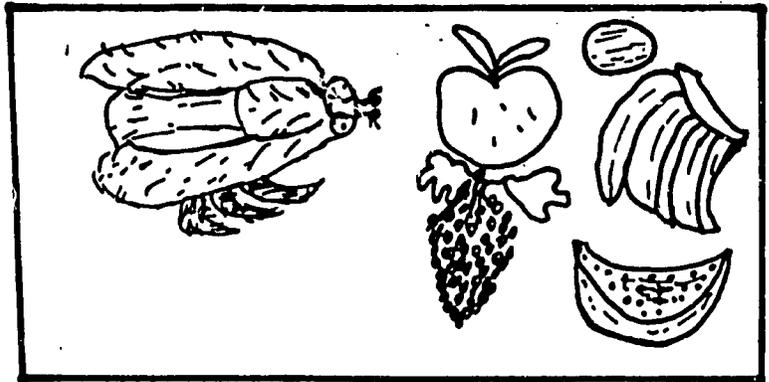
- When there is no hygiene in the preparation of foods.



- When children are not given mothers milk and a bottle is poorly prepared.



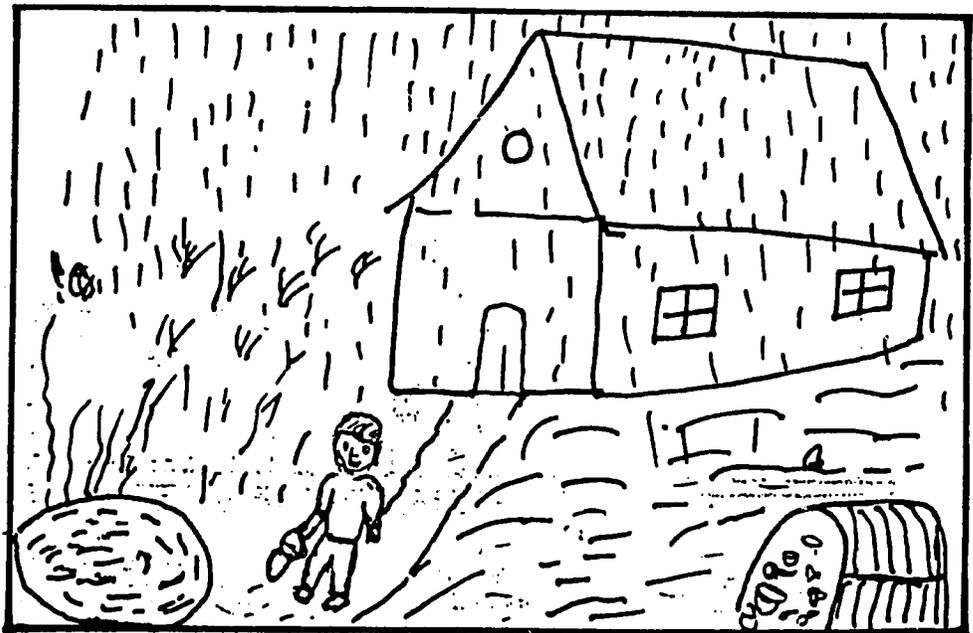
- The consumption of green, rotten or dirty fruits.



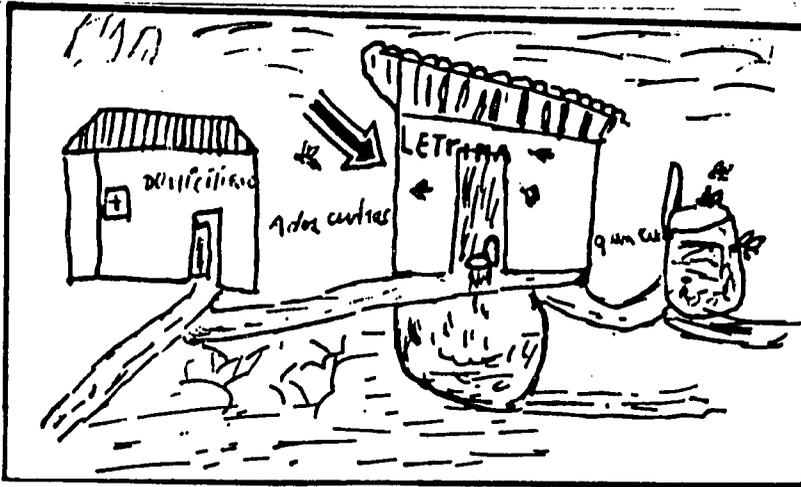
- When we drink water that has not been boiled or treated.



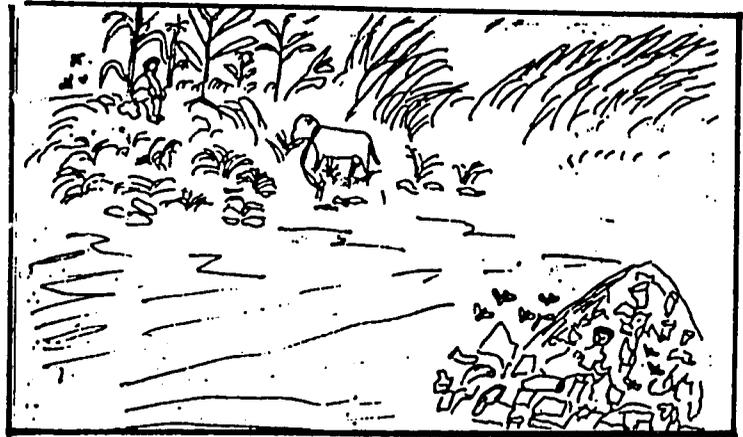
- Containers of water that are contaminated by feces carried by rain runoff.



- Latrines that are not cared for properly or do not exist.



- The poor disposal of garbage.



- Dirty hands and long fingernails are also one of the causes of diarrhea.



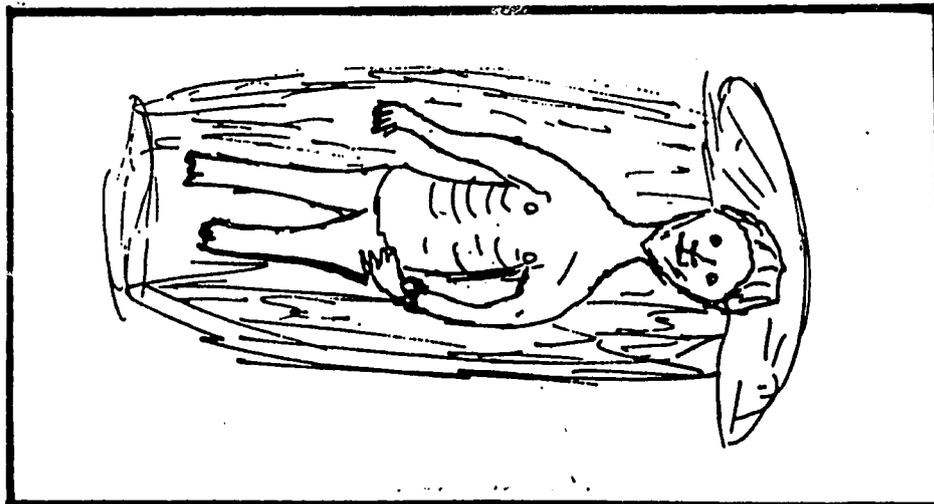
We protect ourselves from diarrhea and other illnesses by maintaining good hygiene.

J. Camacho

The Signals of Serious Illness

The signs present in a child with serious diarrhea are:

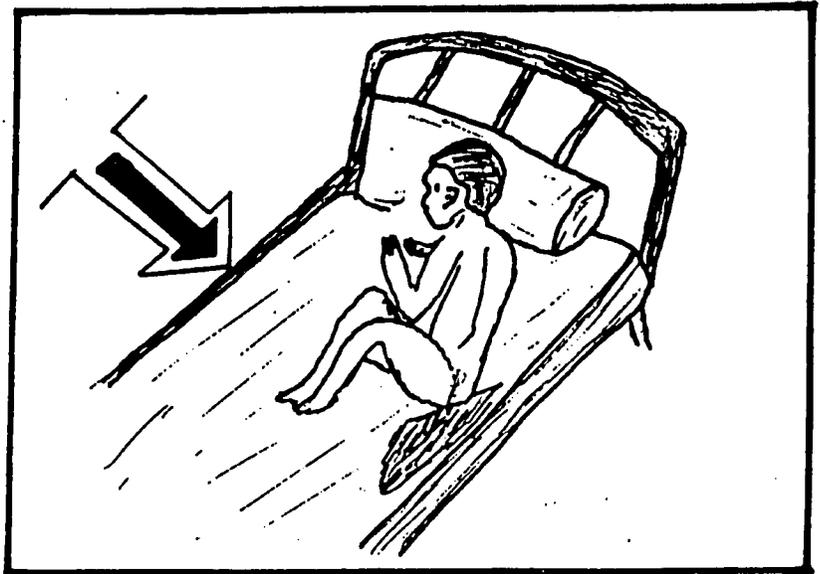
- Feces are semi-liquid and occur more than three times a day
- Sunken eyes
- Cold hands and feet
- Dry skin
- No tears in the eyes
- Dry mouth



These signs mean that the child could die soon: It is an emergency!!! The child should be taken to the hospital immediately. E. Rojas

It is not necessary to know a lot in order to know that a child has diarrhea, generally it is the mother who recognizes the illness.

- The child dirties the bed frequently while sleeping
- The feces become liquid and come out like water, sometimes containing mucus or blood



Many times diarrhea is accompanied by vomiting.

- Stomach ache, and sometimes the patient has a temperature
- Refuses food

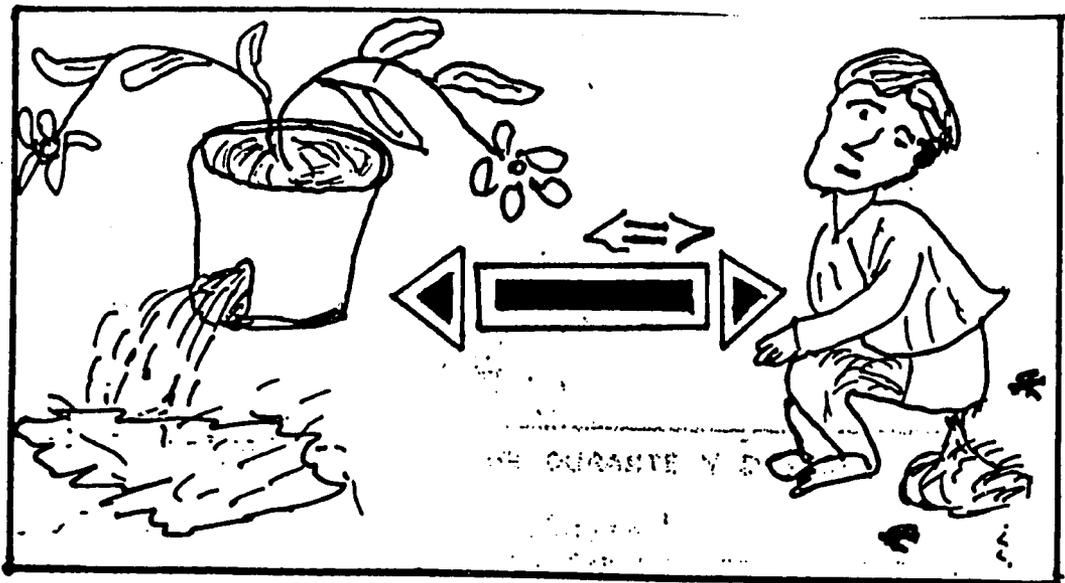


What to Do

Take care of younger children. Try to make sure they do not get diarrhea and if they do be careful that they do not get dehydrated. Give them food according to their needs.



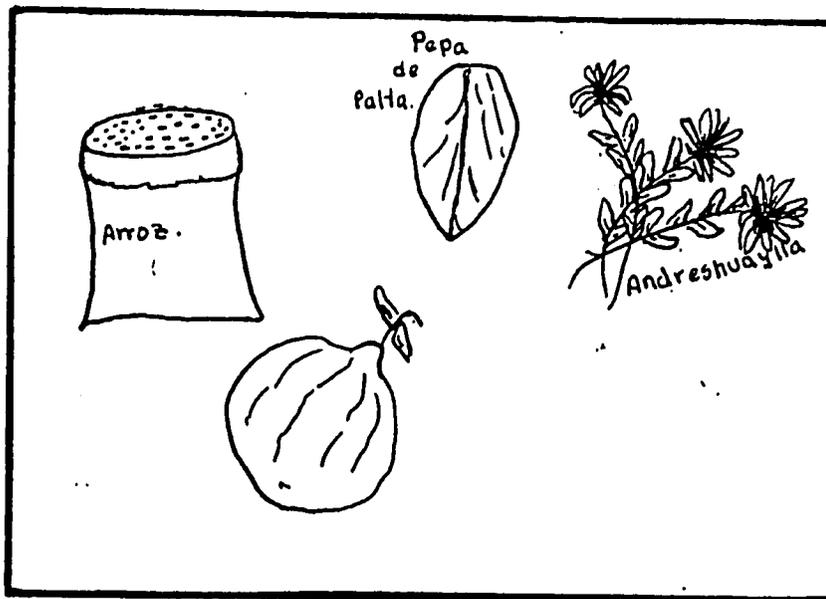
When a child has diarrhea he loses a lot of liquid and can get dehydrated and may die. To avoid this you must give more liquids to the child to replace what he is losing. To do this prepare a home remedy (suero casero).



Continue to give mother's milk, give bland foods to children with diarrhea.



Make rice water with the seed of an avocado, cinnamon, pomegranate and give to the child lukewarm. You may also give the child water boiled with the membrane of andreseshuaylla (the type with yellow flowers).

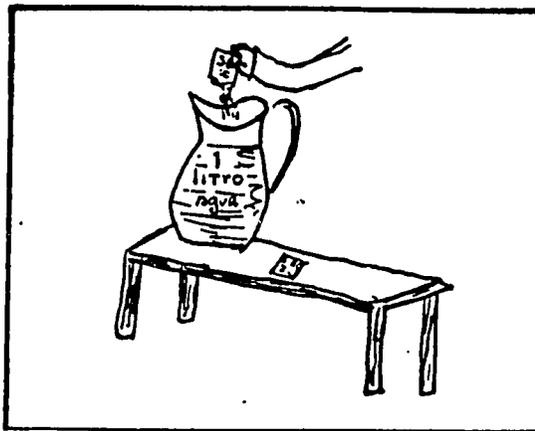


The mother should always give her milk during and after diarrhea. M. Rojas

Replace Liquids

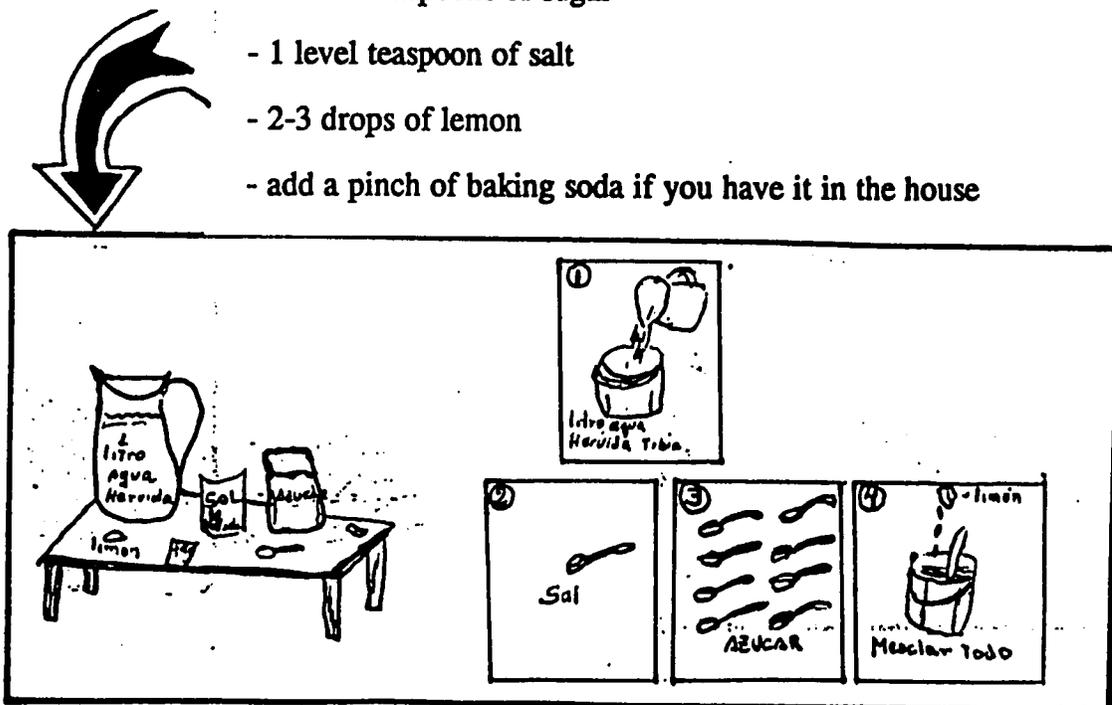
Diarrhea is the loss of salt and liquid from the body which should be replaced immediately.

- Acquire an oral rehydration packet
- Get boiled water that is warm and pour a packet into it
- Make the child with diarrhea drink this preparation continuously, until the child recuperates

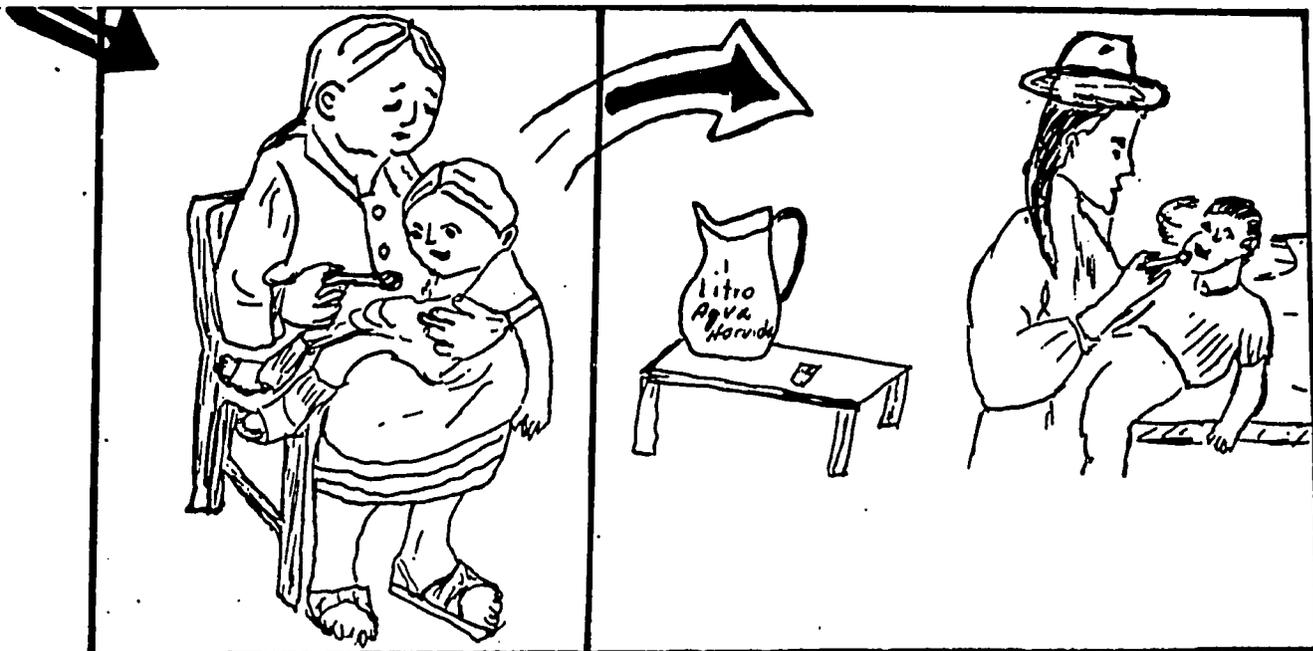


The home remedy (suero casero) is also prepared in a liter of boiled water that has been cooled. Add the following:

- 8 level teaspoons of sugar
- 1 level teaspoon of salt
- 2-3 drops of lemon
- add a pinch of baking soda if you have it in the house

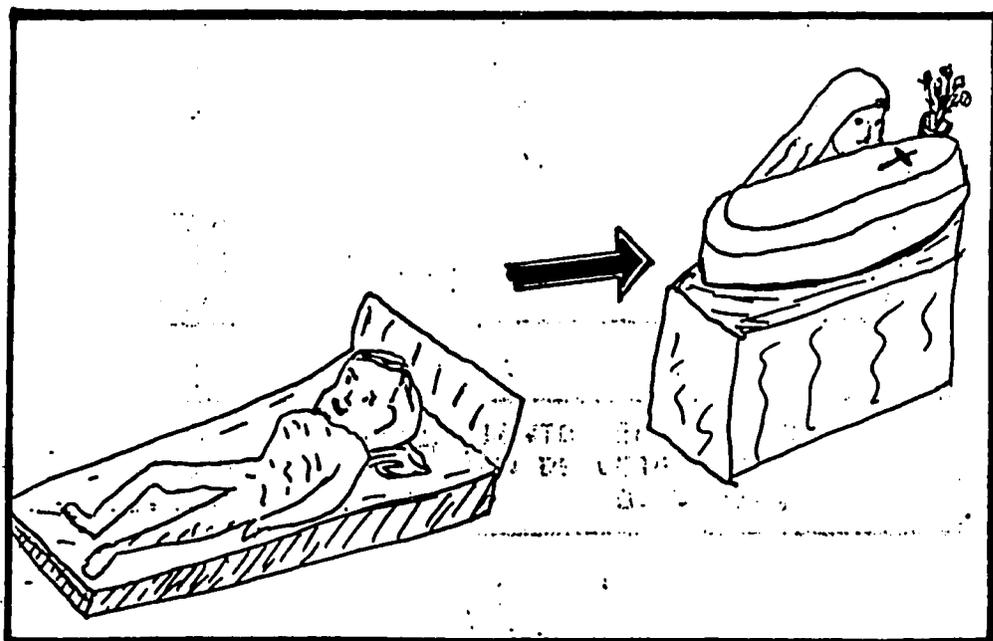


All of this is mixed in a liter of water and given to the child little by little until it is all gone. If the child does not finish it in one day, it should be thrown out and another one prepared because the solution only lasts for 24 hours.



Why does the child with diarrhea die?

Because of diarrhea and vomiting, the body of the child loses water and salt producing dehydration, and the body of the child can dry out, leading to death.



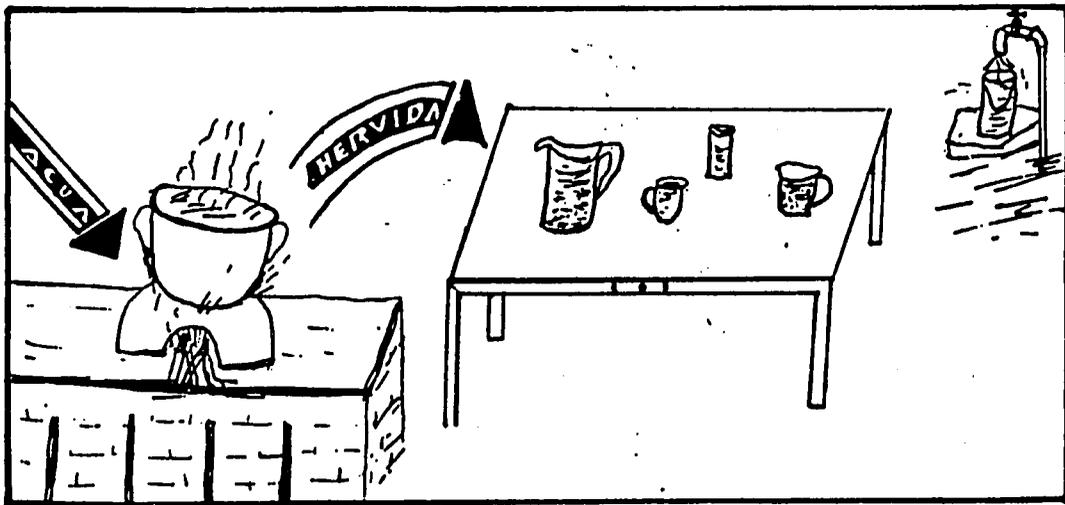
Ways to Avoid Diarrhea (Prevention)

To avoid diarrhea we must educate our communities about hygiene, nutrition, as well as assisting in providing basic health facilities, such as latrines, systems for potable water, etc.

The principal actions for preventing diarrhea are the following:

Water

- Boil the water that you drink
- Do not drink water that has not been boiled or treated
- Do not drink dirty or muddy water
- For all consumption, use water that has been boiled or is potable and is kept in clean containers



Try to build basic health facilities, especially potable water systems and latrines.

O. Vargas

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Hygiene of the Hands

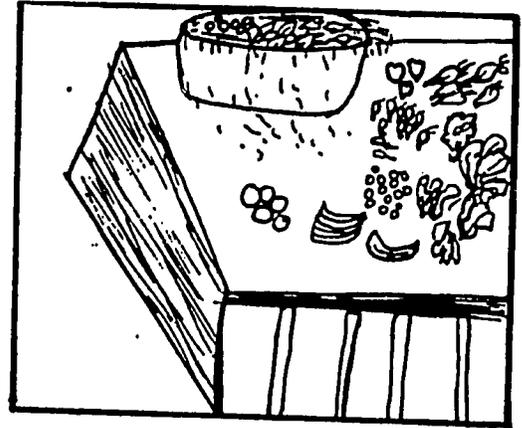
- Wash hands before preparing food
- Wash hands before eating
- Wash hands after going to the bathroom
- Cut fingernails when necessary, at least once a week



Prevent flies from getting on our kitchen utensils. J: Camacho

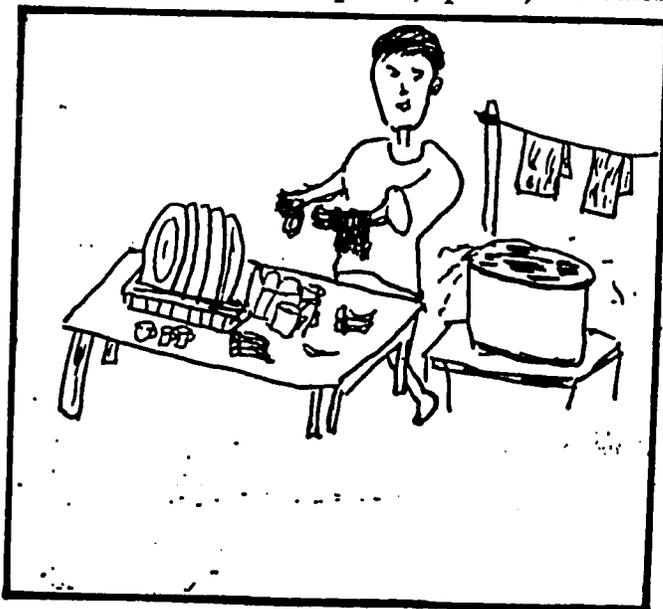
Hygiene of Foods

- Eat fruits that have been washed well with boiled water.
- Eat vegetables that have been cleaned or cooked.
- Always eat food that is clean and well cooked.
- Cover food with a cloth so that flies do not land on it.
- Prepare food carefully and with good hygiene



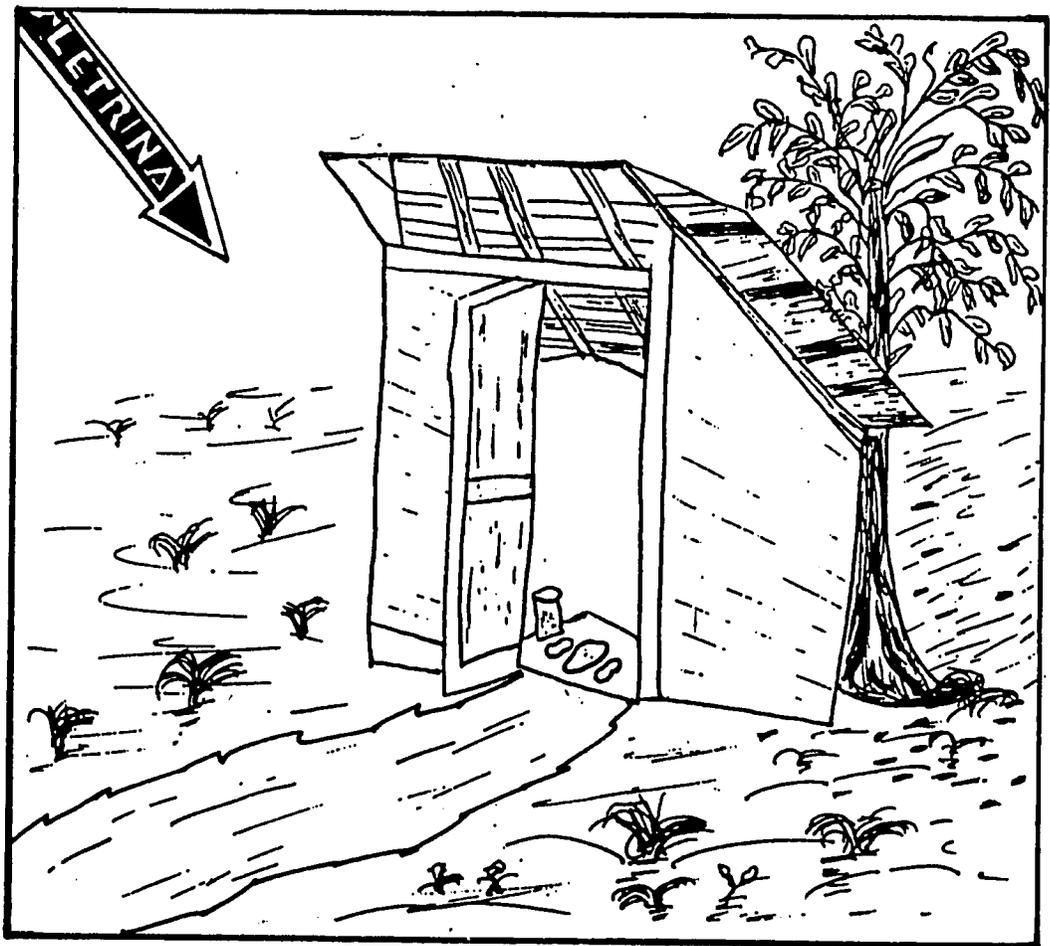
Hygiene in the Kitchen

- Wash the kitchen utensils well
- Wash plates, spoons, and other things with soap and plenty of clean water



Latrines

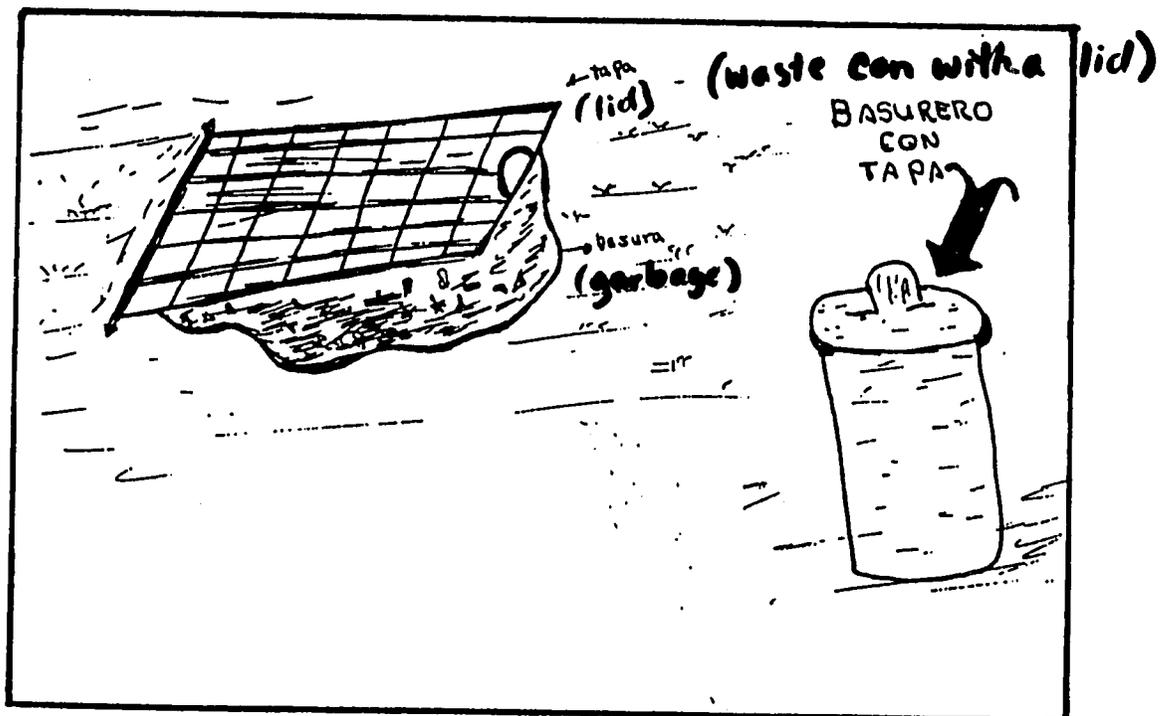
- Provide incentives for all neighbors to construct latrines
- Teach children how to use a latrine
- Have the latrines hygienically located and provide a lid to prevent the flies from entering the well. The latrine should also have a waste basket with a lid to throw the di-
papers.



We set an example for others by using the sanitary latrine correctly. J. Camacho

Waste

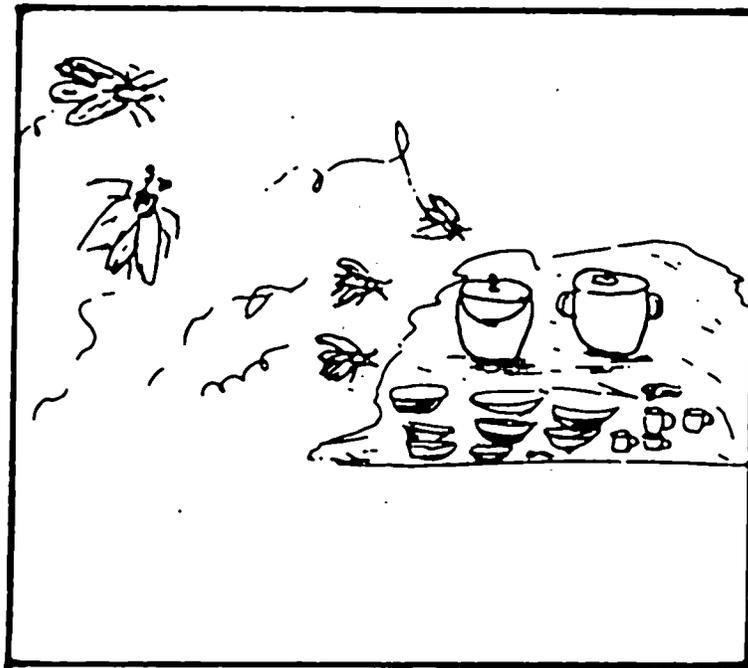
- Proper disposal of garbage is an important action for preventing diarrhea
- Bury garbage and waste that will decompose
- Burn waste and/or bury it
- Avoid having garbage inside and outside of the house because it favors the reproduction of flies



Garbage and food waste should always be put in a waste can with a lid. A. Rojas

Others

- Try to exterminate flies from our houses
- Protect yourself from flies by covering food, eliminating garbage and covering windows and doors with screens. The elimination of flies is very important for avoiding diarrhea.

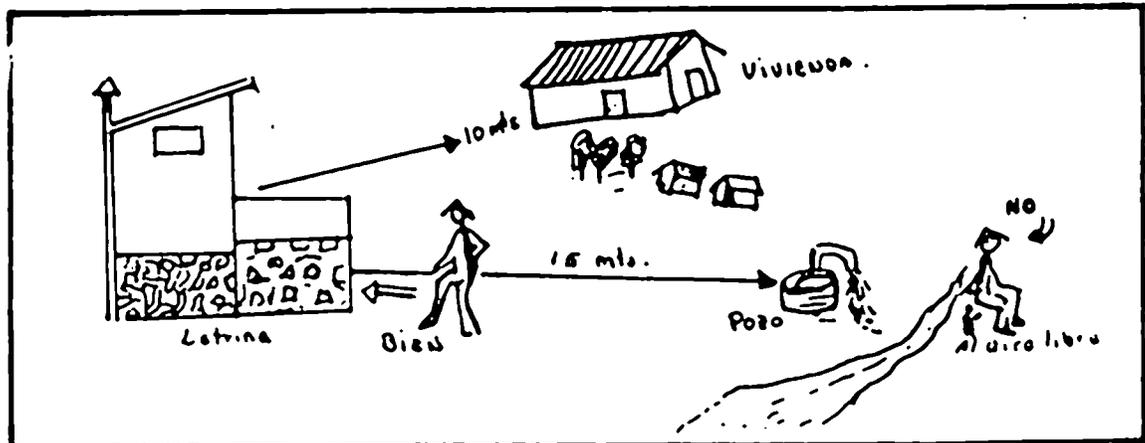


We should not forget that flies are one of the principal transporters of diarrhea. E. Rojas

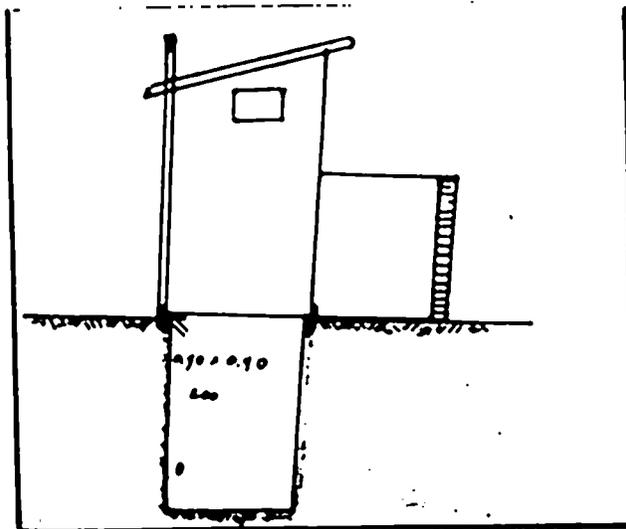
- By maintaining a clean house we can also avoid diarrhea.

How to Make a Latrine

- The latrine should be located a minimum of 15 meters from water sources (wells, etc.)
- It should be located 10 meters from the house



- The excavation of the well should be 0.90 x 0.90 meters in diameter and be a minimum of 1.50 meters deep
- The orientation of the stall of the latrine should be pointed toward the south so that the heat of the sun does not penetrate and to avoid bad odors
- Water and garbage should not be put into the latrine



A latrine should always have a lid. Z. Amanza