

PD-ABG-078  
15A 82815

PROJECT CONCERN INTERNATIONAL

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**Child Survival VII:**

**Para Los Ninos**

**Child Survival in the Highlands of Bolivia**

**September 1, 1991 - August 31, 1994**

FIRST ANNUAL REPORT  
SUBMITTED TO  
THE UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT  
BUREAU FOR FOOD AND HUMANITARIAN ASSISTANCE  
OFFICE OF PRIVATE AND VOLUNTARY COOPERATION

October 15, 1992

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## I. RESULTS IN YEAR ONE

### 1.1. Major Results

This year a strong emphasis was placed on training within the community.

#### EPI

PCI is not involved in the direct delivery of vaccinations, but is training health personnel at the district and local levels to plan and carry out its EPI activities. Rural Auxiliary Nurses, (RANs), and district personnel are being trained in logistics and coordination of the Rural Health Office's EPI program, and CHWs are being trained to assist area and district level vaccination teams in community campaigns, or "sweeps", by establishing the number of doses for each vaccine needed in their communities.

To date, 189 CHWs (104% of target) have been trained in several aspects of EPI, including: how to communicate EPI information to mothers and other community members, how to use the child health card, the use of the dose/child ratio, the importance of immunization reporting and of recognizing and reporting cases of measles and polio to the RAN. Two courses, of 144 hours each, have occurred in Morochata and Independencia, thus completely training 30 CHWs. In Potosi, five short courses of 70 hours each have taken place in Puna, and Colcha K. In these areas a total of 159 CHWs have been trained.

In addition, community educational sessions and training workshops covering EPI have also been held. Fifteen such communal workshops occurred in Cochabamba, training 750 people, 39 educational sessions were held in Puna and Colcha K., training 613 people, and 29 educational sessions were held in the urban area of Potosi, training 450 people.

#### Nutrition

PCI's main nutrition interventions focus on training and education while also including an agricultural production project that aims to increase the nutritional level of rural communities through improving crop yield and crop diversification.

Malnutrition is being addressed in the project areas, with weight for age being the identifying criteria. Attendance at growth monitoring sessions is being promoted, and education about the importance of this activity and the importance of the growth monitoring card are being included in the CHW and RAN training sessions and in community education activities. Emphasis is being given to the follow-up of the malnourished child through home visits by the CHWs and supervision by the RANs. Children suffering from second and third degree malnutrition, determined by using

standard deviation cutoffs on the NCHS weight/age chart, are referred to the health area or district hospital where the child is treated and the mother further educated.

Vitamin A is also being incorporated in the nutrition related educational schemes and PCI collaborates with the MOH in its bi-annual capsule distribution scheme for 1-5 year olds. PCI is also collaborating with PROCOSI in undertaking a study looking at the effectiveness of Vitamin A as a protective agent. If positive, the results of this study, due in January of 1993, will be incorporated into PCI educational and training messages for Vitamin A.

To date, 189 CHWs have been trained in Nutrition and Vitamin A; 30 in Cochabamba, and 159 in Potosi (104% of target). Community training workshops and educational sessions have also been held, with 750 people being trained in Cochabamba, 613 being trained in rural Potosi, and 450 people being trained in urban Potosi.

### **Maternal Care / High Risk Births**

PCI, in an effort to reach its Maternal Care and High Risk Birth objectives, is focussing on training CHWs, RANs and TBAs in relevant aspects of prenatal care, the identification of a high risk pregnancy/birth, the criteria for "high-risk" referral, the importance of maternal nutrition, and in clean, safe delivery practices. To date, 189 CHWs have been trained, 30 in Cochabamba and 159 in Potosi (104% of target), and 63 TBAs have been trained (75% of target), 30 in Cochabamba and 31 each in Puna and Colcha K.. (For a listing of the High-Risk birth criteria, please see section 5.d.6 of the DIP.)

### **ALRI**

In an effort to increase the proportion of mothers of children under the age of five who know to bring their child with symptoms of moderate to severe respiratory infection (according to MOH criteria) to a health facility or a trained health worker (PCI's ALRI project objective), PCI is training CHWs and RANs, and doing direct community education on various aspects of ALRI. PCI is training CHWs and providing refresher courses to RANs in: case identification and management-emphasizing the importance of early recognition of the danger signs and appropriate referral to a health facility, administration of appropriate antibiotics, and the importance of communicating with mothers and training them to identify danger signs. CHWs are being trained, in the urban areas, to treat Plan A and Plan B cases, defined by the MOH as no pneumonia→treatment with salicylic acid and mild to moderate pneumonia→outpatient treatment with antibiotics, respectively, and in the urban areas to refer only. RANs are receiving refresher training in Plans A, B and Plan C, an area hospital treatment plan for severe pneumonia.

To date, 189 CHWs have been trained (104% of target), 30 in Cochabamba and 159 in Potosi, and 750 people have been trained in community based

workshops/educational sessions in Cochabamba, 613 in rural Potosi, and 450 in urban Potosi.

### CDD

PCI's CDD objectives of: increasing the appropriate use of ORS; increasing the proportion of mothers of children under the age of five who know how to correctly prepare ORS and administer ORT; and increasing the proportion of mothers of children under the age of five who know when to bring their child with diarrhea to a health care provider; are being reached through the training of CHWs and RANs as trainers, and through direct community education.

PCI is training CHWs and RANs in CDD case management, the importance of ORT, the use of ORS, the importance of promoting exclusive breastfeeding, the importance of continuing breastfeeding during episodes of diarrhea, and post-diarrhea food supplementation. To date, 30 CHWs have received CDD training in Cochabamba and 159 in the Potosi areas of Puna and Colcha K.. This leads to a total of 189 CHWs trained in CDD, or 104% of target. The community training workshops and educational sessions mentioned in the EPI section also covered aspects of CDD. Thus, 613 people in Puna and Colcha K., 450 in urban Potosi, and 750 in Cochabamba received CDD education.

### Cholera

There have been serious outbreaks of Cholera in both departments where PCI-Bolivia works, and over the past year, we have placed great emphasis on the prevention and treatment of Cholera in the rural and urban areas of Potosí. In our revision of the DIP we will include a set of activities relating directly to the prevention and treatment of Cholera.

To date, PCI has been involved in a variety of educational and structural activities related to Cholera. Community based educational activities have occurred in both Cochabamba and Potosi with 60 rural communities receiving training in Cochabamba, a one day health educational fair on Cholera prevention being held in Puna, Potosi and a radio based communication campaign being held in the general Potosi area. In both Cochabamba and Potosi, we have established an immediate notification system for Cholera cases, we are involved in inter-institutional emergency teams that travel to rural Cholera outbreak areas with supplies of ORS, IV liquids, and antibiotics to treat cases and "manage" contacts. We have allotted sufficient funds to cover the costs of educational materials, soap and disinfectants for Cholera activities, and we have also received an ample donation of antibiotics which are being used to support the MOH and RHO's effort to control this epidemic.

We have also had an important increase in basic sanitary and latrine building activities with the government's declaration that potable water and basic sanitation are now the main National Health Priority. PCI-Cochabamba has presented 30

community proposals for potable water projects with financing to be secured through FIS (Fondo de Inversión Social), and, since the beginning of the year, 180 self financed community projects have been implemented in the isolated communities between Morochata, Independencia and Cocapata. PCI and the RHO's basic sanitation department have provided technical assistance for these projects, and PCI-Cochabamba has also signed a contract with ASONGS (Association of Non Governmental Agencies) in order to implement future projects in this area.

### **Other Training**

PCI is conducting training and supporting supervisory activities that support combinations of the specific interventions listed above. To date, PCI has conducted ten 24 hour, ongoing education courses for CHWs, TBAs, RANs and MDs in Morochata and Independencia, Potosi, with 350 people being trained, and two 24 hour courses in Puna and Colcha K., Potosi, with 62 people being trained. In Cochabamba, eight supervisory trips for medical and auxiliary nurses took place, and one supervisory visit for each of 90 CHWs and TBAs occurred. In Potosi, 1 supervisory visit of the ROH's District Health Team and 5 supervisory visits of the Area Health Team occurred, and three supervisory visits took place for each of the CHWs in Puna district.

#### **a) Increased Coverage**

In the Cochabamaba region, there was a general growth of coverage in the different interventions with an average increase of 10% in relation to the previous year. The major increase was in EPI. In the rural area of Potosi, we obtained an increased immunization coverage of 7%, and in the urban area we measured an increased coverage rate of 10% over the base line survey. We were also able to improve our monitoring of the urban project.

In both regions we have notably improved the capability of the CHWs in the diagnosis, initial treatment, and referral of diarrhea and dehydration cases. This was particularly evident when the cholera epidemic broke out, as the majority of the cholera cases were attended by PCI trained CHWs.

## **1.2. Change in Approach to Individuals at Higher Risk**

Recently, a new immunization policy has been adopted by the MOH. This policy promotes complete immunization within the first 12 months of life where the previous strategy promoted a 3 year immunization scheme. At present, the new program is not appearing to be very effective and the urban area in Potosi has a particularly low coverage rate. Due to this, PCI's urban project in Potosi has employed a new strategy utilizing youth group organizations in a house-to-house sweeping method to detect children who have not completed their full course of immunizations. This scheme has enabled us to double our immunization coverage for children under the age of one,

and significantly increase total vaccine coverage in under 3's. However, at times, these groups have been difficult to motivate and we are presently exploring alternative motivation schemes.

In Potosí's urban project, PCI has devised a house visiting scheme. This scheme allows us to check if appropriate health visits are occurring and to more effectively monitor children at higher nutritional risk. Preliminary results show this scheme to be quite effective.

In both the rural areas in Cochabamba and Potosí, the educational sessions and home visits conducted by CHWs and TBAs have permitted us to increase the early detection of high risk pregnancies. In most cases, the CHWs and TBAs are now accompanying the high risk pregnant women to referral centers when they go one to two weeks prior to their due date. This has significantly improved the channels of referral and counter referral in our project areas.

Following MOH guidelines, we have also simplified the high risk criteria for high risk pregnancy and deliveries, CDD and ARI. This has been a great improvement.

### 1.3. Staffing

Potosí

Psychologist, Lic. Rolando Castillo, specialized in education, has been included in PCI's technical team and is responsible for the elaboration of the health education programs. We also contracted the services of a social worker, Lic. Susana de Mercado, who has nine years of experience working in rural and urban areas.

Please see attached organizational chart.

Cochabamba.

In Cochabamba Lic. Ana María Valdez returned to PCI's staff, after studying health education for 10 months in the United States, on a USAID scholarship at AMHERST University. This PCI employee once again is assuming the responsibility of implementing PCI's rural educational programs.

Please see attached organizational chart.

### 1.4. Continuing Education

PCI's CSVII regional project directors, Dr. Evaristo Maida, and Dr. Oscar Velasco, participated in the following seminars and workshops organized by PROCOSI:

- a. Basic Statistics and National Health Information system.
- b. Design and Evaluation of Health Projects.
- c. Production of Educational Materials.

PCI also held a workshop for its directors on basic epidemiology and study design.

The Regional Director of Cochabamba, Dr. Evaristo Maida, participated in a workshop on leadership and supervision organized by the NUR University, a private university in Santa Cruz. Dr. Maida also attended the following courses:

- a. Work-shop on Nutrition and Vitamin A organized by VITAL.
- b. 3 week USAID sponsored work-shop in Tegucigalpa, Honduras: "Latin America Workshop on Child Survival Programs".

Just prior to this CSVII project, our technical officer, Dr. Ignacio Caballero, participated in a four week, USAID sponsored course on Strategic Planning for NGOs, held at S.I.T in Vermont.

In addition, in June of 1992, the Country Director, Dudley P. Conneely, and the TSO, Dr. Ignacio Caballero, participated in PCI's World Conference in San Diego.

#### 1.5. Technical Support

During this last year, PCI's CS projects received technical assistance from PROCOSI, Johns Hopkins University, PRITECH, University of "Tomas Frias", the University of California - Riverside, and PCI-Headquarters Acting Program Department Director, Barbie Rasmussen. PROCOSI assisted PCI in integrating local rural health systems into project activities. Johns Hopkins assisted PCI in undertaking a baseline study in the urban area of Potosi. PRITECH gave technical advice on the evaluation of CS V activities. The University of "Tomas Frias" cooperated on Potosi based health studies. Dr. Virginia Vithzthum, PhD, from UC-Riverside, worked closely with PCI-Cochabamba staff in undertaking a nutritional study focussing on the breastfeeding and weaning practices of local women. Barbie Rasmussen from PCI-HQ assisted in the modification of the project's budgeting process.

From time to time, PCI - Bolivia also receives graduate students that work in our various projects as volunteer interns. This year we have had graduate students working with us from UCLA, the University of Pennsylvania, and the University of California Riverside, as well as a fellow sponsored by Fulbright and the Inter-American Foundation. This particular individual, Mr. Timothy Wright, RN, has been working with the PCI - Cochabamba staff on an anthropological investigation of the CHWs in their communities.

#### 1.6. Community Participation

Cochabamba

In Cochabamba, 6 community health committees were organized, and we have succeeded in incorporating CHWs into 84 local community governments. These local health committees, as well as the community governing bodies, meet once every month, and health related matters are included in the work agendas of the community governing organizations. PCI also signed a contract with the provincial farmers union of Ayopaya in order to receive cooperation from this institution; an institution to which most of inhabitants of the area belong. In addition, PCI is promoting the idea that each CHW sign a health contract with their own community. We hope to have 90 contracts signed with community organizations by March, 1993.

### Potosí

Potosí is the only department in Bolivia that has its own Departmental Health Committee functioning since 1984. PCI has established a strong working relationship with this organization and has been a catalyst in undertaking events together with the health personnel of this committee.

In the urban area, PCI works directly with the Community Health Committees of San Benito, San Roque, San Gerardo, and also cooperates with other urban committees in educational activities.

In the rural area, community participation has not had the same success as in the urban area due to distance, uncertain transportation, and associated costs. However, PCI has cooperated with the departmental health committee and has succeeded in forming health committees, similar to those described above, in various communities of Puna and Colcha K. In Puna, PCI works with 8 health committees and in Colcha K with 4 committees. PCI collaborates with these committees in vaccination campaigns, as well as the organizing of local community based health fairs.

## 1.7. Linkages to Other Health and Development Activities

PCI is actively seeking to integrate its maternal and infant health projects with other development projects that are being implemented in Cochabamba and Potosí.

### Cochabamba

With the financial cooperation of PROCOSI, PCI - Cochabamba has also been able to implement an agricultural production project that aims to increase the nutritional level of rural communities through improving crop yield and crop diversification. In the last year, we have established 3 pilot phase production centers in Morochata and Independencia. The results of these production projects have been very positive and it is probable that other development agencies will expand this project, which was implemented by PCI, PAAC, and the Nutritional Department of RHO.

## Potosi

In the Potosí region, a very poor and depressed area, PCI has coordinated educational activities with UNICEF in the Puna, Uyuni, and Colcha K areas. Due to logistics, it is very difficult to attend these areas from Potosí.

In the marginal urban areas of Potosí, there is a very high unemployment rate and a disproportionate number of street children. PCI cooperates with DIRME (Regional Direction of the Under Aged) in activities related to the street children in this area. PCI-Potosí also collaborates with Food for the Hungry in health activities designed for mothers and children between 7-14 years of age, and PCI has also established a inter-institutional cooperating mechanism with the University of Tomás Frías in order to improve the technical level of 30 social work students.

## Overall

During this year, PCI sponsored a "Case and Control Study on Chronic Diarrhea and the Protective Function of Vitamin A". This study was financed by PROCOSI and implemented by the medical research staff of the La Paz Children's Hospital. Results will be published by January of 1993. For more information on this study, please see section 1.1 or section 5c.12 of the DIP.

In addition, as a result of the Cholera epidemic, a variety of activities have been undertaken in collaboration with other agencies. Cholera interventions will be described in more detail in the response to the DIP review, but additional information on certain on-going Cholera related activities can be found in section 1.1.

## 2. CONSTRAINTS, UNEXPECTED BENEFITS, AND LESSONS LEARNED

### 2.1. Problems and Constraints

One problem that we have is related to the capacity of small USAID funded projects to compete with the bigger projects undertaken by agencies such as BID and the World Bank for staff and other community resources. Due to impressive budgets, these large agencies are able to easily attract the attention of local counterparts, thus making it very difficult for smaller agencies to work effectively in these areas. This is quite unfortunate, as these BID and World Bank projects are usually directed towards improving the infrastructure, and have not been very successful in the process of health service delivery.

Monetary constraints have also led to other difficulties as well. As a strategy to improve sustainability and reduce on-going costs, PCI has presented an innovative project to PROCOSI which coherently integrates community based primary health activities with hospital services in the rural district areas. Another strategy, promoting replication and cooperation, will be to create efficient operational models of health

systems at the micro regional level that can then be used by larger organizations and projects. For example, in both Cochabamba and Potosí the directors of the World Bank and BID projects have requested technical assistance from PCI in order to help carry out community based Health Projects.

Another constraint is the continuing problem of reaching very isolated communities. PCI initiated a training program for the CHWs of these remote communities. In this program, the CHWs traveled to the Morochata and Independencia Hospitals in order to receive a two-week intensive health training course. A supervision program has also been designed that will be implemented by the CHWs themselves with the support of ROH and PCI personnel.

## 2.2. Unexpected Benefits

This year, PCI has received unexpected benefit from research studies conducted as a result of our inter-institutional coordination effort. Relationships with the University of California, the University of Wisconsin, the University of NUR in Santa Cruz and the University of Tomás Frías in Potosí, have permitted PCI to implement activities of investigation at very low cost and with a very high degree of technical quality. Cooperation with other agencies, such as PAAC in Cochabamba and Food for the Hungry in Potosí, has also strengthened PCI's nutrition and agricultural production projects.

## 2.3. Institutionalization of Lessons Learned

A lesson that PCI is trying to institutionalize is the importance of utilizing qualitative research in undertaking project work in Bolivian. It is felt that, as an institution, PCI should emphasize social, qualitative research in order to establish policy, design programs, and implement these projects in a way totally compatible to the beliefs and KAPs of the population of this multi-ethnic and multi-cultural country. An example of this can be found in a proposal PCI recently presented to PROCOSI. A component of this proposal is to undertake qualitative investigations using anthropological and sociological methodology in order to improve our, and other agencies, knowledge of the Quechua and Aymara cultures.

# 3. **CHANGES MADE IN PROJECT DESIGN**

## 3.1. Change in Perceived Health Needs

According to the weekly reports of the World Health Organization (OMS), Bolivia is the country that has the highest mortality rates per case of Cholera in the hemisphere. There have been serious outbreaks of Cholera in both departments where PCI-Bolivia works, and over the past year, we have placed great emphasis on the prevention and treatment of Cholera in the rural and urban areas of Potosí.

In Potosí, the need to increase vaccination coverage for children under the age of 1 year has also been identified as an urgent priority.

### 3.2. Change in Project Objectives

The objectives presented in the DIP have not been extensively modified. However, at the community level the outputs have been strategically changed. In the urban area of Potosi, we have initiated training of VHWs, groups of young people who assume the role of " health sentinels", in order to increase vaccination coverage and to establish community oral rehydration units that are equipped with an adequate quantity of ORS packages and other required materials. In addition, changes in project objectives/outputs are occurring due to the Cholera epidemic, but these will be addressed in the separate response to the DIP review.

### 3.3 Change In Planned Interventions

Over the past year, relevant changes were made in intervention activities to appropriately respond to the Cholera epidemic. Both project areas were effected by the epidemic and this resulted in greater demand for services from the ROH health personnel as well as from the CHWs and TBAs. Collaboration with other groups was found to be an effective way of combatting the problem, and activities were carried out in cooperation with rural farm institutions and community groups. In addition, PCI began an aggressive radio communication campaign in Potosi which allowed messages to reach a larger proportion of the target population than we had been able to do with our traditional educational activities. For more information on these interventions, please see Section 1.1 or refer to the separate response to the DIP review.

PCI is also searching for ways to improve our nutritional programs by establishing local agricultural production projects, by promoting better family nutritional habits, and through producing educational materials on breast feeding and weaning practices.

### 3.4 Change In Potential and Priority Beneficiaries

The project has placed more emphasis on the complete immunization of children from 0-12 months, the nutrition of children from 23-36 months, and increasing the coverage of TT3 in women from 15-30 years of age.

## 4. **PROGRESS IN HEALTH INFORMATION DATA COLLECTION**

### 4.1. Characteristics of the Health Information System

4.1.1. Based on the National HIS, PCI is actively searching for ways of simplifying the methods of information collection at the community level. In some of the rural communities we are experimenting with a new CHW family registration booklet. In

the urban area of Potosi, PCI has also designed control cards for home visits. Despite the complication of having three levels of information, we hope to establish a family health booklet, a control family note book and to ensure adequate registers at the health centers.

- 4.1.2. In the urban area of Potosí, we have discovered that the new health information/reporting system identifies, with more efficiency, children at higher nutritional risk. We hope that in the near future our home visiting strategy will expand to include pregnant women. During these visits, women would be educated about the value of attending prenatal sessions at the health centers and encouraged to attend such sessions. It is at these prenatal health center sessions that screening for high risk pregnancies would then occur.
- 4.1.3. PCI supports the activities of the health centers which are operated by ROH personnel. These health centers report their activities directly to the district, using the SNIS forms, and are involved in the collection and primary compilation of the CHW and RANs reports. PCI has cooperated with the ROH in this information management process by donating electric calculators and by designing forms to facilitate this operation.
- 4.1.4. In the past year, we have tried to improve the information system of the CHWs. In the past, we requested a monthly report, but in the majority of cases it was very difficult to collect this document. Now, in the majority of rural project areas, the health teams, including CHWs, meet once every two months. We have instructed the CHWs to present their reports at these bi-monthly meetings, and this strategy has greatly improved the collection of data at the community level.

#### 4.2. Special Capacities of the Health Information System

- 4.2.1. What was described in section 4.1.3. is also valid for this section as well. In addition, it should be noted that PCI's regional offices in Cochabamba and Potosí assist in collecting district level data. This data is then channeled to the SNIS system of the RHOs, and the RHOs, in turn, compile and monitor the clinical activities and sessions.
- 4.2.2. By means of a supervisory system, rural visits and CHW reports, PCI monitors the activities of the trained CHWs, and also maintains a register of the CHWs that have left their posts. Due to the serious economic situation and a prolonged draught in Potosi, there is a strong tendency for people to migrate from the rural area into overcrowded urban centers. Usually, when a PCI trained CHW is going to leave his position, he reports this to PCI, including how long he plans to be absent from his community, and presents the name of another candidate to be trained.

Since 1990, the turnover rate in the above area has been 58%. This implies that CHW trainings must be continued in the rural area of Potosí just to maintain an adequate number of operational CHWs in the region. The situation in the rural area

of Cochabamba is quite different as we are working in a more ecologically productive area which has a more stable population. Since 1989, the turnover rate has only been 12% and, generally, the CHWs who leave their positions return to their communities in a short period of time.

- 4.2.3. There does exist, at the national level, an epidemiological surveillance system for Poliomyelitis. One of the goals of the MOH was to eradicate polio by the year 1990. Polio and cases of flaccid paralysis are immediately reported to the MOH, which has all the necessary resources, including the Bolivian air force, to be able to arrive immediately in the affected area. During 1991, two isolated cases of flaccid paralysis were reported within the country. Immunologic and virus culture techniques done in laboratories in Brazil and Panama gave negative results for the three types of polio viruses. The final diagnoses were classified as probable Guillam Barré Syndrome or nonspecific viral poly-radicule neuritis.

Also, as a result of the Cholera epidemic, diarrhea has become a mandatory reportable illness and this has led to the development of a related surveillance and notification system.

- 4.2.4. In Cochabamba, the project has a follow up program for all activities concerning the training of CHWs. On-going training is closely monitored, and only those CHWs fulfilling all the training hours and requisites receive an official certificate from PCI and the ROH. PCI's ongoing education program is considered very important, and a great majority of the CHWs attend these courses. In Potosí, the number of participants in the ongoing education courses have notably increased. During this past year, ongoing education is also being renewed in Colcha K.

PCI has also presented a complementary CHW training project to PROCOSI. This project would support an internship system for CHWs in the Health Area Hospitals. After the CHWs have been trained, they will remain working at an area hospital for approximately a week in order to receive in-service training.

- 4.2.5. Until June of 1992, when the national census took place, PCI did not have precise population data and consequently did not have the precise denominators necessary to obtain general percentages and rates. Today, thanks to the recent census, we do have population data for the capital cities and departments, and, by October, we hope to have this data for the provinces, small towns and communities.

Other information that is difficult to obtain is related to Maternal Health and the registration of pregnancies. These 2 situations are basically due to cultural factors, and a weakness in the vital registration system, especially in the rural areas.

#### 4.3. MANAGEMENT OF THE HEALTH INFORMATION SYSTEM

- 4.3.1. PCI has spent approximately 5% of its project budget on the Health Information System. The costs covered the SNIS forms that were distributed to the CHWS,

TBAs, Health Centers and Districts, and also the purchase of electronic calculators. In the near future, these costs will increase to around 15% of the proposed budget with the purchase of computers and printers for improved data processing.

- 4.3.2. Since 1990, PCI's CSVII projects in Bolivia have included measurable indicators concerning Child Survival and Maternal Health Care. These indicators have been revised yearly according to the ROH and MOH policy documents, and PCI has made internal reviews of its indicators in 1990, in November 1991, and in May of 1992.
- 4.3.3. Since August, 1991, there have been monthly district level meetings of the health information analysis committees. PCI is promoting the same type of meeting at the area level with both the CHWs and the medical personnel. We have had important successes with these types of rural meetings in Cochabamba and Potosí.
- 4.3.4. PCI's information system is related to the National Health Information System (SNIS). The SNIS has been designed to constitute a circular information chain, and it starts at the community level with data collection by the CHWs. Data is then passed on to the Health Area, usually headed by a RAN. This RAN then sends the information to the District, where it is tabulated in order to complete the District's monthly information form. The information is then sent to the ROH office, where it is entered into the SNIS computerized system using a "Q+A" software package. The SNIS computerized system then compiles all the information sent to the ROH, and sends information to the MOH's main computer to produce national health data.

It should be noted that the information produced at the ROH level is sent back to the Districts, and this information then becomes the basis for the monthly Health Information Analysis Committee meetings. PCI is trying to promote similar meetings at both the community and health area levels. In the health area, such meetings would be carried out by RANs and by CHWs at the community level.

- 4.3.5. Since December, 1991, PCI central office staff and the regional office staffs have received training on the use of PC's and software. Beginning in October, 1992, PCI-Bolivia will contract a computer technician in order to establish an information system for all PCI projects implemented in Bolivia. This technician will train PCI's regional technical administrative staff in the management of SNIS software, and will collaborate in the creation of data banks in order to monitor other components of the project. In addition, every Regional Director has received training on the SNIS(National Health Information System) by attending a series of workshops sponsored by Procosi and the MOH.

## 5. SUSTAINABILITY

### 5.1. Recurrent Costs

5.1.1. The recurrent costs that will continue upon the finalization of AID's financing are the following:

- Education of community personnel
- Ongoing education
- Supervision
- Health information system
- Community participation

Costs of these activities represent 30% or \$52,000 of the project budget.

5.1.2. It is probable that the MOH and the ROHs will assume the health information cost, the supervision costs and some of the ongoing educational costs for the RANs. With the increased community awareness and empowerment resulting from project work, it is possible that the communities will assume part of the training costs and part of the community activities costs in the future. However, the first assumption requires a structural change on the part of the MOH and ROH; a change that would decentralize the MOH's administrative system thus giving more importance to the local, district health systems.

## 5.2. Strategies for Increasing Post-project Sustainability

5.2.1. The most important strategy for attaining sustainability in our CS VII project is institutional strengthening at the district level, with a vision of establishing local health systems that can resolve the problems of primary and secondary health care in a designated area. Another strategy that PCI is using in order to attain sustainability of projects, at the community level, is the formation of local district and departmental CHW associations. These are the first steps in establishing a national organization of CHWs that would parallel the MOH's formal personnel organizations at the sector, area, and district levels. The establishment of CHW associations will enhance the sustainability of the "local health volunteer" concept, and, at the same time, it will serve as a direct incentive for CHWs to participate and continue with their activities.

5.2.2. In the rural areas of Puna, Potosi, and Ayopaya, Cochabamba, the responsibility of implementing educational activities has been respectively transferred to the directors of the districts and to the directors of the areas. This has increased the potential for sustainability while also cutting recurrent costs.

In Cochabamba, PCI is also experimenting with reducing the costs of supervision by creating a self-supervisory system for the CHWs.

## 5.3. COST RECOVERY

5.3.1. PCI has not intervened in the financial administration of the districts, but we do have a role in managing the rotating funds for medicines which actively involves the CHWs. For more information on these funds, please refer to section 5e.12 in the DIP.

- 5.3.2. 80% of the Bolivian population live in conditions of poverty where they are not able to purchase two thirds of their minimum food necessities per family. 60% of the population lives in conditions of extreme poverty where they are not able to purchase one third of the minimum food necessities per family. Under these conditions, it is very difficult to find appropriate cost recovery mechanisms for basic health care services.

It is important to understand that PCI works in isolated communities considered to be the poorest of the poor. These communities have not lost their human dignity, and, whenever possible, they pay, in cash or in kind, for their health care services. However, the costs of medical supplies and surgical materials are quite high, and they are usually too expensive for the members of these communities.

The Bolivian State has, for many years, offered free health and education services in an effort to reach a certain level of "equality" within the society. This strategy may not be sustainable in the long term, but costs will have to be subsidized until incomes increase to be able to provide a minimal level of existence. Economic development will be a key in allowing this to occur, and such development must take place in both urban and rural areas for a majority of individuals/communities to be able to make contributions towards their health and educational services. PCI recognizes this need and is involved in the development of agricultural production projects to increase the incomes of the beneficiary populations, as well as to improve their nutritional states.

## **6. PROJECT EXPENDITURES AND JUSTIFICATION FOR BUDGET CHANGES**

### **6.1 Pipeline Analysis**

Please refer to Pipeline Spreadsheet submitted under separate cover.

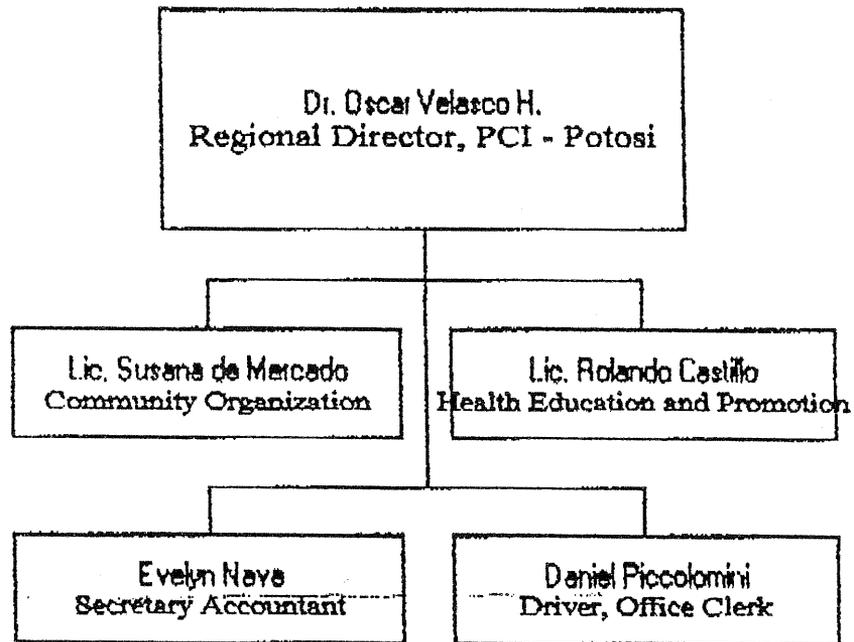
### **6.2 Justification of Budget Changes**

No major budgetary changes have been made since the submission of the DIP.

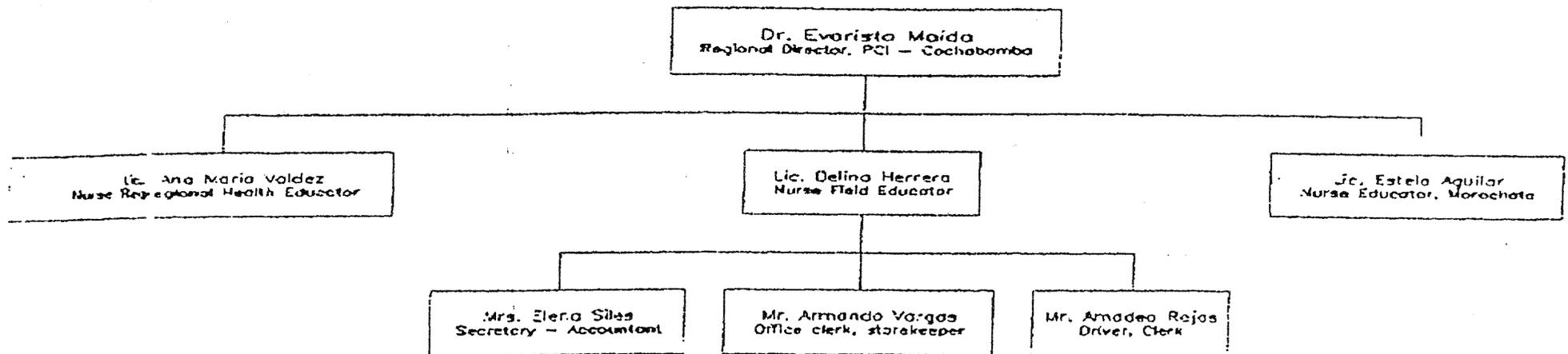
## **7. 1992/1993 WORK SCHEDULE AND BUDGET**

Please see attached spreadsheets.

# PCI - POTOSI



# PCI - COCHABAMBA







PVO: PROJECT CONCERN INTERNATIONAL

Country: BOLIVIA

	Year 1				Year 2				Year 3			
	1	2	3	4	1	2	3	4	1	2	3	4
b. Area 2												
- ORT			X	X	X	X	X	X	X	X	X	X
- Immunization	X	X	X	X	X	X	X	X	X	X	X	X
- Nutrition:												
Breastfeeding			X	X	X	X	X	X	X	X	X	X
Maternal Nutrition			X	X	X	X	X	X	X	X	X	X
Vitamin A	X	X	X	X	X	X	X	X	X	X	X	X
Growth Monitoring/Promotion			X	X	X	X	X	X	X	X	X	X
- ALRI/Pneumonia			X	X	X	X	X	X	X	X	X	X
- Family Planning/Maternal Care			X	X	X	X	X	X	X	X	X	X
- Other(High Risk Birth)												

6. Technical Assistance												
a. HQ/HO/Regional office visits		X										
b. Local Consultants												
c. External technical assistance												

7. Progress Reports												
a. Annual project reviews			X				X				X	
b. Annual reports				X				X				X
c. Mid-term evaluation							X					
d. Final evaluation												X

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BUDGET: In thousands of dollars (\$000)

Place dollar amounts in shaded areas only

PVO/COUNTRY: PCI/BOLIVIA

	Year 1		Year 2		Year 3		TOTAL - Years 1-3		
	(a) A.I.D.	(b) PVO	(c) A.I.D.	(d) PVO	(e) A.I.D.	(f) PVO	(g) A.I.D.	(h) PVO	(i) TOTAL
<b>I. PROCUREMENT</b>									
<b>A. Office Equipment (specify)</b>									
1. Office	1000	7000	1000	7000	1000	0	3000	14000	17000
2. EPI	0	0	0	0	0	0	0	0	0
3. ORT	0	0	0	0	0	0	0	0	0
4. Other	0	24000	0	17000	0	0	0	41000	41000
<b>SUBTOTAL</b>	<b>1000</b>	<b>31000</b>	<b>1000</b>	<b>24000</b>	<b>1000</b>	<b>0</b>	<b>3000</b>	<b>55000</b>	<b>58000</b>
<b>B. Supplies</b>									
1. Office	1000	0	1200	0	1300	0	3500	0	3500
2. EPI	0	0	0	0	0	0	0	0	0
3. ORT	0	0	0	0	0	0	0	0	0
4. Other	0	12000	0	12000	0	12000	0	36000	36000
<b>SUBTOTAL</b>	<b>1000</b>	<b>12000</b>	<b>1200</b>	<b>12000</b>	<b>1300</b>	<b>12000</b>	<b>3500</b>	<b>36000</b>	<b>39500</b>
<b>C. Consultants (exclude evaluation costs)</b>									
1. Local	1389	0	1486	0	1590	0	4465	0	4465
2. External	0	0	0	0	0	0	0	0	0
<b>SUBTOTAL</b>	<b>1389</b>	<b>0</b>	<b>1486</b>	<b>0</b>	<b>1590</b>	<b>0</b>	<b>4465</b>	<b>0</b>	<b>4465</b>
<b>D. Services (exclude evaluation costs)</b>									
1. Manpower Services	0	0	0	0	0	0	0	0	0
2. Lectures/Talent Fees	0	0	0	0	0	0	0	0	0
3. General Contractual Services	4170	0	1177	0	1500	0	6847	0	6847
<b>SUBTOTAL</b>	<b>4170</b>	<b>0</b>	<b>1177</b>	<b>0</b>	<b>1500</b>	<b>0</b>	<b>6847</b>	<b>0</b>	<b>6847</b>

BUDGET: In thousands of dollars (\$000)

Place dollar amounts in shaded areas only

PVO/COUNTRY: PCI/BOLIVIA

	Year 1		Year 2		Year 3		TOTAL - Years 1-3		
	(a) A.I.D.	(b) PVO	(c) A.I.D.	(d) PVO	(e) A.I.D.	(f) PVO	(g) A.I.D.	(h) PVO	(i) TOTAL
<b>II. EVALUATION (specify)</b>									
<b>A. Baseline Survey</b>							0	0	0
1. Consultant/Contract	2500	0	0	0	0	0	2500	0	2500
2. Staff Support	6875	0	0	0	0	0	6875	0	6875
3. Other	0	0	0	0	0	0	0	0	0
<b>SUBTOTAL</b>	<b>9375</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9375</b>	<b>0</b>	<b>9375</b>
<b>B. Mid-term</b>									
1. Consultant/Contract	0	0	4194	0	0	0	4194	0	4194
2. Staff Support	0	0	7356	0	0	0	7356	0	7356
3. Other	0	0	0	0	0	0	0	0	0
<b>SUBTOTAL</b>	<b>0</b>	<b>0</b>	<b>11550</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>11550</b>	<b>0</b>	<b>11550</b>
<b>C. Final</b>									
1. Consultant/Contract	0	0	0	0	4469	0	4469	0	4469
2. Staff Support	0	0	0	0	7871	0	7871	0	7871
3. Other	0	0	0	0	0	0	0	0	0
<b>SUBTOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12340</b>	<b>0</b>	<b>12340</b>	<b>0</b>	<b>12340</b>
<b>III. PERSONNEL</b>									
<b>A. Technical</b>	61878	17415	86207	18634	70842	19938	198925	55987	254912
<b>B. Administration</b>	22302	0	63863	0	25534	0	71699	0	71699
<b>C. Clerical</b>	8022	0	9110	0	8787	0	27398	0	27398
<b>D. Temporary</b>	0	0	0	0	0	0	0	0	0
<b>SUBTOTAL</b>	<b>92700</b>	<b>17415</b>	<b>99189</b>	<b>18634</b>	<b>106133</b>	<b>19938</b>	<b>298022</b>	<b>55987</b>	<b>354009</b>

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BUDGET: In thousands of dollars (\$000)

Place dollar amounts in shaded areas only

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PVO/COUNTRY: PCI/BOLIVIA

	Year 1		Year 2		Year 3		TOTAL - Years 1-3		
	(a) A.I.D.	(b) PVO	(c) A.I.D.	(d) PVO	(e) A.I.D.	(f) PVO	(g) A.I.D.	(h) PVO	(i) TOTAL
<b>IV. TRAVEL/PER DIEM</b>									
A. Domestic	48300	0	28300	0	31200	0	95009	0	05009
B. International	17047	0	5200	14550	10000	14550	33227	29100	62327
<b>SUBTOTAL</b>	53337	0	33500	14550	41309	14550	128236	29100	157336
<b>V. COMMUNICATIONS</b>									
A. Printing/Reproduction	1510	0	1910	0	1800	0	4532	0	4532
B. Postage/Delivery system	1800	0	1900	0	2081	0	5823	0	5823
C. Telephone	7206	0	7200	0	7140	0	21584	0	21584
D. FAX/Telex	0	0	0	0	572	0	572	0	572
<b>SUBTOTAL</b>	10552	0	10886	0	11273	0	32511	0	32511
<b>VI. FACILITIES</b>									
A. Equipment Rentals	0	0	0	0	0	0	0	0	0
B. Facilities Rentals	2232	0	2388	0	2555	0	7175	0	7175
C. Other	0	0	0	0	0	0	0	0	0
<b>SUBTOTAL</b>	2232	0	2388	0	2555	0	7175	0	7175
<b>VII. OTHER DIRECT COSTS</b>	0	0	0	0	0	0	0	0	0
<b>SUBTOTAL</b>	0	0	0	0	0	0	0	0	0
<b>VIII. INDIRECT COSTS</b>									
A. Overhead/Administration	40768	16076	40106	18410	44348	12371	131222	46857	178080
B. Other	0	0	0	0	0	0	0	0	0
<b>SUBTOTAL</b>	46768	16076	40106	18410	44348	12371	131222	46857	178080
<b>TOTAL</b>	222523	76491	202372	87594	223348	58859	648243	222944	871188

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