

Curamericas

Consejo de Salud Rural Andino

Child Survival XIII Project

FINAL EVALUATION

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Lynn Johnson
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Lynn Johnson
La Paz

ACRONYMS

AIEPI	Atención Integral de las Enfermedades Prevalentes de la Infancia (Integrated Management of Childhood Illnesses)
AN	Auxiliary Nurse
ARI	Acute Respiratory Infection
CS	Child Survival
CAI	Comité de Análisis de Información (Information Analysis Committee)
CBC	Communication for Behavior Change
CDD	Control of Diarrheal Disease
DFID	British Department for International Development
HIS	Health Information System
HQ	Headquarters
IMCI	Integrated Management of Childhood Illnesses
PHC	Primary Health Care
MOH	Ministry of Health
NGO	Non-Governmental Organization
ORS	Oral Rehydration Solution
ORT	Oral Rehydration Therapy
PCM	Pneumonia Case Management
PROCOSI	Programa de Coordinación en Salud Integral
PROSIN	Programa de Salud Integral
PVO	Private Voluntary Organization
SBS	Seguro Básico de Salud (Basic Health Insurance)
HV	Health Volunteer

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A. Executive Summary

A.1 Program Description

Curamericas (formerly Andean Rural Health Care) and its counterpart NGO in Bolivia, Consejo de Salud Rural Andino (CSRA), began the implementation of a Child Survival (CS) XIII project in October 1997, in the Altiplano region of Bolivia. The overall goal of the CS Project was to improve child survival and reproductive health practices, targeting men, women, adolescents (15-18 years old) and children (0 to 5 years of age). The project covered four geographic areas near Lake Titicaca: Ancoraimes, Carabuco, Ambana, and Puerto Acosta.

During the four years of project implementation, Curamericas/CSRA focused on working with municipal governments to scale up child survival and primary health care services, increasing community capacity in health decision making, strengthening the capacity of Curamericas to provide leadership in the development of sustainable CS and primary health care systems, and improving the capacity of CSRA to provide sustainable, long-term primary health care within the evolving municipal structures of Bolivia.

Project interventions included: immunizations, control of diarrheal disease, pneumonia case management, nutrition and micronutrients, maternal and newborn care, and child spacing. Efforts were also directed toward program strengthening, and the provision of curative services through three Area Health Centers located in Ancoraimes, Carabuco and Puerto Acosta. The Ambana target area is a sub/center under the jurisdiction of Carabuco.

Key project strategies included the implementation of: a census-based, impact-oriented (CBIO) primary health care (PHC) methodology; regular home visits and group education activities conducted by auxiliary nurses (ANs) and health volunteers (HVs); direct CS services through health centers and health posts, managed jointly by CSRA and the Ministry of Health (MOH); and the use of mobile health teams to cover areas not included as part of the community based census strategy. HVs at the village level assisted ANs in community outreach activities. Co-management of health systems was strengthened at the municipal level through the functioning of Municipal Health Boards (MHBs).

A.2 Program Accomplishments

A key achievement of the Curamericas/CSRA Child Survival XIII Project was the implementation of five child survival interventions in four geographic regions of the Bolivian Altiplano reaching approximately 16,100 women, infants and children in 227 rural communities. Joint implementation of activities is on going with three municipal governments and their respective health centers and outlying health posts.

Curamericas/CSRA has proven that an NGO can have a huge impact on how municipal governments manage health systems. The CS Project has demonstrated success in the following areas: development of vision and leadership competencies through accompaniment in the provision of services; capacity building through participation on MHBs; and demonstration of personal and professional values that inspire MOH and municipal partners to deliver quality

services. An explicit emphasis on trust, credibility and transparency in all financial dealings has been a key factor in the success of the shared management model.

Important results in the area of sustainability include the participation of municipal governments in a process of shared management of health services by CSRA and the MOH. As a direct result of excellent health programming during the past years, made possible largely through USAID Child Survival Program funding, CSRA has attained a seat at the table regarding the national health agenda, and is a leading spokesman for NGO participation to improve public sector procedures and policies.

A.3 Highlights¹

Immunization

A comparison of the data from the baseline and final KPC surveys shows a significant improvement of children age 12-23 months with complete vaccination coverage, from 40 to 73% over the life of the project. Children who have received the complete vaccination schedule by age 15 months have increased significantly in Ambana (from 4% to 30%), Ancoraimes (from 24% to 66%) and in Puerto Acosta (from 0% to 47%). Overall vaccination coverage reaches herd immunity levels in Carabuco and Ancoraimes (85% and 83% respectively), but requires improvement in Ambana and Puerto Acosta where levels are 63% and 59% respectively.

Control of Diarrheal Disease

Among women of children age 0-23 months, knowledge of oral rehydration therapy (ORT) has increased by 13% (from 45% to 58%). Of the 58% of women who had heard of ORT, 92% expressed an understanding of how to use it, 75% know how to prepare it, and 72% stated that they had used ORT recently. The two geographic areas that collect mortality data from census information, Carabuco and Ancoraimes, report a decreasing trend in infant mortality due to diarrheal disease, from a total of 5 deaths (combined figure for both sites) in 1998 and to no deaths reported in 2001 for either site.

Pneumonia Case Management.

Data from the final KPC indicate that 53% of mothers seek appropriate treatment for children with signs of pneumonia, an increase of 14% as compared to the baseline, which exceeds the Project's original goal of 51%. Knowledge of chest in-drawing and recognition of rapid breathing increased from 30% to 46%, but was less than the project goal of 62%. The two geographic areas that collect mortality data from census information, Carabuco and Ancoraimes, report a decreasing trend in infant mortality due to pneumonia, from a high of 11 deaths in 1998 and to a low of 4 deaths reported in 2001.

¹ Comparison of baseline and final KPC results is based on surveys conducted in 1998 and 2001. See Attachment D for a comparison of indicators by geographic area.

Nutrition and Micronutrients

A comparison of baseline and final KPC data regarding growth monitoring show a significant improvement in the proportion of children who have a growth card (from 72% to 94%), children who are weighed 6 times a year (from 51% to 73%), and children who are weighed during the first month of life (from 35% to 56%). Feeding practices have also improved with exclusive breastfeeding increasing from 61% to 74%, and an increase in appropriate complementary feeding from 78% to 85%.

Maternal and Newborn Care

A comparison of baseline and final KPC results show marked improvement in prenatal visits (from 26% to 48%) and in deliveries attended by someone trained in safe birthing techniques (from 8% to 30%). Although the objectives for this component were not met, the CS Project has been effective in changing behaviors, demonstrated by an increase of over 20% for both indicators.

Family Planning

A comparison of the baseline and final KPC results shows an increase in women who use modern contraceptives, from 3% to 17%. Although this is an improvement, use of modern contraceptives remains low in the project area. Natural family planning (LAM and rhythm) is much more accepted, and the results show an 18% improvement (from 46% to 64%) over the life of the project.

A.4 Conclusions

The Curamericas/CSRA CS XIII Project has achieved significant results in light of comparison of final KPC data with baseline indicators. Several of the implementation strategies represent innovations in how to manage health care systems: use of a census-based impact-oriented approach, shared management of health services between the public and non-profit sector (MOH/NGO), and joint management of municipal health systems.

In spite of the overall positive results, the following aspects of project implementation will require strengthening during future intervention activities by Curamericas/CSRA in the target area. Little progress was made in the following indicators: 1) maternal knowledge of danger signs for pneumonia, 2) Vitamin A supplementation to women and children, 3) iron supplements to pregnant women, and 4) prenatal care and birth attendance by trained persons. Two areas that showed no progress were Tetanus Toxoid (TT) coverage and maternal knowledge of diarrhea danger signs.

Some of the strategies detailed in the DIP were not implemented, including the Hearth Methodology, TBA strategies, use of Factor Analysis for Communication for Behavior Change (CBC), and use of the Pneumonia Toolbox. In light of the fact that some of these strategies may not have been feasible or appropriate (i.e. use of IMCI protocols instead of the pneumonia

toolbox), other ways of addressing the underlying issues need to be developed. Specific areas of attention for future interventions are community nutritional rehabilitation, improved prenatal care and birth attendance, enhanced communication for behavior change strategies, and improved pneumonia case management in the home and health center.

Areas needing improvement identified during the final evaluation include: systematic support to HVs and provision of basic health education materials; supervisory systems including a focus on quality of care using checklists or other appropriate strategies; supply systems for micronutrients and family planning methods; improved training of auxiliary nurses regarding life saving skills; information system management specifically for the functioning of the Information Analysis Committees (CAI)² in Puerto Acosta and Ambana; and strengthening of municipal health boards with a focus on health management and decision making.

A key area of difficulty during the CS Project was the “shared management” model implemented between CSRA and the MOH. Although this model has the potential to evolve into a sustainable means of providing quality preventive and curative services to Bolivian populations, it is important to document here the real challenges CSRA faced as a day-to-day partner of the MOH in health service management. In the past, CSRA implemented CS projects with exclusive control over all employees. However, under the new model, the majority of health staff receives salaries and supervision from the MOH District and Area Health Centers. The challenge here was how to unify criteria between CSRA and the MOH regarding the way personnel and health services should be administered. Problems arose when the MOH directors gave orders to staff that were not consistent with previous agreed-upon programming between CSRA and the MOH.

Another area of difficulty was the priority given to CS interventions. The MOH focuses almost exclusively on immunizations, while CSRA has the mandate to address several interventions simultaneously. Hence there was little MOH support for nutritional rehabilitation, pneumonia case management and maternal health. The CSRA Executive Director and staff have come to the conclusion that effective management cannot be done where there are “two heads”. The delegation of authority to CSRA to administer a MOH health service needs to be clarified at higher MOH levels, to avoid conflicts and contradictory orders that confuse staff and compromise results.

In spite of the difficulties of shared management between CSRA and the MOH, and the need to strengthen CBC and management systems in the field, the Curamericas/CSRA CS Project has shown outstanding results. In addition to improvements in coverage of CS interventions, the following areas are truly exemplary: community relations and participation, intercultural communications in the field, use of program data for local decision-making, and application of a model of public-non-profit primary health service provision at the municipal level with great potential for long-term sustainability. Challenges facing Curamericas and CSRA at this juncture are to expand the innovative strategies that have been developed and field tested to other regions of Bolivia, explore opportunities for influencing health policy in Bolivia based on successful models of local health systems management, and to document these experiences so they can be shared on a world wide level.

² Comité de Análisis de Información (CAI) is a meeting for analysis of health data. Information collected by the MOH system and community census data is reported, results are discussed and programming decisions are made.

B. Assessment of Results and Impact of the Program

B.1 Summary of KPC Results³

PROJECT OBJECTIVES	Goal	KPC 1998	KPC 2001
1. Immunization (20% Effort)			
2. Increase the number of children age 12-23 months with complete vaccination coverage	74%	40%	73%
3. Increase the number of pregnant women who receive at least 2 doses of Tetanus Toxoid vaccination	46%	23%	22%
Diarrhea Case Management (15% Effort)			
1. Increase the number of mothers who recognize at least one danger sign of dehydration (dry mouth, sunken eyes or fontanel, decreased urine output)	52%	15%	12%
2. Increase the number of mothers who have heard of ORT	69%	45%	58%
2.1) <i>Of the mothers who have heard of ORT, increase the proportion who understand the use of ORT</i>	84%	73%	92%
2.2) <i>Of the mothers who have heard of ORT, increase the proportion who can properly prepare ORT</i>	84%	57%	75%
2.3) <i>Of the mothers who have heard of ORT, increase the proportion who have used ORT</i>	76%	61%	72%
3. Increase the number of mothers who give equal or more liquids during diarrhea episodes (excluding breast milk)	69%	45%	59%
Pneumonia Case Management (15% Effort)			
1. Increase knowledge among mothers in the signs and symptoms of pneumonia for chest in-drawing and rapid/difficult breathing	62%	30%	46%
2. Increase the number of mothers seeking treatment from trained health personnel for their children age 0-23 months with signs of pneumonia.	51%	39%	53%
Nutrition/Micronutrients (15% Effort)			
1. Increase the number of children age 0-23 months who receive growth monitoring six times per year	62%	33%	73%
2. Increase the number of children age 0-23 months who receive their first growth monitoring control during their first month of life	56%	35%	56%
3. Increase the number of children age 0-23 months with control card in home and/or clinic	79%	74%	94%
4. Increase exclusive breastfeeding through first 6 months of life	68%	65%	74%
5. Increase the number of children age 6-10 months who receive solid food	90%	78%	85%

³ Baseline and final KPC results were collected and tabulated for each of the four project geographic areas, Ancoraimes, Carabuco, Ambana and Puerto Acosta. Project goals were also established for each area by indicator. In an effort to show overall trends during CS XIII, this chart presents the average percentage regarding goals, baseline, and final results for the four areas. The averages were not weighted. Areas of significant difference regarding CS indicators among geographic areas are mentioned in the narrative. Information on each indicator according to geographic area is presented in Attachment D.

PROJECT OBJECTIVES	Goal	KPC 1998	KPC 2001
6. Increase the number of children age 6-11 months and 12-23 months who receive two doses of Vitamin A	72%	32%	51%
7. Increase the proportion of women who receive Vitamin A after delivery	65%	N/A	31%
8. Increase the proportion of women who receive a 3-month supply of iron sulfate tablets during pregnancy	62%	N/A	19%
Maternal and Newborn Care (10% Effort)			
1. Increase the number of women who receive at least one prenatal care visit.	56%	19%	48%
2. Increase the number of pregnant women delivering in the presence of a trained person	38%	8%	30%
Family Planning (10% Effort)			
1. Increase modern contraceptive use among women who do not desire children in the next two years	16%	3%	17%
2. Increase natural contraceptive use among women who do not desire children in the next two years	60%	46%	64%

The above levels of effort add up to 85%. The other 15% level of program effort was for providing basic curative services and program strengthening.

B.2 Results: Technical Approach

B.2.a Overview

Following is a summary of the principal strategies that Curamericas/CSRA implemented during the CS XIII Project.

Community Census

Curamericas/CSRA has developed a census-based, impact-oriented (CBIO) methodology, which is the basis of a rural health care system strengthened and expanded during this project. After NGO leadership have established a relationship with project area communities, auxiliary nurses (ANs) and HVs (health volunteers) conduct censuses, number houses and draw maps of each community. Basic demographic data and vital statistics are collected and updated periodically for each household. Family health files are maintained at Health Centers and Posts, including information on births, deaths, migrations, vaccination coverage, growth monitoring, illnesses, and treatments. Regular home visits and group education activities are provided by ANs and HVs, while direct services are available through health centers and health posts.

Home Visits

The frequency of home visits depends on the risk profile of each family. Families with children under two and pregnant women are supposed to be contacted every two months, and families with children age 2-5, or a pregnant woman are to be visited three times a year. Women of childbearing age are visited every 6 months, and other families are visited once a year. Newborns, malnourished children, and TB patients are visited each month.

Direct Service Provision by MOH/CSRA

Direct health services are provided at three Area Health Centers located in Carabuco, Ancoraimes and Puerto Acosta, and in the Sub-Center of Ambana in the jurisdiction of Carabuco. The Health Centers are managed jointly by CSRA and the MOH. This strategy fosters capacity building and sustainability, as CSRA provides additional staff and training, and the MOH system is strengthened to continue providing quality health care over the long term. Each Health Center has a network of health posts that offer front line services to rural communities. Each Health Center is staffed by a physician, a CS field supervisor, a registered nurse and 1-2 auxiliary nurses plus administrative staff. Each health post is staffed by an auxiliary nurse who schedules clinic days and rural outreach days each month.

Mobile Health Teams

In areas where communities are not yet censused, mobile health teams visit the larger communities four times a year to deliver services and to provide health education. The objective of the mobile team is to serve a maximum number of individuals and to promote the use of health posts and centers. As communities enter into the census methodology, the mobile team visits end and the system of home visits, group education, and clinic activities takes their place.

Health Volunteers at the Village Level

The CS Project uses the community structures, specifically farmers associations (sindicatos agrarios), to recruit HVs to work in the community. Volunteer personnel assist the AN in home visits, preventive education, provision of ORS packets, and in some cases, first-aid. They are trained by the project and supported with on-going technical assistance from ANs and CS field supervisors. HVs receive a small monetary incentive per activity, which is paid every three months, upon receipt of a report. This mechanism assures the continual updating of household census information, community education, and contacts between the community and health service providers.

Community Agreements

The CS Project implemented a slightly different strategy in Puerto Acosta. There, each community must first enter into a written agreement with CSRA that indicates mutual responsibilities for the implementation of the census based approach and other CS activities. Although progress is slower at first, this process is perceived to facilitate improved long-term local commitment and sustainability.

Municipal Management of Local Health Systems

The CS XIII Project has assisted municipal governments to form municipal health boards. The boards are responsible for the development of local health systems in their respective municipality. Emphasis is placed on health leadership, inter-institutional coordination, assignment of sufficient resources for local systems to function efficiently, adequate management of the Basic Health Insurance package, and the analysis of local health data for shared decision-making.

B.2.b. Progress Report by Intervention Area

IMMUNIZATION

(i) *Comparison of Baseline and Final Evaluation Surveys*

PROJECT OBJECTIVES	Goal	KPC 1998	KPC 2001
Immunization (20% Effort)			
1. Increase the number of children age 12-23 months with complete vaccination coverage	74%	40%	73%
2. Increase the number of pregnant women who receive at least 2 doses of Tetanus Toxoid vaccination	46%	N/A	22%

Key activities for the immunization component include tracking of eligible children through the community census strategies and provision of vaccines during home visits. Vaccination campaigns are used in communities where the household census has not been done. Quality is sought through emphasizing complete vaccination by the age of 15 months and by the use of supervision checklists. Cold chain management is a joint responsibility of the municipality, the MOH and CSRA. In order to insure registration and follow-up, vaccination cards are kept in duplicate by the mother and health post/center. To promote the importance of immunization for both children and women, educational sessions are held using visual aids (cartillas). The DIP recommended the use of factor analysis to determine barriers to behavior change through a rapid assessment, and based on this information, development of educational messages.

A comparison of the data from the baseline and final KPC surveys shows a significant improvement of children age 12-23 months with complete vaccination coverage, from 40% to 73% over the life of the project. The percentage of children who have received the complete vaccination schedule by age 15 months has increased significantly: in Ambana (from 4% to 30%), in Ancoraimes (from 25% to 66%) and in Puerto Acosta (from 0% to 47%). Overall vaccination coverage reaches herd immunity levels in Carabuco and Ancoraimes (85% and 83% respectively), but needs to be improved in Ambana and Puerto Acosta where coverage reaches 63% and 59% respectively.

Immunization for pregnant women with tetanus toxoid (22%) did not reach the target of 46%. Distribution by geographic area shows Ancoraimes to have the highest coverage (35%), followed by Carabuco (28%), Ambana (16%) and Puerto Acosta (10%). It is important to note that TT vaccination is not a priority for the MOH, and none of the infant deaths registered in recent years have been attributed to neo-natal tetanus.

(ii) *Factors Affecting Achievement of Program Objectives*

The census based methodology and a well maintained registration system were key factors in attaining improvements in immunization coverage. Home visits to give vaccinations has been a huge boost to increasing and maintaining the percentage of children with the full schedule of vaccines, and to providing vaccines by the time a child reaches 15 months of age. Information

from the KPC 2001 indicates low drop out rates in Carbauco (3%), Ambana (5%), and Anoraimes (1%), with a somewhat higher rate in Puerto Acosta (9%). Education provided during home visits by VHs and during group meetings has also influenced community acceptance of child vaccination. Radio messages sponsored by PROSIN (a Bolivian government health organization financed by USAID) and the MOH have increased awareness regarding immunizations. The Seguro Básico de Salud (Basic Health Insurance) provides vaccines free of charge. Vaccines have been available in most geographic areas, and cold chain management has been adequate, although not all posts have refrigerators. Training has been given in the repair and maintenance of refrigerators to staff at health centers. In areas without electricity or gas, ANs pick up vaccines at the health center and transport them to communities in a thermos. Specific days are scheduled for this activity and ANs without transport are given a motorcycle to use. Temperatures of refrigerators are monitored and when black outs occur the vaccines are discarded. In Puerto Acosta, the municipal government equips all health facilities with refrigerators and thermoses, and is covering maintenance and gas costs.

(iii) Contributing Factors for Objectives Not Fully Achieved

The community census methodology is up and running in all the communities in Carabuco and Ancoraimes. In Ambana, 69% of communities have been censused, while in Puerto Acosta only 16% have been censused to date. The lack of census data makes it more difficult to track individual children. Although the cold chain is well equipped in Puerto Acosta, there are health facilities in Carabuco, Ambana and Ancoraimes without refrigerators. In such cases, vaccines cannot be provided to children or women who visit the health post.

The factor analysis approach for tailoring educational messages was not implemented during the project. Although use of “cartillas” is a good strategy for individual or small group education, materials are not available for new staff, especially volunteers. The formation of groups to learn about CS interventions has been successful in some areas, however in Ambana only 2 groups were formed during the life of the project, hence limiting educational opportunities. Quality control using checklists has not been fully implemented.

There is great resistance to tetanus toxoid vaccination. Some women complain of swelling and pain in the arm, and others believe that the vaccine will cause sterilization. There is a general mistrust of modern medicine on behalf of the Aymara population. Another factor for low reporting of coverage rates may be attributed to poor previous record keeping. Some women claim to have already had 4-5 vaccinations and therefore refuse additional immunization.

(iv) Lessons Learned

- ❑ Although the use of quality checklists had not been fully implemented, ANs have slowly seen the benefits of the lists and are accepting feedback regarding needed changes.
- ❑ The accompaniment of ANs by CS supervisors has helped to improve the management of immunization records, tracking of children and quality in general.
- ❑ Complete immunization coverage of all children age 0-23 months provided through home visits requires sufficient human resources to reach all those in each geographic area.

However, the home visit strategy is less labor intensive than the traditional vaccination campaigns.

- ❑ The application of tetanus toxoid to high school girls has been a successful strategy in Puerto Acosta.
- ❑ Continual updating and training of ANs and VHs in educational methodologies and provision of materials to new staff and volunteers is necessary if immunization education is to be successful.

(v) *Special Outcomes, Unexpected Successes, Constraints*

- ❑ An unexpected outcome was the support of the Municipal Government of Puerto Acosta regarding the cold chain.
- ❑ An observation of note during the visits to some of the project areas was the lack of children under the age of two. Demographics are changing, with migration of young people to the cities, especially to El Alto and Caranavi. This trend has depleted many communities of infants and young children.

(vi) *Future Applications of Lessons Learned*

- ❑ Continue to expand the census to all project communities and institutionalize the procedure with the MOH and the municipal health boards to assure the continuity of high levels of vaccination coverage for children.
- ❑ Expand the strategy of tetanus toxoid vaccination for high school girls.
- ❑ Consider providing health education through the schools regarding the importance of child immunization. It is more difficult to reach older women due to geographic and language barriers.
- ❑ Develop a communication for behavior change strategy for CS interventions to replace the current focus on giving messages, and assist health workers to make their own “cartillas” and other educational materials.
- ❑ Consider moving CS activities to additional geographic areas where demographic information shows a significant number of children age 0-23 months and pregnant women.

CONTROL OF DIARRHEAL DISEASE

(i) Comparison of Baseline and Final Evaluation Survey

PROJECT OBJECTIVES	Goal	KPC 1998	KPC 2001
Diarrhea Case Management (15% Effort)			
1. Increase the number of mothers who recognize at least one danger sign of dehydration (dry mouth, sunken eyes or fontanel, decreased urine output)	52%	15%	12%
2. Increase the number of mothers who have heard of ORT	69%	45%	58%
Of the mothers who have heard of ORT:			
1.1 Increase the proportion who understand the use of ORT	84%	73%	92%
1.2 Increase the proportion who can properly prepare ORT	84%	57%	75%
1.3 Increase the proportion who have used ORT recently	76%	61%	72%
3. Increase the number of mothers who give equal or more liquids during diarrhea episodes (excluding breast milk)	69%	45%	59%

The principal strategy for the control of diarrheal disease (CDD) intervention is education of mothers to provide adequate home management of diarrhea cases. Messages relate to the use of oral rehydration solution (ORS), home available liquids and proper nutrition during diarrhea episodes, recognition of danger signs, and seeking of further treatment. ANs and HVs are trained in correct diagnosis and treatment. They educate mothers on control of diarrhea, including the recognition of danger signs for dehydration, correct dietary management, referral of severe cases, and distribution of ORS packets. ANs and HVs distribute ORS packets free of charge in their communities. Referral services are provided by CSRA/MOH health centers and MOH referral hospitals.

The 2001 KPC Survey does not show an increase among mothers who know at least one symptom of dehydration, indicating that this topic may not have been a priority in educational sessions. The highest percentage of mothers who could state a sign of dehydration was in Ancoraimes (26%), followed by Carabuco (12%), Ambana (6%) and Puerto Acosta (5%). The two geographic areas that collect mortality data from census information, Carabuco and Ancoraimes, report a decreasing trend in infant mortality due to diarrheal disease, from a high of 5 deaths in 1998 to a low of 0 deaths reported in 2001. Information from CSRA/MOH health centers shows that follow-up of detected cases of diarrhea with dehydration was highest in Carabuco (100%), followed by Puerto Acosta (95%), Ancoraimes (60%) and Ambana (39%).

Knowledge of ORT has increased by 13% (from 45% to 58%). Of the 58% of women who had heard of ORT, 92% expressed understanding of how to use it, 75% knew how to prepare it, and 72% indicated that they had used ORT recently. In spite of these results, there are still a large proportion of mothers who have not heard of ORT in the project area. Regarding geographic distribution, the highest percentage of mothers who had heard of ORT was in Carabuco (73%), followed by Ancoraimes (63%), Ambana (46%) and Puerto Acosta (50%).

In regards to continuing to give the same amount or additional liquids to a child during an episode of diarrhea, a comparison of the baseline and final surveys shows an increase of 14% (from 45% to 59%). Carabuco showed the highest rate with 71% of mothers continuing liquids, followed by the other sites ranging from 53-56%.

(ii) Factors Affecting Achievement of Program Objectives

The existence of a census of all households in Carabuco and Ancoraimes has facilitated follow-up of dehydration cases. The majority of health personnel (90%) received clinical training in the Integrated Management of Childhood Illnesses (IMCI) at the Hospital Obrero in La Paz. Key aspects of the IMCI training were replicated with the HVs. These training events better prepared health personnel and volunteers to provide integrated care, including control of diarrheal disease. Educational activities included information on prevention of diarrhea, the relationship between child nutrition and diarrheal disease, and the importance of using ORT to prevent dehydration.

In areas where a census did not take place, the mobile health team made continual visits to communities where the IMCI approach was implemented. ORS packets were available during the period of project implementation at health centers, health posts, and in communities through HVs. The ORS packets are provided free of charge to the population. In Ambana, Oral Rehydration “Units” have been established and are implemented by health volunteers. The ORT Unit consists of a community volunteer who has been trained to provide ORS packets, education, and referral of cases of dehydration. The ORT Unit often functions in the home of the volunteer. The health centers in Carabuco, Ancoraimes, Ambana and Puerto Acosta are equipped to treat severe dehydration. Cases that cannot be resolved are referred to Hospital Sagrado Corazón in La Paz, which has a formal agreement with CSRA.

Several communities have benefited from the construction of water systems that were facilitated by CSRA, and were sponsored by the local municipal governments, “Agua Para el Pueblo” (Water for People), and/or Plan International.

(iii) Contributing Factors for Objectives Not Fully Achieved

The three objectives for the CDD intervention were not met, and though there was progress in knowledge of ORT and administration of more liquids during diarrhea episodes, only 12% of mothers could recognize at least one danger sign of dehydration. The IMCI approach, which emphasizes 16 key family practices, including care-seeking, should be a priority for integrated behavior change strategies at the community level. “Caretakers need to recognize a sick infant or child and need to know when to take the infant or child to a health worker or health facility”.⁴

A key constraint to the success of all project interventions, including CDD, is the difficulty in developing strong linkages between health facilities and communities. Some limitations include: mistrust of modern medicine, a low priority given to health by community members, a reluctance to pay for health care and to spend time seeking care, and the low value placed on the life of a

⁴ See “Community IMCI: Reaching Communities for Child Health and Nutrition”, CORE, BASICS, USAID, CSTS, April 2001.

child under the age of one year. Time used in care-seeking takes women away from tasks that are viewed as essential for survival (i.e. grazing animals, planting, harvesting, etc.). In addition, most health centers are distant from rural villages and require effort and time to reach. Some MOH health staff, many of who are doing their obligatory rural service, or have been hired as directors of Area Health Centers do not speak the native language and unintentionally “mistreat” patients due to a lack of cultural sensitivity. With the new-shared management model, not all staff is selected by CSRA, and a few of the MOH employees have an ingrained prejudice towards the indigenous people. An additional constraint is a poor understanding of the seriousness of diarrhea, a condition that project area families consider to be “normal” among infants and young children.

(iv) Lessons Learned

- ❑ An integrated behavior change strategy is necessary, if improvements are to be forthcoming in the home management of diarrhea and prompt care seeking based on the recognition of danger signs.
- ❑ If cultural barriers are not understood and changes implemented on behalf of health personnel, community members will continue to be discouraged from seeking care.

(v) Special Outcomes, Unexpected Successes, Constraints

As mentioned above, water and sanitation projects sponsored by municipal governments and other agencies are contributing to the decrease in diarrheal disease. In some cases CSRA has helped communities advocate with municipal health boards and inter-sectorial committees for the implementation of water and sanitation systems.

(vi) Future Applications of Lessons Learned

- ❑ Strengthen linkages between the health facilities and communities to decrease barriers and improve practices in the home and prompt care seeking to address community mistrust and lack of shared values. Emphasize the results of the study on inter-cultural relationships with new MOH staff, and screen candidates for rural positions based on cultural sensitivity indicators. Identify specific behaviors that health personnel should demonstrate in their relations with patients from rural communities, and include these in yearly performance evaluations.
- ❑ Design and implement a communication for behavior change strategy, appropriate for the local setting, taking into consideration the results of the inter-cultural study.
- ❑ Prioritize home visits to children who have diarrhea, and train HVs to provide counseling and to make agreements with mothers regarding improved feeding practices and ORT.
- ❑ Continue supporting municipal governments to sponsor water and sanitation projects.

PNEUMONIA CASE MANAGEMENT

(i) Comparison of Baseline and Final Evaluation Surveys

PROJECT OBJECTIVES	Goal	KPC 1998	KPC 2001
Pneumonia Case Management (15% Effort)			
1. Increase knowledge among mothers in the signs and symptoms of pneumonia for chest in-drawing and rapid/difficult breathing.	62%	30%	46%
2. Increase the number of mothers seeking treatment from trained health personnel for their children age 0-23 months with signs of pneumonia.	51%	39%	53%

Key strategies for pneumonia case management include: identification of children through the census or via the mobile health unit, provision of diagnosis and treatment during home visits or at health posts and centers, training ANs to properly diagnose probable pneumonia using a clock with a second hand, educational activities on prevention and care seeking with families and groups, use of a quality checklist to verify proper pneumonia case management in health centers and posts, provision of transport from communities to health centers in cases of emergency, and follow-up home visits to children who are being treated for pneumonia.

Data from the final KPC indicate that 53% of mothers seek appropriate treatment for children with signs of pneumonia, an increase of 14% as compared to the baseline, and exceeding the Project's goal of 51%. Knowledge of chest in-drawing and recognition of rapid breathing increased from 30% to 46%, but was short of the Project goal of 62%. Knowledge of danger signs per geographic area ranged from 42-48%, however large differences exist for seeking care from health personnel, as follows: Ancoraimes (93%), Carabuco (59%), Puerto Acosta (33%) and Ambana (27%). The two geographic areas that collect mortality data from census information, Carabuco and Ancoraimes, report a decreasing trend in infant mortality due to pneumonia, from a high of 11 deaths in 1998 to a low of 4 deaths reported in 2001.

(ii) Factors Affecting Achievement of Program Objectives

IMCI training and the use of a clinical history form based on the IMCI approach has helped health facilities improve pneumonia case management. Use of motorcycles to transport sick children to health centers has improved access, and educational sessions in homes and at group meetings have helped to increase awareness. Essential medicines have been available for treatment of pneumonia cases during the implementation of the project. The majority of health centers have made a commitment to provide 24-hour service, assigning someone on duty during nights and weekends. The AN is to be available at his/her home to treat emergencies when not on duty at the health post. The treatment is free of charge to the patient, and costs are reimbursed to health facilities by the Basic Health Insurance. Health volunteers have been trained to count rapid breathing using a chronometer and observe chest in-drawing to diagnose

cases of probable pneumonia. The most highly trained HVs are authorized to administer cotrimoxazol.

(iii) Contributing Factors for Objectives Not Fully Achieved

Although the results of the KPC for recognition of danger signs and care seeking exceed baseline levels (46% and 53% respectively), there is still a large proportion of mothers who have no knowledge regarding home practices and timely treatment of pneumonia in young children. Although child death due to pneumonia dropped from 13 cases to 6 between 1998 and 2001, pneumonia continues to be the leading cause of death in the Bolivian Altiplano. Contributing factors include the cultural barriers mentioned in the discussion of CDD above, and the difficulties regarding transport and access. An infant with pneumonia may easily die if not treated with antibiotics promptly, and by the time a mother realizes the child needs treatment, there may be no means of transport from isolated communities. Although the CS Project has established a procedure for transportation by motorcycle or ambulance for emergencies, geographic factors (such as a lack of access roads in certain areas) and communication difficulties continue to be barriers to prompt care. Not all health centers have a sufficient number of motorcycles and ambulances, and some of the health posts do not have access to radio communication.

Regarding quality in pneumonia case management (PCM), the checklists originally planned in the DIP were only partially implemented. The Pneumonia ToolBox mentioned in the DIP was not used. Quality in PCM has been addressed through the IMCI approach, which has been implemented during the past two years as part of the MOH strategy.

(iv) Lessons Learned

- ❑ If pneumonia cases in children are to be detected, the following activities should be improved: follow-up of children recovering from pneumonia who are on a treatment program to assure adequate home management, training of HVs to improve the detection and referral of cases, and availability of essential medicines at health posts and centers.
- ❑ Regular CSRA/MOH supervision and follow-up of health care providers is crucial, if staff are expected to implement clinical IMCI protocols and improve the quality of care for pneumonia case management. Supervision of staff to assess procedures in pneumonia case management was not emphasized in the CS Project, however this should be prioritized in the future intervention activities.
- ❑ Education of families in PCM requires an approach that can successfully deal with cultural barriers. For example, recognition of danger signs that require immediate care seeking along with community strategies to evacuate a sick child to prevent death.

(v) Future Applications of Lessons Learned

- ❑ Following are some suggestions for improving pneumonia case management:
 - 1) Strengthen community involvement in health activities and support for health volunteers through a community analysis of census information on a periodic basis, which would include problem identification and the development of an action plan;

- 2) Follow-up for CSRA/MOH Health Centers in quality assurance practices;
 - 3) Improve IMCI supervision system and track indicators;
 - 4) Improve data analysis at the health center and during monthly CAI meetings at the Sector and Area levels;
 - 5) Monitor volunteer performance at the monthly CAI meetings; and
 - 6) Make sure that all health posts and centers have adequate supplies of antibiotics.
- Study the transport and communication situation of each geographic area and work with municipal governments or other agencies/donors to improve access. A strategy that has worked in other settings has been the development of emergency evacuation plans at the community and health post level.
 - Implement an integrated communication for behavior change strategy, as mentioned in the CDD section, to better address household management and prompt care seeking by families.

NUTRITION MICRONUTRIENTS

(i) *Comparison of Baseline and Final Evaluation Survey*

PROJECT OBJECTIVES	Goal	KPC 1998	KPC 2001
Nutrition/Micronutrients (15% Effort)			
1. Increase the number of children age 0-23 months who receive growth monitoring six times per year	62%	33%	73%
2. Increase the number of children age 0-23 months who receive their first growth monitoring control during their first month of life	56%	35%	56%
3. Increase the number of children age 0-23 months with control card in home and/or clinic	79%	74%	94%
4. Increase exclusive breastfeeding through first 6 months of life	68%	65%	74%
5. Increase the number of children age 6-10 months who receive solid food	90%	78%	85%
6. Increase the number of children age 6-11 months and 12-23 months who receive two doses of Vitamin A	72%	32%	51%
7. Increase the proportion of women who receive Vitamin A after delivery	65%	N/A	31%
8. Increase the proportion of women who receive a 3-month supply of iron sulfate tablets during pregnancy	62%	N/A	19%

A comparison of baseline and final KPC data regarding growth monitoring show a significant improvement in children who have a growth card (from 74% to 94%), children who are weighed 6 times a year (from 33% to 73%), and children who are weighed during the first month of life (from 35% to 56%). Feeding practices have also improved with exclusive breastfeeding increasing from 65% to 74%, and an increase in complementary feeding from 78% to 85%.

Regarding the provision of two doses of Vitamin A to children, the percentage has increased since the baseline (from 32% to 51%), however coverage did not reach the DIP objective of 71%. Provision of Vitamin A to women after delivery and iron supplements during pregnancy did not reach project targets, with coverage rates of 31% and 19% respectively. The provision of micronutrients depends on the reception of adequate supplies from the MOH, and accurate record keeping regarding the distribution of supplements.

While there has been improvement in growth monitoring and feeding practices, it is difficult to assess nutritional improvement over the past four years due to a lack of complete service data. Information is collected in each geographic area regarding the number of children not gaining weight, their level of malnutrition, those who participate in rehabilitation, and the results. Problems with the data include a lack of information for all 4 geographic areas for all 4 years of the project, because Puerto Acosta and Ambana did not enter the program until year 3. Data from Carabuco and Ancoraimes for 1997 show an average rate of malnutrition among children

under two years of age of 38% (-1 SD, weight for age). Considerable improvement is seen in the data for 2001, showing an average of 25% for children with weights under -1 SD.

The Project's strategy to ameliorate poor nutritional status has been to implement growth monitoring of each child under the age of two. Children who fall under -1 SD based on weight for age are included in a nutritional rehabilitation program. Eligibility for the program is dependent on the following criteria: the child must be under 2 years of age, the child's weight should be between -1 or -2 SD (those at -3 SD are too difficult to rehabilitate), there must be sufficient food available in the home for rehabilitation, the family must agree to the rehabilitation process, and the AN must agree to make all the follow-up visits. The program consists of nutritional counselling to the mother, treatment with anti-parasite medication before and after rehabilitation is completed, provision of iron and vitamin A supplements, and monthly visits to the family.

Service data for the period January-September 2001 indicate that 47% of malnourished children detected were rehabilitated in Carabuco, 21% in Puerto Acosta, and only 4% and 2% in Ambana and Ancoraimas respectively.

ANs and HVs are trained in growth monitoring procedures and in nutritional counselling based on the growth pattern of each child. In light of the improvement in project objectives and the positive trend towards decreasing the number of malnourished children, it is evident that this strategy has been effective.

(ii) *Factors Affecting Achievement of Program Objectives*

The key factor for the achievement of the nutrition objectives was the implementation of growth monitoring in a majority of project communities. This process was greatly enhanced by having census information for all the communities in Carabuco and Ancoraimas, which permitted health personnel to target children for participation in the nutrition component. In Puerto Acosta and Ambana, where not all communities are censused, coordination with local authorities helped to identify children under 2 years of age, and the mobile health unit provided growth monitoring and nutrition education. Personal contact with mothers during home visits enabled health personnel and volunteers to provide effective nutrition counseling.

Health personnel and HVs were trained in growth monitoring, Vitamin A supplementation and nutritional counseling. ANs, with the assistance of health volunteers, made follow-up visits to families with children who were not gaining weight. The importance of keeping the child growth card is stressed by CSRA/MOH, and the procedure of keeping duplicate cards has facilitated registration and follow-up. The development of a system for nutritional rehabilitation with criteria and procedures provided health staff with clear guidelines to actually implement the program.

Growth monitoring every two months enabled ANs and HVs to assess children's growth tendencies and assist families to take corrective actions. In Puerto Acosta, the Municipal Government assisted the Health Center to acquire a vitamin rich cereal from Peru, which is being used to rehabilitate malnourished children. Since many families do not have enough food, this strategy could make a difference in the number of families who are eligible to enroll their children in the nutritional

rehabilitation program. In Carabuco, the Municipal Government has approved the purchase of a multi-grain cereal from Cochabamba to be used in nutritional rehabilitation.

PROCOSI (a network of health NGOs in Bolivia) launched a nutritional improvement project in 1999, sponsored by a USAID funded project, Linkages/AED. This project provided technical assistance to PROSIN regarding child feeding and counseling practices. The PROSIN project works closely with CSRA/MOH services and is promoting the Linkages methodology, which includes an educational flip chart and training for health workers in application of the Observation, Reflection, Personalization, and Action (ORPA) methodology with mothers. ORPA is an educational process for creating awareness and taking action, which Linkages has applied to nutrition education for rural women in Bolivia. The first step in an educational session is to observe flip charts, drawings or pictures. The next step is to reflect on the meaning of the visual aids. The following step is “personalization”, which involves talking about how each participant would behave in a similar situation. The final step is a discussion on the adoption of ideal practices. After the ORPA session, the facilitator presents the basic educational messages to the group.

CSRA has recently begun the implementation of micro-credit for women through a USAID Matching Grant project in partnership with Freedom from Hunger. The formation of credit groups has created a framework for providing more intensive education to larger numbers of people. This has been a boost to nutrition education activities in the project area.

(iii) Contributing Factors for Objectives Not Fully Achieved

Immediate causes of malnutrition include inadequate food intake coupled with a high prevalence of infectious diseases, particularly diarrheal disease and respiratory infections, with two-week prevalence rates of 43% and 48% respectively (KPC 2001). Contributing causes include: insufficient food; inadequate food distribution practices within the home; a lack of time to prepare frequent meals for children; poor access to health services; lack of potable water and sanitation; insufficient education and information; and inadequate breastfeeding and complementary feeding practices. Due to socio-economic factors, changes in nutritional status may require long-term integrated development with coordinated efforts among municipal governments, health, education, the agriculture sector, and the NGO community.

Constraints to meeting the objectives for micronutrients are lack of supplies, late detection of pregnant women, and limited orientation to mothers regarding the importance of the supplements. Often incomplete records are kept, making it difficult to assess coverage and to implement adequate follow-up for second doses. Health personnel require capacity building in technical aspects of nutrition, including psychomotor development, and in the implementation of behavior change strategies. Such behavior change strategies should insure that mothers understand the meaning of children’s nutritional status, that mothers recognize their nutritional risks during pregnancy, and that they are motivated to take the required actions. Another area that needs improvement is follow-up of children who are not gaining weight, based on verification of child growth cards. In particular, CSRA supervisors need to insure that registers in the community correspond to those at health centers. The child health cards, which include both immunization and growth information, are kept in duplicate at both the home and the health center or post. If the results of growth monitoring or

vaccinations are recorded during the home visit, but not on the duplicate cards at the health center, health personnel has difficulty programming home visits for timely follow-up.

The DIP indicated that more female health personnel would be hired to better interface with mothers, however this was achieved to a very limited extent. Most of the ANs and health volunteers are men. Although the Hearth methodology was included as a project strategy in the DIP, it was not implemented. Project staff indicated that the time required for meetings of mothers in the communities was a barrier to the establishment of peer education activities. As mentioned in section on CDD (iii), time is precious to altiplano mothers who must complete many daily tasks necessary for sheer survival. Only when mothers give high priority to an activity will they lay aside these tasks to participate.

It is important to note that CSRA undertook two pilot tests of the Hearth methodology in the Altiplano, conducted by CS Coordinator Maria Elena Ferrel and CSRA nutritionist, Roxanna Sardon, prior to the initiation of CS XIII. Neither of these tests was successful. There were several reasons for this lack of success. First, population density in the area was low, resulting in the need to combine women of several nearby communities into one group. This required even more time to get to and from the meetings, and women of one village were frequently at odds with those from other villages. Second, women did not feel that they had the time for this time-intensive effort. Next, sponsoring hearth mothers, despite explanations to the contrary prior to project startup, demanded compensation of some kind in order to continue their support. Fourth, some mothers complained that despite very low costs of the complementary foods, they still could not afford to buy the ingredients for the recipe. Finally, there was a strong cultural bias toward taking a passive, wait and see approach for early childhood malnutrition. Parents, especially fathers, usually were unwilling to invest scarce family resources into its resolution, and generally were not supportive.

Another activity mentioned in the DIP was a study to determine the relationship between parasite infections and anemia. Although this did not take place, health personnel recommend that children receive anti-parasite medications as part of routine child health care activities.

Constraints at the community level include: 1) families are not accustomed to diversifying their diets, 2) Community authorities are not integrated in health activities nor do they participate in the analysis of nutritional information at the monthly CAI meetings, and 3) mothers are reluctant to put into practice the guidance provided by the AN or the HV.

(iv) Lessons Learned

- ❑ Group education activities to promote nutritional rehabilitation (Hearth sessions) have not been successful, and probably are not feasible in the project area.
- ❑ The only way that a nutritional rehabilitation program can be effective is if health personnel commit themselves 100% to counseling and home visits. One reason this has not happened is that MOH staff does not think it is part of their job to spend extra time on home visits. MOH staff expects financial compensation for extra work, and this expectation is not shared by CSRA managers. While CSRA staff is totally committed to improving health, many public sector staff do not share these same values.

- ❑ Nutrition interventions can have more impact if CSRA/MOH works with the education sector, the productive sector, and Municipal Governments to assure an integrated development approach.
- ❑ Nutrition rehabilitation works best if a limited number of children are selected per geographic area, so that there will be sufficient human resources to guarantee the needed home visits and follow-up.
- ❑ If men are integrated into health activities, through the participation of local authorities in the CAI meeting, they will play an increasingly more active role in assisting women to improve nutritional practices in the home.

(v) *Special Outcomes, Unexpected Successes, Constraints*

An unexpected outcome was the involvement of the Municipality of Puerto Acosta, which assisted CSRA/MOH to obtain a large quantity of nutritious cereal from Peru, for use in the nutritional rehabilitation program. The municipal government is currently exploring alternatives to produce the cereal locally. Carabuco has followed suit, with the approval of a strategy to import cereals from Cochabamba, a grain-producing region in central Bolivia.

(vi) *Future Applications of Lessons Learned*

- ❑ Continue to expand the census to other communities, along with growth monitoring of all children under age 2, and strengthen the nutritional rehabilitation program.
- ❑ Use the nutrition intervention as an entry point for community IMCI, and reinforce behavior change in the other CS interventions as part of the home visit and counseling strategy.
- ❑ Continue training of ANs and HVs in participative educational methodologies to improve communication for behavior change.
- ❑ Improve quality of care at the Health Sector level through continued support and in-service training in child and maternal nutrition.
- ❑ Improve the registration process to track child weights, follow-up activities and results, and the administration and record keeping of Vitamin A and iron sulfate.
- ❑ Improve the supply system for micronutrients.
- ❑ Make agreements and action plans with each family that has a child with negative growth tendencies, as part of a strategy to prevent moderate and severe malnutrition.
- ❑ Continue efforts to engage men and local authorities in an analysis of nutrition indicators and creative planning to improve nutritional status, such as home gardens and crop diversification, among others.
- ❑ Include follow-up of women who have apparently unwanted pregnancies to prevent low birth weight and poor feeding practices, emphasizing self-esteem and value identification. A reflection on values might include: “what values do I have regarding the purpose of life, how can I express these by taking care of myself and by making decisions that will protect my health and the health of others, especially a child whom I choose to bring into the world”.
- ❑ Consider applying the “Municipal Inter-Sector Model” used in Puerto Acosta to other municipalities. In Puerto Acosta, the municipality has formed an inter-sector committee to address issues in the areas of health, education, infrastructure, transportation, and agricultural production. This municipality has responded to requests from health centers, schools, and

communities with allocation of resources. One example is a joint activity between health and education to teach reproductive health to several groups of high school juniors and seniors.

- Strengthen efforts to hire more female health workers and to recruit female health volunteers to enhance educational activities with mothers.

MATERNAL AND NEWBORN CARE

(i) *Comparison of Baseline and Final Evaluation Survey*

PROJECT OBJECTIVES	Goal	KPC 1998	KPC 2001
Maternal and Newborn Care (10% Effort)			
1. Increase the number of women who receive at least one prenatal care visit	56%	26%	48%
2. Increase the number of pregnant women delivering in the presence of a trained person	38%	8%	30%

Key strategies for the maternal and newborn care component included: use of the Warmi Methodology, train men in safe birthing practices, distribute clean birth kits, train traditional birth attendants (TBAs) in the detection of pregnant women and referral, develop emergency evacuation plans, follow-up of postpartum women, and provide education in LAM and nutrition to mothers.

A comparison of baseline and final KPC results show marked improvement in prenatal visits (from 26% to 48%) and in deliveries attended by someone trained in safe birthing techniques (from 8% to 30%). Although the objectives for this component were not met, the CS Project has been effective in changing behaviors, as both indicators show over a 20% increase. Prenatal visits were highest in Carabuco (59%), followed by Ancoraimes (49%), Ambana (44%) and Puerto Acosta (41%). Regarding women who deliver in the presence of a trained person, Carabuco had by far the best coverage (49%), followed by Ancoraimes (30%), Ambana (21%) and Puerto Acosta (20%). Service data for the four geographic areas indicate that 61% of high-risk pregnancies received follow-up. Reported maternal deaths decreased from 4 in 1998 to 1 in 2001, showing a trend toward improved diagnosis and treatment of obstetrical emergencies.

(ii) *Factors Affecting Achievement of Program Objectives*

Formation of women's groups to address reproductive health issues enhanced the process of behavior change. Discussion on maternal health topics was generated by the use of visual aids, socio-dramas, and other participatory methods. Health personnel and HVs received training in reproductive health and were given a manual for home birthing procedures. Clean birth kits were distributed in all of the geographic areas. The Basic Health Insurance covers transport costs for obstetric emergencies and pre and postnatal care. A good referral system is in place with the District Hospital in La Paz to receive and properly treat obstetric and neonatal emergencies. CSRA received assistance from PROCOSI to implement a Reproductive Health Project, which covered the salary of an educator to work with women's groups and funds for the production of educational materials. CSRA made an excellent selection of an Aymara reproductive health educator, who is very well received by the communities. She has made great headway in gaining trust and motivating behavior change among local women's groups.

(iii) *Contributing Factors for Objectives Not Fully Achieved*

Cultural barriers between the Aymara people and health personnel are a constraint to adoption of behavior change in reproductive health practices. In order to improve inter-cultural relationships and to bridge the gap between the indigenous population and modern medical practitioners, CSRA sponsored an ethnographic study to determine how to better reach Aymara women and men with reproductive health interventions. The local population generally is wary of strangers and often feels mistreated at health centers and hospitals. When an obstetric emergency occurs there is usually a long process of decision-making that includes the mother and/or mother-in-law, the traditional healer and the husband. If the case is not resolved, the patient may seek care at a health center as a last resort. The decision to seek modern medical treatment may be too late, and if a mother dies at a health facility the gap between traditional and modern medicine widens. As CSRA/MOH facilities implement new ways of service provision taking into account cultural differences, the use of modern medical services is increasing.

(iv) *Lessons Learned*

- ❑ Changes made at health centers, based on the results of the ethnographic study, have increased the utilization of maternal care services. See Section (v) below for the recommendations, many of which have already been implemented in Ancoraimes.
- ❑ The hiring of an Aymara educator was an excellent way to begin working with women's groups and to motivate women to adopt new health practices. The use of Aymara staff is not new, what was different here is the use of someone without health training, but rather a background in popular education.
- ❑ Free transport for emergencies and sonograms, financed by the Basic Health Insurance has increased utilization of services.
- ❑ The strategy initially envisioned in the DIP of working with TBAs was not successful. The reason for this is that people do not use "parteros" (midwives) to assist with delivery. The "assistant" usually is the husband, mother or mother-in-law.

(v) *Special Outcomes, Unexpected Successes, Constraints*

An important contribution of the CS Project is the ethnographic study, titled "*Salud Sexual y Reproductiva en Cuatro Comunidades Aymaras*" (Reproductive and Sexual Health in Four Aymara Communities). The study presents points of view from community members and health personnel and recommends ways to overcome these. Some of the recommendations regarding delivery include: presence of the mother, mother-in-law, or father during delivery; heating of the delivery room; availability of a stove so that family members can cook and provide the traditional foods and teas believed to be important; permission for the woman to give birth in a squatting position; and sensitivity to the importance of modesty, such as not taking off the woman's clothes and keeping her well covered. The study recommends to: 1) hire a socio-cultural facilitator to improve behavior change strategies, 2) make changes in service delivery methods, and 3) use traditional medicines at health centers and teach health volunteers how to use and prepare them.

(vi) *Future Applications of Lessons Learned*

- Continue with the intercultural approach and the implementation of the recommendations of the ethnographic study to improve utilization of services and changes in reproductive health behaviors.
- Expand training of men and health volunteers in safe birthing practices, and continue to promote the clean birth kit.
- Train ANs in life saving skills. MotherCare (a USAID funded project) developed a training program for level 1 of the Bolivia Health Care System in life saving skills, along with protocols for treatment of obstetric and neonatal emergencies. MotherCare also has a path to survival model for obstetric and neonatal care, which complements the ethnographic study results. The set of educational materials prepared by MotherCare may be of use to CSRA/MOH health facilities.
- Continue to promote the use of maternal health cards to track prenatal visits, TT immunization, micronutrient supplementation, delivery and postpartum care.

FAMILY PLANNING/CHILD SPACING

(i) *Comparison of Baseline and Final Evaluation Survey*

PROJECT OBJECTIVES	Goal	KPC 1998	KPC 2001
Family Planning (10% Effort)			
1. Increase modern contraceptive use among women who do not desire children in the next two years	16%	3%	17%
2. Increase natural contraceptive use among women who do not desire children in the next two years	60%	46%	64%

Key strategies for the family planning component include: promotion of modern methods by all field staff, individual counseling during home visits, registration and follow-up of new and continuing users, use of a logistics system for re-supply, training for health personnel and volunteers, and use of checklists to improve quality.

A comparison of the baseline and final KPC results shows an increase in women who use modern contraceptives, from 3% to 17%. Although this is an improvement, use of modern contraceptives remains low in the project area. Natural family planning (LAM and rhythm) is more accepted, showing an 18% improvement (from 46% to 64%) over the life of the project. Modern family planning use was highest in Ancoraimes (25%), followed by Carabuco (21%), Puerto Acosta (15%) and Ambana (8%). Natural methods were most used in Ambana (74%), followed by Puerto Acosta (69%), Ancoraimes (60%) and Carabuco (52%).

(ii) *Factors Affecting Achievement of Program Objectives*

Contraceptives are distributed by health centers, health posts, mobile health units, and through home visits. Home visits provide a private setting for family planning counseling. All health personnel received training in various sexual and reproductive health topics sponsored by CSRA, the MOH, PROCOSI and Pathfinder (a US PVO). Health personnel have received training in family planning logistics management (FPLM), a JSI (John Snow Incorporated) initiated logistics management program in Bolivia.

(iii) *Contributing Factors for Objectives Not Fully Achieved*

During the final evaluation interviews some health posts and centers mentioned stock-outs of contraceptives. Since contraceptive distribution is done by the MOH, CSRA has limited capacity to influence this situation. An emergency stock was obtained by CSRA, but this was not sufficient to provide supplies on an on-going basis. A lack of Depo Provera, the most popular method, has resulted in unplanned pregnancies among women in the project area. Several individuals who were trained in contraceptive technology are no longer working with the CS Project, therefore know-how regarding supply management has not been passed on to other staff. There was a lack of educational materials for group education activities on family planning. Quality checklists also have not been fully implemented.

(iv) *Lessons Learned*

- ❑ Depo Provera has met with widespread acceptance, and promoting its use increases the number of new and continuing users.
- ❑ The home visit strategy is an excellent means of providing reproductive health counseling in a private environment.
- ❑ Use of fairs and markets to promote family planning has been a successful strategy.
- ❑ Competition games for increasing family planning knowledge have been successful.

(v) *Special Outcomes, Unexpected Successes, Constraints*

In Puerto Acosta the municipal government, CSRA/MOH and the education sector combined efforts and gave reproductive health education to all junior and senior high school students. The use of rural schoolteachers as health educators was very effective, and this strategy could be expanded in other geographic areas.

(vi) *Future Applications of Lessons Learned*

- ❑ Emphasize improving quality in family planning based on the following: information, availability of methods, technical competence, follow-up mechanisms, consolidation of services, and interpersonal relations.
- ❑ Implement a communication for behavior change strategy to increase family planning users, building upon the successes to date (e.g. home visits, fairs and markets, competitions, and games).
- ❑ Systematically improve supply system management for contraceptives.
- ❑ Consider working through MHBs to attain greater synergy between rural schoolteachers and health personnel. Schools provide a captive and receptive audience for health education, and students will soon be mothers and fathers with children of their own. Behavior change is much easier among younger people, and this may be a more cost-effective investment for lasting changes in health behavior.

B.2.c Special Studies and Approaches

Four innovative strategies for impact oriented service delivery were field tested during this project: census based community epidemiological surveillance, joint decision making at the municipal level for strengthening local health systems, shared management of MOH health facilities, and the implementation of an inter-cultural approach.

The census-based impact-oriented approach to community health care includes a census of each community, the opening and maintenance of a family health folder with a number for each household, preparation of a community map, periodic home visits, registration of births, deaths and migrations, and analysis of the most frequent health conditions. The census-based methodology has created a framework for nurturing trust between practitioners and clients. It has helped health personnel understand the priorities of the communities and to develop appropriate interventions. Most importantly, the census-based approach has allowed CSRA and MOH partners to measure impact. The census gives each Area Health Center correct demographic data, which improves planning and evaluation of intervention strategies, and provides mortality and morbidity data. Important lessons learned in the implementation of the census-based methodology are: 1) census information must be combined with regular home visits in order to attain results, and 2) use of paid auxiliary nurses is much more effective than reliance solely on health volunteers.

CSRA's strategy of engaging in shared management of local health systems with MHBs and MOH facilities has resulted in increased coverage of preventative and curative services to the population and a decrease in maternal and infant mortality, and represents a true joint undertaking to improve local health systems. CSRA has developed a model of municipal health management that can be offered to other municipalities in Bolivia. Legislation over the past few years has created a decentralized environment within both MOH and municipal government contexts, within which CSRA has made significant progress toward the twin objectives of increased local investment and increased local participation in health program decision-making.

The CS Project conducted an ethnographic study to compare attitudes and practices among the Aymara population in the four geographic areas and those of health personnel. The results of the study helped CSRA/MOH staff make major adjustments in service delivery and treatment of patients, and several procedures were changed to take cultural preferences into consideration. One of the most important aspects for the Aymara people is to be shown courtesy, affection and kindness. Health personnel are now making a big effort to be more gentle and loving with each patient and his/her family members. The results of the ethnographic study were shared with other NGOs and the MOH during a formal presentation in La Paz.

B.3 Results: Cross-cutting Approaches

B.3.a Community Mobilization

(i) Community Mobilization Approach

The CS Project's approach for community mobilization included five complementary strategies: 1) participation of families in the community census, 2) selection and training of HVs to provide selected preventive child survival services, 3) formation of community groups to learn about health topics, 4) participation of community volunteer leaders in health program decision making, and 5) participation of municipal governments in community health programming. This integrated approach, linking different levels of community participation to address child survival needs, is an effective one.

Work with HVs has been a challenge over the life of the project, due to the fact that there is no formal mechanism for including the HVs as a recognized part of the MOH system. The focus has been on training volunteers, linking them to health facilities through the monthly CAI (information analysis meeting) at the Health Post level, providing on-going supervision, and the implementation of incentive plans. In Ancoraimes, there is a cadre of dedicated volunteers who have been active for the past 3 years. A relatively new group of women volunteers is active in Carabuco, and in Ambana and Puerto Acosta there are a few active volunteers and several who are still in a learning process.

(ii) Fulfillment of Community Mobilization Objectives

Even though the DIP did not include specific objectives for community mobilization, the following are key results of the five above-mentioned strategies.

- ❑ 100% of communities in Ancoraimes and Carabuco (52 and 31 respectively) have undertaken a census of each family. Family registers are kept at each health post, providing a means for ANs to reach each child and woman with CS interventions. The census process is on-going in Ambana and Puerto Acosta, with coverage of 69% (23/35) and 16% (22/109) respectively. The mobile health unit visits those communities not reached through the census, and includes preventive and curative care, as well as educational activities.
- ❑ Ninety-two trained health volunteers are providing a wide range of services to rural communities including: coordination and presentation of health information to community leaders; home visits; updating census information and reporting of vital statistics; growth monitoring; education of families in family planning, CDD, PCM, tuberculosis, pre and post natal care, and clean birth procedures; identification of pregnant women, and reporting of births; follow-up of malnourished children; first-aid; and, referral of cases to health centers.
- ❑ Some health centers pay volunteers a very small monetary incentive for preventive interventions based on quarterly reports.
- ❑ The formation of community groups to learn about health topics has been especially successful in Ancoraimes where CSRA has hired a female "popular"⁵ educator to work with women. A total of 65 groups have been formed in the four project areas.

⁵ The term "popular" refers to non-formal education activities, which are often held in the community.

- HVs participate in health decision-making through the monthly CAI meetings in Ancoraimes.
- Municipal Governments have become more active in health programming, and have increased financial support over the life of the project in all 3 municipalities. (See Section B.3.d). In Puerto Acosta, the municipality has formed an inter-sectorial committee to address issues in the areas of health, education, infrastructure, transportation, and agricultural production. This municipality has responded to requests from health centers, schools, and communities with allocation of resources as follows:
 - Sponsorship of a Life Melody Festival to safeguard the sexual and reproductive health of adolescents;
 - Training of high school students in reproductive health with an emphasis on the prevention of STDs/AIDS;
 - Training of school teachers to replicate the training to additional groups of students; and
 - Support with salaries, incentives, gasoline, maintenance and other recurrent costs for the local health system.

(iii) Lessons learned

- Although work with HVs has improved access to child survival services at the community level, an improved incentive program is required to prevent attrition and continually motivate the volunteers. Conversations with municipal representatives indicate openness to financing the work of the volunteers, either through a small monthly stipend, covering travel expenses, or standardizing monetary incentives that CSRA/MOH currently provides.
- If sufficient support is not provided to HVs from health centers, many become discouraged and gradually drop out. It is important for CSRA/MOH to continue to assist ANs to hold monthly CAI meetings at health posts and to improve the quality of the meetings in the areas of on-going training and supervision. In this way, HVs will see the impact of their work in changing communities' health status, and will feel a sense of accomplishment.
- Change takes place slowly among the Aymara population in the Altiplano, where ancient traditions are deeply embedded. It is important for CS Project and MOH staff to foster a gradual process of change. Advancing too rapidly and forcing certain issues, without respect for community beliefs and processes, may burn bridges that cannot be rebuilt.
- Empowerment implies change and change implies risk. If health personnel and other change agents are not willing to share these risks, there is no example for community members to follow. As CSRA National Director, Nathan Robison states: *“Although we have made progress in making empowerment one of our most important organizational values, we still have much to learn about it, particularly in terms of what it means at the level where staff makes day-to-day contact with families and communities”*.
- It is possible to implement inter-sectorial development programs with a high level of synergy among sectors, if the municipal government buys into an integrated vision and takes a leadership role in fostering inter agency participation.

- ❑ An NGO can have a huge impact on how municipal governments manage health systems. CSRA has had success in the following areas: development of vision and leadership competencies through accompaniment in the provision of services; capacity building through participation on community health boards; and demonstration of personal and professional values that inspire MOH and municipal partners to deliver quality services. CSRA’s emphasis on trust, credibility and transparency in all financial dealings has been a key factor in the success of the shared management model.
- ❑ Although there continues to be a strong influence of paternalistic organizations that “give-away” everything from services to medicines, the CS Project has been successful in mobilizing high levels of community participation by combining curative and preventive health care with some free and other fee-for-service services.
- ❑ Community participation has been enhanced by “listening” to community needs, such as requests for training in use and preparation of traditional remedies, and the development of basic veterinary skills. As a result, HVs now offer “services” that community members are willing to pay for. This not only improves the status of the HV within communities, but also meets felt needs, opens doors for preventive health activities, and provides a meaningful financial incentive for the HV.
- ❑ Community epidemiological surveillance activities through the census have promoted the concept of self-care regarding improving family health, particularly in a number of communities in Puerto Acosta.

(iv) Demand in the Community for Program Activities to Continue

During the final evaluation, group interviews were held among 90 mothers and fathers, 33 health promoters, and 6 representatives from municipal governments in Carabuco, Ancoraimes and Puerto Acosta. (See Attachment C for a list of participants in the group interviews.) It was clear from conversations in all of the group interviews that there is high interest and demand for project activities to continue.

During the final evaluation interviews, municipal representatives were open to alternatives to provide incentives to HVs. Some suggestions were: include a line item in next year’s annual operating plan for HVs; give HVs training in crop improvement and veterinary services as an income generation incentive; and establish rotating funds for the sale of veterinary medicines by HVs.

HVs mentioned many factors that motivate them to continue working in the community. These included: community service, a sense of satisfaction, a desire to prevent deaths in the community, a desire to continue to learn new things, commitment to the community, a desire to assist health personnel to “protect” the community from disease, and feeling appreciated by families during home visits. In order to improve their work in terms of quality and continuity, health volunteers offered the following suggestions: form a health volunteer association and request assistance from the municipal government; request assistance with transport to distant communities and the provision of basic equipment (scales, clean birth kits, rain ponchos, first-

aid kits, educational materials, notebooks); provide additional training in skills that would appeal to farmers (e.g. small animal production); and share the results of their activities with local authorities and municipal government representatives.

During the final evaluation interviews, mothers expressed several ideas about how to improve the work of the VH in the community. Some of these were: receive the HV with affection; receive the orientation that the HV gives; allow him/her to vaccinate one's children; and receive veterinary and first aid services from the HV.

(v) *Sustainability Plans for Community Mobilization*

CSRA has developed a sustainability strategy based on two inter-related goals: 1) enable and empower the poor in Bolivia to improve their health and reduce the tragically high incidence of unnecessary sickness, suffering and death, and 2) provide sustainable quality programs of preventive and curative health services and supporting activities. The work CSRA has done through shared health system management and community census and surveillance activities has generated a high level of local participation. CSRA now has systems in place, with increasing support from municipal governments, to continue community mobilization to improve health behaviors individually and collectively.

B.3.b. Communication for Behavior Change (CBC)

(i) *Effectiveness of the CBC Approach*

Strategies for communication for behavior change included: face-to-face education through home visits, group meetings to discuss topics, use of visual aids (cartillas), and the implementation of an intercultural approach based on the results of the ethnographic study mentioned in Section B.2.c. The home visits and one-on-one communication have been very effective, along with use of "cartillas" by HVs as teaching aids. Since many people are illiterate, the use of cards with pictures is appropriate.

Group education has not been feasible in all of the project communities. In a culture where people are "busy" with agricultural tasks, on which their survival depends at a subsistence level, it is difficult to get people to spend time in meetings. Even the home visits have to be planned when the family has time. Otherwise, family members will not sit down and engage in a conversation regarding health. As awareness of the importance of disease prevention and timely treatment increases, people are more willing to spend time learning.

The implementation of the intercultural approach began in Ancoraimas, and is gradually being expanded to other geographic areas. In order to bridge the gap between traditional Aymara communities and CSRA/MOH physicians and nurses, the CS Project made a series of changes in birthing practices in hospitals, and trained promoters and communities in the use of medicinal herbs to treat common health problems. The intercultural approach was highly effective in opening new channels for behavior change, especially in the number of births attended by health personnel. In Ancoraimas, the number of deliveries assisted by trained staff increased by over 50%, from 84 births in 1998 to 155 in the year 2000. During the final

evaluation interviews, almost all health volunteers and many mothers and fathers mentioned their delight with the new opportunity to learn how to prepare and use traditional medicines.

CBC Objectives

The results of the final KPC and interviews during the final evaluation show that mothers' behaviors have changed regarding care seeking practices and home management, especially regarding child immunizations, pneumonia case management, nutrition, maternal care and family planning. The intercultural approach is promoted in women's groups, at health fairs, and in meetings with local authorities. A workshop on cultural sensitivity was held with health personnel and covered the following topics: 1) humanization of health services, 2) concepts of health, illness, sexuality, pregnancy, and delivery from an Andean and Western medical perspective. Key results of the intercultural approach include:

- ❑ Increased trust and acceptance of the services provided by health personnel;
- ❑ Aymara obstetric practices are valued by the people and health staff;
- ❑ There is a greater sharing of cultural values on both sides;
- ❑ Health personnel are more committed to providing care that is culturally appropriate;
- ❑ Increased proportion of pregnant women seek prenatal care;
- ❑ Increased demand for obstetric care provided by health personnel;
- ❑ Increased demand for family planning services; and
- ❑ Treatment of illness includes both modern and traditional medicines.

Although mass communication was not a strategy of the CS Project, a USAID funded MOH project entitled PROSIN (Proyecto de Salud Integral) made extensive use of radio communication to foster behavior change in health practices. Several soap operas (novellas) were aired that dealt with health issues, including IMCI and reproductive health. These messages supported the work done by ANs and HVs in the communities, and the new approaches being used in health centers and posts based on the intercultural approach.

Some difficulties in the implementation of an effective CBC strategy include: the factor analysis outlined in the DIP was not done; educational materials are not available for all HVs; existing materials have not been updated and improved on a regular basis; work with Freedom from Hunger groups is functioning optimally in Ancoraimas, but needs to be improved in other geographic areas; there are not sufficient contacts with the population to attain lasting behavior change; if paternalistic "give-away" organizations exist in the same geographic area, people may not want to meet unless there is a material incentive.

(ii) Lessons Learned

- ❑ The changes that health personnel made to improve service delivery based on the intercultural study were crucial to improving communication and acceptance of the services offered.
- ❑ Formation of women's' groups was enhanced by a Matching Grant project implemented by Curamericas, Freedom from Hunger, and their two local NGO partners (CSRA and

CRECER) which organized community banks where women engage in income generation activities and health education.

- ❑ The application of the ORPA model, which some ANs used in nutritional counseling, can be effective in other interventions as well. The ORPA approach calls for identifying what the mother knows about a topic, providing information through dialogue, and making an agreement with the mother to make a change in behavior.
- ❑ Addressing additional topics and interventions with community support, such as lorenas stoves, potable water, self-esteem, and income generation, opens doors for preventive health education.
- ❑ The educational cards (cartillas) have been useful to motivate reflection and communication at the household level.
- ❑ Groups are motivated to continue meeting if there are contests, recreational games, participatory methodologies, videos and topics of interest besides health topics (traditional medicine, literacy, arts and crafts).
- ❑ Cooking together using new recipes based on Andean foods is a good way to improve nutritional practices.
- ❑ Health fairs are a successful way to promote new behaviors and use of health services, and to foster the participation of community members, local authorities and health promoters.

(iii) How will these behaviors be sustained?

The sustainability strategy mentioned in the Section B.3.a will be a basis for continuing the communication for behavior change strategies. Both the home visits and the intercultural approach have been adopted by the MOH, and there is strong community demand for these activities to continue. Several of the field teams have applied innovations based on the results of the intercultural study, and PROSIN and the Regional Health Department in La Paz are interested in replicating this approach.

B.3.c.Capacity Building Approach

(i) Strengthening the PVO Organization

Curamericas and the Consejo de Salud Rural Andino have both benefited from the experience of implementing a Child Survival Project. The CS Grant has been a catalyst for improving communication and coordination between Curamericas and CSRA, and increased the capability of both organizations to assume leadership roles in child survival in an ever-widening circle of influence.

Curamericas involvement in health programming, as a result of the Bolivia CS Project has increased greatly in the past four years. New initiatives include: 1) a health project in Mexico based on the census-based impact-oriented approach; 2) a CS mentoring grant in Haiti, implemented by FOCAS, a US-based PVO; 3) a Matching Grant project in collaboration with Freedom from Hunger to integrate services of women's banks and primary health care in the Altiplano Region of Bolivia and in western Guatemala; 4) a sub-grant with CARE as part of the CARE MoRR project; and 5) active involvement in CORE with participation in the Monitoring and Evaluation Working Group.

Curamericas has also increased staff positions as a result of an institutional assessment in 1999 using the DOSA methodology. A new Executive Director was hired in June 2001, Jennifer Babula, with extensive experience in fund raising. A County Program Coordinator, Craig Boynton, was hired during 2000. Craig has an MPH and several years of experience in Latin America, along with a background in population and reproductive health. He represents Curamericas as a member of CORE and participates in the Safe Motherhood Working Group. Another new hire is Tom Davis, an expert in Child Survival, quality assurance, behavior change communication and training. Tom will give 40% of his time to Curamericas in these areas. A new certified public accountant, Cynthia Sexton, was also hired this year to upgrade the accounting system and improve financial procedures.

Curamericas has made progress in creating strategic alliances. Curamericas has developed a close relationship with CARE headquarters in Atlanta and receives invitations to attend conferences and training events. CARE shares new child survival and reproductive health materials with Curamericas on a continual basis. Another alliance has been formed with the Office of the First Lady in Bolivia, which will facilitate the shipment of materials and supplies for health projects from the U.S. to Bolivia. Finally, Curamericas relocated its headquarters to the Research Triangle Park area of North Carolina during July 2001. This relocation should result in the development of new partnering opportunities with other non-profit organizations and universities located in this area.

(ii) Strengthening Local Partner Organizations

Consejo de Salud Rural Andino has enhanced its organizational capacity as a result of the CS XIII Project. CSRA has developed an unprecedented reputation at the national level vis-à-vis the MOH, and excellent relationships with local governments due to continuous excellence in child survival and health programming. Both of these relationships have paved the way for two innovative and potentially sustainable strategies—shared management of local health systems and shared decision making through local health boards at the municipal level. During the past four years, CSRA has strengthened its capacity to mobilize funds and public resources. CSRA's sustainability strategy is based on a sound financial plan that calls for increasing inputs from the MOH and Municipal Governments to support local health delivery systems. CS XIII assisted CSRA to demonstrate that the long-term involvement of an NGO as part of the public health sector system can make a huge difference in coverage, quality, and sustainability of preventive and curative service delivery.

Successive CS grants (III, VI, IX and XIII) have assisted CSRA to transform the census-based impact-oriented methodology from the dream of a PVO visionary to a sustainable NGO model which is not only being implemented in Bolivia, but in other countries as well. Lessons learned from over 10 years of CS programming have not only strengthened CSRA, but have implications for public health administration and management on a much broader scale.

CSRA Director, Nathan Robison, documented the following lessons showing how capacity has been built within CSRA as a direct result of CS funding. (Personal interview, November 2001)

- The integration of clinic based curative care and community-based primary care is essential for the sustainability of primary care programs. Curative care meets the felt needs of adults, who are the primary decision makers regarding the use of primary health care for their children.
- Mid-level health workers can be key elements in the provision of health services in isolated rural areas where continuous professional health leadership is lacking.
- Health problems vary among families and between geographic areas. The identification of people most at risk is made possible through the census methodology; hence interventions can be prioritized and delivered at the household level.
- Use of the census-based impact-oriented methodology has allowed CSRA to develop a relationship of trust between practitioners and clients. More importantly, it has enabled CSRA and the MOH to understand community priorities and combine these with epidemiological ones to measurably decrease morbidity and mortality.
- Use of paid workers instead of volunteers is a key to success in the management of the census-based impact-oriented methodology.
- The census-based approach will only impact health indicators if systematic home visits are part of the strategy.
- The model of shared management of health services emerged gradually as CSRA began to operate government facilities and direct government staff. Following MOH norms and standards rigorously and reporting to the MOH District, contributed to the success of this innovative NGO-MOH approach.
- Sustainability includes much more than material resources and technical know-how. Key elements are leadership, accountability, stability and ownership. These elements have been provided by CSRA over time, but generally not by the MOH, creating an important opportunity for NGO participation.

During the CS XIII Project, CSRA was able to build on the above lessons and to implement new concepts regarding health systems management. Legislation regarding decentralization of the municipal governments and the health system increased the transfer of resources and responsibilities from the central government to municipalities, and created a context for the CSRA shared management model. During the life of the project, CSRA has made great headway in strengthening local health boards, with a focus on human development as opposed to infrastructure, and an emphasis on improving service quality and access. The CSRA model, which is highly developed in the municipality of Puerto Acosta, merits expansion into other municipalities of Bolivia, while the shared management model should be considered as an answer to assuring transparency, efficiency, and quality of local health systems in the country.

On the national front, CSRA has been a mainstay in PROCOSI, a network of 24 PVOs/NGOs working in health. PROCOSI funding enhanced CS interventions in reproductive health and nutritional improvement. CSRA is an active member of a national NGO association, FENASONGS, and advocates in favor of the NGO sector. As a direct result of excellent health programming during the past years, made possible largely through USAID Child Survival Program funding, CSRA has attained a seat at the table regarding the national health agenda, and is a leading spokesman for NGO participation to improve public sector procedures and policies.

(iii) Health Facilities Strengthening

The CS XIII Project has made progress in strengthening health facilities in the following areas: 1) upgrading administrative systems (finance, supplies, logistics); 2) improving infrastructure and transport; 3) training to improve technical quality and human development; 4) improving information systems and decision making capacity; 5) strengthening linkages between communities and health facilities; and 6) assisting municipal health boards to function effectively. The CSXIII Project did not undertake a formal health facilities assessment. Since the local partner, CSRA, jointly administers facilities with the MOH, the quality of service provision was continually improved during the life of the CS Project through the process of accompaniment.

The management of administrative systems has improved greatly due to the assignment of an administrator paid by the CS Project to each of the three CSRA/MOH health centers. Although the central level of CSRA in La Paz keeps good records of all financial transactions, the feedback of this information to partners needs to be improved. With the formation of municipal health boards and the participation of different municipal actors in health programming, it is important to build trust through good communication and transparent financial management. The Basic Health Insurance (SBS) provided by the Bolivian Government requires that the municipal government reimburse health facilities for expenses that are authorized under the SBS. It is important that all parties receive a SBS report on a periodic basis to demonstrate accountability.

In order to improve administrative systems, the development of procedures manuals and training in management topics should be prioritized. Often training events center exclusively on public health technical aspects, and little has been done in the area of management training. The focus of future training could also bridge the gap between administration and program staff, with the goal of creating better coordination between the two.

The concurrent management of municipal health systems has assisted greatly in the strengthening of radio communications, transportation and the construction and remodeling of health centers and health posts. The goal is to have a health post within, at the most, one-hour walking distance from every community in each municipality.

The CS XIII Project has spent extensive time and energy assisting municipal health boards to make decisions based on local needs and to assign resources to take necessary actions. Municipal strengthening fosters the concept of “stewardship” in the area of health and development at the municipal level. As municipal governments view themselves more as stewards, and less as public works agents, inroads are being made in the development of municipal health systems. The systems require adequate transport for emergencies, timely communication, and sufficient physical space, equipment and supplies to operate effectively. During the four years of the CS XIII Project all three municipalities have made important contributions. See Section B.3.d for more detailed information on municipal contributions. Aspects that need additional strengthening include increasing the capacity of health centers to treat emergencies due to car accidents, and in some sectors transportation and radio communication need to be improved.

Technical quality has been improved through the replication of training seminars at the local level, and use of the CAI meeting to provide refresher training in child survival topics. Human development topics, such as self-esteem, personal growth, and values have also been included in training sessions for CSRA/MOH staff in each of the geographical areas. Many of the training topics are replicated by ANs with his/her respective HVs at the Health Sector level.

Information management and decision making has been strengthened over the life of the CS Project. Information is now being consolidated at the CSRA national office by computer, a standardized list of indicators has been accepted, and a basic registry system has been adopted. The CAI at the Health Sector level is being implemented in Carabuco and Ancoraimes, where the AN meets with HVs and local authorities to share information and make decisions regarding health activities for the area. The increased awareness of health indicators has been an impetus to community mobilization to address some of these issues. A good example is the community of Ullumata, where leaders decided to make lorena stoves to reduce the amount of smoke in homes.

Areas that need improvement in the future include: correct completion of forms and registers, clarification of the roles of CSRA and the MOH regarding training and supervision, and the management of the information system at health centers. Other topics for improvement are the development of management indicators and follow-up, and joint quarterly analysis and discussion meetings of CSRA and the MOH on both technical and managerial information. Some success has been attained in the quarterly analysis of technical information, however this has not been the case with administrative information.

Linkages between health facilities and communities have been strengthened during the life of the CS Project. Successful linkages have been developed through monthly CAI meetings in Ancoraimes and Carabuco, personal growth groups in Puerto Acosta, women's groups in Ancoraimes, health fairs, and efforts to bridge cultural barriers through changes at health centers based on the ethnographic study. The CS XIII Project included a field supervisor for each geographic area, who provided continuous supervision and refresher training to ANs and HVs. The field supervisor has had an effective role in strengthening the linkages between health facilities and communities in his/her mandate to foster community outreach.

The following actions would help improve functioning of municipal health systems:

- ❑ Continue the strategy of hiring an administrator for each Area Health Center. Since this staff position is paid for by CSRA, explore ways to transfer the funding for this position to the MOH or municipal governments.
- ❑ Continue with the field supervisor position to insure out-reach activities.
- ❑ Select partners from other sectors to assist with health infrastructure, such as the FIS (Social Investment Fund).
- ❑ Develop procedures manuals for administrative and financial management and formulate performance indicators and quarterly evaluation and follow-up.
- ❑ Improve the process of feeding back programmatic and financial information to municipal health boards.

- ❑ Develop a systematic plan for strengthening municipal health boards, including training in group decision-making, health leadership, conflict resolution, and planning.
- ❑ Improve the health facility-community relationship through additional research regarding the definition of “quality” from the Aymara point of view, followed by a social marketing strategy to improve utilization and coverage of health services.

CSRA has developed a sustainability strategy that includes three elements: shared management of health services, shared health system management at the municipal level, and the census-based impact-oriented approach. Although CSRA will gradually move to new geographic areas, the basic strategies have been put in place and are currently functioning through the joint administration of health facilities. CSRA is looking at mechanisms to assure the continued high level of service provision over the long term, including the possibility of including the shared management model at the Health District Level with endorsement from the national MOH.

(iv) Strengthening Health Worker Performance

Health worker performance is strengthened through a process of accompaniment at Area Health Centers and Health Posts where both CSRA and MOH staff work together. At Health Centers, CSRA staff assist MOH personnel to apply the census methodology and use the information to improve preventive and curative services. CSRA field supervisors assist ANs to develop a community outreach system, based on the census methodology. CAI meetings are used to improve information analysis and decision making skills. All staff attends training events to improve both technical capacities. HVs receive supervision and on-going training from ANs and help them with community outreach activities. Many of the training topics are replicated by ANs with his/her respective HVs at the Health Sector level. Information on the participation of HVs is presented in Section B.3.a. Community Mobilization, and a discussion on staff training is presented in the next section (v) Training.

Experience in previous CS projects has shown CSRA that the success of the census-based methodology depends on the use of paid auxiliary nurses and regular home visits. Although HVs have an important role to play in community outreach, their effectiveness is directly related to the extent to which ANs provide on-going support.

It was evident during the final evaluation site visits that the accompaniment of ANs by CS supervisors has helped to improve the functioning of the MOH system at the Health Post level. Some important observations included: good management of immunization records, tracking of children for follow-up, use of the census information to plan home visits, health leadership vis-à-vis community authorities, mentoring relationships with HVs, management of basic medicines and supplies, and strong links with communities and Health Centers for improved referrals. In Carabuco, some ANs have had difficulties in the implementation of community outreach, due to a lack of support from the Area Health Center Director, who favors curative care at the Center, as opposed to community based public health activities. This is an example of one of the challenges CSRA has faced as in the implementation of shared management model, which will be further discussed in Section B.3.d. Sustainability.

Since ANs cannot provide continual on-site supervision, the monthly CAI meeting has been effective in Carabuco and Ancoraimes to receive reports from HVs and provide guidance and assistance. The CAI at the Health Sector level is not yet functioning in Puerto Acosta and Ambana. Strengthening the CAI should be a key focus of future actions to mobilize local authorities and health volunteers. In order to motivate HVs, CSRA/MOH health facilities have developed symbolic monetary incentives, however there is no long-term strategy to insure continuity. See Section B.3.a (iii) for more information on incentives and lessons learned.

Interviews with HVs during the final evaluation indicated that many had received extensive training in a variety of topics, such as: diarrheal disease, pneumonia case management, nutrition, family planning, tuberculosis control, prenatal control, animal health, traditional medicine, self-esteem, management of the census methodology and use of registers. In order to improve the quality of the training, HVs suggested use of words that are easy to understand, provision of materials to study after the event, and at least one half of the time should be spent in practice rather than theory.

Interviews with HVs also showed that many used educational materials that had been photocopied, while others did not have materials. Some stated that they used the visual cards (cartillas) that CSRA provided, and others mentioned reproductive health visual cards produced by DFID (British Department for International Development). In Carabuco, where many of the HVs are new, only 3 out of 11 volunteers interviewed had visual materials on nutrition, and only one had material on nutrition for pregnant women. In Puerto Acosta, the volunteers interviewed mentioned use of an IMCI flipchart, and photocopied material on family planning. Most of the HVs interviewed requested additional training in IMCI and new educational materials for use during home visits and group sessions.

Regarding suggestions to improve the work of HVs, the following was mentioned: exchange visits with HVs from other areas; continued training in veterinary medicine, traditional medicine, first-aid, and safe birthing practices; training in leadership; and equipment for growth monitoring, first-aid and deliveries.

Regarding reporting and sharing health information, the HVs interviewed indicated that they present information to the AN on: patients seen, growth monitoring, births and deaths, home visits, family planning, group meetings, and educational talks given. The information was generally reported to the AN, and discussed at the CAI at the Health Sector or Area level. Information was also shared with community assembly meetings, with a focus on cases of illness in the past and how there are fewer cases now. Difficulties mentioned by HVs in their work with the community had to do with community members' belief that HVs earned money, which in some cases caused jealousy.

The following are some suggestions for improving the work of HVs:

- ❑ work with MHBs to develop incentive schemes for volunteers who have demonstrated capacity and commitment to community health activities.
- ❑ Strengthen the CAI at the Health Sector level, and use this meeting for training and motivation of health volunteers, not only the presentation of reports.
- ❑ Develop a systematic schedule of visits to communities by the AN during the monthly CAI meeting.

- ❑ Develop a system to enable HVs to access educational materials and needed supplies for the successful completion of their responsibilities.
- ❑ Continue to train HVs in additional topics of interest, especially those with income generation potential, such as veterinary medicine and traditional medicine.
- ❑ Strengthen training in moral leadership, conflict resolution, and inter-personal communication skills. This will help HVs deal with difficulties in their communities in a productive way.

As mentioned in Section B.3.a (v), CSRA has developed a sustainability strategy that includes shared management of health services, shared health system management at the municipal level, and the community census that calls for a high level of local participation. MOH services now have systems in place to support a cadre of HVs with some basic incentives, and systems to provide training and supervision. Future negotiation with MHBs may strengthen the incentive program, insuring the long-term presence of HVs in the communities.

Field observations were used to assess the results of improving health worker performance, and gaps between performance standards and actual performance were addressed through in-service training provided by ANs at the CAI meeting and/or during community visits.

(v) Training

The basic training strategy involved initial and refresher training for CSRA/MOH staff in the CS interventions. Once this was completed, ANs were responsible for training HVs in the community, with assistance from the field supervisor and the Area Health Center staff. The ANs and HVs, in turn, provided education to communities through home visits and group activities. Education for mothers in basic behavior changes required to improve child health took place during home visits and group meetings. Results from the final KPC and responses at group interviews during the final evaluation showed that this training approach had been effective.

At the time of the MTE there was an insufficient variety of training materials and a lack of materials for some HVs. The situation regarding materials continues to be a problem. The final evaluation team found that there has been a duplication of effort regarding training of volunteers, especially in reproductive health topics.

The MTE recommended that training be given in human development subjects, such as self-esteem, and this has been done. Another recommendation suggested education of high school students in family planning, and this was done very successfully in Puerto Acosta, through a joint effort with the District of Education and the Municipal Government. In order to improve the training component, a curriculum should be developed at the Health District Level, with inputs from all local stakeholders—MOH Area Health Centers and Posts, MHBs, and schools.

B.3.d. Sustainability Strategy

CSRA defines sustainability as follows: *A sustainable local health system is the continuous, indefinite provision of benefits (quality health services) to defined communities.* CSRA has learned that sustainability ensues only if the following elements are in place: sufficient and

secure provision of resources; offering products that are in demand; good technical capacity; an organizational structure that guarantees accountability, clear goals and objectives, values, and a stable work environment; and leadership that foresees and prepares for the future, motivates people and fosters a sense of ownership.

Sustainability strategies in the CSXIII Project were implemented in three main areas: financial sustainability, institutional sustainability, and coordination with other institutions and municipal governments. Results from the sustainability strategy implemented during the CSXIII Project are impressive. Following is a brief summary of achievements.

Financial Sustainability

- ***Increase local support for recurrent costs of health facility management from 18% to 50%.***

LOCAL SUPPORT FOR RECURRENT COSTS

Geographic Area	Baseline 1996-1997		Percent Local Support	Final 2000-2001		Percent of local support
	Total Operational Budget	Local Support		Total Operational Budget	Local Support	
Carabuco	\$120,867	\$22,787	19%	\$152,201	\$82,807	54%
Ancoraimes	\$135,874	\$27,801	20%	\$147,252	\$50,519	34%
Puerto Acosta	\$69,094	\$16,305	23%	\$152,568	\$58,504	38%
TOTAL	\$325,835	\$66,893	20%	\$452,021	\$191,830	42%

- ***Increase the proportion of resources generated by CSRA (not counting support from Curamericas) from 34% to 67% of the budget.***

Information from 2001 for Carabuco, Ancoraimes and Puerto Acosta, and estimates from CSRA Offices in Montero and La Paz, shows that CSRA is currently generating 59% of its budget, an increase from \$519,113 to \$876,706 over a four year period.

- ***Include salaries for staff positions created by the CSXIII Project in the annual MOH budget.***

All positions created during CSXIII have received official MOH endorsement and are now budgeted annually by the MOH for the project target area. MOH salaried staff slots increased from 23 to 35, and positions sponsored by municipal governments increased from 3 to 8.

- *Increase sales by 25% in CSRA/MOH operated health facilities (Ancoraimes, Carabuco, Puerto Acosta).*

INCREASE IN SALES FOR CS XIII TARGET AREAS

Geographic Area.	1996-1997	2001	% Increase.
Carabuco	\$3,862	\$7,682	99%
Ancoraimes	\$7,939	\$13,550	71%
Puerto Acosta	\$1,527	\$11,295	640%
TOTAL	\$13,328	\$32,527	144%

- *Maintain rotating drug funds.*

Rotating drug funds have been maintained in all three Area Health Facilities.

- *Increase from 3% to 20% municipal support for local health systems.*

Formal written, signed agreements have been made and are currently on-going in each geographic area, assigning municipal funding, and reimbursement for Basic Health Insurance in support of local health systems. Local sources of support for operational expenditures have increased over the past four years as follows.

MUNICIPAL SUPPORT

Geographic Area	1996-1997		Percent of Municipal Support	2000-2001		Percent of Municipal Support
	Total Operational Budget	Municipal Support		Total Operational Budget	Municipal Support	
Carabuco	\$120,867	\$3,467	3%	\$152,201	\$28,512	19%
Ancoraimes	\$135,874	\$1,333	1%	\$147,252	\$6,936	5%
Pto. Acosta	\$69,094	\$3,237	5%	\$152,568	\$21,176	14%
TOTAL	\$325,835	\$8,037	3%	\$452,021	\$56,624	13%

- *Increase resources from the regional representatives of the central GOB by 15%.*

The increase for the three geographic areas was 27%, from \$69,440 to \$95,933.

Institutional Sustainability

Key strategies for institutional sustainability were: 1) strengthening MHBs; 2) technical training of health personnel; 3) administrative training; 4) management training; 5) development of an institutional culture centered on ownership, service quality and empowerment; and 6) strengthening the CSRA board of directors.

MHBs in Carabuco and Puerto Acosta received on-going accompaniment by CS Project staff, regarding public health, management of local health systems, and administration of the Basic Health Insurance package. In Ancoraimes, little progress was made due to a highly unstable municipal government. In general, municipal strengthening is a slow process due to contentious local politics and a continual replacement of mayors. During the four-year period there were 5 different mayors in Ancoraimes, and 4 mayors each in Puerto Acosta and Carabuco.

Technical training of health personnel was continuous, with a series of workshops sponsored by CSRA, PROCOSI and the MOH on IMCI, reproductive health and other topics (See Section C.2). Administrative training was given on the following topics: logistical management for family planning, financial administration for USAID/PROCOSI projects, administration of goods and services, application of the new anti-corruption law for project accountability (Ley SAFCO), and general accounting. Management capabilities of CSRA staff were greatly strengthened as follows: three CSRA national staff members completed MPH degrees in London, Mexico and Bolivia, respectively, and one staff member is currently in an MPH program; the CSRA Area Health Director for Puerto Acosta attended an IMCI conference in the Dominican Republic, a Measure Evaluation workshop in the U.S., and a leadership program sponsored by the Kellogg Foundation in Mexico; and CSRA's financial manager participated in a management course at the Catholic University in La Paz.

Progress toward the development of an institutional culture was enhanced by workshops on leadership and group cohesion. The CSRA Board of Directors increased the frequency of their meetings and recruited new members. Several workshops were held to develop a new strategic plan for CSRA, including sessions on institutional and personal values.

Coordination

Progress toward coordination with other institutions included: a formal agreement with the Bolivian NGO, CRECER, to implement micro-credit with health education through the formation of community banks; and coordination with communities and a local NGO, Cientifica, to provide health related services such as literacy training, veterinary interventions, and lorena stove construction.

Coordination with municipal governments focused on assisting communities to present projects for income generation and to improve the quality of life. Specific initiatives included an irrigation system in the community of Chinchaya in Ancoraimes through the Inter American Foundation, and the formation of an inter-institutional committee under the auspices of the municipal government of Puerto Acosta.

Future Challenges

The sustainability strategies implemented by CSRA depend on securing Bolivian Government funds. This is a high-risk business. CSRA has been very successful to date, given the limited time frame during which decentralization and municipal financial management and decision-making processes have been in place in Bolivia. A key requirement for future success in shared management of health systems is to tighten formal agreements with municipal and regional governments and MOH Districts. Another requirement is on-going training of municipal authorities in the basics of health governance. This is essential given the frequent changes that take place among municipal leaders. Another key for success is for CSRA to reduce its commitment to municipal governments that do not provide the agreed upon counterpart funding. As CSRA enters into new geographical areas, clear conditions are now placed on municipal government partners, including a commitment for on-going operational expenses for local health systems.

C. Program Management

C.1. Planning

The workplan in the DIP was outlined in general terms. Based on this, the CS Project developed annual operating plans that have proven to be effective guides for project implementation. Although a start-up workshop was held at the beginning of the project, induction was not done for new staff regarding the DIP objectives and strategies. Further, modifications to the technical interventions arose and adjustments have been made as necessary throughout the project, reflecting a concern on the behalf of Curamericas and CSRA to continually improve their program. A case in point is the IMCI strategy, which provided new guidelines for case management, and a different approach for talking to caretakers.

The DIP was overly ambitious in terms of targets for some of the technical interventions, when considered against their baseline indicators. The results of the final KPC show improvements for most indicators, however some fell short of the high goals initially set in the DIP.

C.2. Staff Training

CS XIII staff received training in the child survival interventions early in the project, based on individual needs. Training in other topics was sponsored by different agencies, including CSRA, PROCOSI, the MOH, BASICS, Save the Children, and Freedom from Hunger (the Bolivian affiliate is CRECER). Most of the workshops lasted from 2-3 days and covered the following topics:

- 1) Behavior Change Communication
- 2) Self-esteem
- 3) Biostatistics
- 4) New MOH Information System
- 5) Informed Consent for Reproductive Health Programs
- 6) Implementation of Gender Approaches
- 7) LQAS Methodology
- 8) Strategic Planning
- 9) Management of Self-Evaluation Guides
- 10) Interpersonal Communication
- 11) Home Delivery
- 12) Sexual Health for Adolescents
- 13) Use of Computer Packages for Information Systems
- 14) Logistical Management of Family Planning Methods
- 15) Veterinary Medicine

Following are some lessons learned about building the capacity of program staff.

- Although extensive training was provided to technical staff, better results could be attained through the development of an overall capacity building plan emphasizing technical and

human skills and competencies. A more profound understanding of the CS goals and objectives is necessary so that all staff (new and old) focuses on the DIP strategies and work toward these in their respective geographic areas.

- ❑ The quality checklists envisioned in the DIP were not fully implemented, and did not receive widespread acceptance. A lesson here is to explore alternative ways of monitoring and continually improving quality.
- ❑ A shared vision between different geographic areas and MOH and CSRA staff will enhance teamwork and quality.
- ❑ Capacity building processes, including training, should not be undertaken unless follow-up and supervisory systems are in place.
- ❑ It is important to assure that the training sessions really have an impact on project objectives.

C.3. Supervision of Program Staff

A supervision system is in place to assess performance of health personnel, management of the information system, technical quality, equipment, supplies and infrastructure. Two types of supervision are done, one by the MOH District (every 6 months), and another by CSRA (each quarter). The three Area Health Centers supervise Health Posts (Sectors) on a quarterly basis. The Health Sector AN supervises HVs.

The supervision system is adequate, however areas that need improvement include: completion of planned supervisory activities; greater emphasis on follow-up of the results; improved feedback to staff; ways to reduce barriers to effective supervision; update and review job descriptions and clarify roles, especially in the case of field supervisors; and improve supervision of health volunteers and link the results to capacity building. Since there are two supervision systems, it would be useful to assess how these could be joined into a single system. Although the supervision system is functioning, it should be streamlined and adopted by the MOH and MHBs in order to merit expansion to other MOH districts and municipalities.

C.4. Human Resources and Staff Management

Essential personnel policies and procedures have been established in the Area Health Centers of Carabuco, Ancoraimés and Puerto Acosta. Salary incentives are provided by CSRA to motivate MOH staff to incorporate specific activities related to the census-based, impact-oriented (CBIO) approach. Although a good working relationship exists between CSRA and MOH staff in Puerto Acosta and Ancoraimés, this was not the case in Carabuco at the time of the final evaluation. Since the MOH has the option of choosing the Area Health Director, this individual may or may not be interested in the CS Project approach. Interviews during the final evaluation showed that in the two Health Centers where cohesion and a shared vision exist, both MOH and CSRA staff stated “WE ARE ONE FAMILY”. This statement is most impressive and shows how people can be united around a goal that transcends individual agendas. Except for the situation in Carabuco, where two successive Area Health Directors have not embraced the CS Project goals, staff turnover has not been a problem.

CSRA has made efforts to assure employment for CS Project staff after grant funding ends, particularly in Carabuco and Ancoraimes. Several salaried slots have been created over the past 2-3 years, which have provided employment for former CSRA personnel.

C.5. Financial Management

Financial management and accountability for program expenditures and budgeting have been adequate. No significant adjustments in the budget were made. The CSRA Executive Director has excellent skills regarding financial management and for developing innovative financing mechanisms. Therefore, it was not necessary to bring in outside technical assistance to develop financial plans for sustainability.

A needed area of improvement identified during final evaluation interviews is to overcome communication gaps between administrative and program staff. It is important for the accountants to understand the purpose behind expenditures, and program staff needs to be aware of budget constraints.

The successful sustainability strategy discussed in Section B.3.d assures the continued functioning of the rural health systems in Ancoraimes and Carabuco. CSRA will continue to provide support to Puerto Acosta, and plans to expand to new areas where demographic information shows high numbers of potential beneficiaries for child survival interventions. Two such areas are the fast growing town of El Alto near La Paz, and Alto Beni, a semi-tropical area, also near La Paz.

C.6. Logistics

The CS XIII had sufficient logistical support to implement project activities. The joint management of health services by CSRA and the MOH made it possible to distribute vehicles, equipment and supplies based on needs, and to obtain additional logistical support when required. Maintenance of motorcycles, vehicles, and radios needs to be considered in MOH and municipal budgets, if the current level of logistic support is to continue. Some geographical areas had trouble with obtaining a timely supply of essential medicines and contraceptives. Attention should be given to areas of difficulty so that the lack of supplies does not affect implementation of technical interventions.

C.7. Information Management

Exemplary information management was one of the principal successes of this CS XIII Project. The CBIO methodology assisted CSRA/MOH facilities to collect and update demographic and epidemiological information from every family in two of the project sites (Carabuco and Ancoraimes), and progress is being made to cover all families in the other two. The information is analyzed at CAI meetings at the Area and Sector levels, and is used to determine future actions, and to document successes. Health personnel at all levels have the capacity to continue collecting information.

High mortality rates in Ancoraimes for pneumonia cases, detected through the community census system, helped staff realize that follow-up had not been done in several of the cases. The situation was remedied and mortality rates dropped. In Ambana, indicators for reproductive health were surprisingly low. The only female AN was then assigned intensive home visits to improve utilization of services. In Puerto Acosta, the monthly CAI meeting revealed poor results regarding nutritional rehabilitation. As a result, the decision was made to introduce food supplements for malnourished children.

The CS Project contributed to the MOH data collection system through the census-based information system. Program staff, headquarters staff, local MOH partners and the communities are clearly aware of what the CS Project has achieved. The Project's impact data have been shared with the MOH and the NGO community to show how the CBIO approach can enhance impact and health decision-making. Information from the CS Project has been used to prioritize interventions, and has contributed to the design of future projects.

C.8. Technical and Administrative Support

Technical assistance to the CS Project was provided locally, in most cases by CSRA staff or through workshops sponsored by PROCOSI and PROSIN. The training in LQAS was provided by an outside consultant contracted by Curamericas. The areas of assistance included: design and implementation of procedures for home deliveries; design of formal agreements with public and private sector agencies; design of a technical training manual; design and implementation of basic registers for improved information management; assistance with training, education, information, and communication in health; and the ethnographic study which was the basis for the intercultural approach. In addition to the above, assistance was provided by Curamericas and outside consultants regarding the use of vital statistics, improvement of the nutrition program, and development of quality checklists.

Technical assistance needs for the future include: development of procedures manuals for administrative management; communication for behavior change strategies; improvement of the logistics system; implement a training and supervision system; and implement a program for continuous quality improvement.

C.9. Management Lessons Learned

Financial Management

- ❑ Good program management requires communication between administrative and program staff. Accountants need to understand the purpose behind expenditures, and likewise program staff needs to be aware of budget constraints.

Staff Training

- ❑ Although extensive training was provided to technical staff, better results could be attained through the development of an overall capacity building plan emphasizing technical and management topics. Instead of a series of workshops an annual plan should be developed

with learning objectives, methodologies, and behavior change outcomes linked to the specific capacities the program is designed to foster.

- Capacity building processes, including training, should not be undertaken unless follow-up and supervisory systems are in place.
- It is important to link training sessions to improved program performance. For example, if staff has been trained in logistics management for contraceptives, part of the training should include an action plan for making changes to upgrade service provision.

Municipal Management

- The concurrent management of municipal health systems has paved the way for contributions, such as: 1) strengthening of radio communications, 2) improving transportation, and 3) construction and remodeling of health centers and health posts. The goal is to have a health post within, at the most, one hour walking distance from every community in each municipality.
- As municipal governments view themselves more as stewards, and less as public works agents, inroads are being made in the development of municipal health systems.

D. Conclusions and Recommendations

Conclusions

Successive CS grants (III, VI, IX and XIII) have assisted CSRA to transform the census-based impact-oriented (CBIO) methodology from the dream of a US based PVO visionary to a sustainable NGO model which is not only being implemented in Bolivia, but in other countries as well. Lessons learned from over 10 years of CS programming have not only strengthened Curamericas and CSRA, but have implications for public health administration and management on a much broader scale.

The Curamericas/CSRA CS XIII Project has been successful in reaching its objectives, based upon a comparison of final KPC data with baseline indicators. Several of the implementation strategies represent innovations in how to manage health care systems: use of the CBIO approach, shared management of health services between the public and private sector (MOH/NGO), and joint management of municipal health systems. The challenges facing Curamericas and CSRA at this juncture are: to expand the strategies that have been developed to other regions of Bolivia and to other countries; to explore opportunities for influencing national Bolivian health policy based on their successful models of local health system management; and to document these experiences so they can be shared on a global level.

Achievements

Key achievements include: the implementation of child survival activities in 227 communities; support of community health programs by three municipal governments and 92 health volunteers; joint implementation of health activities of three Area Health Centers and their respective health posts; staff trained in key child survival interventions and the IMCI approach; and over 16,100 women and children benefiting from primary health care interventions.

Use of the CBIO methodology has allowed CSRA to develop a relationship of trust between practitioners and clients. More importantly, it has enabled CSRA and the MOH to understand community priorities and combine these with epidemiological ones to decrease morbidity and mortality.

Exemplary information management was one of the principal successes of the CS XIII Project. The census based methodology assisted CSRA/MOH facilities to collect and update demographic and epidemiological information. The information is analyzed at CAI meetings and used to determine future actions, and to document successes.

CSRA has developed a sustainability strategy that includes shared management of health services, shared health system management at the municipal level, and the community census that calls for a high level of local participation. MOH services now have systems in place to support a cadre of HVs with some basic incentives, and systems to provide training and supervision. Future negotiations with MHBs may strengthen the incentive program, insuring the long-term presence of HVs in the communities.

CSRA has made great headway in strengthening local health boards, with a focus on human development as opposed to infrastructure, and an emphasis on improving service quality and access. The CSRA model now merits expansion into other municipalities of Bolivia, while the shared management model should be considered as an answer to assuring transparency, efficiency, and quality of local health systems in the country.

Lessons Learned

Immunization

- ❑ The accompaniment of ANs by CS field supervisors has helped to improve the management of immunization records, tracking of children and quality in general.
- ❑ The application of tetanus toxoid to high school girls has been a successful strategy in some of the geographic areas.
- ❑ Continual updating and training of ANs and VHs in educational methodologies and provision of materials to new staff and volunteers is necessary if immunization education is to be successful.

Pneumonia Case Management

- ❑ If pneumonia cases in children are to be detected, the following activities should be improved: follow-up of children recovering from pneumonia who are on a treatment program to assure adequate home management, training of HVs to improve the detection and referral of cases, and availability of essential medicines at health posts and centers.
- ❑ Regular CSRA/MOH supervision and follow-up of health care providers is crucial, if staff are expected to implement clinical IMCI protocols and improve the quality of care for pneumonia case management. Supervision of staff to assess procedures in pneumonia case management was not emphasized in the CS Project, however this should be prioritized in the future intervention activities.
- ❑ Education of families in PCM requires an approach that can successfully deal with cultural barriers. For example, recognition of danger signs that require immediate care seeking along with community strategies to evacuate a sick child to prevent death.

Control of Diarrheal Disease

- ❑ An integrated behavior change strategy is necessary, if improvements are to be forthcoming in the home management of diarrhea and prompt care seeking based on the recognition of danger signs.

Nutrition

- ❑ The only way that the nutritional rehabilitation program can be effective is if health personnel commit themselves 100% to counseling and home visits. One reason this did not happen is that MOH staff does not think it is part of their job to spend extra time on home visits. MOH staff expects financial compensation for extra work, and this is one area that CSRA has had difficulty

with. While CSRA staff is totally committed to improving health, many public sector staff do not share these same values.

- Nutrition interventions can have more impact if CSRA/MOH works with the education sector, the productive sector and municipal governments to assure an integrated development approach.
- If men are integrated into health activities, through the participation of local authorities in the CAI meeting, they will play an increasingly more active role in assisting women to improve nutritional practices in the home.

Maternal and Newborn Care

- Changes made at health centers, based on the results of the ethnographic study, have increased the utilization of maternal care services.
- The inclusion of an Aymara educator and giving her basic CS training was an excellent way to begin working with women's groups and to motivate women to adopt new health practices.

Family Planning

- Depo-Provera has been very well accepted by the project area population.
- Educational cards (cartillas) have been useful in home visits.
- Use of fairs and markets to promote family planning has been a successful strategy.
- Competition games for increasing family planning knowledge have been successful.

Curamericas Use of Lessons Learned

Curamericas has actively worked with their Bolivian partner, Consejo de Salud Rural Andino to develop a model for child survival using Curamericas CBIO methodology. Past experiences, lessons learned, and recommendations are integrated into new programs as they are developed by Curamericas program staff. In the last four years, Curamericas has expanded its in-country presence from working exclusively in Bolivia to three new countries in Latin America and the Caribbean, partnering with local NGOs in each country. Through these partnerships, Curamericas has built upon lessons learned from previous CS projects, and will continue to do so with this CS XIII project that ended in September 2001.

Finally, the results of the CS XIII project will be shared with a diverse child survival and development community through a variety of venues. Curamericas is an active member of the US-based PVO network, the CORE Group, and the program staff at Curamericas participate in various CORE Group Working Groups. This provides excellent opportunities to share lessons learned from CS XIII in Bolivia with the larger child survival community in the US. Second, Curamericas promotes its program staff to present papers at international conferences such as the annual conferences of the American Public Health Association and the Global Health Council. These also are opportunities to share the results and recommendations of the USAID CS XIII project with the health and development community. Other opportunities to communicate the lessons of the project include developing articles for publication in the many international health and development journals that exist.

Recommendations

Immunization

- ❑ Continue to expand the CBIO approach to all project communities and institutionalize the procedures with the MOH and the MHBs to assure the continuity of high levels of vaccination coverage for children.
- ❑ Expand the strategy of tetanus toxoid vaccination for high school girls.
- ❑ Consider providing health education through the schools regarding the importance of child immunization. It is more difficult to reach older women due to geographic and language barriers.
- ❑ Consider moving CS activities to geographic areas where demographic information shows a significant number of children age 0-23 months and pregnant women.

Pneumonia Case Management

- ❑ The following are some suggestions for improving pneumonia case management:
 - Strengthen community involvement in health activities and support for health volunteers;
 - Follow-up for CSRA/MOH Area Health Centers in quality assurance practices;
 - Improve IMCI supervision system and track indicators;
 - Improve data analysis at the Area Health Centers and during monthly CAI meetings at the Sector and Area levels;
 - Monitor volunteer performance at the monthly CAI meetings; and
 - Make sure that all health posts and centers have adequate supplies of antibiotics.
- ❑ Study the transport and communication situation of each geographic area and work with municipal governments or other agencies/donors to improve access. A strategy that has worked in other settings has been the development of emergency evacuation plans at the community and health post level.

Control of Diarrheal Disease

- ❑ Strengthen linkages between the health facilities and communities to decrease barriers and improve practices in the home and prompt care seeking to address community mistrust and lack of shared values. Emphasize the results of the study on inter-cultural relationships with new MOH staff, and screen candidates for rural positions based on cultural sensitivity indicators. Identify specific behaviors that health personnel should demonstrate in their dealings with patients from rural communities, and include these in yearly performance evaluations.
- ❑ Prioritize home visits to children who have diarrhea, and train HVs to provide counseling and to make agreements with mothers regarding improved feeding practices and ORT.
- ❑ Continue supporting local governments to sponsor water and sanitation projects.

Nutrition and Micronutrients

- ❑ Continue to expand the census to other communities, along with growth monitoring of all children under age 2, and strengthen the nutritional rehabilitation program.
- ❑ Use the nutrition intervention as an entry point for community IMCI, and reinforce behavior change in the other CS interventions as part of the home visit and counseling strategy.
- ❑ Improve the registration process to track child weights, follow-up activities and results, and the administration and record keeping of Vitamin A and iron sulfate.
- ❑ Improve the supply system for micronutrients.
- ❑ Make agreements and action plans with each family that has a child with negative growth tendencies, to prevent moderate and severe malnutrition.
- ❑ Continue efforts to engage men and local authorities in an analysis of nutrition indicators and creative planning to improve nutritional status, such as home gardens and crop diversification, among others.
- ❑ Include follow-up of women who have unwanted pregnancies to prevent low birth weight and poor feeding practices, emphasizing self-esteem and values identification.
- ❑ Make an effort to hire more female health workers and to recruit female health volunteers to enhance educational activities with mothers.

Maternal and Newborn Care

- ❑ Continue to assist health personnel and health facilities to make changes, based on the results of the ethnographic study.
- ❑ Expand training of men and health volunteers in safe birthing practices and continue to promote the clean birth kit.
- ❑ Consider training ANs in life saving skills. MotherCare developed a training program for level 1 of the Bolivia Health Care System in life saving skills, along with protocols for treatment of obstetric and neonatal emergencies. MotherCare also has a Path to Survival Model for obstetric and neonatal care, which would be of interest to CSRA, along with a set of educational materials.

Family Planning

- ❑ Emphasize improving quality in family planning based on the following: information, availability of methods, technical competence, follow-up mechanisms, consolidation of services, and interpersonal relations.
- ❑ Implement a communication for behavior change strategy to increase family planning users, building upon the successes to date (e.g. home visits, fairs and markets, competitions, and games).
- ❑ Study alternatives to improve the supply system for contraceptives.
- ❑ Consider working through the MHBs to attain greater synergy between rural schoolteachers and health personnel. Schools provide a captive audience for health education, and students will soon be mothers and fathers with children of their own. Behavior change is much easier for younger people, and this may be a more cost-effective investment for lasting changes in health behavior.

Municipal Health Systems

- ❑ Improve the process of feeding back programmatic and financial information to municipal health boards.
- ❑ Develop a systematic plan for strengthening municipal health boards, including training in group decision making, building leadership, conflict resolution, and planning.
- ❑ Improve the health facility-community relationship through additional research regarding the definition of “quality” from the Aymara point of view, followed by a social marketing strategy to improve utilization and coverage of health services.
- ❑ Apply the model used in the Municipality of Puerto Acosta, where an inter-sector committee was formed to address issues in the areas of health, education, infrastructure, transportation, and agricultural production.

Health Facilities Strengthening

- ❑ Although the central level of CSRA in La Paz keeps good records of all financial transactions, the feedback of this information to partners needs to be improved. It is important that all parties receive financial reports on a periodic basis to demonstrate accountability.
- ❑ In order to improve administrative systems, the development of procedures manuals and training in management topics should be prioritized. The focus of future training could also bridge the gap between administration and program staff, with the goal of creating better coordination between the two.
- ❑ Areas that need improvement in the future include: correct completion of information forms and registers, clarification of roles regarding training and supervision, and the management of the information system at health centers. Other areas of improvement include the development of management indicators and follow-up, and joint quarterly analysis and discussion of both technical and managerial information by CSRA/MOH facilities. Greater success has been attained in the quarterly analysis of technical information, however this has not been the case with administrative information.

Community Mobilization and Work with Health Volunteers

- ❑ Work with MHBs to develop incentive schemes for volunteers who have demonstrated capacity and commitment to community health activities.
- ❑ Strengthen the CAI at the Health Sector level, and use this meeting for training and motivation of health volunteers, not only the presentation of reports.
- ❑ Develop a system to enable HVs to access educational materials and needed supplies for the successful completion of their responsibilities.

Communication for Behavior Change

- ❑ Develop a communication for behavior change strategy for CS interventions to replace the current focus on giving messages, and assist health workers to make their own “cartillas” and other educational materials.

Training

- ❑ In order to improve the training component, a curriculum should be developed at the Health District Level, with inputs from all local stakeholders—MOH Area Health Centers and Posts, MHBs, and schools.

Supervision

- ❑ Although the supervision system is functioning, it should be streamlined and adopted by the MOH and MHBs in order to merit expansion to other MOH districts and municipalities. Areas of improvement include: completion of planned supervisory activities; greater emphasis on follow-up of the results; improved feedback to staff; ways to reduce barriers to effective supervision; update and review job descriptions and clarify roles, especially in the case of field supervisors; and improve supervision of health volunteers and link the results to capacity building.

Financial Management

- ❑ An area of improvement mentioned during the final evaluation interviews is to overcome communication gaps between administrative and program staff. It is important for the accountants to understand the purpose behind expenditures, and program staff needs to be aware of budget constraints.

Logistics

- ❑ Some geographical areas had trouble with obtaining a timely supply of essential medicines and contraceptives. Attention should be given to areas of difficulty so that the lack of supplies does not affect implementation of technical interventions.

Technical and Administrative Support

- ❑ Technical assistance needs for the future include: development of procedures manuals for administrative management; communication for behavior change strategies; improvement of the logistics system; and studies to improve quality of service.

ATTACHMENT A
FINAL EVALUATION TEAM

Lynn Johnson, Consultant, Team Leader

Craig Boynton, Curamericas Country Program Coordinator

Nathan Robison, CSRA Executive Director

María Elena Ferrel, CSRA Project Technical Manager

Hernán Castro, CSRA Project Operations Manager

Franz Trujillo, CSRA Project Director Ancoriames

William Valencia, CSRA Project Director Carabuco and Ambana

Ramiro Llanque, CSRA Project Director Puerto Acosta

ATTACHMENT B

ASSESSMENT METHODOLOGY

FINAL EVALUATION PLAN

OBJECTIVES OF THE EVALUATION

The purpose of the Final Evaluation is provide to all stakeholders with details on the project's accomplishments, and to listen to feedback beneficiaries and donors, , including women, and children and their families, other community members and opinion leaders, health workers, health system administrators, local partners, other organizations, and representatives of donor agencies.

The final evaluation includes:

- ◆ The comparison of baseline and final data to assess impact through KPC studies.
- ◆ Review program performance according to each objective. Compare planned activities with actual results, analyzing constraints that limited the achievement of goals and factors that enhanced successes.
- ◆ Elaboration of lessons learned from the project activities, implementation, or approach.
- ◆ Identification of promising practices and opportunities for scaling up, replication or use of the approach within a broader context.
- ◆ Recommendations, including: management, HIS, training, M and E, coordination with the community, MOH, and other relevant components.
- ◆ Feedback and analysis on project sustainability, including relationships between project stakeholders such as the MOH, community volunteers and others.

COMPOSITION OF EVALUATION TEAM

The team is to be composed of:

Team Leader (consultant)

CS Project Coordinators

Other team members (6-15 people) selected from:

- ◆ Project staff
- ◆ MOH representatives
- ◆ Community representatives
- ◆ AID Mission representatives

The team leader is responsible for coordinating all evaluation activities, supervision of the team, meeting all specified objectives, collaborating with curamericas, and submitting a draft and a final report according to the defined timeline. Maria Elena Ferrel, Hernan Castro and other assigned curamericas staff will function as the coordinators of the teams for field data collection, including overall coordination, planning and logistical support of the team.

METHODOLOGY

The methodology for the final evaluation responds to the requirements of the USAID/BHR/PVC 2001 Final Evaluation Guidelines, which recommend a participatory approach resulting in an effective learning experience for PVC, the PVO, and local partners. Team members will include representatives from curamericas, Consejo de Salud Rural Andino, communities, the Bolivian Ministry of Health, USAID, and collaborating NGOs.

A planning workshop will be held with the evaluation team to plan the activities for the field visits and to develop instruments for the collection and analysis of data. These will be used during visits to project communities and referral health facilities. Field visits and observations will be made to the communities selected during the planning workshop. The selection process will identify communities from the geographical areas where the project is implemented including communities at different stages of advancement toward the project goals and objectives. This will enable the evaluation team to assess both the strengths and weakness of the implementation strategy, and to develop innovative ways to overcome barriers for future activities.

Using both a participatory approach and participatory methodologies, a multi-disciplinary team of key project stakeholders will assess the degree to which the project met its goals and objectives as outlined in the DIP, and examine the process of implementation using a variety of quantitative and qualitative methodologies, including planning and analysis workshops, field visits, key informant interviews, and group interviews. The evaluation will focus on: assessment of results and impact of the program, cross cutting approaches, community mobilization, communication for behavior change, capacity building, training, sustainability strategies, planning, staff training and supervision, information, finance and logistics systems, and information management. Recommendations and lessons learned from this project will be studied to develop improved strategies for the coming years.

Methodologies to obtain information for the evaluation will include:

- Document Review
- Analysis of KPC and Quality of Care studies
- Meetings and interviews with Project Staff
 - Key Informant Interviews
- Group Interviews
- Site visits and observations

EVALUATION PLAN

The evaluation will be divided into five phases:

1. Preparatory Activities
 - Conduct KPC final and Quality of Care studies (led by Maria Elena Ferrel and Hernan Castro, with support from Craig Boynton before consultant arrives)
 - Document review
2. Planning
 - Preplanning (Formation of team, logistics, document review)
 - Planning Workshop (Content, methodologies, design of instruments)
3. Data Collection
 - Field visits
 - Key informant interviews
 - Group interviews
4. Data Analysis
 - Summarize data
 - Analysis of data by team and resource persons
5. Presentation of Results
 - Analysis sessions with project staff in La Paz
 - Formal presentation to be scheduled after results analysis of field data and KPC, Quality of Care surveys
 - Written final report approved

The evaluation team will be divided into small groups to collect information from the field. Each team will consist of approximately 5 people. The teams will work in the field for 8 days to visit approximately 16 communities selected for visits. The communities will be selected using the following criteria, which will be revised during the planning workshop:

1. *Exclude* communities that are inaccessible due to inclement weather, and which would be difficult to reach.
2. Randomly select 16 communities and group them into circuits.
3. Plan which communities will be visited on which day.
4. Identify at least one health district and two health centers to visit within the circuit.

5. Include communities which show three levels of progress towards project indicators: minimum, intermediate, and advanced based on the KPC and other available progress data.

During field visits the following people will be interviewed:

- Women
- Community Volunteers
- Community Leaders
- TBAs (Traditional Birth Attendants)
- MOH personnel
- Municipal Representatives

A two-day workshop will be held with the evaluation team to review the results of the KPC and field visits, organize the data and prepare for the formal presentation. A one-day Results Workshop will be held for all team members plus USAID, MOH, and NGO partners to review the results of the field work and other information collected during the evaluation, and to formulate recommendations for improving the quality of project implementation in the future.

EVALUATION SCHEDULE

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Oct 21 Cochabamba to La Paz Document Review	Oct 22 La Paz, document review, and planning meetings	Oct 23 La Paz, document review, and planning meetings	Oct 24 La Paz Preparatory Workshop Develop and reproduce instruments	Oct 25 Travel to the Project Site Meeting to fine tune instruments and schedule	Oct 26 Field Work	Oct 27 Field Work
Oct 28 Field Work	Oct 29 Field Work	Oct 30 Field Work	Oct 31 Field Work Return to La Paz	Nov 1 La Paz Organize preliminary data	Nov 2 La Paz Organize preliminary data	Nov 3 La Paz Organize preliminary data
Nov 4 Travel to project site	Nov 5 Field Work	Nov 6 La Paz Organize final data	Nov 7 La Paz Internal analysis	Nov 8 La Paz Internal analysis	Nov 9 La Paz Prepare Results Workshop	Nov 10 La Paz Write draft report
Nov 11 La Paz Write draft report	Nov 12 La Paz Results Workshop	Nov 13 Return to Cochabamba Write draft report	Nov 14 Cochabamba Write draft report	Nov 15 Send draft to Curamericas for review	Nov 16	Nov 17
Nov 18	Nov 19 Receive and incorporate comments and recommendations from Curamericas	Nov 20 Prepare Final Report	Nov 21 Edit and send Final Report to Curamericas			

TALLER DE PLANIFICACION

HORA	ACTIVIDAD	RESPONSABLE
9:00 – 9:30	Bienvenida e Introducción de Participantes	Maria Elena
9:30 – 12:30	Análisis de Intervenciones del Proyecto Estrategias Claves y Datos del KPC Revisión conclusiones y recomendaciones Eval. Medio Termino Comparación resultados Línea de Base y final Elaboración de preguntas-Instrumentos (Trabajo en plenaria) <ol style="list-style-type: none">1. Inmunización2. Control de Enfermedades Diarreicas3. Nutrición y Micronutrientes4. Salud Materna5. Planificación Familiar6. Servicios Curativos	Trabajo grupal
12:30 – 2:30	Almuerzo	Vhania Gonzalo
14:00 – 18:00	Análisis de Enfoques Transversales Revisión conclusiones y recomendaciones Eval. Medio Termino Comparación resultados Línea de Base y final Elaboración de preguntas-Instrumentos (Trabajo en plenaria) <ol style="list-style-type: none">1. Capacitación2. Trabajo con líderes y promotores3. Trabajo con servicios de Salud4. Trabajo con municipios5. Movilización comunitaria6. Cambio de comportamiento7. Sostenibilidad	Trabajo grupal
18:00 – 18:30	Conclusiones	

PLAN DE VISITAS DE CAMPO

FECHA y LUGAR	HORARIO	ACTIVIDAD	PARTICIPANTES
Octubre 26 (Viernes) ANCORAIMES	MAÑANA	Visita Puesto de Salud Cajjata	Lynn Johnson Maria E. Ferrel Hernán Castro Franz Trujillo William Valencia
		Entrevista de Grupo comunidad Lacaya	
		Visita Puesto de Salud Maca-Maca	
		Entrevista de Grupo Organizado Maca-Maca	
	TARDE	Reunión con Personal de Salud (Hosp.Anc.)	
		Entrevista Grupo Promotores (Hosp.Anco)	
Entrevista Autoridades HAM-Ancoraimes (Instalaciones HAM)			
Octubre 27 (Sábado) ANCORAIMES	MAÑANA	(Otras entrevistas Según Necesidad)	Lynn Johnson Maria E. Ferrel Hernán Castro Franz Trujillo William Valencia
Octubre 27 (Sábado) CARABUCO	TARDE	Entrevista Grupo Promotores (Hosp. Carabuco)	Lynn Johnson Elsa Sanchez Maria E. Ferrel Hernán Castro William Valencia
Octubre 28 (Domingo) CARABUCO	MAÑANA	Visita Puesto de Salud Chaguaya	Lynn Johnson Elsa Sanchez Maria E. Ferrel Hernán Castro William Valencia
		Entrevista Grupo comunidad Chaguaya	
		Visita puesto de Salud sector Stgo. Okola	

	TARDE	Entrevista Grupo comunidad sector Quilima	
FECHA y LUGAR	HORARIO	ACTIVIDAD	PARTICIPANTES
Octubre 29 (Lunes) CARABUCO	MAÑANA	Entrevista Autoridades HAM-Carabuco (Instalaciones HAM)	Lynn Johnson Elsa Sanchez Maria E. Ferrel Hernán Castro
		Reunión Personal de Salud (Hosp..Carabuco)	Franz Trujillo William Valencia
Octubre 29 (Lunes) PTO. ACOSTA	TARDE	Visita Puesto de Salud Iquipuni	Lynn Johnson Elsa Sanchez Maria E. Ferrel Hernán Castro Franz Trujillo William Valencia Ramiro Llanque
Octubre 30 (Martes) PTO. ACOSTA	MAÑANA	Visita Puesto de Salud Chiñaya	Lynn Johnson Elsa Sanchez Maria E. Ferrel Hernán Castro
		Entrevista Grupo comunidad Chiñaya	Franz Trujillo William Valencia Ramiro Llanque
		Entrevista Grupo Comunidad Ullumata	
Octubre 30 (Martes) PTO. ACOSTA	TARDE	Entrevista Grupo Lideres Comunitarios (Hosp.Pto)	Lynn Johnson Elsa Sanchez Maria E. Ferrel Hernán Castro
		Reunión con Personal de Salud (Hosp.Pto. A.)	Franz Trujillo William Valencia Ramiro Llanque
Octubre 31 Miércoles LA PAZ	MAÑANA	Entrevista Autoridades HAM Puerto Acosta	Lynn Johnson Elsa Sanchez Maria E. Ferrel Hernán Castro
		Entrevista Director de Distrito Omasuyos	
		Entrevista Director de Distrito Camacho	

FECHA y LUGAR	HORARIO	ACTIVIDAD	PARTICIPANTES
Noviembre 5 (Lunes) AMBANA	TARDE	Reunión con el Personal (Centro Medico Ambana)	Lynn Johnson Elsa Sanchez Maria E. Ferrel Hernán Castro William Valencia Ramiro Llanque
		Grupo focal Promotores (Centro Medico Ambana)	
Noviembre 6 (Martes) AMBANA	MAÑANA	Visita Puesto de Salud Wilakunka	Lynn Johnson Elsa Sanchez Maria E. Ferrel Hernán Castro William Valencia Ramiro Llanque
		Grupo focal comunidad Cuturhuaya	
		Visita Puesto de Salud Copusquia	
		Grupo focal comunidad Copusquia	

**EVALUACION FINAL
PROYECTO DE SUPERVIVENCIA INFANTIL
Consejo de Salud Rural Andino**

TALLER DE ANÁLISIS INTERNO

MIÉRCOLES 7 DE NOVIEMBRE

2:00-2:30 Bienvenida y Presentación de los Objetivos del Taller

2:30-4:30 **Análisis de las Intervenciones de Supervivencia Infantil**
Material de Apoyo: Resumen de Resultados
Cuantitativos y Cualitativos

Guía de Preguntas

Grupo Facilitador Tema

- | | | |
|---|-------------|---|
| 1 | Ramiro | Inmunizaciones
Control de Enfermedades Diarreicas
Manejo de Casos de Neumonía |
| 2 | Franz | Nutrición y Micronutrientes
Servicios Curativos |
| 3 | María Elena | Salud Materna
Planificación Familiar |

4:30-6:00 Panel de Puntos de Vista de las Intervenciones

¿En que medida fueron efectivas las estrategias de intervención?

- ¿Cuáles son los logros más importantes?
- ¿Qué aspectos se deben mejorar?
- ¿Cuáles son las lecciones aprendidas?
- ¿Cuáles con las principales recomendaciones?
- ¿Hubieron Resultados No Esperados?
- ¿Hubieron Barreras No Esperadas?

JUEVES 8 DE NOVIEMBRE

9:00-10:00 Elaboración de Recomendaciones Generales y por Zona Geográfica
Material de Apoyo: Resumen de Resultados del Trabajo de Grupos

10:00-1:00 **Análisis de Estrategias Transversales**
Material de Apoyo: Resumen de Resultados Cuantitativos y Cualitativos

Grupo Facilitador Tema

- | | | |
|---|-----------------|--|
| 1 | María Elena | Comunicación para le Cambio de Comportamiento |
| 2 | Franz | Movilización Comunitaria <ul style="list-style-type: none">a) Participación Comunitaria (censo, reuniones, visitas domiciliarias)b) Fortalecimiento del Desempeño de Voluntarios (Lideres/Promotores, Parteros, otros) |
| 3 | Hernán , Ramiro | Desarrollo de Capacidades <ul style="list-style-type: none">a. Fortalecimiento de los Servicios de Saludb. Fortalecimiento de los Gobiernos Municipalesc. Capacitación |

1:00-2:00 Almuerzo

2:00-4:00 Panel de Puntos de Vista de las Estrategias Transversales

- Cuan efectiva fue la estrategia?
- Se cumplieron los objetivos?
- Cuales fueron las lecciones aprendidas?
- Hay demanda para continuar las actividades?
- Que planes hay para sostener las actividades?

4:00-6:00 Elaboración de Recomendaciones Generales y por Zona Geográfica
Material de Apoyo: Resumen de Resultados del Trabajo de Grupos

VIERNES 9 DE NOVIEMBRE

9:00-11:00 **Análisis de Temas Gerenciales**

Material de Apoyo: Resultados Evaluación de Medio Termino, resumen de capacitación al personal

Grupo Facilitador Tema

1	M.Elena, José, Mirtha	Manejo del Sistema de Información Planificación del Proyecto
2	Hernán	Administración de Recursos Humanos Capacitación del Personal del Proyecto Supervisión del Personal del Proyecto Asistencia Técnica
3	Natan, Gloria	Sostenibilidad Asistencia Administrativa Manejo Financiero Apoyo Logístico

11:00-1:00 Elaboración de Recomendaciones

1:00-2:00 Almuerzo

2:00-6:00 **Preparación para el Taller de Resultados**

- Información Cuantitativa por Intervención
- Información Cualitativa
- Estrategias Claves del Proyecto
- Conclusiones: Fortalezas
- Conclusiones: Debilidades
- Lecciones Aprendidas
- Recomendaciones

INTERVIEW GUIDES

EVALUACION FINAL
PROYECTO SUPERVIVENCIA INFANTIL XIII
CONSEJO DE SALUD RURAL ANDINO
BOLIVIA - OCTUBRE 2001

GUIA DE ENTREVISTA: **DIRIGIDO A MADRES**

Comunidad _____

Nombre del Entrevistador _____

Nombres de las Madres Entrevistadas _____

EDUCACIÓN Y CAPACITACION

1. ¿Después de participar en las actividades del proyecto de salud, han visto algún cambio en la salud de sus niños y en su familia?
2. ¿Recibe visitas educativas de parte del promotor? (indagar sobre el trabajo del promotor).
3. Puede contarnos sobre una situación donde nuevas prácticas de salud ayudó a usted a mejorar la salud de su niño?
4. ¿Cómo podría seguir trabajando el promotor de salud, después de que termine el proyecto?
5. ¿Cómo se siente en cuanto a la atención que recibe cuando visita el centro de salud?
6. Que aspectos buenos y malos puede mencionar de las actividades de tipo educativo ofrecidas por el personal de salud?
7. Que sugerencias podría mencionar para mejorar las mismas?
8. Considera usted que los mensajes educativos recibidos del personal de salud le han servido para cambiar y adoptar nuevas practicas saludables en su familia?

PLANIFICACIÓN FAMILIAR

9. ¿Cuáles son las razones por las que no usa métodos de Planificación Familiar?

SOSTENIBILIDAD

10. Que sugerencias tiene hacia el personal de salud para mejorar la oferta permanente y la calidad de sus servicios?
11. Como podría la comunidad contribuir a mantener y mejorar el funcionamiento de su puesto de salud?
12. Como podría la comunidad contribuir a mejorar los servicios ofrecidos por el promotor o líder de su comunidad?

EVALUACION FINAL
PROYECTO SUPERVIVENCIA INFANTIL XIII
CONSEJO DE SALUD RURAL ANDINO
BOLIVIA - OCTUBRE 2001

GUIA DE ENTREVISTA: DIRIGIDO LIDERES-PROMOTORES COMUNITARIOS

CAPACITACION

1. ¿Ha recibido capacitación en temas de salud en los últimos dos años y en que temas?
2. ¿Que temas ha puesto en práctica y en qué ha logrado mejores resultados?
3. ¿Cuenta con material educativo adecuado para promocionar la salud en su comunidad? Y como lo usa (solicitar que demuestre)
4. ¿Que sugerencias tienen para mejorar la capacitación del líder comunitario?

TRABAJO DEL PROMOTOR

5. ¿Realiza visitas domiciliarias y que actividades realiza (indagar por búsqueda de niños enfermos, promoción, educación, referencia, atención para promocionar la salud?
6. Realiza promoción sobre la salud en su comunidad?
7. Como realiza la vigilancia de la salud en su comunidad?
8. ¿Qué enfermedades atiende usted con mayor frecuencia, como se da cuenta que está en peligro su salud (indagar por signos de peligro de neumonía, diarrea, alto riesgo obstétrico y desnutrición), y cuando refiere?
9. ¿Qué información maneja usted? Comparte la información que usted tiene con su comunidad?

RELACION CON CSRA

10. En que medida las capacitaciones ofrecidas por el CSRA han satisfecho sus necesidades y expectativas?
11. En que medida las capacitación útiles ofrecidas por el CSRA han sido aplicadas en sus funciones?

12. Cuales son la debilidades y fortalezas del programa de capacitaciones ofrecidos por el CSRA?

13. Que sugerencias tendria para mejorar el programa de capacitaciones al personal ofrecidas por el CSRA?.

SOSTENIBILIDAD

14. Qué le motiva a seguir trabajando como líder/promotor?

15. ¿Cómo consiguen o como podrían conseguir el apoyo de las autoridades locales y de los gobiernos municipales?

16. Que sugerencias y necesidades tiene para poder ofrecer sus servicios a largo plazo y mejorar su calidad?

EVALUACION FINAL
PROYECTO SUPERVIVENCIA INFANTIL XIII
CONSEJO DE SALUD RURAL ANDINO
BOLIVIA - OCTUBRE 2001

GUIA DE ENTREVISTA: **DIRIGIDO A PERSONAL DE SALUD**

Comunidad _____

Nombre del Entrevistador _____

Nombres de las personas entrevistadas _____

COMUNICACIÓN PARA EL CAMBIO DE COMPORTAMIENTO

1. Qué metodología de comunicación, educación o capacitación en salud conoce?
2. Qué metodología y técnicas utiliza para realizar sus actividades de educación en salud?
3. Qué mensajes de salud prioriza o considera que son importantes para realizar educación o capacitación en salud.
4. Qué material educativo utiliza para realizar educación o capacitación en salud?
5. ¿Cómo preparan una sesión educativa?
6. ¿Cómo sabe que las o los participantes aprendieron el tema expuesto en la sesión?
7. ¿Como recogen la información de la educación o capacitación en salud?
8. ¿Qué hacen con los resultados de la información recogida?
9. ¿Qué dificultades han tenido para realizar actividades de educación en la comunidad?
10. ¿Qué otros medios de comunicación utiliza para realizar educación en salud en la comunidad?
11. ¿En las familias que ha visitado han visto algunos cambios en la salud en la madre o sus hijos menores de cinco años?

FORTALECIMIENTO DE LOS SERVICIOS DE SALUD

12. En que medida, en estos últimos 4 años, el CSRA ha apoyado en la mejora de la infra estructura, equipamiento y capacitación y desarrollo del personal (capacitación técnica y humana) en el Municipio?

RECURSOS HUMANOS

13. ¿A partir de su experiencia que temas deberían ser incluidos en los procesos de inducción de nuevo personal y quien debería encargarse de este proceso?
14. ¿Como se puede comprobar que el personal de salud este aplicando las normas de los programas?
15. ¿Han aplicado en el área las listas de verificación de calidad? Si han aplicado, y según los resultados, que cambios han tenido en sus intervenciones?
16. ¿Si no lo han aplicado, porque no lo han aplicado?
17. ¿Que sugerencias tiene para poder mejorar la utilidad de las actividades de supervisión?
18. En que medida ha ayuda a mejorar su desempeño las visitas de supervisión de campo?
19. Que sugerencias tienen para apoyar de mejor modo la generación de un verdadero trabajo en equipo?

RELACION CSRA-SERVICIOS DE SALUD

20. En que medida las capacitaciones ofrecidas por el CSRA han satisfecho sus necesidades y expectativas?
21. En que medida las capacitación útiles ofrecidas por el CSRA han sido aplicadas en sus funciones?
22. Que funciones y esfuerzos han sido duplicadas en el trabajo de Cogestión entre el Distrito y el CSRA? Que sugerencias tienen para evitar a futuro esta duplicación?
23. Cuales son la debilidades y fortalezas del programa de capacitaciones ofrecidos por el CSRA?
24. Que sugerencias tienen para que se les pueda apoyar a mejorar su desempeño después de haber asistido a las capacitaciones?

25. Que sugerencias tendría para mejorar el programa de capacitaciones al personal ofrecidas por el CSRA?

SOSTENIBILIDAD

26. Que sugerencias tiene usted para mejorar la calidad de los servicios que usted ofrece?

27. Como podrían hacer mas sostenible el trabajo de los lideres/promotres comunitarios?

OTROS TEMAS

28. Como se ha utilizado los datos del SIS para la toma de decisiones?

29. Que ejemplos podrían darnos sobre la toma de decisiones informadas en su experiencia

EVALUACION FINAL
PROYECTO SUPERVIVENCIA INFANTIL XIII
CONSEJO DE SALUD RURAL ANDINO
BOLIVIA - OCTUBRE 2001

GUIA DE ENTREVISTA: **DIRIGIDO A PERSONAL DE DISTRITO DE SALUD**

Distrito _____

Nombre del Entrevistador _____

Nombres de las personas entrevistadas _____

DESARROLLO DE CAPACIDAD DE LOS SERVICIOS DE SALUD

1. En que medida el SEDES a través del Distrito a dado cumplimiento a los convenios de delegación de la administración del sistema de salud al CSRA?.
2. Cual ha sido el rol del Distrito en el fortalecimiento de los sistemas de Salud Municipales donde trabaja el CSRA y cual seria su rol a futuro?.
3. Desde su punto de vista cual ha sido el rol que el CSRA ha desempeñado en el fortalecimiento de los sistemas de Salud Municipales y cual debería ser su rol a futuro?.
4. En que medida el Distrito ha sido fortalecido a partir de la cogestión de los servicios con el CSRA?
5. Cuales han sido las desventajas que el Distrito a identificado a partir de la gestión de los servicios de salud con el CSRA?
6. Que sugerencias tiene el Distrito para mejorar la eficiencia de la cogestión de los servicios con el CSRA?
7. En que áreas de trabajo (administración del sistema) se considera todavía indispensable el trabajo del CSRA y en que otras el Distrito podría asumir la responsabilidad junto a las HAM s?
8. Que funciones y esfuerzos han sido duplicadas en el trabajo de Cogestión con el CSRA?
9. Que sugerencias tiene el Distrito para evitar a futuro esta duplicación?

CAPACITACION

10. Cuenta el Distrito con un plan de capacitación continua del personal de salud?
11. En que medida ha influido la capacitación dada por el CSRA en la mejora del desempeño del personal?
12. Como podría el distrito en base a un plan de capacitaciones (ofrecidas por otros socios, PROSIN, CSRA, PROSAM, etc) consensuado poder aprovechar mejor las oportunidades de capacitación?
13. Que importancia le asigna el Distrito a las actividades de capacitación comunitaria?

EVALUACION FINAL
PROYECTO SUPERVIVENCIA INFANTIL XIII
CONSEJO DE SALUD RURAL ANDINO
BOLIVIA - OCTUBRE 2001

GUIA DE ENTREVISTA: **GOBIERNOS MUNICIPALES Y COMUSA**

Comunidad _____

Nombre del Entrevistador _____

Nombres de las Madres Entrevistadas _____

1. En que medida el CMS se ha involucrado en actividades para conocer la realidad y las necesidades del sistema de salud (fortalecimiento del sistema: capacitación, infraestructura, recursos humanos, administración, metodologías, etc)?.
2. Usted cree que el aporte de la HAM ha sido suficiente para satisfacer las necesidades del sistema de Salud (infraestructura, equipamiento, RR HH, capacitación y otros)?

PREGUNTAS PARA COMUSA

1. Que grado de importancia le asigna usted a la capacitación del personal para el fortalecimiento del sistema de salud?
 1. Que estrategias de sostenibilidad (financiera y operativa) prevee el Gobierno Municipal para su sistema de salud a futuro?
 2. Que sugerencias o necesidades tienen para asumir un mayor liderazgo en el manejo del sistema de salud?
 3. Como califica el rol que ha asumido el CSRA en el fortalecimiento del CMS.
 4. Que sugerencias tiene para mejorar el rol del CSRA para fortalecer los CMS
 5. Como podrían hacer mas sostenible el trabajo de los lideres / promotores comunitarios?

ATTACHMENT C

LIST OF PERSONS INTERVIEWED AND CONTACTED

Municipal Government Representatives

Ancoraimes

1. Alejandro Villavicencio, Ejecutivo De La Sub-Federacion de Ancoraimes
2. Benito Tallacagua, Oficial Mayor Técnico y de Desarrollo Humano

Carabuco

3. Dña. Cecilia Cuentas, Miembro Consejo Municipal CARABUCO.
4. Samuel Gamarra, Honorable Aldalde Municipal CARABUCO

Puerto Acosta

5. Dn. Rolando Mamani , Presidente Consejo Municipal PUERTO ACOS
6. Dra. Ana Maria Ticona, Miembro Consejo Municipal PUERTO ACSOTA.

Health District Representatives

1. Dr. Guillermo Teran, Director de Distrito Camacho

Health Personnel

Ancoraimes

1. Franz Trujillo – Director de Proyecto
2. Joaquin Pacosillo – Coordinador de Campo
3. Pablo Siñani – Auxiliar CHEJEPAMPA
4. Alicia Flores – Jefe Enfermería
5. Adela Quino – Auxiliar Hospital ANCORAIMES
6. Sabina Poma – Auxiliar ANCORAIMES
7. Dr. Hernan Castro – Responsable Operaciones CSRA
8. Willfredo Humeres – Auxiliar SECTOR CAJIATA
9. Heriberto Hernani – Auxiliar voluntario
10. Sergio Linares - ODONTOLOGO
11. Miguel Millares - MEDICO INTERNO
12. Esmeralda Sinani – Resp. FARMACIA Y LABORATORIO

13. Jacinto Castro - Auxiliar Sector POCOATA
14. Hilarion Sunavi - Auxiliar Sector INCA CATURAPI
15. Luis Sacacaca - Auxiliar SECTOR MACA - MACA
16. Virginia Cruz – Coordinadora SSR
17. William Valencia – Director Carabuco
18. Lucia Tonconi - Administradora
19. Maria Eugenia Velasco – MEDICO JEFE DE AREA

Carabuco

22. Ximena Paco (Odontóloga)
23. Tania Cosme (Enfermera)
24. Raul Murillo (Medico de Planta)
25. Maria Victoria Medina)
26. Uvaldo Quelali
27. Gregoria Huanaco
28. Juan Carlos Quispe
29. Ismael Yuque
30. Luis Pacosillo
31. Francisco Quispe, Puesto de Salud Chaguaya.
32. German Coronel, Puesto de Salud Santiago de Ocola

Puerto Acosta

33. Ramiro Llanque (DIRECTOR)
34. Santiago Medina (Medico de Planta)
35. Virginia Ticona (Jefe Enfermeria)
36. Luciano Tintaya (Coordiandor de Campo)
37. Basilia Layme (Coordinadora Grupos de Autocrecimiento)
38. Isaac Cordero
39. Grabriel Yanique
40. Natividad Huallpa
41. Berta Quispe, Puesto de Salud Iquipuni
42. Carmen Eulate Cruz
43. Guillermo Surco
44. Ruben Ticona
45. Raul Calamani

Ambama

46. Gilda Bahoz – Auxiliar de Enfermeria Ambana
47. Bartolomé Callisaya – Auxiliar de Enfermeria Sector Copusquia
48. Ramón Surco - Auxiliar de Enfermería Ambana
49. Reynaldo Sánchez – Medico de Área SEDES
50. Simeón Barra – Coordinador de Campo
51. William Valencia – Director de Proyecto
52. Eduardo Capa – Auxiliar de Enfermería Sector Wilakunka

Health Volunteers

Ancoraimes

1. Alberto Quispe
2. Isaaca Poma Mamani
3. Delfina Poma Ticona
4. Victor Callisaya Quispe
5. Justino ticona Gutierrez
6. Silvia Cruz Quispe
7. Julia Cancari
8. Marisol Machaca
9. Verónica Emiliana Condori
10. Anastasio Mamani Mayta
11. Clemente Quispe Mamani
12. Luciano Apaza Ticona
13. Benigno Añaguaya

Carabuco

14. Leonora Caparicona
15. Margarita Hilari
16. Rosa Julio Chaima
17. Martha Perez
18. Paulina Villca
19. Fortunata Tintaya
20. Valeria Ramos
21. Ana Miranda
22. Roxana Quispe
23. Angelica Limachi
24. Nancy Averanga
25. Rosemery Ticona

Puerto Acosta

26. Cristina Quispe
27. Irma Nieves Chambi
28. Marcelino Cerezo
29. Nestor Villca
30. Julian Villca
31. Francisco Mayta
32. Valentin Condori
33. Fabiana Nina

Mothers and Fathers

Ancoraimes

Participantes Grupo Cajiata

1. Teresa Vallejos
2. Sabina Bustencio
3. Maria Mamani
4. Dorotea Leandro Quenta
5. Incolaza Ticona
6. Maria Vallejo
7. Manuela Apaza

Participantes Grupo Maca-Maca

8. Julia Chambi Huallpa
9. Justina Copa Canaza
10. Maria Justo Mamani
11. Juana Chino de Justo
12. Eugenia Mamani Mamani
13. Juana Aruquipa de Mamani
14. Justina Quispe de Castillo
15. Valentina Ruis de Mamani
16. Simona Justo de Mamani
17. Francisca Huallpa Mamani
18. Sabian Mamani Penaloza
19. Hilaria Caparicona de Huallpa
20. Francisca Mamani de Mamani
21. Luciano Chino Quispe

Puerto Acosta

Comunidad: Chiñaya

22. Julia Calamani
23. Florentina Calamini
24. Cecilia Mamani
25. Justina Patrona

Comunidad Ullumata

26. Rafael Villca
27. Gregorio Villca
28. Paulina de Villca
29. Isabela Chambi
30. Francisco Madani
31. Gregoria Arpa

32. Benito Choquemisa
33. Petrona Quispe de Villca
34. Pedro Arpa
35. Enrique Machaca
36. Tomas Villca
37. Isidro Villca
38. Damiana Mamani
39. Antonio Quispe
40. Modesta Machaca
41. Evaristo Mamani
42. German Quispe
43. Francisca Mamani
44. Octavio Arpa
45. Manuel Machaca
46. Pio Quispe

Carabuco

Comunidad Quilima

47. Toribia
48. Rosa
49. Flora Paxi
50. Eusebia
51. Marcela Calcina
52. María Pacosillo
53. Amalia Pacosillo
54. Siverio Hilaria

Ambana

Participantes Grupo Copusquia

55. Emilio Quispe
56. Eloy Mamani
57. Dionisio Quispe
58. Eleuterio Kuno
59. Lorenzo Hilari
60. Pedro Mamani
61. Emilio Alvarez
62. Emilio Montes
63. Julian Quispe
64. Martín Montes
65. Marcela Vda de Alvarez
66. Francisco Alvarez
67. Hector Mamani
68. Victor Celso Hilari
69. Juana Alvarez

70. Paulino Montes
71. Sebastián Mamani
72. Nicolas Mamani
73. Domingo Mamani
74. Proctasio Celso
75. Andres Alvarez
76. Ignacio Apaza
77. Valeriano Mamani
78. Esteban Mamani
79. Simon Mamani
80. Celestino Quispe
81. Julio Vda de Yanarico
82. Juan Kana
83. Teresa Vda de Quispe
84. Candelaria Tito
85. Natividad de Quispe
86. Pascual Montes
87. Jorge Vargas
88. Zacarias Hilari
89. Genaro Alvarez
90. Roberto Montes