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TRIP REPORT

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MONITORING AND EVALUATION PLAN DEVELOPMENT FOR BASICS/BOLIVIA AND THE CCH PROJECT

May 18-May 31, 1996

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ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ARI	Acute Respiratory Infections
BASICS	Basic Support for Institutionalizing Child Survival Project
BL/EOP	Baseline/End-of-Project Survey
CAI	Comité para Análisis de la Información (Committee for Information Analysis)
CBC	Communication and Behavior Change
CCH	Community and Child Health Project
CDD	Control of Diarrheal Diseases
CMR	Child Mortality Rate
COTR	Contract Office Technical Representative
CS	Child Survival
DDM	Data for Decision Making Project
DHS	Demography and Health Survey
DILOS	Directorios Locales de Salud (Local Health Board)
DITES	Dirección Territorial de Salud (Territorial Health Direction)
DPT	Diphtheria-Pertussis-Tetanus Vaccine
DQR	District Quarterly Report
EPI	Expanded Programme on Immunization
FP	Family Planning
GOB	Government of Bolivia
HH	Household (survey)
IMCI	Integrated Management of Childhood Illnesses
IMR	Infant Mortality Rate
IR	Intermediate Result
M&E	Monitoring and Evaluation
MIS	Management Information System
NGO	Non Governmental Organization
ORS	Oral Rehydration Salts
OTB	Organización Territorial de Base
PAHO	Pan-American Health Organization
PAO	Plan Anual de Operación (Operations Annual Plan)
QAP	Quality Assurance Project
RHFA	Rapid Health Facility Assessment
RSH	Reproductive and Sexual Health
SNIS	Sistema Nacional de Información en Salud (National Health Information System)
SNS	Secretaría Nacional de Salud (National Secretary of Health)
SO	Strategic Objective
SOW	Scope of Work
SRS	Secretaría Regional de Salud (Regional Secretary of Health)
STD	Sexually Transmitted Disease
STTA	Short Term Technical Assistance

SVEN	Sistema de Vigilancia Epidemiológico Nutricional (Nutritional Epidemiology Surveillance System)
TB	Tuberculosis
TT	Tetanus Toxoid
UNICEF	United Nations Children's Fund
USAID/B	United States Agency for International Development/Bolivia
WHO	World Health Organization

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I. EXECUTIVE SUMMARY

The purpose of this short-term technical assistance, from May 18 to May 30, 1996, by Dr. Eckhard Kleinau, Deputy Project Director–Evaluation/MIS, and Dr. Vincent David, Consultant, was to review the status of monitoring and evaluation of BASICS and CCH work plans and to make recommendations about key child survival and related indicators including appropriate data collection methods. A minimum package of indicators is proposed that adheres to standards accepted for child health and nutrition interventions and that is consistent with indicators identified in the strategic framework of USAID/Bolivia.

Meetings were held with SNS, USAID/Bolivia, CCH, BASICS, and several other organizations. The situation in the target zones was assessed during field trips to Altiplano Valle Sur and Sacaba Districts.

BASICS and CCH work very closely together in three main technical areas: communication and behavior change; integrated case management; and the use of information for community action. BASICS' primary responsibility is to design, test, and disseminate methods, and to build capacity of CCH and other organizations to implement, monitor, and evaluate these methods. This includes activities that assure the quality of the products and that monitor their effective implementation. The dissemination of lessons learned is also an important BASICS activity. CCH's primary responsibility in the areas of collaboration is the implementation of child health and nutrition interventions by building the capacity of the SNS on district and national level. The projects monitor progress and evaluate outcomes through appropriate supervision, routine monitoring and survey tools.

From the small visit sample, information seems to be collected regularly and in a timely manner. Copies of most recent monthly reports were available in the health centers visited. The information is consolidated at district level. The older districts in the CCH project and an estimated 40% of the districts at national level use a dedicated computer program for data processing. In its present state, and provided its implementation is maintained (supply of forms), the SNIS should be able to provide an important share of the information needed for Project M&E. The practice of monthly CAI meetings seems well established, at least within the health institutions. However, the process of popular participation with shared management is still beginning and the periodic sharing of information with community representatives and municipalities is not yet systematic. Supervision does not seem to be an effective and regular process in the zones visited.

The consultants and the project counterpart reviewed the strategic objective, purpose and proposed outputs for the CCH project, as defined in the Amendment No. 15, and developed a list of possible indicators. The definition of indicators, in addition to reflecting the monitoring and evaluation needs of the revised project, takes into account, for standardization purposes, both the proposed USAID indicators for the Results Framework in Health and Population and the proposed BASICS core indicators for Child Health and Nutrition. Finally, the need to evaluate

the impact of past project activities through household surveys implies keeping as close as possible to the data and indicators used in previous project baseline surveys.

Like all BASICS programs, Bolivia's monitoring and evaluation summary presents key indicators, past achievements, and expected results in a concise format that serves planning as well as reporting requirements. It is organized according to the program's five objectives following the work plan. Each objective is measured by a few indicators representing outcomes or intermediate outcomes. A baseline, annual targets, and the life-of-project targets are specified for each indicator. Baseline and end-of-project (EOP) assessments are mostly quantitative and should demonstrate progress. However, annual targets are more appropriately assessed with less expensive and more rapid tools, consisting of routine service statistics, supervision data, or qualitative assessments such as focus groups. Activity level achievements are shown in bullet form. BASICS indicators and monitoring and evaluation approach were revised during this short-term technical assistance (STTA), and are consistent with USAID/B results indicators.

This report concludes with several recommendations to consolidate the monitoring and evaluation approach established by CCH and BASICS. Review BASICS' and CCH's work plans for the inclusion and financing of monitoring and evaluation activities that assure the timely availability of information about results, for example, the systematic use of *rapid health facility assessment*, routine monitoring of the effectiveness of training and health worker performance through *supervision*, *household survey*, and *formative research*. Some modifications are suggested that would *clarify how CCH strategies and objectives will be monitored and evaluated*, with regards to the redefinition of the project's objective and results. Support the development of *planning, supervision, negotiation and technical support skills of the district level teams* through the DDM process and QAP approach. Additional operations research is recommended to assess the causes for a very low utilization rate of health facilities. *Indicators identified by USAID/B* to monitor and evaluate its portfolio of population, health and nutrition projects are very complete and consistent with internationally accepted standards for these indicators. A slightly different choice for a few indicators is suggested, because they are reported more commonly and based on results from national and local surveys.

As a global technical assistance project, BASICS/Bolivia makes effective use of its resources by collaborating very closely not only with CCH and the SNS but also with many other USAID-financed programs, e.g., Mothercare and PROSALUD, and with international organizations such as PAHO and UNICEF. BASICS' inputs are catalytic for training, formative research, and surveillance and have greatly enhanced the impact of key activities on communications for behavior change and service quality. The BASICS project leadership in La Paz deserves credit for this.

II. BACKGROUND AND TERMS OF REFERENCE

The measuring of results of BASICS programs is now, in the second half of the life of the project, a principal part of managing those programs. Since many activities of the Bolivia program have already been implemented or designed (although some might have to be modified to meet changing needs and time frames), the measuring of outcomes and intermediate outcomes and their likely effect on impact is a key responsibility of all program managers. It is second in importance only to the effective implementation of the program in the first place.

The purpose of this short-term technical assistance by Dr. Eckhard Kleinau, Deputy Project Director–Evaluation/MIS, and Dr. Vincent David, Consultant, was to review the status of monitoring and evaluation of BASICS and CCH work plans and to make recommendations about key child survival and related indicators including appropriate data collection methods. A minimum package of indicators is proposed that adheres to accepted standards for child health and nutrition interventions and that is consistent with indicators identified in the strategic framework of USAID/Bolivia.

The scope of work for this short-term technical assistance is attached in Appendix A and includes the following tasks:

- review BASICS' indicators, targets and monitoring and evaluation approach;
- provide feedback to USAID/B on their strategic objectives and intermediate results indicators;
- review CCH indicators and monitoring and evaluation instruments including the national health information system (SNIS);
- recommend indicators and methods, especially those that measure the results of integrated management of childhood illnesses (IMCI) and communication and behavior change (CBC); and
- recommend roles and responsibilities for monitoring and evaluation to BASICS, CCH and USAID/B.

III. SUMMARY OF ACTIVITIES

This short term technical assistance took place May 18-30, 1996. The team held introductory meetings with the BASICS Resident Advisor, the CCH Project Director, authorities from the National Secretary of Health (Planning, Evaluation, Projects, and International Relations Division), and with the USAID Mission in La Paz.

The team reviewed the available documentation with regards to the new definition of CCH project's objectives and strategy, CCH operation plans for 1995 and 1996, current and proposed CCH monitoring and evaluation (M&E) instruments, USAID's strategic objective and results framework, and BASICS' draft guidelines for program monitoring and evaluation and lists of

core child health and nutrition indicators. A complete list of the documents reviewed is included in Appendix C.

Working meetings were organized with individual BASICS team members and with the team as a group to review the scope of BASICS activities. The work plan review covered activities carried out together with CCH as well as BASICS-specific endeavors; the objectives, targets and indicators included in the Project M&E Summary; the definition of responsibilities for M&E for each organization; and the proposed CCH baseline studies of behavior changes and quality of care.

Several working sessions were held with key CCH project managers, especially within the Special Services Division, responsible for M&E. The strategic objectives and expected results of the project were reexamined, including methods to obtain the information needed to monitor and evaluate these results, especially through the proposed baseline and evaluation study.

Field visits were conducted in a sample of health facilities and district-level offices of the CCH project in order to get a first-hand impression of the data collection process and the mechanisms currently used for analyzing and sharing the information, under the new community focus introduced by the Popular Participation Law. Summary findings from the field visits are included in Appendix D.

Debriefing sessions were held with the CCH project staff, the National Secretary of Health, and the USAID Mission to share the findings and conclusions of the consultant team.

A detailed list of activities and a list of persons contacted are included in Appendices B and E, respectively.

IV. SCOPE OF BASICS AND CCH WORK PLANS AND ROLES AND RESPONSIBILITIES RELATED TO MONITORING AND EVALUATION

The two projects work very closely together in three main technical areas: communication and behavior change; integrated case management; and the use of information for community action. BASICS' primary responsibility is to design, test, and disseminate methods, and to build capacity of CCH and other organizations to implement, monitor and evaluate these methods. This includes activities that assure the quality of the products and that monitor the effective implementation. The dissemination of lessons learned is also an important BASICS activity. CCH's primary responsibility in the areas of collaboration is the implementation of child health and nutrition interventions by building the capacity of the SNS on district and national level. The projects monitor progress and evaluate outcomes through appropriate supervision, routine monitoring and survey tools. A more detailed description is presented in Table 1.

Table 1: BASICS and CCH Roles and Responsibilities

Objectives	BASICS	CCH	USAID SO/IR
Communication and Behavior Change	Develop and test messages for dissemination through radio, TV and printed material, build capacity of districts; develop, test and disseminate tools to assess baseline, monitor behavior change through focus groups, and assess outcome through follow-up	Train district personnel in the use of messages through various media; implement evaluation tools to assess baselines and end-results (increased knowledge); implement monitoring through supervision tools	IR I.1 IR I.2
Information for Action	Develop, test, and adapt mortality surveillance instrument, build capacity in districts; develop, test and disseminate tools to assess baseline, monitor the use of information through a review of district work plans, and assess results through lessons learned	Train district staff to implement mortality surveillance; build district capacity to improve the quality of routine reporting through the SNIS, and the use of information by municipalities (CAI)	IR II.2 IR III
Improve Quality of Care through IMCI	Evaluate training centers (ARI/CDD), prepare for introduction of IC; build capacity through TOT; develop, test and disseminate tools to assess baseline, monitor HW quality through supervision, and assess result through follow-up	Train training center and staff of selected districts in expanded SCM; implement evaluation tools to assess the baseline and end-results; implement supervision tools to monitor the effectiveness of training	IR II.1
Improve Medical Education	Evaluate CDD medical education, introduce other modules		IR II.1
Reduce neonatal mortality	Develop and test a strategy		IR I.1 IR II.1
Social marketing	Produce and test ORS materials; coordinate private commercial sector to produce ORS; assess baseline, monitor introduction and follow-up market study		IR I.1
		Capacity building of Districts and Municipalities (and SNS)	IR II.2

V. CCH MONITORING AND EVALUATION APPROACH AND PROGRAM INDICATORS

A. Rapid Assessment of M&E Systems in the CCH Districts Including SNIS

1. Data collection

The National Health Information System, used by all public health facilities and some of the private providers, includes three main forms:

- basic information module (filled out once a year; provides information on characteristics of the health center and surrounding communities, population in catchment area, water and sanitation situation, inventory of infrastructure, equipment and personnel, other health providers and community organizations);

- epidemiologic surveillance monthly report (including EPI and communicable diseases, such as AIDS, malaria, cholera, yellow fever, etc.); and

- health activities monthly report for the main programs: child health, reproductive health, outpatient services, TB and STDs, outreach activities, inpatient services, laboratory and dental services (the same report is also used at hospital level).

Approximately 15 additional monthly reports are used for specific programs or administrative areas (transport, cost-recovery, etc.).

From the small visit sample, information seems to be collected regularly and timely. Copies of most recent monthly reports were available in the health centers visited. The information is consolidated at district level. The older districts in the CCH project and an estimated 40 percent of the districts at national level use a dedicated computer program for data processing. In its present state, and provided its implementation is maintained (supply of forms), the SNIS should be able to provide an important share of the information needed for project M&E (SNIS forms are shown in Appendix L.)

The SNS policy to reduce the number of reports and include most of the needed information on the activity monthly report is to be commended. However, this may lead to space problems when trying to include new information, for instance, regarding case management; most often, this will mean a trade off with information from other programs, although there may be some room to reduce the space dedicated to STDs, FP and some others, without affecting their content.

Suggested modifications to the SNIS monthly report were mentioned to the SNS at their request and include:

- EPI: bring the Measles Immunization box and the Completed Schedule box to the "Less than one year old" frame, as a way to motivate staff and population towards the achievement of the immunization schedule before the first birthday (a standard indicator for coverage and effectiveness of the EPI activities).

  Note: the relevance of this suggested modification may be affected by the fact that the SNS recently changed its EPI norm for measles immunization from 9 months to 12 months, based upon the fact that massive immunization efforts have lowered the risk of disease and death from measles, thus allowing a later immunization (at a time when most of the maternal antibodies have disappeared, thus increasing the probability of the vaccine creating effective immunity). This shift in the immunization age, however, expands the age group that needs to be followed on a more regular basis, until their schedule has been completed.

- SVEN: include the number of children reaching one year of age with adequate growth pattern (category A, B and C). The cumulative figure over the year allows to calculate the overall proportion of children reaching this landmark without major damage to their growth and developement. (This could also be done when reaching the age of two, as this seems to be the cut-off point for growth monitoring activities.)

Modifications to instruments used at national level cannot be implemented too often, as they imply validation, reprinting and training costs. Thus one may not want to include now the existing indicators for expanded case management, as hopefully they will be replaced within a year or so by integrated child management indicators, developed with the IMCI protocols and training modules by BASICS and WHO.

With regard to case management, it should be noted that the space provided for follow-up visits in the individual patient's Clinical History form is not ample enough for the provider to annotate the presence or absence of key symptoms or signs, an essential element for the diagnosis process and for the evaluation of provider skills through review of clinical records.

2. Analysis and information sharing

In the visited sites, wall charts with monitoring graphs for immunization and prenatal coverage seem ubiquitous, but not always updated. The team observed some examples of community-based mapping for ARI/diarrheal diseases.

The practice of monthly CAI meetings seems well established, at least within the health institutions. However, the process of popular participation with shared management is still beginning (the DILOS for some of the sites visited had just been conformed) and the periodic sharing of information with community representatives and municipalities is not yet systematic. The CAI meetings in small communities seem to focus directly on resolution of perceived needs rather than use systematic analysis of information. The team was not able to directly observe a

CAI session, but has been informed of the development of innovative strategies for information sharing in the Altiplano Valle Sur district. The extent of the participation of NGOs and private providers in the CAI sessions is not known.

Another opportunity for information sharing is the preparation of Annual Operation Plans (PAO) (see process in Appendix D), which includes repeated discussion of priority problems with community representatives and municipalities. However, it seems that the participation of the district team in this process takes much of its time and prevents the team members from doing other activities (such as supervision for instance).

An attractive, well illustrated brochure with color graphs is produced every year at national level that summarizes the country's health situation, epidemiologic profile and health activities. The contents of the brochure have recently been made available on e-mail, for easier consultation by health providers, municipalities, funding agencies and non government or community organizations.

The CCH project should continue to strengthen the ability of the SNS at local and district level to involve community representatives in the analysis of the health situation of the municipality, using participatory techniques. An important aspect of this technical support is how to deal with denominators for health events or practices: community participation may be crucial, especially in rural areas, to help accurately update, on an annual basis, the figures provided by the census. Another essential element is the consolidation of data from all providers in the geographical area, in order to promote the concept of coverage of services for a given population, rather than the simple accumulation of services provided.

3. Supervision

Supervision does not seem to be an effective and systematic process. The consultant team recorded comments about irregular visits and supervision perceived as aimed at detecting low performance (rather than supportive). No supervision protocols could be seen, copies of conclusions and recommendations from visits were not left at the health center, and priority is given to programming activities (see above), in addition to the usual problems of per-diem and transport.

The CCH project could support SNS supervision activities by improving supervision skills while introducing the evaluation protocols for the training on expanded case management (and later on, integrated management of childhood illnesses). Although the initial post-training evaluation in this area needs to be done by the teaching staff from the clinical training centers, in order to improve the quality of training, in the end, the continuous supervision of quality of care provided through appropriate case management will be a major responsibility of the supervision system.

Note: in this document, the term "district" refers to an administrative level within the previous health model, located between the region (department) and the health centers. A district may

include 3 to 20 municipalities and cover an area generally inhabited by 50-60,000 people. The CCH project is working in eleven such districts in three regions (La Paz, Cochabamba, Santa Cruz), where it has reinforced the district teams. With the new sanitary model, the district was theoretically replaced with the Territorial Health Direction (DITES). However, this entity does not yet have official approval, as the municipalities are trying to assert their newly granted authority in health planning and lobby for a direct administrative link with the department. The consultant team, however, shares the project management's view that an intermediary technical health unit is needed (especially for small municipalities) in order to provide technical support in planning and supervision at a level of effort and local specificity that could not be obtained from the department. In particular, the technical support provided by a competent district team may help in adapting municipal health plans to the overall health situation of the geographical area (including lobbying for a certain amount of inter-municipality solidarity) rather than adapting the district operation plan to fit the inversion needs expressed by the municipalities.

B. M&E Strategies for the Reorganized CCH Project

The definition of the CCH project was reviewed last year (October 23, 1995) through Amendment No. 15 to the USAID grant No. 511-0594, reflecting both the return to the original purpose of development and implementation of an integrated package of child survival services, and the recent political changes in the country and health sector context, with regards to the decentralization process, the Popular Participation Law and the implementation of the "Plan Vida" as the main strategic orientation of the SNS.

The 1995-98 Strategic Plan, elaborated in this transition period, defined the project purpose as: "Improving the institutional capacity of the public sector and its links to the private and non-government sectors to bring health services in selected districts and mobilize the population demand for such services." The proposed products were:

- the developement and implementation of a community health model in selected rural districts (at this time, DITES: territorial health directions);

- administrative support systems (such as logistics, information) developed and functioning in selected rural districts;

- eleven rural districts developed and managed in experimental form, so that they could be replicated under the guidelines for popular participation;

- local health services providers (public, private and volunteer) organized and trained in delivery of community and child health services; and

- changes in knowledge, attitudes, and practices in the local population, increasing the demand for priority health services.

Under those headings, a number of strategic themes and their corresponding activities were defined, and impact, process, and quality indicators were designed as criteria for the evaluation of the strategic plan.

The consultants and the project counterpart reviewed the strategic objective, purpose and proposed outputs for the CCH project, as defined in the Amendment No. 15, and developed a list of possible indicators for each of them. The definition of indicators, in addition to reflecting the monitoring and evaluation needs of the revised project, takes into account, for standarization purposes, both the proposed USAID indicators for the Results Framework in Health and Population and the proposed BASICS core indicators for Child Health and Nutrition. Finally, the need to evaluate the impact of past project activities through household surveys implies keeping as close as possible to the data and indicators used in previous project baseline surveys.

Appendix F proposes a list of indicators, classified according to the exposition of objective, purpose, and outputs in the Project Amendment, that should allow the project managers and the cooperating and financing agencies to monitor the CCH project's achievements and evaluate its impact over the period 1996-98. The definition and mode of calculation of the indicators is shown when necessary, as well as the source(s) of information, with a brief discussion of the problems relevant to data collection, indicator construction and analysis. The USAID and BASICS documents referred to above will provide the reader with a more complete description of some indicators. A summary table classifies the indicators by source of information.

The main indicators in each category are listed below:

- <u>Strategic Objective</u>

  Infant Mortality
  Decrease in proportion of infant and child deaths due to ARI/diarrheas

- <u>Project Purpose Indicators</u>

  Access
  Number and % facilities with trained providers
  % persons (children under 1 or under 5) with at least one visit to health facility over last year

  Coverage/utilization
  % of children fully immunized by age 1 (or by age 2)
  % of women with prenatal control

  Quality
  Average number of growth monitoring visits per year in children 0-1 and 1-4
  Average number of prenatal visits

VI. BASICS' INFORMATION NEEDS AND MONITORING AND EVALUATION APPROACH

Because of a more limited scope of activities, BASICS has fewer information needs than CCH as reflected in a smaller number of indicators. Both projects monitor inputs and products as well as the results or outcomes of their activities. BASICS delivers specific products through technical assistance, and measuring the timely availability of these products is a routine function of the project's management information system. While it is CCH's primary responsibility to effectively implement many of the products provided through BASICS technical assistance, BASICS will require the same outcome information collected by CCH and the SNS to assure the quality and effectiveness of its products.

Most monitoring and evaluation activities are developed jointly by BASICS and CCH staff. District teams carry out these activities with direct support from CCH. BASICS is involved in building the capacity of CCH and district staff. If the need arises to collect specific data that are not available from existing sources, BASICS and CCH will decide jointly about the best approach to collect additional information.

All BASICS projects present indicators, past achievements and expected results in a concise monitoring and evaluation summary that serves planning as well as reporting requirements. The monitoring and evaluation summary for the Bolivia program is organized by its five objectives following the work plan. Each objective is measured by a few indicators representing outcomes or intermediate outcomes. A baseline, annual targets and the life-of-project targets are specified for each indicator. Baseline and end-of-project assessments are mostly quantitative and should demonstrate progress. However, annual targets are more appropriately assessed with less expensive and more rapid tools, consisting of routine service statistics, supervision data, or qualitative assessments such as focus groups. Activity level achievements are shown in bullet form. Products (outputs) are planned in the annual work plan and presented at the end of the monitoring and evaluation summary.

BASICS' indicators and monitoring and evaluation approach were revised during this short-term TA and are presented in detail in the monitoring and evaluation summary in Appendix I. They are outlined according to their respective objectives in Table 2.

Table 2: BASICS Program Objectives, Indicators and Data Sources

Objective	Indicator Group	Data Source	
		BL/EOP	Annual
Objective 1: Communication and Behavior Change	Caretaker knowledge	HH Survey	Rapid Tool*
	Caretaker practice	HH Survey	Rapid Tool
	Recognition of danger signs and care seeking	HH Survey	Rapid Tool
	Utilization of child health and nutrition interventions	HH Survey	SNIS
	Intermediate outcomes	Evaluation	Reports
Objective 2: Information for Action	Implementation of mortality surveillance	Lessons Learned	Reports from districts
Objective 3: Improve Quality of Care through IMCI	Health worker practice	RHFA**	Rapid Tool: Supervision
	Health worker knowledge	RHFA	
	Caretaker counseling	RHFA	
	Facility capacity	RHFA	
	Clinical training center capacity	Evaluation	Reports
	Intermediate outcomes	Evaluation	Reports
Improve Medical Education	Education changes implemented	Lessons L.	
	Students exposed		
Reduce neonatal mortality	Feasibility of strategy	Document	
Objective 4: Social marketing	ORS availability	Market research	Rapid Tool Producers
	ORS utilization		

*) Rapid Tools are: Small sample survey (i.e., LQAS), Supervision Instrument, Focus Group, Key Informant Interview, Service Exit Interview, Intercept Interview, Preceding Birth Technique

**) RHFA: Rapid Health Facility Assessment (based on experience in Santa Cruz, Eritrea and Madagascar)

BASICS primary role is to deliver the products under each objective, therefore intermediate outcomes are included such as percent of districts where radio stations broadcast messages according to schedule and percent of target audience exposed. The project also provides and builds capacity in applying tools to monitor and evaluate the outcome in the target population in terms of behavior change. All methods comprise baseline and end-of-project assessments as well as annual monitoring, and cover all stages of behavior change through message dissemination: exposure, comprehension, practice, and adoption.

% children 0-3 months with exclusive breastfeeding

Sustainability
Number of supervision visits conducted that included formal evaluation of expanded case management
Increase in the proportion of popular participation (municipality) and cost recovery funds, as opposed to a decrease in project's fund over the next three years

Demand mobilization (behavior changes)
Proportion of mothers who did apply the acquired knowledge during a previous event

- Project outputs

3.1.1. Number of agreements signed between private providers and SNS
3.1.2. Number of effective supervision visits over last six months
3.1.3. Average number of visits for the age groups 0-1 and 1-4
3.2.1. Number of agreements signed between municipalities (or commonwealth of) and SNS
Percentage of execution of the annual budget
3.2.2. Number of reports on lessons learned
Number of agreements signed between private providers and SNS by subsector
3.2.3.
3.3.1.
3.3.2. Mechanisms for dialogue between DILOS, providers and community groups established and functioning
3.3.3.

The Project will rely on several sources of information in order to elaborate indicators and analyze the achievements of the project over the next two years (project time-frame). Those sources include:

1. SNIS: providing data from the basic information module and health activities monthly report, gathered by all providers in a given geographical area (a municipality or a group of), based upon updated population figures in this area, and consolidated at district level. The SNIS is the most permanent source of information and, in the mid- to long-term, should provide as much of it as needed, without overloading the operating staff responsible for data collection. Some of the information provided by the SNIS will be cross-checked by the BL/EOP survey, allowing to confirm its validity and motivate health personnel and other users towards its utilization as a decision-making tool in the long range.

2. District Quarterly Reports sent by the district teams to the CCH project are most useful for monitoring of project outputs, that is the process of implementing decentralized health

services with shared management. A specific instrument for reporting such outputs during the project's timeframe will be needed in order to standardize the information received from different municipalities (modification of the current format). The DQR should also include a summary of the SNIS findings relevant to the construction of project purpose indicators.

3. Evaluation/supervision reports (especially those from the evaluation of case management training impact) will provide information on the quality of care provided in the project's facilities with regard to management of ARI, diarrheas and expanded case management. The draft evaluation instrument developed by BASICS and tested in the Santa Cruz Region will need to be reviewed in line with similar instruments developed by BASICS in other countries, which provide more guidance for the investigator within the instrument itself, thus improving its reliability. Periodic supervision instruments will later on need to incorporate the RHFA indicators of appropriate case management.

4. Baseline/end-of-project survey: baseline and follow-up surveys have been conducted in the districts initially covered by CCH in 1990 and 1993. A new baseline survey has been planned for all project districts for 1996, in order to provide some of the information needed for the new evaluation criteria. A final EOP survey will be conducted in 1998. Obviously, the 1996 survey will not be a baseline survey for the older districts, where several interventions have already been conducted, thus implying the need for a more qualitative analysis taking into account the specific history of project interventions when making before/after and cross-district comparisons. An important part of the household survey will be dedicated to measuring coverage of communication interventions (exposure) and impact of these messages (knowledge and actual practices), another major component of the BASICS support. Appendix G provides a summary of the IEC questions that will be incorporated into the survey's questionnaire. Appendix H summarizes the discussion on sampling methodology for the survey. For reasons of cost and ease of analysis, the two-step cluster sample survey should be the methodology of choice; the additional costs implied by any design modification aimed at increasing the weight of communities with project water systems in order to evaluate the impact on diarrhea prevalence would have to be weighted against the quality of the information provided and its uncertain potential for inferring causal relationship.

5. Demographic and Health Survey: the next one will probably take place in 1999. It should be remembered that the period covered by the 1999 survey for IMR/CMR estimation will partly correspond to the initial phase of the project, before the amendment that implied the revision of indicators. Thus changes in the strategic indicators measured by the DHS will evaluate the impact of the whole project, not only that of the 1996-98 period.

The proposed annual measurements of indicators use rapid tools that are less costly than those used for the baseline and end-of-project, but they also provide data that are more qualitative in nature. The main purpose of this approach using different types of methods is to make monitoring and evaluation more affordable and create local capacity. The annual use of rapid tools tells programs whether they are on the right track without providing precise estimates for most indicators.

VII. SUMMARY OF USAID'S STRATEGIC FRAMEWORK AND INDICATORS

The proposed results framework of USAID/B specifies as the strategic objective an "**improved health of the Bolivian population.**" Three primary intermediate results (IR) and seven secondary intermediate results contribute to the strategic objective and follow in an abbreviated format.

IR I **Improved** Child Survival (CS) and Reproductive and Sexual (RSH) **Health Practices** by Bolivian Women, Men, Adolescents and Children
- IR I.1 Development, Dissemination and Use of CS and RSH Messages and Social Marketing Products
- IR I.2 Increased Knowledge and Participation in CS and RSH Activities

IR II **Improved Quality and Increased Coverage** of Community Health Care Provided or Established by Local Governments and NGOs
- IR II.1 Improved Skills of Health Care Providers and Administrative Staff
- IR II.2 Improved Capacity of NGOs, Communities, Municipalities, and Departments to Plan, Finance, Administer, and Sustain Services

IR III Timely and Sustained Support of the Implementation of Relevant Elements of the **Popular Participation and Administration Decentralization** Laws
- IR III.1 Improved Normative and Coordinating Capacity of Health Care System
- IR III.2 Increased Financial Sustainability of Health Care System
- IR III.3 Political Support and Development of Tools at National Level for Efficient Implementation of a Decentralized and Participatory System

A complete copy of the USAID/B proposed results framework and proposed indicators can be found in Appendix K.

As Table 1 shows, BASICS and CCH contribute in a major way directly to intermediate results one and two. CCH also supports intermediate result three where BASICS plays a lesser role.

USAID/B has proposed indicators that measure child survival and reproductive and sexual health and interventions on each level of the results framework. (Refer to Appendix C: Wolowyna,

et.al., 1996.) All impact indicators defined for the strategic objective level have the Demographic and Health Survey (DHS) as a source and will be measured at least every five years. Indicators for the primary intermediate result packages represent a mix of caretaker behavior, utilization of CS and RSH interventions, health worker performance, and institutional capacity. Data would come from several sources: DHS (quinquennial), program data (annually), special quantitative and qualitative studies (biennial or annual), and the national health information system–SNIS (annual). Indicators for the secondary intermediate results will be developed by subteams of the USAID Strategic Objective Team.

The USAID/B indicators and data sources are consistent with accepted child health and nutrition indicators, most of which have been adopted by BASICS and CCH as core indicators for program monitoring and evaluation. Recommendations about the choice of some indicators and a more detailed description of composite indicators are presented in the following chapter.

VIII. RECOMMENDATIONS

A. Roles and Responsibilities for Monitoring and Evaluation

BASICS and CCH share a joint responsibility for monitoring and evaluation of program activities related to both projects. Because CCH will implement most monitoring and evaluation approaches through district teams, BASICS relies on the timeliness of this process to meet the project's quarterly and annual reporting requirements. While both projects seem to agree on the joint responsibility, some necessary *monitoring and evaluation activities* have not been included in either work plan, or financing is not assured yet, for example for the health facility assessment related to integrated case management.

Recommendation: Review BASICS' and CCH's work plans for the inclusion and financing of monitoring and evaluation activities that assure the timely availability of information about results.

BASICS/B has developed a *rapid health facility assessment* and tested the instrument with a small sample of health workers in the Santa Cruz region. The advantage of the tool is that it is very short and easy to apply. However, this succinctness could compromise the validity and reliability of information, because it is more prone to interpretation and skill level of the interviewer.

Recommendation: Use the BASICS rapid health facility assessments developed and tested successfully in Eritrea and Madagascar to adapt the Bolivia tool. An instrument that includes more guidance for the observation and interviews in the questionnaire itself could improve the validity and reliability.

Add a few questions about "service satisfaction" to the exit interview of caretakers. This could provide some reasons for a low utilization of services perceived by the authors.

BASICS and CCH have done and planned further training of trainers and health professionals. A routine monitoring of the *effectiveness of training* and health worker performance is crucial to justify the costs of training programs and to adapt the training approach to the workers' needs and conditions in the field.

Recommendation: Besides rapid health facility assessments, design and implement supervision tools that monitor key elements of quality and that allow immediate feedback to health workers to improve knowledge and practices. This should build on efforts in the district of Patacamaya and the Santa Cruz region and draw on BASICS experience in Guatemala. The CCH project should then support the SNS supervision activities by training the district teams and incorporating these tools into periodic supervision instruments and protocols.

BASICS could assist the universities developing a strategy to evaluate the effectiveness of the medical education program as far as child survival is concerned.

CCH is in the process of redesigning a *household survey* instrument that will measure the behavior of mothers with children under five years of age. This includes knowledge and practices of home care and care seeking related to breastfeeding, diarrhea and acute respiratory infections. BASICS' communications consultant, CCH educators, and the monitoring and evaluation unit of CCH work closely together to design and implement a single household survey instrument.

Recommendation: Assure that some child health and nutrition questions in the redesigned survey instrument are consistent with two earlier household surveys carried out in 1990 and 1993. The UNICEF multiple indicator survey, used in about 60 countries, could be a useful tool for key questions related to child health and nutrition, survey methodology, and questionnaire format.

After completion of the survey's pilot test and validation, review results of the process and prepare final instruments. (STTA may be needed for this activity.)

BASICS should sponsor one counterpart to participate in the preparation, implementation, and analysis of an integrated household survey (PAHO)

in Colombia. The resident adviser will prepare a SOW and products expected.

The primary purpose of household surveys is to evaluate the improvement in key behaviors due to program interventions. The instrument under development also contains many questions that are more useful for *formative research*, but that are not necessarily indicators to reflect change. BASICS and CCH have helped district communication staff to carry out numerous focus group studies, e.g., in Patacamaya, Altiplano Valle Sur District.

Recommendation: Remove the formative research questions from the household survey instrument, and devise a qualitative (i.e., focus group) tool to gather the information needed for the design of the communications activities. This would make the household survey more efficient and could improve data validity.

CCH has identified several types of indicators that measure impact, outcome, process, and products in its Strategic Plan 1995-1998. The identified indicators are appropriate to measure the progress of child health and nutrition and other program interventions. Some modifications are suggested that would clarify *how CCH strategies and objectives will be monitored and evaluated*, with regards to the redefinition of the project's objective and results.

Recommendation: Organize indicators according to the results framework proposed in the 1995 amendment.

For each indicator, add a source of information (which reflects on the completeness and validity of the data) and a brief definition of each indicator. Several indicators are not standard child survival indicators and may not be used for a "traditional" program evaluation, but they could be very useful for local monitoring, for instance, the number of deaths registered.

Revise the indicators for quality of care and assure their conformity with data generated by health facility surveys, e.g., Santa Cruz.

Within the context of its new results framework, the CCH project has a unique opportunity to support the development of *planning, supervision, negotiation, and technical support skills of the district level teams*, thus demonstrating their importance in the development and maintenance of effective and equitable service networks under the decentralization process.

Recommendation: Through the DDM process and other related activities, emphasize the district team's skills for information analysis and diffusion and for negotiation with community representatives and municipalities.

Using the DQR and other reports, document the procedures and achievements of the popular participation process, especially those of the PAO, in order to make this process more effective and contribute to an easier replication in other settings.

A recurrent impression, obtained from the field visits and reinforced by the analysis of available information, points out at the *very low utilization rate of health facilities*, including in small urbanized areas, in spite of lack of major access difficulty and apparent availability of technical and logistical resources. This low utilization rate explains, for instance, that cost recovery schemes, although implemented in a systematic manner, only represent lees than one percent of the Altiplano Valle Sur district's revenues. Further qualitative investigation of the issue is warranted, given that an increased utilization rate is one of the main products expected from both BASICS' and the CCH project's activities.

Recommendation: Use qualitative investigations (focus groups at community level) and community participation activities (such as the elaboration of the PAO) to explore the generic and area-specific reasons for low utilization of facilities and assess the validity of the project's strategies and activities aimed at increasing this rate.

B. Minimum Package of Indicators and Methods proposed for BASICS and CCH and Relation to USAID's Strategic Framework Indicators

Indicators identified by USAID/B to monitor and evaluate its portfolio of population, health and nutrition projects are complete and consistent with internationally accepted standards for these indicators. A few additional indicators are suggested, because they are reported commonly and based on results from national and local surveys.

Recommendation: The "proportion fully immunized children in the first year of life", which is the most important information about adequate protection and a key indicator used in the DHS, will not be feasible because the SNS decided to postpone the age of measles vaccination to 12 months. The immunization ratio of measles for children under one is therefore not reported by SNIS.

Coverage rates for individual antigens are always available; DPT1 often serves as an indicator of access to health (EPI) services. TT coverage in women giving birth (protected newborns) might be appropriate given the objective to eliminate neonatal tetanus. These data could be linked to the reported number of cases.

New nutrition indicators that better reflect the effectiveness of nutrition-related services are being developed by BASICS and will be sent to

USAID/B, BASICS, and CCH for consideration, in addition to "repeat visits".

Health facility surveys provide a standard set of quality of care indicators that can be combined into a composite index. A complete list is included in Appendix J. Some indicators need to be defined in the child survival context, for example: appropriateness of services (assuming a comparison with the minimum package), and continuity of care (a concept of family health care).

The need for USAID/B to measure a few strategic objective level indicators on an annual basis is difficult to achieve, because impact indicators are only assessed in multi-year intervals. However, a few proxy measures are proposed in Table 3 that reflect the four development hypotheses for the results framework.

Table 3: Core Child Health and Nutrition Indicators for BASICS, CCH, USAID/Bolivia

Technical Area/ Indicator	Data Source	Collection Frequency	Responsibility	USAID Framework
% of caretakers showing improvement in key behaviors (composite)	Focus groups (1997) HH Survey (96 & 98)	annual biennial	BASICS/CCH	SO
% of health workers practicing SCM/IMCI (composite)	Supervision Health Facility Survey (96 & 98)	annual biennial	SNS/CCH CCH/BASICS	SO/IR
Fully immunized by age one ratio	SNIS (should be included routinely)	annual	SNS/CCH	SO
Lessons learned from districts with information for action (qualitative)	SNIS (CAI) Mortality surveillance	annual	CCH BASICS	SO/IR

C. Institutionalization of Systematic Data Collection and Dissemination

CCH is already actively involved in institutionalizing the collection, analysis, and utilization of the SNIS-derived information in the districts. Following the installation of the DILOS, efforts to share the information with communities on a systematic basis should be maintained, taking as an example the activities conducted in the district of Altiplano Valle Sur.

The process of decentralization of health services, establishment of provider networks, including public and private sector practitioners, and shared management with the community representatives and the municipalities needs to be documented during the last two years of the CCH project in order to identify problems and lessons learned for further replication and to assess the validity of the proposed project's and GOB's strategies. This systematization of experience, emphasizing the role of the district team in the process, entails the development of a standard district quarterly report (DQR) format, including most of the indicators proposed under the heading "project results." The report format in itself should also be considered a management tool for the district team.

BASICS and CCH have successfully built formative research capacity in a few districts by training educators and other district staff in the use of the focus group approach and other qualitative methods. The results of these studies are directly incorporated into the development of district operations plans. Both projects will enable districts to carry out rapid quantitative assessments in future. All data collection and dissemination efforts will focus on changes in caretaker behavior, quality of care delivered by primary level facilities, and the use of information for community action.

It is not clear whether these and other CCH activities are sustainable, because district teams are 50-80 percent project-funded and there is still no provision for their incorporation in the SNS payroll. This should constitute a good incentive for the project and for the district to demonstrate that the district is an essential intermediate institution for planning and supervision, even under a decentralized focus. Financial sustainability of district operations is another concern, because of low utilization rates and thus the capacity for cost recovery mechanisms to cover an increasing proportion of operations and maintenance costs. The fact that a municipality builds a health center or hospital does not necessarily mean that productivity and utilization will improve.

D. Next Steps

The BASICS project team in La Paz will complete the revised monitoring and evaluation summary that is included in Appendix I. This involves baseline information for the objective level indicators in as far as it is available from existing data sources, for example, household surveys done by CCH in 1990 and 1993 and a WHO/CDD facility survey in 1995.

BASICS and CCH teams will finalize and field test the instruments for the 1996 BL/EOP household survey. STTA may be needed for the analysis of the validation process and the fine-tuning of the survey instruments. The survey is supposed to be conducted in the third quarter of 1996.

Following the completion of surveys, annual targets should be established as well based on existing levels for these indicators, but it will require further discussion between the BASICS and CCH teams to produce realistic estimates. The implementation of methods to gather annual data

needs to be included in the work plans of both projects with a budget and time line. Expected achievements for PY3, 4 and 5 should be reviewed and adapted to BASICS' and CCH's current work plans.

APPENDICES

APPENDIX A

APPENDIX A: TERMS OF REFERENCE FOR THIS SHORT-TERM TECHNICAL ASSISTANCE

BASICS
SCOPE OF WORK

A) Name: Eckhard Kleinau, Vincent David

B) Account Code: 000-BO-01-036

C) Destination: La Paz and other areas of Bolivia

D) Dates: 05/18/96 - 05/25/96 (Kleinau); and 05/18/96 - 05/31/96 (David)

E) Fee days: 7 (Kleinau); 15 (David)

F) Scope of Work:

Kleinau and David will assist in the development of monitoring and evaluation plans for the CCH project, BASICS/Bolivia, and provide feedback to USAID/Bolivia on their M&E plans. Specific tasks include:

- Review with both BASICS and CCH the scope of activities and definition of roles and responsibilities.
- Work with BASICS/Bolivia staff to review status of BASICS M&E plan, indicators, targets, and how to operationalize the systematic collection of data.
- Provide feedback to USAID/Bolivia on their M&E plans, results packages, and indicators.
- Perform a rapid evaluation of the Management Information Systems that currently exist in CCH districts.
- Analyze the indicators designed by CCH in their Strategic Plan and Operational Plans.
- Make recommendations based on the rapid evaluation and on the analysis of indicators including an emphasis on Integrated Case Management.
- Propose a minimum package of interrelated indicators to be used to monitor the interventions of the CCH project, as well as the joint activities carried out with BASICS.

Kleinau will bring technical expertise and knowledge of BASICS monitoring and evaluation strategies and methodologies. He will ensure that the system developed by CCH and BASICS will coincide with what the Mission is developing. The use of a standard package of child

survival indicators by BASICS, CCH and USAID is essential in our reporting results and program outcomes. A prerequisite will be to review with both BASICS and CCH the scope of activities and definition of roles and responsibilities.

David, a Spanish-speaker, will work closely with Kleinau, CCH and BASICS/Bolivia to determine the indicators for specific objectives, and also to provide technical assistance on how to operationalize the systematic collection of data to measure the program outcomes by indicator.

APPENDIX B: LIST OF ACTIVITIES

18/05/96
Travel to Miami

19/05/96
Travel from Miami to La Paz
Rest
Consultant team meeting, document revision

20/05/96
Meeting with Ana María Aguilar and Antonio Gómez (who accompanied the consultants in the following meetings)
Meeting with Secretaría Nacional de Salud (National Health Secretary), Planning, Evaluation, Projects Division
Meeting with USAID/La Paz

21/05/96
Working meeting with Antonio Gómez: revision of CCH project's history, objectives, structures, strategic and operations plans
Working meeting with Bolivia BASICS team: review of BASICS objectives, activities and work plan for PY3

22/05/96
EK: Meeting with Gridvia Kuncar (IEC/BASICS): review of KAP survey instruments
VD: Meeting with Antonio Gómez: indicators for CCH project M&E

23/05/96
Field visit: Altiplano Valle Sur District, Patacamaya Health Center, Ayo Ayo Hospital

24/05/96
Report writing
Meeting with Igancio Caballero, CCH Project Director
Diner with Carmen Casanovas, Chief, Technical Services Division, CCH Project
EK: Meeting with Dra. A.M. Aguilar: review of BASICS Project work plan and activities

25/05/96
Meeting with BASICS team (Ana María Aguilar, Dilberth Cordero) to review household and facility surveys instruments and discuss Project M&E summary updating

26/05/96
EK: Departure to Washington

27/05/96
Trip to Cochabamba

Field visit: Sacaba District, Melga Health Center, Colomi Hospital

28/05/96
Return to La Paz
Report writing

29/05/96
Meeting with CCH and BASICS staff to review contents of baseline survey; sampling methodology; miscellaneous issues.
Debriefing meeting with Dr. Caballero (CCH) and Dr. Maldonado (SNS)

30/05/96
Debriefing at USAID/LA Paz
Travel to Miami

31/05/96
Travel to Tegucigalpa

APPENDIX B

APPENDIX C

APPENDIX C: REFERENCES

1. Wolowyna O, Pinto G., Kirmeyer S, Bender D. Result Package for Health and Human Resources. Report prepared for USAID/Bolivia. Technical Assistance in Reproductive Health Services Project. February 1996.

2. Amendment No 15 to the Project Grant Agreement (23/10/95)

3. Plan Estrategico 1995-1998, CCH Project

4. Planes Operativos 1995 (CCH) y 1996 (Special Services Division, CCH)

5. Project Paper Supplement, CCH Project, AID 511-0594

6. Decreto Supremo No. 24237: Del Sistema Nacional de Salud (08/02/96)

7. Guidelines for Monitoring and Evaluation, BASICS

8. Core Indicators for Child Health and Nutrition Interventions, BASICS (06/03/96)

9. Proposed Draft Indicators for Results Framework: Health and Population, USAID/Bolivia (15/05/96)

APPENDIX D

APPENDIX D: SUMMARY FINDINGS FROM THE FIELD VISITS

1. Field Visit to Altiplano Valle Sur District

Team: Eckhard Kleinau, Vincent David, Antonio Gómez (CCH)

a. District office, Patacamaya

Setting: approximately 80 km south of La Paz, population estimated at 169,000; covers 4 provinces and 18 "municipios" (roughly equivalent to health areas). 54 health facilities (including a small hospital, health centers and health posts). 16 physicians (including district director and one pediatrician on rotating loan from University; most physician are doing their mandatory year of social service and thus, are staying only for this time length); 50 auxiliary nurses.

Process for the elaboration of the District level Annual Operations Plan (PAO)

Starting in November, local health staff meets with cantonal agents (from the municipality) and secretaries of community organizations (about 8-10 persons, total) to elaborate the health center PAO, which is presented to the DILOS (which include one representative from the district health team) and consolidated at municipal level (i.e. adding all health facilities in a given "municipio") by the district team. The district team gathers all mayors in a workshop during which plans are approved and budget discussed, with regards to needed amounts and source of funds). The district prepares a clean version of each municipal PAO which is sent to the mayors for revision and approbation by the Municipal Council, and inclusion into the Municipal Development Plan.

Then the district asks for a written municipal commitment to the approved spending, which is needed for discussions with CCH project . They consolidate the municipal PAOs and their specific activities into a district level PAO, which is sent for revision and approbation to the SNS and to CCH. The whole process takes about six months of the year.

The 1996 budget for the district was distributed as follows:

Municipalities:	B. 3,697,929	67.5%
NGOs:	B. 596,270	10.9%
Cost recovery:	B. 33,614	0.6%
CCH project:	B. 1,150,458	21.0%
Total:	B. 5,478,271	

Information system

The two monthly reports from the SNIS are brought to the district at the monthly CAI meetings; compliance with information requirements from the health centers is good (as emission of paychecks depends upon delivery of monthly reports). Information is consolidated and processed through a dedicated computer package (district office is well equipped by CCH: computer, printer, copying machine).

Yearly targets for immunization, outpatient visits, preventive care visits and other activities are defined in the PAO and based upon population estimates derived from the 1992 census and provided by the municipalities, and from last year's achievements. WHO/UNICEF designed monitoring graph charts are available and used for monthly updating of achievements in immunizations and prenatal care. The district is testing a table type instrument for monthly monitoring of all PAO's targets achievements, which will be produced in a format large enough to put on the wall of the center, in order to constitute both a stimulus to the personnel and a communication instrument for the community.

Monthly CAI meetings are organized in each health center and municipalities to share the information and discuss problems. The Altiplano Valle Sur district was credited by the CCH staff to have developed innovative way to share information with the community and DILOS in a cultural sensitive and simple manner, though the team could not observe these activities for lack of time. Notes from meetings of the DILOS are kept by the secretary and can be used for monitoring actions taken by the community.

Over the last year, the district has noticed an increase in the number of visits for ARI and diarrhea in Patacamaya, not so in the peripheral health centers.

Supervision

Supervision activities are hampered by logistics and financial difficulties (per-diem, transport) and mostly by the important amount of time needed for the elaboration of the district PAO. The district director developed and supervision instrument which is still heavily loaded on immunization and prenatal care, and do not include epidemiology and case management of ARI and diarrhea.

Drug procurement and distribution

District buys drugs at subsidized prices to CEAS and IMES, two national procurement centers. They also can buy from regional procurement center or from private distributors. The drugs are sold to health centers with a small utility margin. The health centers also buy from regional procurement centers and from private distributors (though the cost is higher). Drugs are sold to the patients with again a small margin (patients get receipt). Drugs prices for sale to health centers and to the public are centrally determined. Drug purchases are based upon a list of essential drugs, available under generic names in the main procurement centers, but other

purchases are allowed. Drugs from vertical programs (ORS, Vitamin A, etc...) are provided free of charge. Informal exemption systems are in use for people with scarce resources.

Cost recovery mechanisms

All services have a user fee, varying for most outpatient or curative activities between B. and 5. The price for institutional delivery is B.40 if the woman did not have prenatal care, B.20 if she did have prenatal care and is free for women with more than 4 prenatal visits.

b. Health Center, Patacamaya

Catchment area around 16,000 people. Four clinics (including dentistry, with new material), one maternity room, one curative care room, X-ray apparatus, no laboratory. Two general physicians, one pediatrician (on rotating loan from university). DILOS for this municipio was conformed the day before our visit. Apparent low productivity: 8-12 outpatient visits per day, 10 births per month, 8-10 dentistry patients per day, 50 prenatal files since beginning of the year (210 expected if full coverage, based upon 40 per thousand birth rate). Outreach activities (clinics, education) are mentioned, with roughly 10 days per month for the general physicians. Info system well kept; using CLAP/OPS Historia Perinatal. Note: format for control visits in individual clinical history form do not allow much space for writing presence or absence of key symptoms for ARI or diarrhea, thus limiting use of file review for case management evaluation.

c. Hospital Bartolina Sosa, Ayo Ayo

Built in 1974-75 under the "Alianza para el Desarrollo" program, in what used to be the siege of the district (later on moved to Patacamaya). Or, outpatient clinics, three 4-bed rooms, neonatology unit (with two incubators), X-ray apparatus; basic laboratory and kitchen in bad shape. One physician, one nurse, three auxiliary nurses, one administrator. Very low productivity: 5-6 inpatients per month, 4-5 outpatients per days, no births reported in first four months. Reasons invoked for lack of demand are the low population in catchment area (site selected for political reasons), the fact that the hospital was built on top of a graveyard and the initial orientation towards (somehow-less-than-voluntary) surgical sterilizations. Outreach activities conducted with acceptable results for immunization. Municipality ownership of facility and equipment prevents transfer of unused resources to other places with more needs.

2. Field Visit to Sacaba District

Team: Vincent David, Antonio Gómez

a. Sacaba District

Located in the outskirts of Cochabamba, includes 7 health centers. The team was unable to meet with the district team, as its members were involved in a meeting on the day of the visit.

b. Health Center Melga (Municipality of Sacaba)

Population 3,174, moving due to seasonal agricultural employment patterns in Chaparé. Rural health center with one physician, one nurse, one dentist + Peace Corps volunteer (nutrition). One polyvalent clinic room + one other room for storage/radio communications. Child care center with supplementary feeding next to the center (three such centers depending from the health center, with a total of 75 registered kids. New dentistry equipment, partly donated, partly from municipality. Drugs provided upon prescription from the health center by the catholic sisters nearby, who also participate in education/nutrition programs. Monthly CAI meetings include 10-15 people, including representatives from 7 OTBs. Map of communities in catchment area is on the wall, with number of cases of ARI/diarrheal diseases who sought medical care, by community.

c. Colomi Hospital

Municipality with 18,000 people, along the road from Cochabamba to Santa Cruz (50 kms. from Cochabamba). Hospital includes one dental/emergency clinic, one outpatient clinic, one delivery room, a four-bed ward and kitchen. No X-ray, no laboratory (refer to Cochabamba). Staff include one physician, one dentist (working *ad honorem* with his own material), one professional nurse, 2 auxiliary nurses and a cook. Records well kept (though no copy of Child Health Card, as in the La Paz region); upon arrival, physician and nurse were updating consolidation and report forms. Average number of outpatients 200 per month, 5-10 deliveries. Ward empty at the time of arrival. Specific epidemiologic features of the area include traumas (road accidents, shooting) and intoxications (suicides; gastric tubing appears as the most costly item on the health center's price list).

DILOS being organized now, without all participants yet. Monthly CAI meetings are mainly staff meeting with the administrator representing the municipality. Shared financing by the municipality and CCH have been included in this year's operations plan (still to be reviewed by CCH) for hospital expansion, lab equipment and ambulance.

General note: wall chart for ARI and diarrhea case management were displayed in all centers visited.

APPENDIX E

APPENDIX E: PERSONS AND ORGANIZATIONS CONTACTED

BASICS/Bolivia

Dra. Ana María Aguilar, Resident Advisor
Lic. Gridvia Kuncar, IEC Advisor
Dr. Dilberth Cordero, Technical Assistant

CCH Project, La Paz

Dr. Ignacio Caballero, Director
Lic. Antonio Gómez, Chief, Special Services Division
Dra. Carmen Casanovas, Chief, Technical Services Division

USAID/La Paz

Lic. Enrique Cassal, Security Officer
Dr. Paul Ehmer, HPN Officer
Dr. Jorge Velasco, CCH Project Officer
Lic. Virginia Wheaton, Evaluation Officer

Secretaría Nacional de Salud (nivel central)

Dr. Ramiro Maldonado, Director, Planning, Evaluation, Projects and International Relations
Dr. Ramiro Zuleta, Chief, Information, Monitoring & Evaluation Unit, SNS
Dr. Guido Pinto, Long Term Advisor to M&E Unit, RTI
Lic. Pamela Pereira, Statistician

Altiplano Valle Sur District

District team

Dr. Alberto Tenorio, Director
Lic. Norma Zibera, Statistics Dpt
Lic. Elizabeth Vicuña, Drug Logistics
Lic. Miguel Conde , Administrator
Lic. Teresa Ibañez, Educator

Health Center, Patacamaya

Dr. Daniel Bueno, Pediatrician
Dra. Mabel Rojas, Physician

Hospital Bartolina Sisa, Ayo Ayo

Dr. Jon Bermejo, Physician
Lic. Lucio Cale, Administrator
Lic. Martina Enríquez, Nurse

Sacaba District

Health Center, Melga

Lic. Simón Vilca, Nurse

Dr. Roberto Hinojosa, Dentist

Hospital, Colomi

Dr. Edilberto Gutierrez M., Director

Dr. Oscar Montano G., Dentist

Lic. Boris Ugarte, Administrator

APPENDIX F

APPENDIX F: DISCUSSION OF INDICATORS FOR M&E OF CCH STRATEGIC OBJECTIVE, PURPOSE, AND OUTPUTS

The following is a list of proposed indicators, classified according to the exposition of objective, purpose and outputs in the Project Amendment, that should allow the Project managers and the cooperating and financing agencies to monitor the CCH project's achievements and evaluate its impact over the period 1996-98. The definition and mode of calculation of the indicators is shown when necessary, as well as the source(s) of information, with a brief discussion of the problems relevant to data collection, indicator construction and analysis. The most important indicators in each category are indicated in bold characters. A summary table classifies the indicators by source of information.

1. Strategic Objective

To improve family health throughout Bolivia

- Indicators

Infant Mortality
Child Mortality
Decrease in proportion of infant and child deaths due to ARI/diarrheas
Nutritional Status (% of under five children with stunting and/or wasting)

Maternal Mortality
Fertility rate

The last two indicators correspond to the inclusion of the reproductive health elements from Plan Vida, currently incorporated into Project activities; however, given the time frame for the remaining Project life, major changes in both indicators are unlikely to be observed and attributed to Project activities, as the period of calculation - from the 1999 DHS survey, see below - would partly cover the years before this time frame)

The incidence rates for measles, neonatal tetanus, diphtheria and poliomyelitis could also be added to this list of impact indicators.

- Sources and methodology

Those indicators come from trends observed during periodic DHS surveys: the next one will probably take place in 1999. Two methods could be used to provide Project specific data:

- the first one implies extracting from the national sample the data corresponding to the 11 CCH districts (as a whole). The population covered by the Project is estimated at 500,000 people, that is about 7% of the Bolivian population, and thus could be assimilated (in size) to a department, for which the information would have statistical significance for selected variables. However, the epidemiological significance would be

less obvious, as important differences in health situation exist between the Project regions. Identifiers for Project-covered segments would be at municipality level, not always exactly corresponding to districts, but again, the changes will only be meaningful for the whole of the area covered, and small differences of definition will not have a major impact on these figures.

- the second method implies no additional data processing costs; it uses as Project estimates the DHS estimates corresponding to the rural stratum of departments covered by the Project (La Paz, Cochabamba, Santa Cruz), keeping in mind that the Project, even though aimed at rural areas, covers small towns that are included in the urban stratum of the DHS survey.

It should be remembered that the period covered by the 1999 survey for IMR/CMR estimation, will partly correspond to the initial phase of the Project, before the amendment that implied the revision of indicators; thus changes in the strategic indicators will evaluate the impact of the whole Project, not only of the 1996-98 period. It should also be noted that significant changes in chronic malnutrition status are unlikely to be observed during so short a period, thus reducing the utility of this indicator. A better one could be the proportion of children with acceptable W/A (categories A B and C in the SVEN box of the SNIS report) by age 1 and by age 5.

- Other issues: mortality surveillance system/mortality surveys

It is unlikely that the mortality survey methodology developed by BASICS in El Alto can be implanted and functioning in all districts within the three year time frame, except maybe, under a sentinel site system, thus reducing its utility as a monitoring tool for mortality indicators. A small number of observations (a district of 60,000 people with a birth rate of 40/1,000 and an IMR of 75/1,000 live births would expect around 180 infant deaths per year) would make difficult the interpretation in yearly variation of IMR/CMR, more so in specific sub-groups by cause or risk factors. It seems that the survey is more appropriate as a tool for local analysis of the death contributing factors, motivation of health workers and community and identification of priority actions than for short-term monitoring of program impact. A shorter version, easier to manage at community level, may be more appropriate for this purpose.

2. <u>Project purpose indicators</u>

To improve the access, coverage, quality and sustainability of an integrated package of community and child health interventions, and mobilize the demand for these services in selected rural areas.

The indicators in this category will come from different sources, implying different levels of efforts and resources in order to collect the necessary information:

- monthly reports from the health facilities to the district (SNIS) and consolidation at this level
- quarterly reports from the CCH-covered districts to the Project management (DQR)
- Project's baseline and evaluation survey (BL/EOP).

The most appropriate source(s) for each indicator is mentioned and discussed if needed in the following enumeration.

2.1. Access

Access indicators, in terms of child health and community interventions, include the availability of trained and effective providers in a given area and a measure of the "distance" (be it geographical, financial or cultural) of the area population to these services, as assessed, for instance, by the proportion of households or persons that had at least one visit to a health provider over the last year (assuming that most persons would have at least one episode of illness or need for control/prevention that would theoretically require contact with a provider).

- number and % of health providers (by category: physicians, nurses, auxiliary nurses) trained for ARI/diarrhea/expanded case management (later on to be replaced with Integrated Child Management)

- **number and % facilities with trained providers**

The two indicators above imply that each project district, with the help of the relevant health centers, make an inventory of health facilities and providers (including the private and non-government sectors), in order to detect portions of the geographical catchment area without available case management; the SNIS basic information module should be used as a basis for this inventory (source = DQR).

- number of community-based oral rehydration units/ health volunteers managing ARI (source = DQR)

- proportion of children with DPT1 immunization

- **% persons (children under 1 or under 5) with at least one visit to health facility over last year** (source = SNIS: number of first visits in relation to population; or BL/EOP). The use of the SNIS for this indicator implies that private providers do report to the district office as do the SNS facilities.

2.2. Coverage/utilization

The indicators under this chapter measure two concepts which are interrelated and sometimes difficult to separate. They reflect the interaction between providers efforts to bring services to the population (offer/coverage) and population efforts to reach these services (demand), resulting in actual utilization of health services. The following indicators could be measured:

- **% of children fully immunized by age 1** , or according to the new policy, % of children fully immunized by age 2, also a quality indicator (SNIS: measles vaccine given before first or second birthday; BL/EOP: in children 11-23 months; note that with measles

vaccine to be given at any time after the 11th month, the measure of coverage among the 11-23 month group won't assess the timeliness of the immunization);

- % women in reproductive age with at least two doses TT (SNIS, BL/EOP)
- % of children under 1 and 1-4 with growth monitoring visits (SNIS, BL/EOP)
- **% of women with prenatal control** (SNIS, BL/EOP)
- % of births attended institutionally/by trained provider (SNIS,BL/EOP)
- Proportion of pneumonia among all respiratory infections seen at health centers
- Proportion of severe dehydration among all diarrheas seen at health centers

The source for those two indicators comes from the DQR analysis of the SNIS data for outpatient visits. Their increase reflects the appropriate use of services for severe cases, whereas home management can be sufficient for milder problems. The indicators should be analyzed along with the expected and actual number of outpatient visits for those two problems, as a high proportion of severe cases would be meaningless if the overall number of visits is minimal.

The accuracy of the indicators derived from the SNIS data depends upon the completeness and timeliness of the reporting process, but most of all, upon the definition of population bases (denominators). Projected estimates from the censuses should ideally be updated yearly at community and municipality level. Systematic comparison with the BL/EOP estimate should allow increased validity of the SNIS-provided data and continuing improvement in the elaboration of population estimates in the Project districts.

Most of these indicators (except for proportion of pneumonia and severe dehydration) could also be taken from the DHS but would not measure only the changes during this phase of the Project, as mentioned before, and would imply the need to extract the sub-database corresponding to Project areas.

2.3. Quality

The quality of care provided to the population, as it applies to the technical aspects of the service, can be measured in two different ways: interpretation of records showing the achievement of expected standards of care and direct observation of the client-provider contact to assess this achievements. Indicators derived from the first category of measurement include:

- **Average number of growth monitoring visits per year in children 0-1 and 1-4** (SNIS, BL/EOP)
- Proportion of children reaching their first birthday with appropriate growth patterns (categories A, B, and C in the SVEN) (SNIS)

- **Average number of prenatal visits**; % of women with 4+ visits (SNIS, BL/EOP)

- **% children 0-3 months with exclusive breastfeeding** (last day) (BL/EOP), showing the effectiveness of promotion measures

The supervision conducted after clinical training in case management (later on integrated child management) or the regular supervision process conducted by the district level, if they include a review of sample clinical records, can give information on the proportion of cases appropriately managed according the criteria defined in the evaluation/supervision protocol mentioned below.

Direct observation data can be obtained during the same two processes, according to the protocol for Rapid Health Facility Assessment (RHFA) developed by BASICS and CCH, and tested in the Santa Cruz region. The corresponding instrument provides an evaluation tool for "expanded" case management and should later be replaced with the instrument elaborated for integrated care management (BASICS/PAHO). Sampling mechanisms will need to be defined to ensure that the cases selected for observation in the different health centers (including those from the private and non-profit sectors) give an accurate image of the situation in the Project districts. Indicators included in this instrument include:

- % of providers evaluating the danger signs

- % of providers correctly diagnosing malaria, ARI or diarrheal diseases

- % of providers correctly treating malaria, ARI or diarrheal diseases

- % of providers correctly counseling parents of children with malaria, IRA or diarrhea

- % of providers correctly using the Child Health Card for integrated care (immunizations, nutrition)

- % of mothers knowing home treatment and danger signs for ARI, diarrheal diseases

The last indicator can be correlated with data from the BL/EOP, which will provide a better estimate of community-based knowledge, as supervision-derived data can be biased by access to services and demand patterns.

2.4. Sustainability

As proposed in the Project amendment, the sustainability indicators should reflect the support given by the Project to the SNS in terms of supervision and quality control for the integrated package of services, as follows:

- **Number of supervision visits conducted that included formal evaluation of expanded case management** (later integrated child care)

- Number of indicators for expanded case management included into SNIS monthly report (note: this indicator may not be available during the Project's time frame, as the SNS may wish to include indicators relevant for integrated child management, which should be incorporated at a later date)

Another set of indicators refer to the establishment and functioning of health provider networks as evaluated in sections 3.1 and 3.2 of this annex (project outputs). Finally, financial sustainability of the new sanitary model could be assessed by the **increase in the proportion of popular participation (municipality) and cost recovery funds, as opposed to a decrease in Project's fund over the next three years**, as scheduled in the amendment, while increasing the overall per capita resources.

2.5. Demand mobilization (behavior changes)

Apart from indicators related to number of visits to health facilities, the increase mobilization of demand for health services can be assessed through changes in the knowledge, attitudes and practices of the population, changes which will ultimately result in increased and more appropriate demand for the services. These changes can be investigated by the BL/EOP and, in some cases, through supervision visits (interception surveys). They could be validated at national level (or at the Project area level) by specific results from the DHS, with the same timeframe problem as mentioned before. Although the theoretical model for behavior changes classifies the indicators in this area into four groups, referring to exposure, understanding, practice and adoption of new behaviors, the BL/EOP will consider three categories that are more appropriate in terms of impact evaluation: exposure to the communication messages; knowledge of danger signs and appropriate management; and actual experience with the last child's development process and diseases.

The technical areas covered by the survey will include:
- obstetrical risk
- management of the newborn child
- breastfeeding and nutrition
- diarrheal diseases
- pneumonia
- exposure to radio messages, patterns of use of communication media.

In revising the previous draft of the questionnaire, a agreement was reached to include into the final version only the questions that would allow the elaboration of indicators and measurement of impact from the IEC activities, leaving the formative questions for more qualitative investigation methods (such as focus groups).

The derived indicators will be of three types:

- Proportion of mothers who know danger signs (for instance, vaginal bleeding for pregnancy, fast breathing for ARIs) or appropriate behavior (give exclusive breastfeeding until four months)

- **Proportion of mothers who did apply the acquired knowledge during a previous event** related to the question (pregnancy, delivery, child's illness) - a measure of sustainability

- Proportion of mothers who heard or read messages about the relevant topics (including source of information) - a measure of coverage.

The structure of the behavioral change section of the questionnaire is given in Appendix G. The actual formulation of the questions, taking into account local peculiarities and language, will be completed by the relevant CCH and BASICS staff.

3. Project outputs

Most of the indicators at project output level will have to be taken from district reports sent to CCH project office on a quarterly basis. A specific format will need to be created in order to guarantee consistency between the different health facilities and districts and to consolidate the information. Even though those are progress indicators (IR3 indicators in the USAID results framework), they need to be evaluated, as they will allow to assess the validity of the project's approach to reach the overall objective and facilitate the replication/adaptation of the new sanitary model.

3.1. *Increased utilization of existing health care facilities in selected rural districts*

3.1.1. *Local health care providers (public, private and voluntary) organized with 11 local partnerships or coalitions of health care providers for the provision of an integrated package of CCH care services by December 1996*

- Inventory of health resources (number, location, staffing and geographical coverage of all providers) by municipality

- **Number of agreements signed between private providers and SNS** (district level) for provision of the integrated package of CCH services; proportion of providers (from those included in the inventory) that have signed an agreement. (Note: as scheduled in the exposition of the results, this will need to be done quickly, in order to give time for the Project to support participating providers - one of the main motivation to sign the agreement)

- Coordination mechanisms established and functioning (periodic district level CAI meetings conducted and documented); pooling of data from health information systems of different providers; referral system established with support hospital.

3.1.2. *A franchise support system established for the training, quality control and effective delivery of CCH services by December 1997*

This result has recently lost some validity, as the new project direction is promoting the SNS standards as the desirable quality level, rather than a specific CCH label. The promotion of SNS quality standards should be evaluated from the capacity of the Project to support the SNS supervision system by monitoring the impact of provider training on integrated case management and incorporate the criteria for quality evaluation (see above 2.3 and 2.4) into SNS supervision instruments and processes. A summary indicator could be related to the **number of effective supervision visits over last six months** (related to number of facilities/providers).

3.1.3. *By December 1997, the number of visits per persons per year to health services facilities increased 50% from current local baseline*

This result can be assessed from the baseline and evaluation household surveys, asking for each person in the household "How many times in the last year did you go to an hospital, a health center, a private clinic, for any reason?". The **average number of visits** can also be obtained by asking the number of health related visits for each person during a shorter period (three months, for instance) in order to diminish recall bias, then extrapolating to the whole year and dividing by the number of persons in the sample. SNIS data related to first annual visit to a health facility by age group can also provide this information. Given the Project's emphasis, the resulting indicator can also specifically be assessed **for the age groups 0-1 and 1-4.**

3.2. *Increased institutional capacity of the National Secretary of Health to guarantee quality health services and mobilize community demand for health*

3.2.1. *The National Sanitary Model (with local and regional variations) developed and operational in 11 rural districts by December 1996*

The National Sanitary Model could be defined by using two general characteristics: shared management with popular participation and service networks (SILOS), whose implantation should be evaluated.

- **Number of agreements signed between municipalities (or commonwealth of) and SNS**, through conformation of DILOS (local health directory)
- Proportion of expected activity report (minutes of meetings) from the DILOS actually received at district level (one per month at least).
- Actions plans approved by municipalities within scheduled time frame
- **Percentage of execution of the annual budget** (by source)

3.2.2. *11 rural health care districts in La Paz, Cochabamba and Santa Cruz developed experimentally for further replication under Popular Participation Law by December 1996*

This project output is interpreted as having more to do with the micro level implementation of the new model and the documentation of the Project's experience in supporting this implementation. Indicators along this line include:

- **Number of reports on lessons learned** and guidelines for replication of the model
- **Number of agreements signed between private providers and SNS** (district level) for provision of the integrated package of CCH services **by subsector** (non and for profit)
- Number (%) of communicators actually promoting CCH messages in the district (from inventory)
- Inventory of traditional providers completed and mechanisms for contact and integration defined in each municipality
- Number (%) of water systems functioning

3.2.3. *A set of 7 management support systems developed, established and operational at the District level linked to regional and national levels by December 1997* (refers to computerized system for logistics, accounting, pending accounts, payroll, EPI costs, administrative mail control, material distribution, some of which have already been adopted by the SNS)

The evaluation for these results will be based upon the information provided by the district quarterly reports, supplemented by qualitative assessment conducted during supervision visits.

3.3. *Changes in knowledge, attitudes and health care practices among local population groups registered, documented and validated*

3.3.1. *By July 1998, 33 selected organized community groups demonstrate increased demand for health services attributed to Project activities*

- Three community support groups per district identified (mother's groups, popular committees, etc..); in all likelihood, it will not be possible to monitor group-specific utilization of services from the baseline survey.
- Use focus groups and analysis of DILOS records to document contacts between these organizations and the DILOS in order to resolve a health problem and/or perceived increase in use of health facilities/services

3.3.2. *An interactive system to increase the responsiveness of local health care delivery system to the needs and health expectations of the local community groups established and operating by December 1996*

- **Mechanisms for dialogue between DILOS, providers and community groups established and functioning** (include actual participation in PAO's elaboration/discussion and CAI meetings)

- Number of community suggestions for improvement in the health services mentioned in the DILOS report and actually implemented

3.3.3. *Six regional assessments of how changes in behavior (increased demand for services) affect sustainable impact on health conducted and concluded by December 1997*

4. Summary table of indicators by source

As indicated previously, some indicators can be obtained from different sources. In the long run, the SNIS, the supervision reports and the district reports (to the Project, then to the department) should be the preferred sources, as they do not imply additional inputs for data collection. In the short run, however, overlapping sources may be useful in validating the data and promoting a better analysis of the available information.

4.1. National Health Information System (SNIS)

This information is derived from the three basic SNIS reports (basic information module, epidemiologic monthly surveillance report, health activities monthly report).

Project purpose

Proportion of children with DPT1 immunization
% persons (children under 1 or under 5) with at least one visit to health facility over last year
% of children fully immunized by age 1 (measles shot given before first birthday) or 2
% women in reproductive age with at least two doses TT
% of children under 1 and 1-4 with growth monitoring visits
Proportion of children reaching their first birthday with appropriate growth patterns
% of women with prenatal control
% of births attended institutionally/by trained provider
Average number of growth monitoring visits per year in children 0-1 and 1-4
Average number of prenatal visits; % of women with 4+ visits

Project outputs

Number of visits per persons per year to health services facilities (also in groups 0-1 and 1-4)

4.2. District quarterly report (DQR)

A specific DQR format should be elaborated by the Project's staff, that would include the information needed for the construction of these indicators, at municipal level if needed. This report, which should also include the aggregated SNIS data (and the evaluation/supervision data) used for the calculation of relevant indicators (sections 4.1 and 4.3) will be used as a management tool by the district teams in the long run, even though the indicators related to the network institution building phase will loose some of their relevance.

Project purpose

Number and % of health providers (by category: physicians, nurses, auxiliary nurses) trained for ARI/diarrhea/expanded case management (later on to be replaced with Integrated Child Management)
Number and % facilities with trained providers
Number of community-based oral rehydration units/ health volunteers managing ARI
Proportion of pneumonia among all respiratory infections seen at health centers
Proportion of severe dehydration among all diarrheas seen at health centers
Number of supervision visits conducted that included formal evaluation of expanded case management (later integrated child care)
Number of indicators for expanded case management included into SNIS monthly report (national/project level)
Increase in the proportion of popular participation (municipality) and cost recovery funds, as opposed to a decrease in Project's funds
Number of effective supervision visits over last six months

Project outputs

Inventory of health resources by municipality
Number of agreements signed between private providers and SNS (district level) services; proportion of providers that have signed an agreement
Coordination mechanisms established and functioning
Number of agreements signed between municipalities (or commonwealth of) and SNS, through conformation of DILOS (local health directory)
Proportion of expected activity reports from the DILOS actually received at district level
Actions plans approved by municipalities within scheduled time frame
Percentage of execution of the annual budget (by source)
Number of reports on lessons learned and guidelines for replication of the model
Number of agreements signed between private providers and SNS by subsector
Number (%) of communicators actually promoting CCH messages in the district
Inventory of traditional providers completed and mechanisms for contact and integration defined in each municipality
Number (%) of established water systems currently functioning
Three community support groups per district identified

Use of focus groups and analysis of DILOS records to document contacts between these organizations and the DILOS
Mechanisms for dialogue between DILOS, providers and community groups established and functioning
Number of community suggestions for improvement in the health services mentioned in the DILOS reports and actually implemented

4.3. Supervision/quality control instruments (RHFA)

Project purpose

% of providers evaluating the danger signs
% of providers correctly diagnosing malaria, ARI or diarrheal diseases
% of providers correctly treating malaria, ARI or diarrheal diseases
% of providers correctly counseling parents of children with malaria, IRA or diarrhea
% of providers correctly using the Child Health Card for integrated care (immunizations, nutrition)
% of mothers knowing home treatment and danger signs for ARI, diarrheal diseases

Note: availability of drugs for appropriate case management was not included as an indicator for quality of care, as the limited findings from the consultants visit did not identify this as a major problem. Should this assumption be invalid at national level, corresponding indicators could be added.

4.4. Baseline Survey (BL/EOP)

Project purpose

Proportion of children with DPT1 immunization
% persons (children under 1 or under 5) with at least one visit to health facility over last year
% of children fully immunized by age 1 (measles shot given before first birthday) or 2
% women in reproductive age with at least two doses TT
% of children under 1 and 1-4 with growth monitoring visits
% of women with prenatal control
% of births attended institutionally/by trained provider
Average number of growth monitoring visits per year in children 0-1 and 1-4
Average number of prenatal visits; % of women with 4+ visits
% children 0-3 months with exclusive breastfeeding (previous day)
Proportion of mothers who know danger signs or appropriate behavior
Proportion of mothers who did apply the acquired knowledge during a previous event
Proportion of mothers who heard or read messages about the relevant topics

Project outputs

Number of visits per persons per year to health services facilities (also in groups 0-1 and 1-4)

4.5. Demographic and health surveys (DHS)

Strategic objective

Infant Mortality
Child Mortality
Decrease in proportion of infant and child deaths due to ARI/diarrheas
Nutritional Status (% of under five children with stunting and/or wasting)
Maternal Mortality
Fertility rate

APPENDIX G

APPENDIX G: DRAFT FOR THE BEHAVIORAL CHANGE SECTION OF THE BL/EOP QUESTIONNAIRE

1. General structure

In all themes included in the questionnaire, the same general structure will be used (with a few exceptions):

- knowledge of danger signs (fast breathing for ARI) or key behaviors (exclusive breastfeeding until four months)
- actual experience, either during the last pregnancy, delivery and child rearing process, or during the last episode of illness of the child (the reference to actual experience allows to diminish general answers based more upon what is expected from the respondent than on a adopted attitude, even though this may decrease the number of available observations)
- exposure to communication messages and source of exposure: for ease of use, all exposure questions will be grouped into a table-like question at the end of the module, along with the exploration of patterns of use of communication media.

The following is a resumed list of questions for each theme; the complete format for the question and possible answers will be revised by BASICS IEC advisor and the CCH survey design team.

2. Obstetric risk

- How many prenatal visits did you have during your last pregnancy?
- Where did you seek prenatal care?
- What are the danger signs that can appear during the pregnancy?
  Expected answers: headache, swelling of feet, vaginal bleeding
- Did you have any of these signs during your last pregnancy?
- What did you do?
  Expected answers: went to health center, self treated, did nothing, etc...

3. Newborn management

- What should be done to the child just after s/he is born?
  Expected answers: dried, put clothes, give bath, do not do anything, etc...
- What care did you provide to your last child just after birth?
- When should the child be given breast for the first time after birth?
- When did you first give breast to your child?

Note: the last two questions are also part of the breastfeeding/nutrition theme.

4. Breastfeeding/nutrition

- Up to when should the mother give only breast milk to her child?
- Up to when did you give only breast milk to your last child?
- At which age should the mother give more solid food to her child?
- At which age did you start giving solid food to your child?
- Up to when should the child receive breastmilk, in addition to other foods?
- Up to when did you give your child breast milk?
- Which food did you give your child yesterday? (Analyze based upon child's age)

5. Diarrhea

- What kind of food or drink should a mother give to child with diarrhea?
- When your child had diarrhea, did you keep breastfeeding him/her?
- Did you give him/her more/same/less liquids than usual?
- Did you give him/her more/same/less food than usual?
- What the danger signs in a child with diarrhea?
  Expected answers: thirst, dry mouth, sunken eyes, cries without tears, etc...
- What should the mother do when the child has one or more of these signs?
- Did your child have one of these signs when he was sick?
- What did you do?
- What did you give him/her?
- Do you know how to prepare ORS?
- Why do you give ORS to a child with diarrhea?
  Expected answers: rehydration (sophisticated), to replace lost fluids, etc...
- When should on wash his/her hands?
- When you last prepared food, did you wash your hands before?
- When you last changed your child, did you wash your hands afterwards?

6. Pneumonia

- Do you know the danger signs in a child with cough?
  Expected answers: fast breathing, chest indrawing, do not want to eat
- What should the mother do if the child has danger signs?
- Did your child have any of these signs when s/he had a cold?
- What did you do?

7. Exposure to messages

- During the last two weeks, did you hear or read about the following themes; from where did you get this information?

	Yes/No	Source
Need to go for prenatal care during pregnancy		
Danger signs during pregnancy		
How do you care for the newborn		
When to start breastfeeding		
Duration of exclusive breastfeeding		
Introduction of solid food		
Duration of breastfeeding		
Danger signs in a child with diarrhea		
Feeding the child with diarrhea		
Purpose of ORS in child with diarrhea		
Preparation of ORS		
Danger signs in a child with ARI		

APPENDIX H

APPENDIX H: GUIDELINES FOR BL/EOP SURVEY SAMPLING METHODOLOGY

The design of the BL/EOP survey should take into account the history of previous surveys done in the project area:

- baseline survey in 6 initial districts in 1990, with a sampling frame based upon equal distribution between communities that were going to be beneficiaries of water supply projects and non beneficiaries communities

- baseline survey in two new districts in 1993, with a more conventional cluster survey design

- qualitative investigations on seven IEC themes conducted in 1994-95 in 9 districts.

The main objective of this survey is defined by the strategic objective/results framework design included in the 1995 amendment; it is to be conducted in all 11 Project districts to evaluate results from the period 1996-1998, with special emphasis on recently initiated IEC interventions. The two-step cluster survey design seems to be the more effective in this concept. Within this overall framework, the survey design should also attempt to fulfill two secondary objectives:

- consider the baseline survey of 1996 as a follow-up survey for the district which had a previous baseline in 1990 or 1993: the use of a core questionnaire very similar to that used in the two previous surveys will facilitate the comparison of results, although the analysis will need to take into account that communities selected in 1990 to receive water systems may be different from other communities in some characteristics, and may be over-represented in the 1990 sample.

- evaluate the impact of installation of water system on diarrhea prevalence and other related variables. A first step in this direction would be to assess the probability of a community with project water system being selected from the sample frame of primary units (communities) during the first step of sampling. For instance, assuming 20 water projects by districts, an average population size of 50,000 per district and 500 per community, the probability of selecting a community with water system would be 1 in 5. This probability would increase if communities selected for water system have more population than the average community. If an acceptable proportion is found (let say one third to one tenth of the sample), then prevalence of diarrhea and other related variables could be compared between the two groups of communities. If the estimated proportion is much smaller, one will have to balance the disadvantages of introducing a more complex stratification or weighing system for the whole survey with the benefits of obtaining an information which, in any case, cannot be taken as a causal relationship, as a number of intermediate and confounding variables are known to intervene between the installation of a water system and a resulting decrease in prevalence of diarrheal diseases (for instance, overall micro biologic burden, quality of water system, use of alternative sources, water conservation practices, food preparation and general hygiene).

APPENDIX I

APPENDIX I: BASICS/BOLIVIA M&E SUMMARY

June 21, 1996

PROGRAM EVALUATION & MONITORING SUMMARY

BOLIVIA

I. EVALUATION SUMMARY - OUTCOMES

GOAL

To contribute to the reduction of infant and child morbidity and mortality related to diarrheal disease and pneumonia.

PURPOSE

To develop and evaluate interventions that reduce infant and child morbidity and mortality by: a) assuring quality care at the health provider level; b) promoting preventive activities and appropriate care-seeking behavior at the household level; and, c) supporting the health care reform process.

OBJECTIVE 1: Increase the proportion of caretakers who regularly practice behaviors to prevent childhood diseases, provide appropriate home care, and seek care at health facilities when needed (*Effectiveness*)

Scope: BASICS in 11 CCH districts (which cover 30% of country geographically) by 1998 (population of 800,000 which represents approximately 20% of the Rural Bolivian population); target three El Alto districts (population of 480,000) as follow-up to mortality study.

Indicators	Baseline	PY3	PY4	EOP	Source
Practice: **% caretakers recognizing, treating and seeking care for danger signs of illness in children <5 years appropriately (diarrhea, ARI) such as:** * Proportion of children who had been sick in the previous 2 weeks who had received food and fluids appropriately during the illness. * Proportion of children who had been sick in the previous 2 weeks and who had demonstrated danger signs and who had been taken to trained health providers for care. * Proportion of newborns who received the breast immediately after birth (within first hour). * Proportion of children under 4 months who received only breastmilk the day before (separate children w/ diarrhea). * Proportion of children 6 months or older who received appropriate complementary feeding the day before (separate children w/ diarrhea). * Proportion of children fully immunized by 12 months of age * Proportion of mothers of children 12 months of age or younger who were protected against tetanus at the time of their last delivery	**Household Surveys**	TBD	TBD	TBD	El Alto: Mortality survey, CDD HH survey in PY2, surveillance (PY3-5) CCD Districts: Household surveys * (Selected communities in 1990 & 1993; baseline in PY 3; repeat survey PY5, Mortality surveillance (PY3-5)
Knowledge: **% caretakers who know about preventive behaviors related to immunization, exclusive breastfeeding, complementary feeding, hygiene** * Percent CT know preventive practices (DD, malaria, malnutrition) * Percent caretakers know vaccination schedule (measles) * Proportion of caretakers who know to breastfed immediately after birth * Proportion of caretakers who know about children aged 0-5 months exclusively breastfed * Proportion of caretakers who know about children aged 6 -12 months receiving at least 3 complimentary feeds per day	**Household Surveys**	TBD	TBD	TBD	Household surveys (Selected CCH communities in 1990 & 1993; baseline in PY 3; repeat household survey PY5.

* CCH and BASICS are revising an existing household survey instrument to be implemented in 1996. BASICS Communications Adviser and CCH Educators lead the development of behavior change related questions of this instrument.

Scope: BASICS with CCH in up to 6 CCH districts **(Sustainability)**

Indicators	Baseline	PY3	PY4	EOP	Source
Programmatic: % of districts where radio stations reach at least 80% of "target" audience with behavior change messages on a "regular" basis	TBD	30%	60%	100%	Review program schedules, market rsch
Qualitative: % of "target" audience who know and understand at least 3 key behavior change messages, such as: * Percent caretakers of children who had been sick in the previous 2 weeks who know the signs for seeking care immediately when their infant or child is sick * Percent caretakers know ARI danger signs * Percent caretakers know fever danger signs * Percent caretakers know: - diarrhea danger signs for care seeking? - ORS/RHF use - increased fluid (validation?) - continued feeding (validation?) * Percent caretakers know about BF after birth, exclusive for 6 months * Percent caretaker know how of complementary feeding at 6-12 months	TBD	TBD	50% know at least 1 messa ge	80% know at least 2 messa ges	market research, focus groups

Achievements:

- Baseline data for CDD and ARI established in El Alto through household survey.
- Local advisor hired to manage IEC activities, with focus on Objective One.
- MOH and CCH central level and district health officers and educators/communicators trained in social marketing, including planning and conducting qualitative research, and developing social marketing plans for district level health services and for reaching communities with appropriate care and care seeking messages. Approximately 40 people trained.
- Six CCH districts with social marketing and communication strategies developed to encourage behavior change, including appropriate care within the home, and care seeking behavior.
- WHO guide for planning radio interventions translated into Spanish by BASICS/Bolivia.
- Utilizing WHO guide, MOH and CCH central level and 30 district health officers trained in planning for radio programs for effective dissemination of key child survival messages for caretaker and health worker behavior change.
- Concept developed for radio program to target El Alto caretakers and health workers with behavior change messages, utilizing results of mortality survey to determine most appropriate messages.

- Pilot initiative on international radio broadcasting and child survival underway in Bolivia, June 1996. Consultant helping BASICS to assess local conditions, and develop, test and evaluate 10-12 local radio programs aimed at increasing caretakers' awareness of child survival issues.

PY3-PY5 Activity Targets:

- 6 of 11 (55%) districts targeted by CCH and El Alto regional office implement social marketing and communications strategies for at least one behavior
- BC model tested (narratives from mortality study) and results used to develop at least 6 new messages and a community mobilization tool and X of y CCH district officers are trained in applying the BC model (to be confirmed by E. Fox)
- Radio spots including at least 3 new messages made available to radio stations
- X of Y radio stations have a written agreement with BASICS (El Alto) and CCH (targeted districts) and broadcast new spots (to be confirmed by IEC Advisor)
- Based on experience with CCH, BASICS/Bolivia technical assistance provided to PROCOSI for social marketing workshop(s).
- 11 of 11 (100%) districts targeted by CCH and El Alto regional office implement social marketing and communications strategies for at least one product
- CCH Districts: Baseline data on outcome indicators collected in at least 2-3 districts using mortality surveillance module (PY4), total of 6-7 districts in PY5
- Mortality surveillance data and integrated household survey used to evaluate outcome indicators in PY5

OBJECTIVE 2: Improve the use of data for decision making to reduce child mortality and morbidity (*Quality*)

Scope: 11 CCH districts (population of 800,000 = 20% of entire Bolivian rural population) and El Alto municipality

Indicators	Baseline	PY3	PY4	EOP	Source
Proportion of districts supporting communities and # of districts active in mortality surveillance (Effectiveness)	Assume 0	3	2-3 districts	11 total by end PY5	Interviews with district health officer
Number of policies/program strategies directly or indirectly affected by mortality survey or surveillance data (Sustainability)	Targeted policies/ strategies?				Review of changes in policies, strategies

Achievements:

- Household survey on caretakers knowledge, attitudes and practices for cholera and other diarrhea conducted in El Alto following mass-media education strategy in response to cholera outbreak.
- Mortality study completed in El Alto and results presented to community leaders and health providers in El Alto and to PROSALUD, PROCOSI, and CCH district officials.

- Various publications and reports of mortality study findings prepared, to be published in remainder of PY3 in Bolivia and internationally and distributed to policy makers at national and regional levels
- Institutionalization of mortality surveillance in El Alto being carried out to, as an intermediate outcome, improve abilities of district level health officials to monitor mortality, with final objective of providing information upon which community interventions can be developed.
- Mortality Surveillance Manual completed, ready for adaptation to Bolivia, and for training CCH districts in its application. Final objective is provide mortality information upon which interventions can be based.
- BASICS technical assistance provided to BASICS/Bolivia and CCH to develop evaluation methods (Household survey, rapid health facilities survey) for measuring results of interventions under all BASICS project objectives.

PY 3-PY5 Activity Targets:
- Continue to disseminate results of mortality survey.
- Selected districts in CCH districts to be trained in using mortality surveillance module (3 for PY3; 11 districts by PY5)
- Carry out baseline household survey in CCH districts.
- Up to 11 districts of CCH with mortality surveillance on-going
- Leaders from up to 11 CCH districts knowledgeable and taking action to reduce infant and young child deaths

OBJECTIVE 3: Improve knowledge and practice of SCM among Health Workers including their ability to communicate health messages effectively to caretakers. (*Quality*)

Scope: BASICS collaborating with CCH, UNICEF, and PAHO in training through 6 training centers for CDD, ARI or IMCI for approximately 2000 persons (30% doctors, 10% nurses, 60% auxiliary nurses; approximately 50/50 split rural/urban areas represented), through 6 training centers.

Indicator	Baseline	PY3	PY4	EOP	Source
% of trained health workers who provide SCM (CDD, ARI, or IMCI) according to protocol	PAHO '93 HFS	TBD	70%	80%	Supervision CQI/HFS
% of front line health facilities with provider(s) who have been trained in SCM (CDD, ARI or IMCI)	PAHO '93 HFS	TBD			HFS
% of front line health facilities with provider(s) who have established "working relationships" with their communities	PAHO '93 HFS	TBD			HFS

Achievements:
- Multi-institutional working group formed for IMCI.
- 250 (125 from rural areas) front line health workers trained in combined ARI/CDD case management in MOH clinical training facilities; approximately 7 trainers in each of 3 training

centers trained; BASICS provided technical assistance, training of trainers, quality control and supervision.

- 9 national trainers, 361 regional health staff and 135 health program managers and providers trained in diarrheal disease and cholera control and case management.
- Study completed on barriers to ARI SCM compliance by physicians and caretakers. Study results used as basis for developing appropriate counseling module within training centers curricula.
- Curricula and training methodologies for training of ARI/CDD/Breast feeding developed and tested.
- Evaluation of CDD/ARI training centers completed and curriculum revised (Quality)
- Technical assistance provided to SOH to establish training centers, develop support systems and prepare for IMCI implementation with working group.
- Neonatal task force to review national norms and plan community level interventions established and functioning (includes Mothercare project).
- BASICS follow-up visits to three public medical schools (La Paz, Sucre, Cochabamba) conducted to monitor application of revised CDD curriculum. Three medical schools have conducted workshops for their regional faculties to encourage adoption of same curriculum. WHO methodology for evaluating this effort has been drafted, with potential PAHO application in Bolivia in early 1997.

PY3-PY5 Activity Targets:

- Approximately 300 front line health workers and trainers trained in CDD, ARI or IMCI by CCH (Quality/Access) in PY3
- Preparations finalized for launch of IMCI in Bolivia: IMCI algorithm adapted for Bolivian context and nutrition, counseling and complementary intervention strategies designed; national health policy revision underway, if necessary; training plan developed and resources ready (Quality/Access/Sustainability)
- Total of 42 trainers (7 at each of 6 centers) trained how to train others in introduction of module, and appropriate caretaker counseling by PY5
- In case of cholera outbreak, technical assistance provided for planning and training rapid response teams.
- Neonatal mortality reduction strategy tested at community level and recommendations developed for national policy formulation.
- Use of quality assurance techniques to encourage health facility outreach to communities tested in El Alto.

OBJECTIVE 4: Increase the availability, delivery and use of CDD/ARI SCM products and services provided by the private sector (*Access, Sustainability*).

Scope: National through INTI

Indicators	Baseline	PY3	PY4	EOP	Source
% increase in ORS sales	INTI docs			50%	Private sector sales figures
% use of ORS in most recent diarrhea episode	Market research study/DHS			70%	Baseline/final study PY3/PY5
% of target populations (4 groups) who know of ORS	Market research study			85%	same

Achievements:

- ORS product and marketing strategies completed; materials produced; baseline data collection begun.
- Baseline data collection on four ORS promotional strategy target groups completed.
- ORS product launched in two phases to pharmacists and physicians and to general public.
- Pediatric Society support garnered for Suero de la Vida. Pediatric Society national commitment made to promote Suero de la Vida to doctors and other health personnel.
- First monitoring study of product launch and promotion completed.
- Needs assessment of PROCOSI PVOs working in CCH districts conducted to determine ways to improve health service delivery through closer collaboration between communities and health services response to community demands.

PY4-5 Activity Targets:

- Final market studies and evaluation completed; promotional strategy refined.
- Bolivia experience in engaging commercial sector in promotion of public health products documented and publicized.
- Consider recommendations from PROCOSI needs assessment for collaborative work with CCH and BASICS.

OBJECTIVE 5: Improve technical and managerial skills required to plan for and deliver effective health services at the municipal and community levels through health sector reform

Scope: El Alto only, PY1-2 only

Indicators	Baseline	PY2	EOP	Source
% of communities with legal recognition and ability to enter into agreements with MOH and other institutions	0	25	25	Project reports; legal registrations

Achievements:

- BASICS technical assistance provided to help define community role in health development process. 25 community committees obtained legal registration as step toward full participation in health development process

Additional PY3 Targets:

- None

OTHER ACHIEVEMENTS

At request of USAID/Bolivia, participated in four meetings in PY3 to date of USAID re-engineering working group for health policy, communications, and health services. Additional participation in periodic meetings requested by USAID.

II. MONITORING SUMMARY - OUTPUTS (PY-2)

Category of Output	Results PY2
LTTA: Country Representative Other Professional Staff	 12 person months (Aguilar) 12 person months (Cordero)
STTA	20 TDYs, 228 days
Technical Reports	10
Surveys, studies, ops research	4 (mortality study, ARI compliance study, 2 CDD/Cholera household surveys
Training	CDD/cholera: 9 trainers 361 regional managers/health providers 135 health providers/El Alto Combined Case Management (CDD/ARI): TOT - 3 training centers 250 front line health workers (50% rural, 50% urban)

APPENDIX J

APPENDIX J: FACILITY INDICATORS RELATED TO CASE MANAGEMENT

Method: Health facility assessment (rapid health facility assessment, WHO health facility quality review, supervision with quality improvement)

1. Proportion of facilities with at least 1 health worker trained in standard case-management in the previous 1-3 years

   ICM, ARI, CDD, Malaria, nutrition

2. Proportion of facilities with regular community outreach activities

3. Proportion of health workers with correct knowledge of when to refer a sick child

   This definition is independent of the illness classification and could include: any danger sign (convulsions, vomiting everything, unable to drink or breastfeed, lethargy or unconsciousness); severe pneumonia or very severe disease, severe dehydration, severe persistent diarrhea, very severe febrile disease, severe complicated measles, mastoiditis, severe malnutrition or severe anemia) Measurement could be interview based (knowledge only), or could use clinical photographs, and possibly record review

4. Proportion of cases needing antibiotics who received antibiotics

   An adequate dose for a full course need to be given at the time of the first facility visit

   a) Proportion of cases of pneumonia, very severe disease or severe complicated measles who receive an appropriate antibiotic

   b) Proportion of cases of dysentery cases who receive an appropriate antibiotic

5. Proportion of cases of malaria who received an antimalarial

   An adequate does for a full course need to be given at the first facility visit

6. Proportion of cases who received an oral drug whose caretakers received counseling in how to administer the drug at home/know correctly how to administer the drug at home

   Dosing schedule depends on the drug and local policies regarding its administration. A full course should be given at the time of the first visit

7. Proportion of cases of diarrhea with some dehydration who receive ORS/RHF at the health facility

   A direct observation

8. Proportion of cases of diarrhea whose caretakers received counseling in how to mix ORS/RHF at home/know how to mix and administer ORS/RHF correctly

A direct observation

9. Proportion of cases who need an immunization according to the vaccination schedule, and received it on the day of the visit

   Proportion of mothers who need a TT immunization according to the vaccination schedule, who received it on the day of the visit

   Ideally from vaccination cards which mothers often will not have with them. From history?

10. Proportion of cases whose caretakers received counseling in how to manage their child at home/know how to correctly manage the child at home

    Home case-management includes continued fluids/breastfeeding, continued feeding, appropriate direct treatment (ORS/RHF or a drug)

11. Proportion of health facilities which have experiences stock.outs of ORS and essential drugs in the previous month

12. Proportion of health workers who have received training in the management of child illness in the last 6 months

13. Proportion of health facilities which have received a supervisory visit in the last 6 months

14. Proportion of cases who were assessed for feeding appropriately

    Proportion of cases with feeding problems whose caretakers received appropriate nutritional counseling

15. Proportion of cases who received an antibiotic when it was not indicated for treatment

APPENDIX K

HEALTH STRATEGIC OBJECTIVE
PROPOSED RESULTS FRAMEWORK

DEVELOPMENT HYPOTHESIS

The Health of the Bolivian Population will Improve if: 1) Bolivian Women, Men, and Adolescents Engage in Healthful CS an RSH Practices; 2) Quality of Health Care Services Improves; 3) Communities, Municipalities, Departments, and NGOs Increase Coverage; and 4) GOB Implements the PopularParticpation and Decentralization Laws.

STRATEGIC OBJECTIVE

IMPROVED HEALTH OF THE BOLIVIAN POPULATION

STRENGTHEN NATIONAL HEALTH POLICY

PRIMARY INTERMEDIATE RESULTS

IR I — Improved Child Survival (CS) and Reproductive and Sexual (RSH) Health Practices by Bolivian Women, Men, Adolescents, and (Children)

IR II — Improved Quality and Increased Coverage of Community Health Care (Provided/Established) by Local Governments and NGOs

IR III — Timely and Sustained Support of the Implementation of Relevant Elements of the Popular Participation and Administration Decentralization Laws

SECONDARY INTERMEDIATE RESULTS

IR I.1 — Increased (Design), Dissemination, and used of Culturally (Accessible/Sensitive) CS and RSH Messages and Social Marketing Products for Defined Populations

IR I.2 — Increased Knowledge and Broadended Participation by Women, Men, and Adolescents in CS and RSH Activities

IR II.1 — Improved Technical, Normative and Sociocultural Skills of Health Care Providers and Administrative Staff at all Levels

IR II.2 — Improved Capacity of (NGOs), Communities, Municipalities, and Departments to Plan, Finance, Administer, and Sustain Culturally Acceptable Health Care Services

IR III.1 — Improved Normative and Coordinating Capacity of the Health Care System

IR III.2 — Increased Degree of Financial Sustainability of the Health Care System

IR III.3 — Stronger Political Support and Development of Tools at the National Level for a More Efficient Implementation of a Decentralized and Participatory Health System

Proposed Draft Indicators for Results Framework: Health and Population

USAID Resources Required/Time Frame: $152,620,000 (FY 1988-2000)

Other Donors: UNICEF, UNFPA, PAHO, IDB, World Bank, GTZ,

Strategic Objective: Improved Health of the Bolivian Population

		Baseline/yr		Source	Frequency
Child Survival					
1.	**Infant mortality rate** The probability that a newborn would die before reaching her/his first birthday	75	1994	DHS	quinquennial
2.	**Child mortality rate** The probability that a newborn would die before reaching her/his fifth birthday	116	1994	DHS	quinquennial
Reproductive Health					
3.	**Maternal mortality ratio** Ratio of maternal deaths to 100,000 live births	390	1994	DHS	quinquennial
4.	**Total fertility rate** The number of children who would be born to a woman if that woman would have her children in accord with a specified series of age-specific fertility rates	5	1994	DHS	quinquennial
5.	**High parity (5+) birth ratio** Proportion of births during a given reference period which are of the order of 5 or more	33	1994	DHS	quinquennial

Intermediate Result (IR1): Improved child survival and reproductive and sexual health practices by adult and adolescent women and men, boys and girls

Indicators	Baseline/yr	Source	Frequency
Child Survival			
6. **Initial DPT vaccine prevalence** Proportion of children by age 1 having received a first dose of DPT	70.5 1994	DHS	quinquennial
7. **Exclusive breastfeeding prevalence** Proportion of infants aged 4-5 months at the time of the survey, who were breastfed exclusively during the last 24 hours	43.0 1994	DHS	quinquennial
8. **Diarrheal Case Management** % of Children under 5 treated with ORS, recommended home fluids, or increased fluids for diarrhea	64.8 1994	DHS	quinquennial
Reproductive and Sexual Health			
9. **Initial prenatal visit rate** Proportion of pregnant women in urban areas seeing a trained provider for at least one prenatal visit during pregnancy	68.3 1994	DHS	quinquennial
10. **Short birth interval (<24 mos) ratio** Ratio of the number of births which occurred within 24 months of the mother's last birth	30.2 1994	DHS	quinquennial
11. Contraceptive prevalence Proportion of all women currently using a modern contraceptive method	17.7 1994	DHS	quinquennial
12. Volume of pantera sales	TBE* 1996	PSI	annual
13. Number of new family planning users by modern method (IUD and pills)	TBE 1996	Pathfinder	annual
14. **Proportion of target commercial sex worker (CSW) and Men with Men (MWM) in 4 cities (La Paz, El Alto, Cochabamba, Santa Cruz) who report use of condom with casual partner "almost always".**	TBE 1996	Clinic Records	annual

* TBE = To be established

IR1.1: **Increased dissemination and use of culturally accessible CS and RSH messages and social marketing products for defined populations**

(Results package subteams of the extended Strategic Objective Team are in the process of developing indicators at this level

IR1.2 Increased knowledge, broadened participation by adult and adolescent women and men, girls and boys, in CS and RSH activities

(Results package subteams of the extended Strategic Objective Team are in the process of developing indicators at this level

Intermediate Result (IR2): Improved quality and increased coverage of community health care established by local government and NGOs

Indicators	Baseline/yr	Source	Frequency
Quality: Child Survival			
15. Repeat growth and development visit ratio Ratio of repeat growth and development visits to all visits in USAID supported facilities in a given year	TBE	SNIS	annual
Quality: Reproductive and Sexual Health (RSH)			
16. % of USAID funded facilities offering a choice of methods	TBE	Pathfinder	annual
17. Proportion of target CSW population in 4 cities (La Paz, El Alto, Cochabamba, Santa Cruz) who complete their STD control at least 3 times a year	TBE	Clinic Records	annual
Quality: CS and RSH			
18. Number of USAID funded Facilities that meet quality criteria (to be defined according to the categories: choice of method, counseling, interpersonal relations, technical competence, appropriateness of services, continuity of care, and others for maternal health and child survival)	TBE	FHI Surveys	biennial

		Baseline/yr		Source	Frequency
Coverage: Child Survival					
19.	**Complete DPT series rate** Proportion of children by age 1 having received a third dose of DPT	28.8	1994	DHS	quinquennial
20.	**Complete DPT series ratio** Ratio of infants receiving a third dose of DPT to an estimated number of infants surviving to first birthday	79.5	1994	SNIS	annual
Coverage: Reproductive and Sexual Health					
21.	**Urban births in health facility coverage** Proportion of index births occurring in a health facility in urban areas	61.7	1994	DHS	quinquennial
22.	**Attended births proportion (urban/rural)** Proportion of index births assisted by a trained birth attendant, tabulated by mother's residence	66.2/26.2		DHS(94)	quinquennial
23.	Number of family planning service delivery sites	TBE		Pathfinder	annual

IR2.1 Improved technical, normative and sociocultural skills of health care providers and administrative staff at all levels

Results package subteams of the extended Strategic Objective Team are in the process of developing indicators at this level

IR2.2 Improved capacity of NGOs, communities, municipalities, and departments to plan, finance, administer, and sustain culturally acceptable health care services

Results package subteams of the extended Strategic Objective Team are in the process of developing indicators at this level

Intermediate Result (IR3): Timely, sustained support for implementation of relevant elements of Popular Participation and Administrative Decentralization laws

Baselines and targets will be developed for the policy indicators

Indicators

24. Number of USAID supported NGOs with signed agreements with National Health Secretariat, Prefectoral health Secretariat or a Municipal governments
25. Number of all health NGOs with signed agreements with NHS, PHS, or municipal governments
26. Percentage of USAID-funded NGOs, budget financed
27. Percentage of USAID-funded NGOs budget from local sources
28. Share of service delivery by private sector

IR3.1 Improved normative and coordinating capacity of health care system

(Results package subteams of the extended Strategic Objective Team are in the process of developing indicators at this level

IR3.2 Increased degree of financial sustainability of the health care system

(Results package subteams of the extended Strategic Objective Team are in the process of developing indicators at this level

IR3.3 Stronger political support and development of tools at the national level for more efficient implementation of decentralized participatory health system

(Results package subteams of the extended Strategic Objective Team are in the process of developing indicators at this level

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APPENDIX L

República de Bolivia
MDH - SNS

S.N.I.S.
INFORME MENSUAL DE ACTIVIDADES EN SALUD

DIDES

UBAGES | Establecimiento | Código Subsector | Mes | Año

ATENCION INTEGRAL AL MENOR DE 5 AÑOS

Control de Crecimiento y Desarrollo						Episodios de Diarrea Menores de 5 Años			Numero S.R.O Distribuidos	Casos de Neumonia	
A Niños Menores de Dos Años				A Niños de 2 a 4 Años		Plan de Tratamiento					
Consultas		Número de Niños Tendencia Ascendente				A	B	C			
Nuevas	Repetidas			Nueva	Repetida					Menor 1 Año	1 a 4 Años

(P.A.I.) MENORES DE 1 AÑO

VACUNACION	DOSIS INICIAL	ANTIPOLIO 1ra	2da	3ra	Ref.	D.P.T 1ra.	2da.	3ra.	B.C.G.
En Servicio									
Fuera del Servicio									

PAI 12 a 23 Meses

Sarampión	2 °. Ref. Antipolio	Ref. D.P.T	Esquema Completo

ESTADO NUTRICIONAL S.V.E.N.

Edad	Niños Superior A y B	Normal C	Leve D	Moderada E	Severa F	Niñas Superior A y B	Normal C	Leve D	Moderada E	Severa F
< 2 años										
2a-4 a 11m										

Vitamina "A" Administradas		
Niños de 9 meses - 4 años		Puerperas
1ra. Dosis	2da. Dosis	

ATENCION AL ESCOLAR

Número de Establecimientos Controlados	Numero de Escolares Controlados	Enjuagues con Fluor	Niños 1º Basico 1ra D.T.	2da D.T.

ATENCION INTEGRAL A LA MUJER

Control Pre-Natal				
Consultas Nuevas		Consultas Repetidas	Con 4 Controles	Embarazos de Alto Riesgo Detectados
Antes del 5º Mes	A Partir del 5º Mes			

Control de Post Parto
1ra. Consulta

Toxoide Tetánico	1ra. Dosis	2da Dosis	3ra Dosis	4ta Dosis	5ta Dosis

Nº de mujeres con Citologia (PAP) 25 a 59 años	Nº de Tabletas Sulfato Ferroso Entregadas a Embarazadas

PLANIFICACION FAMILIAR

Ciclos Pildoras Entregados			T de Cobre Insertadas			Condones Entregados			Depoprovera Inyectados			USUARIOS D.I.U.			PILDORAS			CONDONES			Depoprovera			METODOS NATURALES		ORIENTACION CONSEJERIA
N	R	C	N	R	C	N	R	C	N	R	C	N	R	C	N	R	C	N	R	C	N	R	C	N	C	

PARTO EN SERVICIO

	Partos Atendidos	Referidos	Totales Nacidos Vivos	Totales Nacidos Muertos	Nacidos con peso < 2500 gr Vivos	Nacidos con peso < 2500 gr Muertos	Muerte < a 7 Dias	Aborto Incompleto	Muerte Materna
Vaginal									
Cesárea									

PARTO DOMICILIARIO

Personal de Salud					Partera Capacitada			
Partos Atendidos	Nacidos Vivos	Nacidos Muertos	Embarazos Referidos	Partos Atendidos	Nacidos Vivos	Nacidos Muertos	Nacidos con peso < 2500 gr Vivos	Nacidos con peso < 2500 gr Muertos

CONSULTA EXTERNA

Edad	Nuevas	Repetidas	Referidas
Menores de 5 Años			
De 5 Años y Más			

Inyectables	Sueros	Curaciones

TUBERCULOSIS

Sexo	Sintomáticos Respiratorio	Formas Clinicas Pulmonar BK (+)	Pulmonar BK (-)	Extrapulmonar Meningitis	Extrapulmonar Otros
Masculino					
Femenino					

TUBERCULOSIS (Tratamiento)

Esquema de Tratamiento	Pacientes Incorporados en el Mes Nuevos	Reingresos	Transferencias Recibidas
7 Meses			
Otros Esquemas			

ENFERMEDADES DE TRANSMISION SEXUAL (E.T.S.)

Sexo	Sifilis Primaria	Secundaria	Congenita	Gonorrea	SIDA	Tricomoniasis	Candidiasis	Chancroide	Clamidias
Masculino									
Femenino									

RABIA

Perros Vacunados	Vacunacion Humana 1ra Dosis	7ma Dosis

FIEBRE AMARILLA

Numero de Dosis de Vacuna Antiamarilica

MALARIA

Numero de Localidades Rociadas	Numero de Casas Rociadas	Tratamientos Iniciados en el Mes	Tratamientos Terminados en el Mes

VISITAS DOMICILIARIAS

Seguimiento de Pacientes por Personal de Salud	
Embarazadas	Otros

RELACION CON LA COMUNIDAD

	Club de Madres	Comité de Salud	R.P.S.	O.T.B.	Otros
Nº Reuniones					
Nº Participantes					

ACTIVIDADES DE R.P.S. Y OTRO PERSONAL COMUNITARIO

Diarreas Atendidos	Referidos	Muertos	I.R.A. Atendidos	Referidos	Muertos	Embarazos Referidos	Muertes Maternas	Numero S.R.O Distribuidos

INTERNACION (SERVICIOS CON CAMAS)

Ingresos Espontáneos	Referidos	Egresos Alta Médica	Alta Solicitada	Alta Referida	Fallecidos Antes de 48 H.	Fallecidos Desp. de 48 H.	Causas de Egreso Menores de 5 Años Diarrea	Neumonia	Otros	Fallecidos Menores de 5 Años (Acompañar Informe) Diarrea	Neumonia	Otros

OCUPACION CAMAS

Dias Camas Ocupadas Maternidad	Ocupadas Otros	Disponibles

CIRUGIAS

Total Cirugias Medianas Mayores	Total Anestesia General

LABORATORIO

Resultado	Bacioscopia BK de Diagnóstico	Gota Gruesa P. Vivax	P. Falcip.	Mixto	Citologia Vaginal PAP	VIH Prueba Rápida	V.D.R.L.	Otros Exámenes	Numero de Transfusiones
Positivo									
Negativo									

ODONTOLOGIA

Consultas Nuevas	Consultas Repetidas	Exodoncias	Obturaciones	Aplicación de Fluor Menores de 5 años 1ra	2da.

SUPERVISIONES RECIBIDAS DE:

DIDES	UBAGES

INFORME REALIZADO POR: _____

CARGO: _____

BEST AVAILABLE COPY

República de Bolivia
MDH - SNS

S.N.I.S.
INFORME MENSUAL DE VIGILANCIA EPIDEMIOLOGICA

DIDES													
UBAGES								Establecimiento					
Urbano:		Rural:		Código Sub Sector		Mes:		Desde: Día:		Mes:		Hasta: Día:		Mes:	

CASOS NUEVOS	< - 1	1 - 4	5 - 14	15 - 49	50 y +
1. Caso Sospechoso de Sarampión					
2. Tosferina (Coqueluche)****					
3. Tétanos	Neonatal				
4. Difteria****					
5. Parálisis Flácida Aguda (Sospecha de Poliomielitis)****					
6. Sífilis					
7. Blenorragia (Gonorrea)					
8. SIDA****					
9. Malaria					
10. Fiebre Amarilla****					
11. Dengue****					
12. Diarreas (Excluye Cólera)					
13. Cólera****					
14. I.R.A. (Todas las formas)					
15. Tuberculosis Pulmonar (BK+)					
16. Lepra (Todas las formas)					
17. Rabia Humana****					
18. Rabia en perros					
19. Meningitis					
20. Leishmaniasis (Todas las formas)					
21. Accidentes Ofídicos					
22. Chagas					
23. Trastornos Mentales					
24. Trastornos por consumo de Drogas					
25.					
26.					
27.					
28.					
29.					
30.					
31.					
32.					

**** Notificación Inmediata Superior y a Epidemiologia Regional

Informe Elaborado por: .....

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República de Bolivia
MDH - SNS

S.N.I.S.
MODULO DE INFORMACION BASICA

Establecimiento: ..... Código Subsector: .....

UBAGES .....

Municipio ..... Provincia .....

Departamento .....

Dirección .....

Teléfono: ..... Fax: .....

Casilla:

1.- POBLACION DEL ESTABLECIMIENTO

GRUPOS ETAREOS	MASCULINO	FEMENINO	TOTAL
Menores de 1 año (< - 1)			
De 1 año			
De 2 a 4 años (2 a 4)			
De 5 a 14 años (5 a 14)			
De 15 a 49 años (15 a 49)			
Cincuenta y más años			
T O T A L			

Establecimientos a los que refiere (envía) pacientes:

INFORME REALIZADO POR: ..... CARGO: .....

FIRMA: ..... AÑO: .....

2.- LOCALIDADES O ZONAS DEL ESTABLECIMIENTO

Nombres de las Localidades (zonas) bajo su responsabilidad	Población TOTAL	Medio de Transporte Público	Distancia al Establec. de Salud en Km.	MODO DE ATENCION			INFESTACION POR VECTOR			Población Canina
				En el Establecimiento	Por Desplazamiento Regular	Por Campaña	Aedes Aegipty (F. Amarilla) Dengue)	Triatomas Vinchuca (Chagas)	Anófeles (Malaria)	

3.- CONTEXTO SOCIO ECONOMICO

Hábitos de Consumo de Alimentos en la Jurisdicción del Establecimiento:

Principales Actividades Económicas en la Jurisdicción del Establecimiento:

Medios de Comunicación Masiva Recepcionados:

Fenómenos Migratorios:

4.- SANEAMIENTO AMBIENTAL

Población Servida con Sistemas de Agua Potable: Nº ..... % .....

Población con Sistemas de Eliminación de Excretas: Nº ..... % .....

5.- RECURSOS FISICOS

Establecimientos Administrados por:

INFRAESTRUCTURA FISICA	NUMERO	INFRAESTRUCTURA FISICA	NUMERO
Nº Consultorios		Nº de Ambiente de Servicios General	
Nº Consultorios Odontológicos		Nº Camas (TOTAL)	
Nº Quirófanos		Nº Camas de Maternidad	
Nº de Salas de Hospitalización		Nº de Incubadoras	
Nº de Servicios Complementarios			
EQUIPAMIENTO	**NUMERO**	**EQUIPAMIENTO**	**NUMERO**
- Termo		- Microscopio	
- Caja Fría		- Estufa	
- Refrigerador		- Centrífuga	
- Congelador		- Centrífuga para Microhematocrito	
- Balanza para Niños		- Espectrofotómetro	
- Electroencefalógrafo		- Equipo de Computación	
- Electrocardiógrafo		- Impresora	
- Endoscopio		- Equipo de Radiocomunicación	
- Ecografo		- VEHICULOS	
- Rayos "X"		- Bicicleta	
- Rayos "X" (Odontología)		- Motocicleta	
- Equipo Odontológico		- Auto	
- Aspirador		- Jeep	
- Autoclave		- Camioneta	
- Pupinel		- Ambulancia	
- Ebullidores			

6.- RECURSOS HUMANOS

Secretaría Regional de:

	Total Personal	Médicos Generales		Médicos Especialistas		Odontólogos		Enfer. meras	Traba. jadora Social	Auxi- liar Enfer- mería	Otro Perso- nal Auxi- liar	Nutri- cionis- tas Dietis- tas
		MT	TC	MT	TC	MT	TC					
Con Item de la SNS												
Sin Item de la SNS												

Técnicos						Personal Administrativo			Personal de Servicio		Personal de Campo			Pers. sin Espe- cificar
Laboratorio		Rayos "X"	Fisio- terapia	Estadis- ticos	Otros	Profe- siona- les	Secre- tarias	Otros Adm.	Chofe- res	Otros Serv.	Vecto- res	San. Básí- co	Ali- men- tos	

MT = Medio Tiempo; TC = Tiempo Completo

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7.- ESTABLECIMIENTOS EDUCATIVOS

NOMBRE DEL ESTABLECIMIENTO	NUMERO DE ALUMNOS POR CICLOS					TOTAL
	Pre-Kinder	Kinder	Básico	Intermedio	Medio	

8.- INSTITUCIONES QUE TRABAJAN EN SALUD

NOMBRE	TIPO	DIRECCION	RESPONSABLE

9.- ORGANIZACIONES COMUNITARIAS

NOMBRE DE LA ORGANIZACION	NUMERO DE MIEMBROS	LUGAR DE REUNION	NOMBRE DEL RESPONSABLE

10.- CROQUIS DEL ESTABLECIMIENTO Y SU AMBITO DE INFLUENCIA