

PPS-ABL-249

BASICS **TRIP REPORT**

Evaluation of the Health Education Component of the Community Child Health (CCH) Project in Bolivia

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

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PI-ABL-249

**EVALUATION OF THE
HEALTH EDUCATION COMPONENT OF THE
COMMUNITY AND CHILD HEALTH (CCH) PROJECT**

**La Paz
November 3-18, 1994**

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**BASICS Technical Directive: 000-BO-01-017
USAID Contract Number: HRN-6006-C-00-3031-00**

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ACRONYMS

ARI	Acute Respiratory Infection(s)
BASICS	Basic Support for Institutionalizing Child Survival
CCH	Community and Child Health Project
DHS	Demographic Health Survey
EPI	Expanded Program on Immunization
HE	Health Education
IDB	Inter-American Development Bank
IEC	Information, Education, and Communication
IMR	Infant Mortality Rate
KAP	Knowledge, Attitude, and Practices
NGO	Non-governmental Organization
ORS	Oral Rehydration Salts
PARI	Educational Radio Project
PROISS	World Bank-funded health project
PSF	IDB-funded health project
PTB	Community-based Organization
PVO	Private Voluntary Organization
RPS	Community Health Promotor
SCM	Standard Case Management
SNS	National Health Secretariat
TB	Tuberculosis
TOT	Training of Trainers
TT	Tetanus Toxoid
UNICEF	United Nations Children's Fund
UROC	Community Oral Rehydration Center
USAID	United States Agency for International Development

I. EXECUTIVE SUMMARY

USAID/Bolivia requested that the BASICS project provide a two-person team to evaluate the health education (HE) component of the mission-funded Community and Child Health Project (CCH) and to make recommendations for: improving the effectiveness of CCH's HE activities. The team spent five days visiting five of the six districts supported by CCH and ten days interviewing staff of CCH and other organizations and preparing this report.

In judging CCH's work, the team felt that it was important to keep in mind a number of important constraints:

- CCH's districts are spread throughout Bolivia's major geographical and cultural regions;
- Most of the districts' populations live in small communities of a few hundred people, most of which are inaccessible in wet weather;
- CCH's HE activities must overcome the wide cultural gap between the government's health services and indigenous belief systems;
- In contrast to PVOs, most CCH field staff are government employees who under normal circumstances do limited community work;
- In hope of establishing a replicable methodology, CCH has not supported many new personnel or given extraordinary support to field activities.

Given these constraints and the short time during which the program has been active in most communities (approximately six months), the team found some important positive results. Although it is clearly too early to gauge the **impact** of the HE activities, the **process** followed has generally been successful in:

- generating enthusiasm, hard work, and many local innovations from government (SNS) staff in a short time--a considerable achievement;
- stimulating a greater sense of community identity in the pilot communities;
- raising the priority of good health and the level of knowledge in the pilot communities (with an unknown amount of spillover into actual practices);
- developing some very useful training and support materials that, with modifications, could be widely effective in Bolivia; and
- establishing a good system of supportive supervision and follow-up of training.

Nonetheless, there are a number of important areas in which the program is weak or could be improved:

- **measuring impact:** The program has done a surprisingly poor job in establishing meaningful program and impact indicators and in systematically collecting baseline information.
- **focusing on behavior change:** While the team believes that CCH's "educational" approach has made a good start in teaching health workers and community people the scientific knowledge and recommendations that form the basis of changes in practices, it believes that without a change in orientation the HE work might result in relatively little actual change in practices (use of ORS, appropriate home diagnosis, and action for possible pneumonia, etc.)
- **expanding coverage:** The pilot communities in which the HE program is active include only some 12 percent of the districts' populations -- approximately 47,000 people, including 1,400 infants.

This report contains many recommendations that CCH and USAID should consider in order to strengthen CCH's health education activities. A major thrust of these recommendations is to incorporate several concepts from social marketing for developing comprehensive strategies aimed at specific, feasible changes in behavior. These include:

- gathering and incorporating ethnographic and other qualitative information in order to understand the communities' knowledge, attitudes, and behaviors regarding health, disease, and health services;
- defining current and desirable behaviors;
- systematically gaining an understanding of the attitudinal and practical barriers to people accepting the desirable behaviors; and
- developing a communication and service strategy aimed at overcoming these barriers and motivating health-promoting practices, including the use of additional media such as radio and a creative strategy.

These recommendations imply an expanded role for communication within CCH and will require the addition of an experienced communication expert to the staff as well as strategic technical assistance.

Among the many other recommendations are the following:

- Define appropriate indicators; collect complete baseline information on them in new

districts and, at an appropriate time, assess them in the existing pilot communities.

- Increase program coverage by: "graduating" existing pilot communities to free up auxiliaries to initiate new ones; using regional radio to promote and combat barriers to desirable practices; and expanding coordination with PVOs and other sector programs in the CCH districts.
- Publish a project newsletter to disseminate the many innovations developed at the district and community level.

II. BACKGROUND

The mission-funded Community and Child Health Project (CCH) began in 1989 with the objective of strengthening the government's ability to plan, implement and sustain priority child survival interventions in three of Bolivia's nine departments. Emphasis is on strengthening public health programs at the district level.

In part, CCH has been used as a conduit for material support to the national immunization and diarrheal disease control programs. In addition, a district development program has strengthened managerial systems and sponsored development and implementation of a health education (HE) methodology in six districts. A pilot Chagas control program and a water and sanitation component were recently terminated due to a cutback in available funds.

The HE component was originally designed and implemented by outside contractors (Cientifica and Universidad NUR), but with the budget cutbacks, the contract was terminated at the end of March 1994, and a few Cientifica staff were contracted by CCH to continue the work.

Several new laws are in the process of reshaping the national government and decentralizing control over spending. The Popular Participation Law has given control over government health facilities and significant funds to local municipalities, with local community organizations having veto power over spending. CCH is moving as well as it can to adjust to and take advantage of opportunities offered by these fluid conditions.

In assessing CCH's HE activities, it is important to keep in mind the difficult atmosphere in which the project is working.

- Because the HE program is active in three departments of Bolivia that span the wide range of Bolivia's cultural and linguistic diversity, activities are more difficult to manage than if they were concentrated in one department or cultural area.
- To be successful, the program must bridge significant cultural barriers (language, concepts, etc.) between the scientific approach to health improvement and the traditional

concepts of ancient cultures and communities.

- Access to these communities is extremely difficult. In every district in which the program works, most of the several hundred communities have only 100-200 inhabitants. Communities are widely scattered, and the majority cannot be reached at all during rainy weather. Particularly in Cochabamba Department, large portions of many communities migrate during certain times of the year. Although many families return, others stay permanently in the Valleys and Lowlands. Almost all families are extremely busy with agricultural work during planting and harvesting and therefore not available for meetings and other HE activities at those times. The tiny size of most communities and their difficult access make cost-effectiveness practically impossible to achieve.
- Human and material resources are limited (on average, one auxiliary covers 40 communities), and in the hope of making the approach replicable, CCH has not poured an inordinate amount of special resources into the districts. Still, CCH makes some critical inputs in the areas of vehicles and gasoline, supplies and equipment, drugs, per diems, and supervision. District health educators and a few auxiliaries are also CCH staff.
- The final constraint on more dramatic project results is the fact that CCH works through the Ministry of Health (SNS). SNS has some positive attributes, but its effectiveness suffers tremendously from a lack of staff and other resources, its use of ill-prepared young physicians doing their year of social service work in positions of authority, frequent transfer of personnel due to political considerations, and the general difficulties, mentioned above, of having an impact on public health in Bolivia. By working through SNS, CCH suffers from some of its weaknesses: e.g., district directors who don't make CCH vehicles available when needed, great delays in approval and printing of manuals and other materials, auxiliary nurses who already do the bulk of SNS work being asked to do even more work in the communities, etc.

It is also important to remember that the HE program has been active in the districts for approximately six months, so while it is useful to examine its development, it is far too early to talk about impact.

III. SCOPE OF WORK

USAID/Bolivia requested a two-person external team to evaluate CCH's work in the area of health education, report on their findings, and make recommendations to USAID on how best to support HE and improve the communication program of the SNS in the six CCH districts and/or centrally. The team was asked to meet with USAID, CCH, and SNS personnel and with others who have worked on the health education program to date, in order to become familiar with progress to date and plans for the future. They were also requested to learn about HE efforts of other donors working in child survival, particularly UNICEF, the Inter-American Development

Bank (PSF project), and the World Bank (PROISS project). The team was given the following specific tasks:

- A. assess CCH project progress to date in designing, testing, producing and implementing two health education modules in six project districts;
- B. assess the CCH training of trainers approach, including the availability of government personnel at all levels to implement the approach, and the potential replicability in other districts and areas without CCH project support;
- C. based on available CCH documents and other documentation provided by the mission, assess the results of the CCH approach to date on health personnel at central, regional, district, and area levels in terms of improving health education capacities, versus technical knowledge and capacity in child survival interventions;
- D. assess the "census-based approach" aspect of the health education strategy to date, and determine whether this approach is a valid methodology for working in communities;
- E. based on available documentation, assess the results of the two modules implemented to date on mothers, children, and other beneficiaries in the communities where the approach has been used; and
- F. determine whether USAID should provide a long-term advisor in health education and communication, and at what level such an advisor would work.

IV. METHODOLOGY

To complete the scope of work, the team employed the following methods:

- **Question guides** (see Appendix B) were developed and used for interviewing key people at the central level from CCH, USAID, the World Bank, IDB, UNICEF and other relevant agencies; and government and project staff in the districts and pilot communities (listed in Appendix A).
- **Secondary data review** was carried out by examining files, records, evaluations and other documents provided by the staff of CCH, USAID and others; the training materials and manuals were also reviewed (see Appendix E).
- **Field visits** were organized to all but one district. One or both consultants were able to visit ten pilot communities, interview nine auxiliaries, seven health educators, two district administrators and two district directors.

During the field visits, the team was accompanied by members of the CCH health education team, which permitted the consultants to gain insights into the style of supervision performed by the CCH team.

V. FINDINGS

A. General findings

Although it is clearly too early to gauge the **impact** of the HE activities, the **process** followed has generally been successful in:

- generating enthusiasm, hard work, and many local innovations from SNS staff in a short time--a considerable achievement;
- stimulating a greater sense of community identity in the pilot communities;
- raising the priority of good health and the level of knowledge in the pilot communities (with an unknown amount of spillover into actual practices);
- developing some very useful training and support materials that, with modifications, could be widely effective in Bolivia; and
- establishing a good system of supportive supervision and follow-up of training.

Areas in which the current approach needs improvement are in measuring impact, focusing more on behavior change, and expanding coverage.

B. Progress in designing and implementing HE modules

The process of designing and implementing the HE modules has taken a long time, and the Científica contract was very expensive, but the final results are generally good. Two health education modules were designed by the time CCH funds were cut:

- **MODULE 1. Social Management and Census-based Approach**
(*base censal y gestion social*)
- **MODULE 2. Health Promotion (through Adult Education) and Diarrhea Management**

(In mid-1994, a third model, Popular Participation and SCM of ARI, was designed, tested, produced, and disseminated by the CCH in-house health education team.)

These modules were designed under contract with Científica and NUR University and were evaluated by the participants of the two training of trainers (TOT) sessions, one in Cochabamba

(July 26 - August 5, 1993) and one in Zapahaqui (August 19-28, 1993.) A U.S. consultant, Ellen Eiseman, worked with the CCH team to train health educators, doctors, nurses and auxiliaries from all the six districts where CCH would work.

Three preliminary workshops were held to allow the facilitators to become familiar with Module 1, practice teaching, and to adjust the contents of the module to their specific districts. At these workshops, the trainers, health educators and auxiliaries introduced substantial changes in the working methods and cultural adaptations for the different regions. The general objectives became to enable auxiliary nurses:

- to better teach adults/community members;
- to better organize and manage the communities (155 in total); and
- to effect changes in their communities in order to improve health and hygiene.

Some specific objectives are to do home visits and to use a leaflet and household survey sheet to get information about the health situation in the community through systematic contact with the formal and informal leaders. This information is to be presented visually on a community map with the houses officially numbered and the various resources and risk factors identified by special color codes.

For the preparation of Module 2, preliminary materials were sent out to the educators far in advance of the TOT workshop, after which they were called together to design support materials for the module. Districts were also given enough material with which to develop flipcharts, etc. in order to improve the quality of their presentations of the content. Furthermore, the educators were given specific responsibilities for running workshops for the auxiliaries and health promoters. Once these educators returned to their respective districts, they gave these workshops on preset dates for which technical support had been organized. In preparation for Module 2, three additional workshops were organized for educators and auxiliaries of each department.

Each module contains both activities directed to improving the **processes of working with rural communities** and activities that involve a **specific health content**.

<u>Eg.</u>	<u>process</u>	<u>health content</u>
Mod.1:	social management	census base of health risks
Mod.2:	health promotion	management of diarrhea
Mod.3:	popular participation	acute respiratory infections

During the introductory part of each subsequent module, the training staff and participants identify any problems they had with the previous module.

To ensure that the content of the health component follows SNS norms and standards, the health team collaborates closely with "experts" who are responsible for the relevant specialty within the

SNS. This collaboration has resulted in the SNS reprinting (using its own funds) two of the manuals for auxiliaries developed by CCH, the RPS Manual for Diarrhea Management and the Manual on SCM for Acute Respiratory Infections.

From the evidence found in available reports, the training sessions have been successful in improving knowledge and changing attitudes of the participating health personnel with regards to their communities. Moreover, from what the team observed during the field visits, there is a good affinity, understanding, and sound approach in working with the communities and in the supervisory style of the district staff that reflects the material taught in the training. The team feels that even though most RPSs (community health promoters) and mothers can recite some important knowledge taught, it is not clear if this has led to improved practices. For example, people could correctly tell how to mix the ORS packet, but would they also give it in case of diarrhea? They might know the danger signs for ARI, but would they bring the coughing child to the auxiliary when they saw an in-drawn chest?

Another implementation problem that the team noted is that the auxiliary staff is expected to collect timely information for action in his/her community (e.g., on diarrhea and ARI cases). In fact, auxiliaries appear to visit most houses no more than once every 6-12 months, so unless they get help to receive such information every week or two (e.g., from "health scouts"), it is not really useful.

The support materials look attractive, with many illustrations, but there are too many messages to take into consideration, and not many deal with the potential reasons parents might have for not acting on them, e.g., the resistances embedded in traditional practices and beliefs, or even not recognizing the symptoms as dangerous because they are common occurrences in their lives.

The team suggests, therefore, that in new editions of the manuals the RPS or auxiliary be given tools to help diagnose the communities' own perception of the conditions and their causes, tools to help encourage discussions about their practices and possible barriers to carrying out the new behaviors, and examples of actions he/she can take to motivate compliance with new actions combined with unarmful traditional practices (see recommendations).

C. Training of trainers approach

The "cascade" training has been reasonably effective but not terrific. Some of the weaknesses in this training approach have been minimized through supportive field supervision afterwards. There have been significant delays between the TOT and the final training of RPSs and community leaders and a loss of the technical quality through the several steps. On the positive side, the approach is relatively low cost. It is very useful to have the same persons who do training also do the routine supervision.

Cientifica and NUR University originally planned the following training activities to support capacity building:

1.	Workshop to launch HE effort	3 days
2.	Training of trainers (2 groups)	4 days each
3.	Module preparation work meetings	3-4 days
4.	Training about modules	4-3 days
5.	Multiplier effect in the community	over time
6.	Management and administrative skills training for doctors prior to rural social service	1 day
7.	Experience exchange programs	based on time and \$
8.	Supervision	based on needs
9.	Materials production	

Of the above steps, 1 through 4; 8 and 9 were carried out at a cost of Bs.645,063 prior to severing the contract. Subsequently, module 3 was done by the CCH in-house health education team. The monthly cost when the work was contracted out was Bs.58,642, and the monthly cost since then has been Bs.19,305.

D. Health education and technical capabilities of personnel at all levels

The team's impression, based mostly on field visits to five of the six project districts, is that the CCH HE approach has been relatively successful in improving the health education and technical capabilities of staff at different levels. Virtually everyone interviewed from the health education team to mothers and fathers in the community was enthusiastic about the approach. The CCH central HE team, the health educators, and the SNS auxiliaries are generally working very hard. As one auxiliary explained, the CCH methodology has meant more work for her, but she feels that it is worthwhile because she is now more effective. This enthusiasm has been demonstrated by the significant number of local innovations by health educators, auxiliaries, and RPSs, some of which are described below.

Creative initiatives observed from various auxiliaries:

Capinota District:

- The health educator has collaborated with SNS and PVO staff to arrange radio broadcasts on health and health education activities in some *ferias* (weekly markets).

Carrasco Valle:

- Auxiliaries have extended the methodology beyond their pilot communities to work more efficiently in other communities they are responsible for.
- Auxiliaries have introduced "community notebooks" in all non-pilot communities as a tool for the village health committees to manage information on health issues from the household surveys.

Chiquitanía Sur:

San José:

- The area coordinating committee observed that there were gaps in their indicators for health. Subsequently, a workshop was organized to learn about collecting and analyzing demographic data. The participants agreed to come up with municipal indicators of health risk factors.
- The community maps were used as a planning tool by the municipalities. This experience has led to an invitation by the Puerto Suarez authorities for the San José team to come and help them use similar methods to come up with operational plans for health.
- Based on the work with the pilot communities, the district health team wants to divide San José into *barrios*, so as to allow them a way to work with "pilot neighborhoods" on identifying typical urban health problems. An auxiliary nurse has already set up a reference system for tuberculosis patients to help identify "suspicious coughers" and to give them peer counseling.

Pororó:

- The auxiliary, together with the village health committee, has established a rotating fund to cover emergency health expenses. The whole community was involved in establishing the criteria for using the funds.
- The community actively participated in the decision to become involved with PARI's first **rural** experiment with interactive radio targeting health messages to schools.
- The auxiliary has trained RPSs to apply the census approach to urban barrios, creating maps of these areas with new symbols for threats to public health, e.g., tuberculosis patients.

Taperas:

- The auxiliary has suggested that the community divide up into smaller neighborhood groups to allow for closer guidance, with the help of an RPS or *promotor anclado* who could visit families more often and run smaller meetings with more interaction.
- The community publicly acknowledged its *promotores anclados* as important health resources and has decided on a special symbol to distinguish them on the community map.

Santa Teresitas:

- The Ayoreo auxiliary and RPS have adapted some of the educational posters by translating the text into their language and then adding their own pictures.

Altiplano Valles Sud:**Patacamayo:**

- To reduce infant mortality in home births, the health educators have begun to train relatives of pregnant women and give them a safe birthing kit.

Chapare Valles Puno:**Chalviri:**

- The auxiliary nurse, the son of a traditional midwife and herbal healer, has combined his knowledge of traditional healing and herbal lore to make patients feel at ease with his newly acquired responsibilities for "modern" primary health care.

Given the short time available for this evaluation, the team was not able to actually observe health education in process, but it was able to ascertain through questions a certain level of knowledge in the community. Realizing that learning new health concepts and behaviors is a long-term process, the team feels that the situation in the field after six months of HE activity is satisfactory. The team's main concern, discussed below, is that while many people may learn new health knowledge, they may not be changing their relevant behaviors, which, is what is required for the project to have an impact.

In response to questions, people generally showed that they knew the essential technical knowledge on the topics covered thus far, although knowledge of ARI control was not nearly as satisfactory as for immunization and diarrheal disease control. Not one of the health educators could correctly explain the diagnosis of pneumonia through the standard case management approach. Clearly, ARI training needs to be reinforced through good supervision and support materials (see recommendations). With one or two exceptions, however, the majority of health educators and auxiliaries seemed quite knowledgeable about the topics.

E. The "Census-Based Approach"

Although it has not completely worked as intended, the census-based approach has clearly been worthwhile. Both communities and health staff appreciate having a complete census of the community and love having the community map. In every community visited, everyone knew his or her house number and location on the map. For the first time, these communities know how many families and people are there, and they have a picture of their demographic profile. (Some people are concerned about the low birth rate, generally around 2.6 percent.) In Huayhuasi, the auxiliary had drawn a population pyramid built with sketches of people from the different age groups. Both district and municipal officials said that the census information had been useful for planning health and other projects. Auxiliaries and RPSs claim that having under-ones and pregnant women marked on the town map helps them plan more frequent visits to their homes.

What has not worked well, because of the infrequency of home visits, is marking temporary

conditions such as cases of diarrhea and ARI. With the auxiliary able to visit every home only every 6-12 months, it seems pointless to mark such temporary conditions, unless school children or other community volunteers can be recruited to visit homes at least every two weeks.

Since it is based on the "census-based impact-oriented" methodology, it is surprising that the CCH approach has not been more impact-oriented. Although there is a small baseline survey of a limited number of families in some pilot and non-pilot communities, there are no questions about infant mortality in the previous year, or about several other indicators that should be measured, such as TT status of mothers. It does ask about things that the project may have little impact on, such as the incidence of diarrhea.

The surveys that have been completed have yet to be tabulated. According to the person in charge of the health education work at the time, there was "neither time nor money" to do the baseline well. Given some deficiencies in the questionnaire and the relatively meaningless sample, it may not even be worth tabulating the results. Some suggestions for beginning about to measure impact are given below in recommendations and in Appendix E.

F. The results on beneficiaries

As discussed above, the results in terms of new knowledge have been fairly good, but the results in terms of actual health impact are impossible to gauge. The project clearly needs both a better method of measuring its potential impact and a better focus on behavior-change strategies.

What stands out from the field visits, however, is the excellent community participation that the project has engendered. People are very proud of their census and their map and their active mothers' clubs and health committees.

While many communities and individual households were at first suspicious of the census (a few communities did not become pilot communities because of this), people gradually developed trust in the auxiliaries and RPSs and now seem to participate very willingly.

G. Coverage

A major issue regarding the CCH HE methodology is whether the relatively low coverage is worth the investment of funds and energy. As the statistics below show, approximately 47,130 people (1,400 under one) live in the pilot communities out of a total population for the six districts of 407,742 (11.6 percent.) This is admittedly a small coverage for the investment thus far, but it should be remembered that the bulk of the costs have been to develop the methodology and materials, much of which is completed.

Basic Statistics on Project Districts and Communities

District	Population	No. Pilot Coms.	Pop. in Pilot Coms*	Pop. per Pilot Com.	No. Facs.
Altiplano Valle Sur	153,475	45	12,365 (8.1%)	275	52
Capinota	38,777	10	4,500 (11.6%)	450	7
Chapare Valle Punata	50,820	11	6,060 (11.9%)	551	9
Carrasco Valle	34,390	16	5,050 (14.7%)	316	12
Chiquitania Sur	67,945	28	8,005 (11.8%)	286	16
Valles Cruceños	62,335	29	11,150 (17.9%)	384	30
TOTAL	407,742	139	47,130 (11.6%)	339	126

*Estimated on the basis of 5 persons per family

In addition, the HE activities were initially developed and implemented by contractors, which was much more expensive than doing the work in-house. The monthly cost of the HE activities was Bs.58,642 under the contract but only Bs.19,305 since the contract was terminated (see Appendix F). Maintenance costs (salaries of the central team and health educators, supervision, per diems, gasoline, etc.) will be relatively small once training is completed for all the modules. Finally, there are several possible strategies for expanding coverage:

- Some auxiliaries have already opened up additional pilot communities, although this can only go so far because auxiliaries have limited time due to their obligations in health facilities.
- Initial pilot communities can "graduate" once they have reached certain levels of knowledge and practice, allowing auxiliaries to initiate new pilot communities.
- Radio can be used not only to reinforce the work in the pilot communities but also to have at least some impact on all communities in the region.

These ideas are discussed in more detail below.

H. Role of health education within CCH

The health education team appears to have relatively little recognition and prestige within CCH. There is no coordinator of the HE team, the team is not found on the CCH organizational chart, it feels left out of major project decisions, and its members must work with the insecurity of short-term contracts. Although CCH staff have taken steps to allow the team to be more involved in major CCH decisions, additional steps appear to be necessary.

VI. DISCUSSION

A. Health education models

The BASICS evaluation team was asked to consider other models of health education from Bolivia or elsewhere in order to recommend whether the CCH methodology should be modified or replaced by a more appropriate approach. Assuming that USAID and CCH are willing to provide approximately the same level of funding, the team believes that, with modifications, the current approach is reasonable and appropriate. Other approaches considered are discussed very briefly below, along with the team's comments.

- **The *autodiagnostico* approach** is potentially very empowering to communities and is sustainable. However, it requires very intensive staff attention to a relatively few communities and is also very difficult to manage on a large scale because different communities might simultaneously be addressing different priorities. In general, the approach seems much more appropriate for PVOs working on a small scale than for governments working on a large scale.
- **Use of radio and television** might be considered as an approach to reach many people and avoid the severe problems of inaccessible communities and an understaffed SNS. Alone, however, it is unlikely that mass media would have a significant impact. It also would miss many of Bolivia's most needy citizens. As a supportive medium to CCH's community work, however, use of radio is recommended.
- **Social marketing**, which emphasizes extensive formative research among target audiences, use of multiple media, and careful development and testing of behavior change-oriented messages can be very effective when used well. However, at this point in CCH's HE program, it would seem counter-productive to throw out the many positive attributes of the work in order to start from scratch using a new approach. It would mean adding several new staff with new areas of expertise.

The team believes, however, that some of social marketing's attributes—its focus on behavior change rather than the simple communication of information, its close consultation with target groups in order to arrive at feasible behaviors and effective strategies for promoting them, its use of multiple media—can be incorporated into the current CCH program. How this might be done is discussed in more detail below.

Relevant UNICEF staff were not in Bolivia at the time of the evaluation, but the team is familiar with UNICEF health education approaches (which emphasize social mobilization and social marketing.) The World Bank's PROISS Project does not work in rural areas and emphasizes managerial training, so its experience did not seem helpful. PROCOSI now works mostly as a clearinghouse to facilitate the exchange of useful information and experiences among PVOs working in health. It reports that its affiliated PVOs generally use participatory approaches to

health education, and that while they coordinate with SNS staff, the PVOs utilize their own staff to carry out work in the field. The IDB's PSF project offers experience in using teenage promoters to gather health-related information and to report it weekly to the local SNS facility.

B Using social marketing to increase demand for health services

There is a lot of discussion at the moment, related to CCH's planned "restructuring", concerning improving the quality of services at the district level and using social marketing to increase demand for services. The team would like to point out the importance of not defining service quality only from the SNS point of view. It should not be assumed that if supplies, equipment, training, information systems, etc. are improved, services will be considered better and will be better used by the public. Particularly in a country such as Bolivia, with wide cultural gaps between the health facilities and the rural population, this logic will not work.

What is needed is a social marketing approach, not merely to generate demand for services, but also to improve services from the consumers' point of view. Qualitative research needs to be undertaken in each cultural area in which CCH works in order to learn from the users' point of view what they like and don't like in health care, what their expectations are, what traditions they would have to give up (for example, proper disposal of the placenta) if they were to use the "high quality" services offered. Providers likewise should be studied to learn which norms they consider absolute and which might be subject to compromise.

Such a process might mean, e.g., that:

- all providers will have to learn and use some basic health vocabulary in indigenous languages; and
- delivery rooms might not be as "cold" as is customary: women might be allowed to deliver in a modified standing position, and families might be allowed to dispose of the placenta.

Once health service quality is defined both by providers and consumers, the task of increasing demand is much more feasible, though barriers of cost and travel cannot be taken lightly. Obviously, if increasing appropriate service utilization is a major objective of CCH, progress will need to be monitored by gathering consistent service statistics in facilities.

VII. RECOMMENDATIONS

Continue CCH's health education component. The team believes that the current approach has enough strengths to recommend its continuation, although some important enhancements are needed.

The team believes that improvements can be made in two important areas in which the HE component has been weak—reaching a large enough number of beneficiaries to justify to investment of funds, and achieving the changes in behavior (beyond mere changes in knowledge) that are necessary if the efforts are to have an impact on public health.

Focus more on measuring health impact. As described above, the project's efforts to establish baseline indicators have been unsatisfactory. A more useful baseline would ask about key practices and important beliefs and attitudes that block acceptance of key behaviors; for example, it might ask if respondents believe that pneumonia can be cured with home remedies.

For the current pilot communities, it is suggested that a new brief survey be administered around the summer of 1995, at a time when people should not be migrating or too busy with agricultural work. For comparison, the same survey should be administered in a few matched communities that are not pilot communities. Appendix D gives some indicators that the project should consider, as well as a preliminary draft of the actual questionnaire.

It is also recommended that if CCH moves its HE work into new districts, thorough baseline data be collected and analyzed, and collected once more after one and two years of program operation. It is true that the small size of most of the communities precludes measuring statistically significant changes in some important indicators. However, having relevant baseline indicators for as close as possible to 100 percent of families in pilot communities on a district basis would be very useful for gauging program impact.

Focus more on changes in practices. CCH's approach to HE employs large doses of adult education, community development, and traditional health education approaches. These approaches have several potential benefits, including educating many people about scientific concepts of health and disease and engendering confidence in families' and communities' ability to solve their own problems. What is missing from the approach is a focus on changing key practices and its corollary, delving deeply into the client or beneficiary perspective. These are characteristics of the best social marketing projects, which rely on thorough, qualitative research to understand the clients' perspectives in order to devise acceptable practices, understand the attitudinal and other barriers to people's adopting them, and the communication strategies for promoting them.

At this point in the project's development, it would be disruptive to recommend a major change in methodology. Moreover, there is little doubt that the auxiliaries and RPSs in general know their communities very well and are aware of many of the “resistances” to adopting the key practices recommended. Nonetheless, the evaluation team feels that project impact could be greatly enhanced with **a more systematic focus on practices and to people's resistance carry them out.** Understanding this would affect what project staff and volunteers say to the community. The content of messages would be not only educational as they are now, but also behavior-change oriented in order to address and try to overcome resistance.

How could this new orientation be added to the current methodology? It would not necessarily require major new qualitative KAP studies, since many studies already exist. (For example, there is an excellent focused ethnographic study on ARI, and BASICS/Bolivia is compiling a bibliography of studies related to diarrhea.) It would require a careful examination of existing studies, extracting attitudinal and other resistances, as well as indigenous concepts and terminology. It would require teaching these resistances explicitly as part of each module. It would require discussions during training on how these resistances could be overcome. It would also require equipping auxiliaries with a simple method for determining just which general resistances are relevant in their communities. Finally, it would require some mass media (radio) support focused on giving essential knowledge needed to carry out the behaviors and on overcoming resistance. The radio materials should be in the form of short dialogues or dramas, broadcast regionally in Spanish, Quechua, and Aymara, with appropriate cultural modifications.

CCH should examine all available ethnographic and behavioral studies related to immunization, EPI, ARI, and reproductive health and also interview key informants who have studied indigenous cultures, in order to analyze its programs in terms of behaviors and resistances. The following grid should be completed for each health area and target group (probably mothers, fathers, community leaders, RPSs, auxiliaries, health educators, and doctors).

Desired Practices	Current Practices	Barriers/ Resistances	Strategy for Overcoming
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CCH will require some technical assistance in order to add this behavior-change orientation to training and communications and to incorporate it into support materials.

To illustrate the importance of addressing resistance, some of the possible resistances to adopting desirable behaviors for ARI control are listed below. These are based on Bolivia's focused ethnographic study and other documents and experiences.

Resistances to mothers following desirable behaviors to control ARI; i.e., reluctance and delays in seeking modern care and ineffective use of antibiotics:

1. ARI is considered a problem that can be treated at home with teas, soups, other treatments. (Many home treatments are useful, but a few are potentially dangerous.)
2. Mothers are reluctant to seek modern care because of fatalis: infant death has been common for centuries.
3. There exists particular reluctance to bring newborns for care, since they may not yet be named, and be considered a "person", until they are several months old.

4. **Cough and fever are viewed as more important symptoms than rapid breathing or chest in-drawing.**
5. **Mothers notice fast or difficult breathing but may find it difficult to decide what is fast enough to merit the time and expense of bringing a child to see a health worker.**
6. **Home remedies and local healers are utilized before seeking modern care, causing potentially dangerous delays.**
7. **Mothers find it difficult to comprehend the urgency of quick action.**
8. **Parents are reluctant to incur costs of travel and drugs, sometimes even if they know that their child may die.**
9. **People want injections, not pills they have to crush and mix with liquid.**
10. **There exists a belief that nursing mothers should take medicine for their young infants so that they receive it through the breast milk.**
11. **Because they expect to receive "strong" medicine for a sick child, parents may oppose health workers' advice that a child with a simple cough and cold needs no medicine (only home care.)**
12. **Parents often buy a two-day supply of antibiotic and/or stop giving antibiotics once the child feels better.**
13. **Parents have difficulty remembering so many messages about home care, danger signs, and giving antibiotics.**

Similar lists could be prepared for diarrheal disease control, immunization, etc. Resistances may well vary by region, so a separate grid should be prepared for each.

In order for standard case management (SCM) of ARI to work, health workers too need to adopt some new behaviors. Particularly in the case of physicians, there may be strong resistance. For example:

1. **Physicians were previously trained to use a stethoscope, x-rays, etc. to diagnose pneumonia, so it may be hard for them to accept that SCM is better.**
2. **SCM is too simple to be "scientifically valid": it is not exclusively for physicians.**
3. **Particularly in urban areas, physicians are highly targeted by drug companies (through literature, visits, free samples, medical seminars) that promote the latest multi-symptom**

medicines and antibiotics.

4. **Public-sector health workers may have an unreliable supply of antibiotics.**

To the extent that doctors are involved in supervision and referral of ARI SCM, they too should be a target of communications efforts.

In addition to resistances, field staff should be systematically familiarized with local concepts and terminology related to diarrhea, respiratory illness, etc. This need was made clear to the evaluation team when they asked in several communities if there were many cases of "diarrhea" in the community and were always told that there were almost none. Since DHS data show that 30 percent of children under five had diarrhea in the past two weeks, the likely explanation is that people have many different names for different types of diarrhea, some of which people may not consider "diarrhea" because they are believed to be a normal part of growth and development. It is hoped that staff implementing the baseline surveys were sensitive to such considerations.

Add two other attributes of effective social marketing: use of multiple media and a "creative" strategy. Media options (channels through which people can be reached) are limited in rural Bolivia. Besides the direct contact with auxiliaries and RPSs, reaching people at market days (ferias) seems worth trying (and has been tried on a limited basis in Cochabamba), as does use of radio -- although many of the most needy families lack radios and/or batteries, and broadcasts must be in many languages and modified for many cultural differences.

According to the 1994 DHS, 68.6 percent of rural households have a radio and 58.3 percent listen at least once a week. Obviously, CCH needs to learn the hours and stations of highest listenership. From preliminary information, it appears feasible for the project to receive free air time on many of the regional stations, although it may be necessary to pay for some time in order to be heard at the best listening times. It is also recommended that in communities with low listenership, auxiliaries and RPSs try to establish radio listening and discussion groups to augment coverage.

Broadcasting a lot of didactic information on health is unlikely to have much impact. On the other hand, carefully prepared radio dramas and stories told in the style of traditional stories, in regional versions and languages, have great potential both for reinforcing the existing person-to-person communication and also for reaching many people and communities that are not yet CCH pilot communities.

CCH does not need an advertising agency to devise a creative strategy. Rather, staff with technical assistance should be able to agree on a major theme, slogan, jingle, etc. that typically are part of social marketing projects. A tentative suggestion for a theme is the following:

Many people take care of mild diarrhea and respiratory problems just fine at home, but serious diarrhea and pneumonia need to be treated by a trained health worker--not at

home. An essential job for parents is to know when mild becomes serious and to take immediate action.

Slogans could be something like "Get help for the serious stuff." Obviously, these are very preliminary ideas that should be thoroughly pretested in Bolivia's three regions.

Add a long-term advisor in health education and communication. New laws and their implementation are changing the organization of public health programs in Bolivia: the new law of popular participation and the subsequent autonomy of the municipalities, which are now responsible for local health planning; the current health reform plans; and SNS's new *Plan Vida*, which will focus on reproductive health and reducing maternal mortality. CCH has a comparative advantage in coordinating and assisting local government bodies in the new health planning arena because of its experience with motivating and working with rural communities to make health a priority and its training approach that mobilizes health personnel to make localized operational health plans.

Furthermore, there is much potential for CCH to extend its influence through collaboration with other development agencies:

- The IDB-supported PSF project, which has been working in areas with multiple ethnic groups, has developed its own methodology that allows the community to participate in its own health care. This could be complemented by the CCH approach.
- Johns Hopkins' population communication project has established an alliance with 18 institutions in Bolivia that work on reproductive health. CCH has recently formalized its participation in the IEC committee of this alliance in anticipation of its module on this topic.
- With PROCOSI, CCH will benefit from the technical assistance of the Johns Hopkins group, which would like to coordinate baseline surveys and which intends to do qualitative research on reproductive health and to develop prototype materials for rural areas.

Because of (1) the need to expand the effectiveness of CCH's health education unit in behavior-change and broader communication strategies, including the new area of social marketing assistance to CCH's new emphasis on improving service quality and promoting population utilization of services; (2) the need for a stronger voice for HE/social marketing both within CCH and between CCH and other projects and organizations; and (3) the dynamic situation caused by ongoing political changes within Bolivia, the team recommends that CCH employ a new staff member or full-time advisor who understands the larger issues of IEC--information, education and communication in its broadest sense--and who could advocate for what the institutional position in this regard. This person could be a manager-strategist who could help CCH define its coordination within and relationships to the outside with other development agencies that have

similar projects or experiences that could be complemented with CCH expertise in the rural health delivery system.

The CCH education team lacks the capabilities of an IEC expert with a broad base in social marketing and social communication for behavioral change: the experience and ability to manage formative research, incorporating studies of audience behavior and actual resistances that would allow for developing an appropriate IEC strategy, for which support material can be designed and disseminated, aimed at achieving the desirable behaviors. A list of people suggested during an interview with Dr. Luis Ramiro Beltrán and Ariel Perez from the John Hopkins University IEC project for reproductive health in Bolivia is found in Appendix F.

Give field staff more support materials. It is obvious from the field visits that field staff need clear manuals and job aids as reference material. This is particularly needed for ARI, which, because it is new or difficult, field staff seem to know less well than other topics. Particularly regarding such difficult matrices as the SCM diagnosis and the TT schedule for women, many auxiliaries, RPSs, and health educators did not have the information at their finger tips.

Part of the problem has been SNS delays in printing some of the materials, but beyond that, isolated field staff need a few posters and cards they can take with them on community visits to remind them of key information when they are talking to individuals or groups.

CCH should continue to encourage useful traditional remedies but should also examine traditional practices to learn which might delay critical care or might be harmful. On a district-by-district basis, a CCH team with medical/public health skills and cultural/anthropological skills should interview staff and community people to determine if any traditional practices are harmful in themselves or tend to delay critical treatment. For example, the focused ethnographic study found that some people have babies ingest Vicks Vaporub or rub kerosene on the child's chest for IRA. The evaluation team was also told that there are traditional remedies that "cure" pneumonia (which is doubtful). While field staff should continue to encourage the many practices that are helpful, potentially harmful ones need to be discouraged.

CCH's health education unit should prepare and disseminate a quarterly project newsletter. The newsletter should be simple, not slick, as its prime audience is field staff, not people in La Paz or Washington. The purpose is to give recognition to health educators, auxiliaries, and RPSs who have come up with innovative ideas that others might want to adopt. The newsletter might also give information on upcoming courses and meetings. A few of the innovative ideas that the evaluation team was told about include:

- An RPS started serving *chicha* and burning incense when people brought children with diarrhea. His business started booming.
- In Altiplano Valles Sud, the staff give training and a safe birth kit to close relatives of pregnant women who are likely to attend the births.

- In Capinota, auxiliaries have set up health booths in markets. There has also been some use of local radio for health education.

To the extent possible, the articles should be not merely descriptive but should also analyze advantages and disadvantages of the approach, problems encountered and how they were addressed, and evaluation results. The newsletter should serve as a means to praise and motivate hard work and to disseminate innovative ideas that others might copy or adapt. If it is distributed widely to SNS and other government officials and PVOs, it will also serve to inform them about CCH's HE activities.

CCH should plan for pilot communities to "graduate" in order that the limited staff can reach more communities. CCH needs strategies to reach more people, since in several districts the pilot communities contain only ten percent or so of the district population. A few alternative approaches are discussed below.

- The chances of adding additional auxiliaries are probably slim, given budget constraints of both USAID and the Bolivian government. This should be considered, however, if the program can show an impact on health through improvements in specific indicators.
- Some existing auxiliaries might open up additional pilot communities, but the extent of this is limited by auxiliary's other, facility-based duties. Most simply do not have the time.
- The possibility of simplifying the methodology was considered. While a few minor steps might be cut or shortened, the major steps appear to be essential to success.
- Mass media (radio) support is recommended both to reinforce person-to-person teaching and to reach communities that are not pilot communities. If carefully planned, the lack of radios and batteries could be overcome through the use of listening groups, and broadcasts could be carefully planned to catch people when they are not busy with agricultural tasks.
- Finally, an idea emerged in discussions that seems worth pursuing—the idea of communities graduating from being pilot communities once they have reached certain levels of knowledge and behavior change. This would allow auxiliaries to give less attention to graduate communities and to open up new pilot communities. Some suggested criteria for future selection of new pilot communities are:
 - larger than the median size community in the district;
 - evidence of need, based on poverty, poor epidemiological profile, etc.;
 - reasonable accessibility to the auxiliary; and
 - willingness to cooperate.

While it was frequently stated that the smaller communities seem to respond best, it is recommended that new pilot communities be larger than the median size of communities in the district (usually about 200 people).

APPENDICES

APPENDIX A

APPENDIX A INSTITUTIONS AND PERSONS CONTACTED

BASICS-Bolivia

Dr. Ana Maria Aguilar Country Representative

S.N.S.National Health Secretary

Dr. Marcia Ramirez Maternal and Child Health

USAID Mission to Bolivia

Paul Ehmer Chief, Office of Health and Human Resources
Rafael Indaburo CCH Project Manager

Community and Child Health Project: Central Office

Dr. Alvaro Muñoz-Reyes Executive Director
Antonio Gomez Director, UIME
Dr. Carmen Casanovas Director, Chagas Program
Dr. José Luis Baixeras Director, a.i. District Development
Andres Yale General Administrator
Luisa Mendizabel Health Educator-R.N. Master Trainer
Elisabeth Frias Health Educator-Nutritionist
Rodrigo Carrasco Health Educator-Psychologist

Pathfinder

Ms. Sandy Wilcox Consultant, Reproductive Health

Education Development Center

Ms. Rita Fairbanks Consultant, H. Ed. in Interactive Radio Program for Schools (PARI)

PROSALUD

Elsa Sanchez Health Educator-R.N.
Oscar la Fuente Health Educator

WORLDBANK

Dr. Fernando Lavadenz PROISS Project Manager

CIENTIFICA

Dr. Jorge Velasco H. Ed. Project Manager
Ana María Mercado Administrator

PROCOSI

Ms. Bertha Puley Sociologist

IDB

Dr. Alfredo Calvo
Dr. Daniel G. Gonzalez

PSF Program Evaluation
P.S.F.International Coordinator

Johns Hopkins IEC for Reproductive Health in Bolivia

Dr. Luis R. Bertrand
Ariel Perez

Director
Coordinator IEC

ALTIPLANO VALLES SUD District Health Team

Teresa Ibañez
Natividad Quispe
Miguel Conte
Felipa Calle
various leaders/members of Huayhuasi & Pichaca pilot communities

District Health Educator-R.N.
District Health Educator-R.N.
District Health Administrator
Auxiliary Nurse Calamarca Area

CHAPARE VALLE PUNA District

Mabel Panozo
Marcelo Arévalo
Giovani Ruomo

District Health Educator-R.N.
Auxiliary Nurse for Chalviri
Teacher, Middle School- Chalviri

CAPINOTA District

Piedad Villegas
Dr. José Hinojosa

District Health Educator-R.N.
District Director

CHIQUITANIA SUR District
VALLES CRUZEÑOS District

Dr. Celso Vargas
Dr. Jorge Belmonte
Jackeline Rojas
Wilma Ardaya
Isabel Mariscal

District Medical Director
District Health Educator
Auxiliaries for Mendiola & Postrer Grande

SANTA CRUZ Department

Dr. Herberth Vargas
Dr. Wilson Tarraga
Shirley
Frits Affolter

CCH Regional Coordinator
Advisor, Chiquitanías Sur
Adm. Assistant CCH coordinating office
Nur University, ex-Master Trainer CCH

APPENDIX B

APPENDIX B QUESTION GUIDES

COMMUNITY LEVEL

A. Community leaders/RPS

When did the census-based method of community health education begin in your community?

What is your understanding of how this method works?

What do you think about this method? Has it meant more and better health education in your community? Why do you say that? Has it meant better use of health services by community members? Do you have data to show this?

Under the new method, do more people:

+treat diarrhea with ORS?

+give extra breastmilk and other liquids during diarrhea?

+know the signs of possible pneumonia?

+bring their children immediately to a health worker to see if the child has pneumonia?

+have their children fully immunized?

+have women immunized against tetanus?

If the answer is no to any of these, why? What prevents people from following your advice?

What has been the impact of the census-based method in your community? Do you think fewer children are sick? Do you think fewer children have died? What evidence is there of this?

Do the RPSs and auxiliary who work in your community respect traditional medicine? Please give me an example or two. How do you feel about this.

To what extent has the census-based method of community health education made community people more knowledgeable about health?

Part of the program is regular home visits to collect health information. Do the health workers ever tell the community about the information they have collected? How? How do you feel about that?

Has the census-based method helped the community identify its own health problems? How?

Has the new program made the community more aware of that diarrhea, pneumonia, and immunizable diseases are important priorities?

Do you have full confidence in the ability of the RPS/auxiliary:

+ To give health education? Why?

- + To run the URO? Why?
- + To diagnose and/or treat pneumonia? Why?
- + To organize immunization campaigns? Why?

Do people/do you like this program? Why?

Are there any changes people/you would like to see in the program? What?

RPS: Did your training prepare you well for the census-based approach to your work? How/why not? Have you received sufficient support (materials, supplies, supervision) to implement the approach well?

Do the UROCs always have packets of ORS?

B. Auxiliaries

What do you think of your training in the census-based method of community health education? Did it prepare you well for training the RPSs?

Was any part of the training difficult to conduct with the RPSs? Which? Why?

Have you been able to supervise the RPSs working under the census-based methodology? Any problems?

How well has the census-based approach worked? Why do you say this?

Has it worked equally well in all communities? Why better in some than in others?

What do think its impact has been on:

- + important health knowledge in the communities
- + important health related practices, including appropriate use of services
- + the efficiency of RPSs, auxiliaries, and health educators?

Has training enabled you to prepare effective health education materials and methods, appropriate to your communities and SNS norms?

Are the health education manuals you received in training appropriate and useful for work in your communities? Why?

Has demand for targeted services increased? Why?

How difficult or easy would it be to apply the method in non-pilot communities? Why??????

Do you systematically help the RPSs target high-risk families? How well has this worked?

Do you and the RPSs always have enough essential supplies?

DISTRICT LEVEL

A. Trainers (health educators and some auxiliaries)

Did the CADECA (T.O.T.) prepare you well to train others at the district level?

Did CCH provide sufficient support to you after your training?

How do you feel about the training you gave in your district?

Were you well prepared? How effective was it? Any problems?

B. Director of the district

How familiar are you with the census-based approach to community health education?

Please describe it briefly.

What do you think about it?

What do think its impact has been on:

- + important health knowledge in the communities
- + important health related practices, including appropriate use of services
- + the efficiency of RPSs, auxiliaries, and health educators?

CENTRAL LEVEL

A. CCH Staff (current and former)

Any pretesting reports?

What experience with materials production?

What constraints? Costs?

Distribution mechanism and costs?

Time lag between design, development and production?

Any revisions suggested by community, district, regional or central users?

CADECA / TOT:

What, where, when, who, how and for whom?

Cost? How could it become more cost-effective?

Compare baseline information, objectives & results re:

- * health status of children as well as of the communities?
- * new attitudes, knowledge, and skills?
- * different indicators for different regions/districts?
- * new or proposed interventions?

Census-Based Impact Oriented - What are the costs so far?

Costs to CCH, SNS, communities?

What indicators of impact on health or services utilization have you collected and analyzed?

What, if any modifications could you recommend to the method?

How adaptable is it by SNS for use on a wider scale?

B. SNS Staff

How familiar are you with the CCH health education program in the field?

How was working relations with CCH in preparation of modules?

Do you think health personnel have become more effective in community education and provision of health services because of the CCH methods?

Do you think the health workers have a better impact on health problems? What evidence have you to say so?

Have you seen similar methods been applied outside of CCH districts? With what result?

Do you think the census-based method has potential for widespread use outside of CCH districts? Why?

C. USAID

Opinion about CCH health education?

Commitment to CCH health education?

Interest in making CCH a model for SNS nationally?

D. Agencies with assistance to child survival projects

Are you familiar with CCH and census-based method?

What is your opinion of its effectiveness?

Given your mandate, what of that method would you use?

APPENDIX C

APPENDIX C

SUMMARY OF OBSERVATIONS DURING FIELD VISITS

Department: La Paz

District: Altiplano Valles Sud

Main Contacts: Health Educators Natividad Quispe and Teresa Ibanez;; Auxiliary Nurse Filipa Calle; traditional and formal community leaders and members

Huayhuasi

Large community (116 families, 642 people) a kilometer or two from the highway. 19 children <1 and 19 1-4. Obviously well-organized and well-prepared for our visit. Active mothers club has embroidered health posters, child health card, immunization schedule, etc. People seem to have good knowledge of immunization, diarrhea, and ARI basics but hard to tell. People very familiar with the map and know where their houses are.

23 cases of IRA, including 7 pneumonia or severe pneumonia, seen so far this year, many around June. People think they can cure pneumonia with herbs. Many mothers give just a day or 2 of cotrimoxazole.

The auxiliary nurse responsible for the pilot community seems to be very active and knowledgeable about the content as well as the processes taught in the modules so far. She has been successful with the community to the extent that although she doesn't live right in the community, she has people's respect and gets called for help on health and community affairs.

Filipa feels that what has helped her overcome people's resistance is that she speaks their language, that she puts herself in their shoes, does home visits regularly, and tries to always do what she said she would.

Her special initiative was to introduce other topics and skill training in the women's group activities, combining health messages at any point when the women would seem to need new guidance. For example, the women have embroidered posters with health messages, and Filipa has started cooking classes with the women.

The neighboring community of Velaqua was initially earmarked to become a pilot community, but when Filipa saw that they would not meet to deal with community issues, she moved the pilot site up to Huayhuasi. Now that activities by the villagers has brought water, sanitation and health services to Huayhuasi, the people of Velaqua are begging Filipa to come and work with them on the activities of Modules 1, 2 & 3. Filipa is using the same health education methods and materials with 8 non-pilot communities.

Pichaca

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Small community with gorgeous mountain views. 31 families, 130 people, 6 children 1 < (4.6%). Auxiliary nurse must walk a few hours to get there (he had gone to a course). Again, people knew the map well and had at least superficial knowledge of the HE messages.

The people were extremely happy with the changes that the water system had brought, but progress with the other messages wasn't so evident. The local school goes up to the third grade only, after that children either have to move to Zapahaqui for further schooling or do the several-hours commute daily. Thus, it has been difficult to actively work with the schoolchildren.

RECOMMENDATIONS:

Encourage the way that Filipa works with the women's groups by combining various skills training to their meetings with health education messages.

Reinforce the capacity of the auxiliary nurses and RPSs' to involve the community to more actively generate and maintain health statistics re: indicators on diarrhea, IRA, vaccination coverage; maternal and infant mortality.

Link community organizing work of auxiliaries and RPSs to new requirements of OTBs.

SUGGESTIONS:

If work directly with children is not feasible, provide teachers with HE materials with simplified messages in the local language, so that they can incorporate them classes whenever possible.

Children going to school in Zapahaqui could also play role of "informants" about the health indicators to the auxiliary, who lives there.

If mass media support is not feasible, use schoolchildren as a "third channel" of communication by teaching them songs and jingles in schools so that children can "carry the messages home" to their parents.

Patacamayo

Here we interviewed the other health educator (Teresa). (The SNS Director of the District had already left for La Paz.) She feels the program is very good. The URUs, etc. work much better in the pilot communities than in other communities, and they also generate useful information which tells them that the program is making progress. The information is also helping them present their case to municipios, which now control how government money is spent locally. Some auxiliaries are using modules and materials (but not the map) in non-pilot communities.

As a way to reduce infant and maternal mortality, they have begun to train relatives of pregnant women and to give them a safe birth kit. This seems to be working well.

Natividad feels that the method has generated good community participation and has made health

a community priority.

Department: Cochabamba

District: Chapare Valles Puno

Chalviri pilot community

Main contacts: Health Educator Mabel Panozo; auxiliary nurse Marcelo Arévalo; secondary school teacher Giovanni Ruomo

These are very remote and scattered communities with difficult roads that are difficult or impassable during the rainy season due to landslides. Very traditional societies that live from cultivating potatoes, and when things get hard, migrate to the warmer valleys to hire themselves out as day labor or go to the cities for temporary jobs.

Chalviri, a gruesome four-hour drive from Cochabamba, is blessed with a conscientious auxiliary nurse whose mother is a traditional midwife in a setting where mostly men do this job. She has instilled in him the sense of service which he carries out very well. When he is there, the people come directly to him and not to the RPS, who is his brother and runs the UROC; and people come from as far as one and a half days walk to him because they believe he is sincere and treats them without shunting their traditional practices. He is using the census-based method also in non-pilot communities.

Since the last two old traditional healers died (to whom people used to pay Bs.100 for treatment), people have not looked for others, since the auxiliary nurse has learned herbal lore from his mother and encourages a combination of traditional and modern treatment. He screens all suspicious cases of TB and sends samples for confirmation to the city; he has convinced the parents of 15 year old girls to start their TT vaccine, because girls marry young here. In his concern to make the health education activities with women more "productive," he has contacted a company that will pay piecemeal for sweaters knitted in the homes.

The teacher acknowledged that the auxiliary's willingness to take in and treat even long-term cases and not only give quick fixes has added to his credibility. Moreover, the fact that he gets supervision visits from the health educator and that he goes to courses has added to his status, because people feel that this gives their communities importance. When he is absent in the community meetings, they complain that they miss him and his guidance on health issues.

Department: Santa Cruz

District: Chiquitanías Sur

Area Office: San José

Pilot communities: Pororó, Santa Teresitas, Taperas

MAIN CONTACTS:

Ramiro Hermoso

Marta Bautista

Willy Montano

Jaime Mercado

Nancy Gonzalez

District Health Educator

District Nurse Supervisor

District Health Administrator

Environmental Sanitation Technician

Nurse Supervisor on Rural Service

Aida Vallejos

Teodora Poichee

Andres Pociño

Pilar de Solis

Various leaders/members of 3 pilot communities

Auxiliary for Pororó pilot community

Auxiliary for St. Teresitas

R.V.S. for Ayorea ethnic community

Auxiliary for Taperes

There is quite a dynamic team in San José SNS area office, where CCH trained staff are located. Their faith in the method's usefulness in the rural communities is motivating them to divide the town in *barrios*, assign an auxiliary nurse to each, and apply the census-based approach to urban settings. They are aware that they still have a lot to learn, and thus they are eager to organize a way to systematize their experience so far.

They have expanded coordination with PARI for introducing interactive radio with health messages in the area, with PASTORALE SOCIAL to combine health messages in its religious efforts and with an agricultural NGO to provide seeds and guidance to communities that want organize vegetable gardens.

Furthermore, there has been close collaboration with the municipalities in exchanging experiences with making health plans operational from the communities' perspective; a meeting was organized to explore the need to handle health statistics effectively, and the are team is exploring which indicators would be better.

SUGGESTIONS:

- Organize meetings with staff from the other arcas in the district to exchange experiences that have worked to expand coverage elsewhere in this region with scattered, remote and diverse ethnic groupings; e.g., the auxiliary nurse in Rincón de Tigre has applied methods simultaneously in five non-pilot communities.
- Systematize the example of the RPSs in Santa Teresitas who have translated some posters in their Ayoreo language and explore ways that an anthropological approach will show how to improve understanding of concepts and terminology for diarrhea, IRA, vaccination, reproductive health and barriers to desired healthy behavior.
- Explore ways that self financing or community emergency health funds can work in these subsistence communities, e.g. rotating funds, health cooperatives.

Department: Cochabamba

District: Capinota

Main contacts: Health Educator Piedad Villegas, Auxiliary Nurse ..., District Director Dr. José Hinojosa.

The district has 42,000 people, 300 communities, 11 pilot communities, and 7 auxiliaries. Large areas of the district are inaccessible by road, always or when it rains. Tremendous variation in effectiveness of auxiliaries; some excellent, some doing little. National immunization campaigns

distract auxiliaries from HE work. Much migration, some seasonal and some permanent.

Playa Ancha

Community relatively close to district hospital. Very much into census and map. Community itself requested a full lead of heads of households and other family members. At first some people refused home visits, ashamed of their messy homes. Now not really a problem. Wide use of traditional medicines for both diarrhea and pneumonia. Several mothers interviewed generally seemed well informed. But neither RPS nor auxiliary know the ARI SCM very well.

Capinota

The district director claims district IMR of 400, 80 percent in the first month. Says mostly from diarrhea/malnutrition. Diarrhea considered a natural state for children. Also a lot of pneumonia and some infant abandonment because parents wanted other sex child. Health services seeing 20 percent of diarrhea and ARI cases, attend approx. 10 percent of births.

He likes the CCH model but complains about reaching so few people (7 percent of district population). Feels district gravely understaffed, even compared to neighboring districts. Says CCH helps with per diems, office equipment, etc. Feels some auxiliary ignoring their other communities to give attention to pilot communities and that there should be a minimal program everywhere. Suggest longer trips to communities during which all areas of public health are covered.

Department: Santa Cruz

District: Valles Crucenos

Main contacts: Health Educator Dr. Jorge Belmonte, Auxiliaries Jackeline Rojas, Wilma Ardaya, and Isabel Mariscal, District Director Dr. Celso Vargas.

The district has 400 communities, 78,000 total population, 27 auxiliaries, and pilot communities with a population of 7,495, 10 percent of total district population. 223 of 1885 families are considered at risk. Some problems have arisen: the district director does not make the CCH vehicle available when needed at times; auxiliaries want higher per diems; changeover of personnel means new people coming in without training. Auxiliaries like knowing populations, communities responding well, training good. A few auxiliaries have moved methodology beyond pilot communities.

Mendiola

Population 257, 12 1<s (4.7 percent). Excellent participation. Good knowledge of HE messages but also wide use of traditional remedies. People love having a town map and knowing how many inhabitants, how many families, how many infants, etc. Census found many more families than people expected. People are worried about low birth rate.

Postrer Grande

A rough 2 1/2 hour drive from Samaipata, impossible to reach in wet weather. 849 people, 20 1<s

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(2.4%), 2,149 people in the sector of 8 communities, with 56 1<s (2.6%). Nurse visits other communities once every 3 months. Health center (HC) MD says breastfeeding habits are good, women give colostrum. Because most people are busy in agriculture, it is hard to have meetings at times. There is a mothers club and a health committee. 3 UROCs are not used that much for diarrhea (most go to HC) but adults use ORS for hangovers. Rural UROCs are used more. Last year HC saw about 10 cases of diarrhea per month; now around 4 because more are treated at home with ORS. Most births occur in HC, with charges only for medicines. Immunization coverage is lower due to a 2 or 3 month shortage at the national level.

Auxiliary, MD, and students did the town census and map, which proved useful to know the population and to help plan projects. Auxiliary gives talks to women (40) and youth, occasionally using videos. There is still a lack ARI support materials because they have not been printed by SNS yet. The auxiliary says she works harder under this methodology but feels she is more effective.

Alcalde says that health and education are his priorities. His first objective is to project cement slabs so every house can build a latrine.

Department: Santa Cruz

Main interviews: Dr. Herberth Vargas, CCH Regional Coordinator and Dr. Wilson Tarraga, Asesor, Chiquitania Sur

A small CCH office provides logistical support, secretarial services, a vehicle and driver to two districts. Wilson and other members of Chiquitania team had worked for Project Concern there. The Department consists of 74 communities and 6 larger towns. Chiquitania has very low coverage by other health programs, with no strong PVOs. 32 auxiliaries, some working in periurban areas.

Water is a major problem in many areas because it is impossible to drill through rock. Malaria and Chagas are widespread. Diarrhea and ARI are the main concerns for children.

The program works with PARI (Programa de Aprendizaje Radio Interactivo) with health education in the schools but also with groups of children not in school. It reinforces the work of auxiliaries. The program feels the production of materials should be regionalized, especially for ARI. It has used local legends to teach about ARI.

APPENDIX D

APPENDIX D SUGGESTED INDICATORS

The following is a list of suggested indicators. It should be modified as appropriate once the full range of ethnographic information has been analyzed.

Participation

- percent of parents who attended a community meeting on health in the past month

Immunization

- percent of children 9-59 months immunized against measles
- percent of mothers with 2 or more TT immunizations

Diarrhea

- percent of parents who believe that serious diarrhea is a threat to child health
- percent of those parents who say the reason is dehydration
- percent of those parents who can give at least one correct sign of dehydration
- percent of parents who give various treatments for mild (development-related) diarrhea
- percent of parents who give more, less, or normal amount of liquid and food to a child with serious diarrhea
- percent of parents who give various treatments for serious diarrhea
- percent of parents who seek help outside the home for serious diarrhea
- percent of those who use each alternative source of care
- percent of parents who know correct signs that diarrhea is serious

ARI

- percent of parents who use various treatments and sources of assistance for mild ARI
- percent of parents who know correct signs that ARI is serious
- percent of parents who believe that traditional medicine can cure pneumonia

- percent of parents who say their child had serious ARI recently
- percent of those parents who tried to cure it with home remedies or traditional cures
- percent of parents of child with recent serious ARI who sought help from a trained health worker
- percent of children who were treated by trained health worker who received antibiotic in alternate forms
- percent of children who were given cotrimoxazole pills who received the full 5-day course

Reproductive health

- percent of woman who had any prenatal visits during their last pregnancy
- percent of parents who know various danger signs during pregnancy

Below is a very rough draft of the actual questionnaire. There should be Spanish, Aymara, Quechua, and Guarani versions of the actual questionnaire, all of which should be pretested. The interviewer should not give the possible answers but should classify the answer given using the choices.

Participation

1. In the past month, did you attend a community meeting that discussed health? Yes ___ No ___

Immunization

2. (For parents of children 9 months to 4 years old; ask of youngest child in this age group) Has your child been immunized against measles? Yes ___ No ___ No child of this age in the household ___ (verify on immunization card if possible)

3. Does the mother in the family have two or more TT immunizations? Yes ___ No ___ Don't know ___ (verify on card if possible)

Diarrhea

4. Do you think that diarrhea (cursu-usu, etc.) is dangerous for young children? Yes ___ No ___ Don't know ___

5. a. (For those who answer yes) Why? Dehydration ___ Other ___ (what? _____)

- b. (For those who answer dehydration) How do you know (what signs) if your child is getting dehydrated (secando por la diarrea)? Mucha sed ___ Lloro sin lagrimas ___ Boca seca ___ decaido ___ pujjo o ontanela hundida ___ orina poco ___ Otro _____ (what?)

- *6. (For parents of children 5<) The last time your (youngest) child had aika, what treatment did you give? None ___ Tea ___ Soup ___ Suero casero ___ SRO ___ Medicine ___ Other ___ (what? _____)

7. (For parents of children 5<) a. The last time your (youngest child had cursu-usu (etc.), did you give more, less, or the normal amount of food and drinks, including breast milk? More ___ Less ___ Normal amount ___

- *b. What treatment did you give? SRO ___ Suero casero ___ teas, etc. ___ (purchased) medicines ___ None ___ Other ___ (what? _____)

- c. Did you seek help outside the home? Yes ___ No ___

- d. (If yes) From where? UROC ___ traditional healer ___ health facility ___ Pharmacy ___ Other _____ (what?)

- *8. What signs do you look for to decide that your child has cursu-usu and not just aika? Vomiting ___ Fever ___ Dehydration (secando poor la diarrea) ___ Prolonged diarrhea ___ Blood

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in the stools ___ Loss of appetite ___ Weakness ___ Don't know ___

ARI

*9. (For parents of children under 5) What do you do if your child has a mild respiratory problems such as cold, cough, runny nose? Home treatment ___ Traditional healer ___ Trained health worker ___ Pharmacist ___ Nothing ___

*10. If your child has mild respiratory problems, what signs do you look for to decide that he or she does not have a serious illness such as pneumonia? Don't know ___ Fever ___ Cough ___ Fast or difficult breathing ___ Tiraje ___ Loss of appetite ___ Other ___ (what? _____)

11. Do you believe that traditional medicines can cure pneumonia? Yes ___ No ___ Don't know/maybe ___

12. Has your child recently had a respiratory problem with fast or difficult breathing? Yes ___ No ___

If yes:

a. After you noticed the agitation, did you try to treat your child with traditional remedies or take him/her to a curandero? Yes ___ No ___

b. Did you take your child to see a trained health worker (RPS, auxiliary, MD)? Yes ___ No ___

c. If yes, what treatment did the health worker prescribe? None ___ Injection ___ Pills ___ Other ___ (what? _____)

d. If pills, for how many days did you give them? Don't remember ___ 1/2 ___ 3/4 ___ 5 ___ More than 5 ___

Reproductive health

13. During your last pregnancy, how many prenatal visits did you have? None ___ One ___ 2/3 ___ More ___

*14. Can you tell me some danger signs during pregnancy that would make you see a trained health provider? Swelling ___ Bleeding ___ Feeling extremely tired ___ Other ___ (what? _____)

*For these questions, record all answers if more than one given.

APPENDIX E

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Annex 6

**COMPARISION OF HEALTH EDUCATION COSTS
DURING AND AFTER CIENTIFICA CONTRACT**

SUELDOS		
	<u>C.C.H.</u>	<u>CIENTIFICA</u>
	(Abril - oct/94) 104,569.59 (E.F.I.M.R.C.E.S.)	(Mayo'93 - marzo'94) 438,436.27 (CIENTIFICA + NUR)

DESARROLLO DE MATERIALES		
	<u>C.C.H.</u>	<u>CIENTIFICA</u>
MODULOS 1 Y 2		87,712.60
MODULO 3	900.00	(Creatividad y revision NUR, validacion Cientif., adquisic.)

MATERIALES DE ESCRITORIO p/talleres		
	<u>C.C.H.</u>	<u>CIENTIFICA</u>
MODULOS 1 Y 2		22,232.12
MODULO 3	5,473.10	(No incluye materiales para oficina)

PASAJES *		
	<u>C.C.H.</u>	<u>CIENTIFICA</u>
MODULOS 1 Y 2		22,004.50
MODULO 3	6,524.00	*(Se incluye un estimado de costo por gasolina en viajes de supervisión)

VIATICOS		
	<u>C.C.H.</u>	<u>**CIENTIFICA</u>
MODULOS 1 Y 2		74,678.00
MODULO 3	17,667.05	** (Incluye a otros consultores) (En ambos casos comprados viac. p/talleres y supervisiones)

TOTALES		
	<u>C.C.H.</u>	<u>CIENTIFICA</u>
COSTO TOTAL	135,133.74	645,063.49
COSTO MENSUAL	19304.82*	58642.13**
	* Costo total entre 7	** Costo total entre 11

Fuente: Cientifica/Contabilidad CCH

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APPENDIX F

APPENDIX F

SUGGESTED CONTACTS FOR NEW COMMUNICATION PERSON

Mario Villaroel - tel 782658

- Agronomist/Communicator, recently retired but with an extensive background and experience in rural areas and agricultural extension.

Jaime Cusicanqui - tel 811293/812460 PROA - tel 341213 home

- Bolivian communication expert in working with youth in rural areas for mobilization & education.

Jaime Reyes - tel 320316/342209 PER - Director of Programs at Programa de Educación por Radio, has worked with Radio Indígena and knows the rural population very well. Has experience combining radio and health and has done work with PARI, interactive radio programs for schools; currently working on topic for sex education for adolescents.

Veronica Kaune - 376331 - Educator, who has worked on Health Education in the AIDS effort of CCH; technically sound; also has done work with AED projects here.

For more info on work with radio, also contact:

Ronald Grebe - 324619/324768 ERBOL - Educación Radiofónica Boliviana, a Catholic missionary radio with 25 years experience in programming radio broadcast to indigenous peoples in local languages.

Ann Fitzgerald - 342209/362473 PARI is also a good information source due to PARI's experience with broadcasting health messages into urban schools as part of its interactive radio learning programs.

APPENDIX G

APPENDIX G

LIST OF PRINCIPAL DOCUMENTS REVIEWED

Mid-term evaluation of CCH Project. 1991

Tomas Huanca L. y Dale Stratford. "El Impacto de los Programas de Salud en las Comunidades." La Paz, 1991.

Cientifica Consultora y Universidad NUR. "Informe Final. Programa de Educacion en Salud. Proyecto de Salud Infantil y Comunitaria." La Paz, 25 Marzo 1994.

Secretaria Nacional de Salud. "¿Como Aprender a Enseñar? Manual de Educacion de Adultos."

MSSP, UNICEF < OPS/OMS. Estudio Etnografico sobre Conocimientos y Practicas relacionadas con las Infecciones Respiratorias Agudas (IRA) en Dos Comunidades de Bolivia. La Paz, 1992.

SNS, Proyecto de Salud Infantil y Comunitaria, USAID/Bolivia. "Guia del Capacitador Modulo III. Participacion Popular e Infeccion Respiratoria Aguda."

MPSSP, PROCOSI, OPS/OMS, UNICEF, Proyecto REACH. Infecciones Respiratorias Agudas. Las Pulmonias. Serie Guias de Capacitacion para Responsables de Salud. La Paz, September 1993.

PACHA. "Vision Antropologica de las Comunidades."

CCH. "Informes Distrito Valles Crucenos."

CCH. "Informes Distrito Capinota."

"Anexo 1. Descripcion del Proyecto." (from Project Paper)

Helen Murphy and Eduardo Perez. "Lessons Learned from Bolivia in Programming, Designing, and Implementing Sanitation Programs." WASH, August 1994.

Al Bartlett. "Comments on CCH Project presentation of proposed project redesign." (draft)

CCH. "Resumen Ejecutivo. Plan de Reestructuracion del Proyecto C.C.H." October 1994.

Henry B. Perry, III. "Final Evaluation Report. Child Survival 6 Grant to Andean Rural Health Care. October 1990 - September 1993." August 25, 1994.

Henry B. Perry, III. "The Census-Based Impact-Oriented Approach and its Application by Andean Rural Health Care in Bolivia, South America." October 1993.

Instituto Nacional de Estadistica and Macro International Inc. Encuesta Nacional de Demografia y

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Salud, 1994. October 1994.

SNS, OPS-OMS, UNICEF, USAID, CCH. Manual del Responsable de Salud (RPS). La diarrea comun y la diarrea por colera. 2nda edicion.