

UNCLASSIFIED

UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
AGENCY FOR INTERNATIONAL DEVELOPMENT
Washington, D. C. 20523

BOLIVIA

PROJECT PAPER

SELF-FINANCING PRIMARY HEALTH CARE

AID/LAC/P-172

Project Number: 511-0569

UNCLASSIFIED

PVAP/157

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT DATA SHEET

TRANSACTION CODE

A = Add
 C = Change
 D = Delete

Amendment Number

PROJECT CODE

2. COUNTRY/ENTITY
BOLIVIA

3. PROJECT NUMBER

511-0569

4. BUREAU/OFFICE

IA

05

5. PROJECT TITLE (maximum 40 characters)

SELF-FINANCING PRIMARY HEALTH CARE

6. PROJECT ASSISTANCE COMPLETION DATE (PACD)

MM DD YY
08 23 86

7. ESTIMATED DATE OF OBLIGATION

(Under "B" below, enter 1, 2, 3, or 4)

A. Initial FY 83

B. Quarter 4

C. Final FY 86

8. COSTS (\$000 OR EQUIVALENT \$1 =)

A. FUNDING SOURCE	FIRST FY			LIFE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total						
(Grant)	(150)	(50)	(200)	(815)	(285)	(1,100)
(Loan)	()	()	()	()	()	()
Other U.S.						
1. Title III		20	20		160	160
2.						
Host Country		0	0		495	495
Other Donor(s)						
TOTALS	150	70	220	815	940	1,755

9. SCHEDULE OF AID FUNDING (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE		D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
(1) H	533	520				200		1,100	
(2)									
(3)									
(4)									
TOTALS						200		1,100	

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each)

11. SECONDARY PURPOSE CODE

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)

A. Code R/M BS COOP DEL
E. Amount

13. PROJECT PURPOSE (maximum 480 characters)

To establish a pilot self-financing primary health care delivery system, including a management support unit to service target populations in geographic areas of Santa Cruz influenced by three existing cooperatives - Mineros, San Julián, and La Merced.

14. SCHEDULED EVALUATIONS

Interim: MM YY MM YY Final MM YY
05 85 08 86

15. SOURCE/ORIGIN OF GOODS AND SERVICES

000 941 Local Other (Specify) 935

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a _____ page PP Amendment.)

17. APPROVED BY	Signature <i>David Cohen</i>	18. DATE DOCUMENT RECEIVED IN AID/W. OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION MM DD YY
	Title David A. Cohen Acting Mission Director	
	Date Signed MM DD YY 08 19 83	

PROJECT AUTHORIZATION

NAME OF COUNTRY: BOLIVIA
NAME OF PROJECT: SELF FINANCING HEALTH CARE
NUMBER OF PROJECT: 511-0569

1. Pursuant to Section 104 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Self Financing Health Care Project for Bolivia involving planned obligation of not to exceed \$1.1 million in grant funds over a three-year period from date of authorization subject to the availability of funds in accordance with the A.I.D. OYB/allotment process, to help in financing foreign exchange and local currency costs for the project. The planned life-of-project is three years from the date of initial obligation.

2. The Project consists of establishing a pilot self-financing primary health care delivery system including a management support unit to provide services to urban and rural poor in geographic areas influenced by three existing cooperatives - Central de Cooperativa Agropecuarios Mineros, Cooperativa Multiactiva San Julián, and Cooperativa Multiactiva La Merced.

3. The Cooperative Agreement which may be negotiated and executed by the officer to whom such authority is delegated in accordance with A.I.D. regulations and delegations of authority shall be subject to the following essential terms and covenants and major conditions, together with such other terms and conditions as A.I.D. may deem appropriate.

4. Commodities financed by A.I.D. under the project shall have their source and origin in Bolivia or the United States, except as A.I.D. may otherwise agree in writing. Except for ocean shipping, the suppliers of commodities or services shall have Bolivia or the United States as their place of nationality, except as A.I.D. may otherwise agree in writing. Ocean shipping financed by A.I.D. under the project shall, except as A.I.D. may otherwise agree in writing, be financed only on flag vessels of the United States.

5. Conditions Precedent

A. Disbursement for Project Management

Prior to any disbursement, or the issuance of any commitment documents under the Cooperative Agreement, to finance project

management, the grantee under the Cooperative Agreement ("La Merced") shall furnish in form and substance satisfactory to A.I.D.:

(i) Evidence of the establishment of a Health Subcommittee of the Board of Directors of La Merced who will become the group of Board members responsible for assuring that the project meets the terms of the Cooperative Agreement;

(ii) plans (including organization and staffing charts) to establish within La Merced a Management Support Unit (MSU);

(iii) evidence of the establishment of an Advisory Board for the project consisting of representatives from the participating cooperatives; and

(iv) an agreement between La Merced and each of the other participating cooperatives (Mineros and San Julián) describing the respective responsibilities of each cooperative under the project.

B. Disbursement for the Health Care Delivery System

Prior to any disbursement, or the issuance of any commitment documents under the Cooperative Agreement, to finance the health care delivery system (except for technical assistance), La Merced shall furnish in form and substance satisfactory to A.I.D.:

(i) a project implementation plan showing the execution of all the steps necessary to implement the project;

(ii) a technical assistance plan of all long and short-term assistance required under the project, the work to be performed and a work schedule;

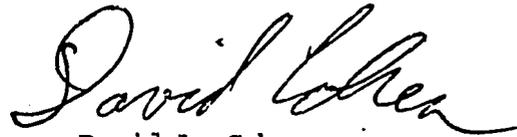
(iii) submit to A.I.D. for its review and approval a written Letter of Agreement between La Merced and FENACRE on their respective roles and implementation schedule in the execution of this project; and

(iv) a decree from the Government of Bolivia exonerating all commodities and technical services procured under the contract from Bolivian taxation.

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C. Covenants

La Merced shall covenant to assure that MSU coordinates to the maximum extent practicable with the Ministry of Social Welfare and Public Health and other organizations providing health services in the project area to define specific roles and responsibilities.



David A. Cohen
Acting Mission Director

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LIST OF ACRONYMS

1. MSU - Management Support Unit
2. MSW/PH - Ministry of Social Welfare and Public Health
3. GOB - Government of Bolivia
4. MCC - Mennonite Central Committee
5. PVO - Private Voluntary Organization
6. CIDA - Canadian International Development Agency
7. FIDES - Consolidation of Colonization Project
8. PRICOR - Primary Health Care Operations Research Project
9. FENACRE - National Federation of Savings and Loan Cooperatives
10. MACA - Bolivian Ministry of Agriculture and Campesino Affairs
11. WPI - Wholesale Price Index
12. CPI - Consumer Price Index
13. INC - National Colonization Institute
14. HHR - Office of Health and Human Resources (USAID/Bolivia)
15. PD&I - Office of Project Development and Implementation (USAID/Bolivia)
16. DP - Office of Development Programs (USAID/Bolivia)

SELF-FINANCING HEALTH CARE

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I. SUMMARY AND RECOMMENDATIONS

A. Summary

This project will improve the delivery of primary health care services to rural and semi-urban target populations in areas of the Department of Santa Cruz influenced by three existing cooperatives: (1) San Julián, (2) Mineros and (3) La Merced. The realization of this objective is based on a strategy through which the health services provided by the system will be paid for by the recipients. The proceeds generated from the provision of services will be returned to the system to completely underwrite its operating costs.

The project consists of two integrally related components: (1) a health care delivery system and (2) a management support unit. The delivery system will be modeled on primary health care strategies developed over the past two decades. It will be a hierarchical arrangement of three related tiers (Levels I, II and III) of health service outlets. Each tier will provide a combination of curative and preventive measures to address, with increased degrees of comprehensiveness, the most critical health problems of the beneficiary groups. Patients, whose conditions cannot be adequately treated at a lower level, will be referred to the next stage of the hierarchy. In line with the self-financing strategy, the various levels of health care will be treated as cost centers capable of generating income to offset expenses. Fees will be charged for the various types of services, and the objective will be to structure the sources of income so that the service delivery units will be self-supporting.

The Management Support Unit (MSU) will be established in the early stages of project implementation. Initially, the MSU will be housed administratively within the La Merced Cooperative. However, it is anticipated that the Unit will eventually become an economically and legally independent entity.

The MSU will have responsibility for the overall management of the project. Organizationally, it will consist of two main divisions - the Health Services Division will define the primary health care interventions that will be offered at each of the system's three levels and develop standards for their delivery. Specific duties will include recruitment of delivery system personnel, development and implementation of staff training and orientation modules, and design of preventive medicine (e.g. health education) programs. The Administration Division will design, implement and monitor the support functions needed for the timely delivery of health care services. Particular areas of concern will be personnel management, financial management, operations research and general services.

Initially, the MSU will be financed with A.I.D. grant funds. However, by the end of the project, it is expected that the Unit will be fully supported with funds generated by the delivery of health services.

As the Cooperative Agreement will be signed with La Merced, the Co-op's Board of Directors will be legally responsible for the project and will provide overall policy guidance. On matters of project implementation, this Board will be assisted by a second group, an Advisory Board made up of representatives from the three participating cooperatives, which, in conjunction with members of the MSU staff, will take under advisement key issues such as types of services to be offered by geographic region, proposed fee schedules and methods of payment. A third group, a Committee of Voluntary Advisors, made up of Bolivian and international health professionals residing in the country, will provide assistance on technical matters. Finally, the three participating cooperatives (Mineros, San Julián and La Merced) will play a key role in using their organizational structures and presence among the intended beneficiaries to recruit participants to the program.

The project beneficiaries will be approximately 37,000 rural and semi-urban poor residing in the areas influenced by the three participating cooperatives. The rural dwellers (approximately 15,000 people) are immigrants from the highland regions of Bolivia, who earn their living principally through slash and burn agriculture. The semi-urban participants, most of whom, also are immigrants from rural highland areas and the Department of Santa Cruz, are engaged in a variety of economic pursuits ranging from menial service jobs to lower level blue collar employees and self-employed endeavors. They will receive the benefits of improved primary health care through the delivery system that will be installed under the project.

The project will last three years. Its total cost will be \$1,755 million. The A.I.D. contribution will be \$1.1 million in grant funds. This will be complemented by \$160,000 in Title III resources and \$495,000 host country contribution that will be generated through the provision of health services.

Figure No. 1

SUMMARY PROJECT BUDGET
(US\$)

	A.I.D.			Host Country			Grand Total
	FX	Grant LC	Total	LC	Title III LC	Total	
1. Technical Assistance	347,000		347,000				347,000
2. Training	21,000		21,000		60,730	60,730	81,730
3. Operating & development costs		245,112	245,112	453,890	89,236	543,126	788,238
4. Commodities	372,713	14,175	386,888	40,912	8,550	49,462	436,350
	740,713	259,287	1,000,000	494,802	158,516	653,318	1,653,318
Contingency/ Inflation	74,071	25,929	100,000		1,484	1,484	101,484
	814,784	285,216	1,100,000	494,802	160,000	654,802	1,754,802

Notes: (1) Host Country counterpart is calculated at Bolivian Pesos (\$b.) 196 to one dollar, which is the official rate for obligations as established by Government Decree and Bolivian Central Bank regulations.

(2) Besides the AID grant contribution, an additional US 138,856 will be furnished by PRICOR through and A.I.D. centrally funded project.

B. Recommendations

The USAID/Bolivia project committee has determined that the proposed activities are technically, administratively and financially feasible within the three year life-of-project period. The specific analyses carried out during the project design did not identify any serious obstacles to project implementation and indicated that the

project can achieve its purpose. Special attention was paid to the self-financing and beneficiary acceptance issues identified in the PID review cable (see Annex L). The project paper was reviewed by the USAID/Bolivia Project Committee, which determined that all issues had been satisfactorily addressed. Both the Project Development Team and the Reviewing and Approval Committee have concluded that the project is technically, economically, socially, administratively, environmentally and financially sound and recommend that the project be approved and that an A.I.D. grant for 1.1 million be authorized.

C. Project Development Team

1. The Project Development Team was composed of:

Michael H. Lofstron, Project Development Officer
Lee R. Hougen, Health Development and Human Resources Officer
Katherine Jones-Patron, Assistant Health and Human Resources
William G. Kaschak, Project Development Officer
Sonia Aranibar, Assistant Program Officer
Jaime Mendoza, Program Assistant
Oscar Sarmiento, Procurement Specialist
Raúl Pinto, Financial Analyst
Luis Montero, Financial Analyst
Oscar Antezana, Program Economist

2. The following consultants and AID/W personnel assisted in the preparation of the project paper:

Peter Taylor, FIDES/San Julián Advisor
Harry Peacock, FIDES Advisor
Robert Le Bow, Health Planning Specialist
Ivo Kraljevich, Anthropologist
Larry Bartlett, Health Economist
Peter Cross, Health Economist/Financial Analyst

3. The following GOB and Bolivian private sector personnel played key roles in the development of the project:

Adalberto Terceros Banzer, President La Merced Cooperative
Ernesto Rodriguez, President San Julián Cooperative
Dudley Conneely, Cooperative Advisor.
Florantino Lutino H., President of Administrative Committee,
Mineros Cooperative

4. The project was reviewed by the following USAID/Bolivia Officers:

Thomas Geiger, Regional Legal Advisor
Robert Asselin, Jr., Chief, Project Development and Implementation Office
Rafael Zelaya, Mission Controller (Acting)
Roberto León de Vivero, Mission Program Officer

5. The project was approved and authorized by:

David A. Cohen, Acting Mission Director

D. Issues

1. Project Reliance on Cooperatives to Supply a Membership Base Sufficient to Allow the Health Care Delivery System to Become Self-Sufficient May be too Restrictive

The co-ops will be used principally as a vehicle to access participants of the project; the financial contribution that they will make to project activities will be minimal. Further, while participation through cooperatives will be encouraged (e.g. through reduced prices on costs for services) non-members also will be eligible to use the system. It is estimated that minimally 10 percent of the users of services will be non-cooperative members. In sum, the product to be offered (i.e. provision of health care and pharmaceuticals) will be efficient, affordable and extremely attractive to the population at large in the geographic target areas.

2. This Project may not Generate the Resources Necessary to Address the Need to Provide Preventive Health Care

Preventive health care is a part of the entire package of services offered by this project. It has already been demonstrated that the projected target population will have the critical mass of participants necessary to self-finance the delivery of primary health care services. Hence, sufficient resources will be generated to finance the preventive component. In addition, it is expected that revenues generated from the sale of pharmaceuticals and services which are in high demand will offset the costs of preventive health care interventions.

3. It may not be Appropriate for a Primary Health Care Project to Include Secondary (i.e. Level III Limited Curative) Services
A Corollary Issue is How Extensive Primary Health Care Services Need to be to Generate Sufficient Revenue to Make them Self-Financing

In the locales to be affected by this project, limited Level

III services are already being provided to the La Merced and San Julián cooperatives. Projected project utilization rates indicate that the entire package of services will operate at a profit and that the inclusion of additional curative services will not be financially detrimental to the overall delivery system. Accordingly, there is sufficient justification, based on projected utilization rates, to merit incorporation of Level III services. Finally, it is the Mission's judgement that the inclusion of limited curative services is a strong enticement to broad-scale participation of the target group.

4. The Proposed Project may Duplicate the Delivery of Health Services already Furnished by the Ministry of Social Welfare and Public Health (MSW/PH)

The proposed project's delivery scheme is based on the existing government strategy of regionalization and a referral system of health care services. As part of this approach, the project will focus on the lowest three levels of services which have been the hardest for the MSW/PH to address due to a lack of funds and infrastructure.

The MSW/PH has generally not maintained strong community level programs, and Ministry services often have proven to be unreliable. This is supported by data which indicate that most health services currently received by the target population are provided by private (i.e. non-governmental) entities.

The proposed project will provide self-financed primary health care services to communities which now receive inadequate MSW/PH attention. Wherever possible, the project will use existing health facilities (particularly at Levels II and III) to minimize duplication of scarce resources.

5. The Project's Strategy Involves the Utilization of Existing Facilities to Supply Primary Health Care Services to Beneficiaries at Levels II and III. Arrangements for Identification and Selection of these Facilities have not as yet been Made, and it is not Clear if Budgeted Amounts for Renovation of these Facilities are Adequate.

Although final arrangements have not been made for selecting and upgrading existing facilities for Levels II and III, discussions were held with cooperative leaders who expressed interest in providing facilities as a means of better serving their current membership, and in attracting other participants into the health care program as well. Additionally, by improving the delivery facilities for the health care program, co-op will benefit through increased participation of health program members in other services offered by the co-op. The use of Title III monies to support the selection and renovation of Level II and III facilities, is part of the project's operational budget.

II. PROJECT BACKGROUND

A. Country Setting

1. Economic

Bolivia is the fifth largest country in South America in terms of land area, has a population of only 6 million, and possesses an abundance of natural resources. Minerals, natural gas and petroleum form the industrial base that has been the mainstay of the economy. Despite this intrinsic wealth, the country is beset with economic problems. The 1980 per capita GNP of \$580 is the lowest in South America. Over 64 percent of the population lives in conditions below the poverty line, estimated at \$220 per capita, and the lowest 60 percent of the economically productive population receives only 13 percent of the national income. Recently, the drastically declining purchasing power of the peso has compounded the economic problems of the country. In dollar terms, many people are earning less than 20 percent of the amount they were earning at the outset of 1982*.

2. Health

The health status of the Bolivian population, especially the rural and semi-urban poor, is among the worst in Latin America. The seriousness of the situation is revealed by comparing key health indicators (crude death rate, life expectancy and infant mortality) for Columbia, a moderately developed Latin American country, and Bolivia. In 1982, Columbia registered a crude death rate of 8/1000, a life expectancy of 62 years, and an infant mortality rate of 56 per 1,000 live births.** By comparison, based on projection from the 1976 census, Bolivia has a crude death rate of 17/1,000, a life expectancy of 48 years, and an infant mortality rate of 166 per 1,000 live births. In rural Bolivia the infant mortality rate averaged 176/1,000, ranging from a 204 in the highland valley regions to 135/1,000 in the lowland plains. Moreover, while reliable data are not available, it is generally recognized that the incidence of debilitating respiratory, gastrointestinal and parasitic diseases is extremely high.

In sum, Bolivia's health problems are extremely severe, even in the context of developing countries, and accordingly, adversely affect the population as a whole, and especially the rural and semi-urban poor. The limited access to primary health care of these segments of the population exacerbates the frequency and seriousness of diseases mentioned above and diminishes productivity. These elevated mortality

* Further details of the economic crisis and its impact on the society are available in the USAID/Bolivia FY 1985 CDSS.

** Population Reference Bureau, Inc. - 1982 World Population Data Sheet.

rates reflect that major segments of the country's population (the rural and urban poor) suffer severely substandard living levels characterized by low income, deficient housing, illiteracy, malnutrition and inadequate medical attention.

The majority of the health problems can be solved through the implementation of known public health interventions, such as vaccination campaigns, health education programs, environmental sanitation improvements, and maternal and child health services. These public health measures, however, are not widely available in Bolivia. Although 67 percent of the population is rural, the Government of Bolivia's (GOB) health system concentrates approximately 80 percent of its resources in urban areas. In addition, while the MSW/PH traditionally has been assigned the responsibility of administering preventive medicine programs in the rural areas, for a series of reasons (e.g. budget deficits, shortage of skilled personnel, a preference for providing curative services in strictly urban areas, and poor management), the Ministry has never been able to structure a system that adequately has provided these services.

A. Project Setting

1. General

The project area is located in the Department of Santa Cruz, in Bolivia's eastern lowlands and includes those regions serviced by the rural agricultural cooperatives in San Julián and Mineros, as well as the semi-urban surrounding the city of Santa Cruz, where the La Merced Cooperative has its main office and most of its members. The function and membership of these three cooperatives are described more fully in the Institutional Analysis (Section V.C.).

Both Mineros and San Julián were settled by colonists who migrated to the Santa Cruz lowlands from other regions of Bolivia. The Mineros area, located about 100 Kms. north of the city of Santa Cruz between the Grand and Pirafí rivers, was settled spontaneously and logged since the mid-1950's. San Julián is located approximately 180 Kms. northeast of Santa Cruz, between the Grand River to the southwest and the San Julián River to the northeast. The San Julián colonization area was settled in stages from the late 1960's, through the 70's to the present. Both San Julián and Mineros are tropical plains, partially forested with virgin timber. Temperatures average 80°F annually with little seasonal variation. Humidity is high and rainfall heavy in the summer months (November through April), causes periodic flooding.

Roads have been constructed throughout the project areas, providing direct access to the capital of Santa Cruz. However, road and bridge maintenance is difficult, and, during flood season, transportation

to and from San Julián and Mineros is recurrently interrupted. Mineros and San Julián have radio communication with Santa Cruz, and Mineros has some telephone service. Public transportation from Santa Cruz consists of trucks, intermittent bus service, and contracted vehicles. During the wet season, walking is the only means of transportation to some localities.

Santa Cruz is a modern city boasting a unique circular road system. Nearby, petroleum and other new industries have drawn people from all over Bolivia. Because it is growing at a rate of over 7 percent per year, new structures dominate the city. The population of the city of Santa Cruz is approximately 310,000*, but the city and the surrounding area include half the population of the entire plains region, bringing the total urban and semi-urban area closer to 600,000. A map of the project area appears below (see Figure 2).

2. Health

In the Santa Cruz area, health problems are somewhat different from those in the rest of the country. The 1977 Montero Health Survey of rural dwellers in the Department of Santa Cruz, a population comparable to the projected beneficiary groups of this project, revealed an infant mortality rate of 113.5/1,000 and child mortality rates of 18.3 for the 1-4 age group, and 2.9 for the 5-14 age group. Both the Montero Survey and more recent studies in the project area show that the most common health problems encountered are parasitosis (e.g. malaria, hookworm, ascaris), tuberculosis and other respiratory infections, gastrointestinal disturbances, anemia, pregnancy related conditions, skin infections and trauma. The latter may be attributable to farm related accidents and farming with inadequate tools or tools and methods unfamiliar to migrants from the highlands. The average number of disability days per person under 25 is estimated at 22.62. This figure increases with age to 30 days in the 25-44 age group and 68 days in the group 45 years and over.

Families in the project area typically use a variety of health services. Existing health providers are private physicians, limited numbers of MSW/PH personnel, traditional healers, private religious hospitals and clinics and pharmacies. Physicians, characteristically, move in and out of the project area, often for no more than their one-year government social service obligation. With limited diagnostic equipment or facilities, rural physicians generally rely on empirical knowledge and symptomatic diagnoses, and prescribe medicines which may or may not be effective. Ministry of Health facilities provide some services, but are usually understaffed and undersupplied.

* Ministry of Planning and Coordination projection based on 1976 census.

However, MSW/PH malaria, yellow fever and tuberculosis control programs are more successful. The region is serviced by several clinics and hospitals run by religious orders. Owing to the perceived dedication of the staff, reasonably reliable service, and adequate supplies of medicines, these health outlets have been well received by local residents.

3. Beneficiary Description

The project will include the direct participation of approximately 37,000 persons. These beneficiaries are made up of two distinct groups, rural farmers (about 15,000) living in the areas influenced by the San Julián and Mineros cooperatives, and poor semi-urban dwellers (approximately 22,000) residing in the marginal neighborhoods surrounding the city of Santa Cruz and serviced by the La Merced Cooperative.

a) Rural Beneficiaries

Virtually all of the residents in the Mineros and San Julián areas are migrants from other regions of Bolivia. The large majority, 90 percent, come from the neighboring highland Departments of Potosí and Chuquisaca and the upper valley area of the Department of Cochabamba. This migration began during the 1952 Agrarian Reform and has gradually gathered momentum with the largest number of people arriving in the last 10-year period.

At the level of the individual family, the migration takes place in stages. Typically, the husband will make the move first in search of a homestead. Once the homestead is established, the husband is joined by the remainder of the family and the process begins of clearing and preparing the land for planting. At the outset, the families rarely abandon their holdings in their native communities. Therefore, a second process of periodic migration, to and from the colonization area, begins coinciding with respective periods of planting and harvesting in the highlands and lowlands. For some families, the seasonal migration to and from the highlands continues indefinitely. For others, it ceases only when they are assured that the lowland holding is capable of providing sufficient economic support. Still others find lowland farming to be non-viable and, after a period of time, move on to a new area.

The constant movement of significant portions of the population contributes to an extremely unstable social structure in both areas. The basic social and economic unit is the nuclear family. This is the group within which social exchanges take place, psychological support is given and standards for prescribed and prohibited behavior are established. In the context of economic activity, each member who is able shares the workload. The physically more demanding tasks, such

as land clearing and land preparation, are carried out by the adult males. Women assist with the field work and undertake a full complement of domestic chores. Older children help with field tasks and also are often assigned the responsibility of tending the family's livestock.

Beyond the family, social structures are extremely fragile, a fact that is attributable to the unstable nature of the population. Social and economic relationships are characterized by flexible networks of individuals who temporarily coalesce to achieve a given objective. The coalitions tend to be among people from a specific geographic area (e.g. a rural hamlet or a town) and hence have a certain local identity. The objectives of these coalitions are tangible, and their realization is anticipated within a relatively short period. Examples of such groupings are committees to find support to carry out a civic task, such as the construction or equipping of a health post, or the repair of a road, alliances among neighboring farmers to seek technical assistance to solve a particular problem, arrangements between a particular grower and a middleman for the sale of produce, and membership in cooperative for a specific purpose (e.g. gain access to credit or the use of land clearing machinery). In all cases, the relationship is entered into to achieve specific objectives in which the individual has a vested interest. The relationships tend to be temporary, terminating when the purpose has been achieved. Most importantly, there are no continuing obligations among the parties involved.

A slight variation from this trend is found in San Julián. Project design related field research revealed the beginning of a sense of community among the area's residents. For example, some informants made reference to becoming permanent residents, others indicated an interest in running for local office, and there was a general concern about improving the quality of social services (e.g. health, education and roads). Collectively, these attitudes suggested an identification with San Julián as a community. While the existence of such attitudes was in part attributable to the efforts of Bolivian and international professional developers, they (the attitudes) are incipient, and will require considerable cultivation before solidifying into a meaningful base for communal development efforts.

The behavior of the residents in Mineros and San Julián when confronted by illness is dominated by pragmatism - the closest source of cure at the lowest cost is the first choice. Typically, the treatment process passes through a series of stages. The first stage is self-treatment in the home with readily available remedies, traditional herbs and teas often brought from native highland villages and modern items (e.g. aspirins and other pharmaceuticals) that have a wide distribution in rural households. If the illness persists, the advice of a "neighbor" known for understanding problems of health and illness is sought. This is especially the case in isolated localities. The next stage is a visit to a pharmacy to receive advice concerning possible

treatment(s) as well as to purchase the appropriate remedies, usually a stronger drug.

If the affliction continues, modern professional assistance is sought - first a nurse and then a doctor. The physician is consulted only if the previous steps have not produced results. Often, when the process reaches this point, the illness has been critical from the outset, or was a minor ailment that had progressed to a serious stage for the lack of timely, qualified treatment. The decision as to which physician will be consulted depends on the reputation of the physician with little regard to distance or cost.

Throughout the process, norms of modesty, as they apply to preference for treatment by a person of the same sex, are of minor importance. They do come into play in cases of gender specific conditions (pregnancy) or illnesses. However, these norms are waived when the condition is critical.

In addition to this system, a special type of healer is sought for particular afflictions. Diseases that, in the small farmers' view, fall into the category of emotional or nervous disorders are considered to be within the area of expertise of a curandero (traditional health curer). Distance and cost for the consultation with the traditional curer are not important if the illness is judged to be sufficiently serious.

Normally, payment is made in cash, on a fee-for-service basis when the encounter is completed. In exceptional cases (e.g. close friendship between a client and a pharmacist or an expensive encounter such as major surgery) allowances for deferred payment are made.

b) Semi-Urban Beneficiaries

The semi-urban beneficiaries are poor and lower middle class people residing in marginal neighborhoods on the periphery of the city of Santa Cruz. The wide majority have migrated to Santa Cruz in the last 20 years from rural areas of Chuquisaca, Potosí and the Department of Santa Cruz. While living at the fringe of a modern city they have not completely adopted the values and rhythm of the urban settings. In most instances, strong ties (familiar, economic, ideological and emotional) are retained with their natal villages. In effect, they are individuals with a stake in two distinct sectors of society (urban and rural), hence their semi-urban classification.

In terms of residence patterns, these beneficiaries are grouped into loosely structured neighborhoods. Similar to their rural colleagues, the nuclear family is the most important social structure. While there are some ties of kinship among individual

households, the sense of community in these neighborhoods is extremely weak. Most of the migrants continue to identify with their place of birth, rather than with the neighborhood in which they live. In general, social relationships are governed by the limited obligation, loose network type of alliance that dominates interactions in the rural area.

Economic activity runs a gamut of occupations from a variety of tertiary service occupations (e.g. taxi drivers, domestic employees, waiters) to low level blue collar jobs and small scale artisans and entrepreneurs). In many instances, these quasi urban type occupations are combined with small scale farming, and, in almost all cases, there is more than one source of income per household. Reported monthly earnings range from \$b. 6,000 to \$b. 64,000*. However, the wide majority are under \$b. 20,000 - a figure which compares unfavorably with the \$b. 17,500 monthly minimum wage.

The practices that the semi-urban dweller uses for procuring health services is slightly different from that of his rural counterpart. If self-treatment does not produce a cure, there is a tendency to go directly to a physician. Undoubtedly, living in an urban setting with an increased awareness of modern medicine and a relatively greater availability of physicians are key contributing factors to this trend. However, regardless of the type of health provider selected, the main criterion for choosing medical services is based on previous experience with or referral to a health worker who has been effective. The sex and the category (e.g. physician, nurse, curandero) of the health provider are secondary factors in the selection process. Ability to cure is judged as critical.

The preferred payment system for health care is identical to that of the rural sector, i.e. Fee-for-services when the health encounter occurs. Moreover, there is a preference for health services which offer a complete package in one location, and the availability of pharmaceuticals is viewed as essential to any primary care system.

c) Other Health Activities in the Santa Cruz Region

The Catholic Church supports several types of health programs in the Department of Santa Cruz: 13 dispensaries, 5 health posts, 9 hospitals and one promoter training program. Most of the facilities are owned by the Ministry of Health, but nuns or priests act as administrators and, in some cases, provide clinical and/or supervisory services. Salaries of Bolivian clinical staff are paid by the Government and occasionally, hospital feeding costs may also be covered by special agreements with the GOB. Limited supplies and equipment for these facilities are usually secured through donations or, in the case of hospitals, revenues

* \$b. 196 = US\$ 1

generated from fees-for-services. Although the Church traditionally has been successful in obtaining an adequate supply of medicines at reasonable rates, the current economic crisis is seriously threatening its ability to continue to do so.

The Mennonite Central Committee (MCC), a U.S. Private Voluntary Organization (PVO), under an agreement with the MSW/PH, works in the provinces of Ibañez, Warnes, Sara and Ichilo in the Department of Santa Cruz. Currently, they have 12-15 health workers who concentrate their efforts on community education, nutrition, promoter training and some preventive medicine. It is expected that the MCC will participate with the project by providing technical assistance and training of health personnel.

In the City of Santa Cruz, the Canadian Baptists operate an eight-bed hospital, staffed by a physician, a graduate nurse, five auxiliary nurses and one public health nurse. The Canadian Baptist Church and the Canadian International Development Agency (CIDA) provide funds for the health activities in Bolivia. The Canadian Baptists have agreements with the Ministry of Health at the national and regional level.

Currently in the San Julián colonization area, some nurses and promoters trained by the A.I.D.-financed Consolidation of Colonization project (FIDES) are working in makeshift health posts at the community level. The FIDES project will terminate prior to the beginning of this proposed effort, leaving these health personnel with no support for their activities. It is anticipated that some of the FIDES health delivery personnel will be incorporated into this project.

d) Conformity with CDSS

The USAID/Bolivia long-term strategy supports the fundamental goal of promoting economic growth with equity to achieve an improved standard of living for Bolivia's poor. The strategy represents a significant change in direction from A.I.D.'s previous nationwide approach to a more focused effort designed to accelerate socio-economic growth and development in a specific geographic region - the La Paz-Cochabamba-Santa Cruz Corridor. The Corridor was selected for program concentration, to a large extent, because of its growth potential, which, compared to the other regions of Bolivia, can be more easily developed due to the existence of a nascent marketing and infrastructure base, as well as other favorable development factors (e.g. available land and water resources, adequate soils and climate, and a skilled and relatively progressive labor force). These factors offer promising investment opportunities to the private sector, a principal focus of USAID/Bolivia's long-term strategy for the period FY 1984-1988. In sum, the population of the Corridor is most able to take advantage of financial and technical assistance to move toward improving agricultural practices and toward

creating and strengthening small agribusiness, which in turn, will stimulate new demand for agricultural products and increased employment.

In order to succeed, USAID/Bolivia's long-term strategy which emphasizes agro-industry, marketing services and export promotion, must rely upon an increased level of farm productivity and production. In this context, the Self-Financing Primary Health Care Project aims at improving the health of agricultural and semi-urban workers in order to increase the annual number of productive work days and productivity by establishing self-financing primary health care systems in three cooperatives in the Department of Santa Cruz. The project supports the A.I.D. Health Policy Paper's emphasis on delivering a discrete set of effective primary health interventions, developing private logistics and distribution mechanisms as alternatives to non-existent or inefficient public sector channels, and on encouraging private contributions for health services in the form of fee-for-service and cooperative payments. The project also supports the Agency's Recurrent Costs Policy by assisting the GOB to reduce the recurrent cost burden related to the delivery of primary health care services. This is particularly relevant given the MSW/PH's inability to cover operating costs other than salaries, such as medicinal supplies, equipment, maintenance and operation costs. The design of the project, therefore, makes use of three main concepts: (1) emphasis on primary health care delivery, where the focus will be on preventive services and the use of community based health workers supervised by a professional staff, (2) minimum new infrastructure requirements, where the infrastructure to be constructed for diagnostic services (e.g. laboratory facilities) will be limited, and make maximum use of existing facilities and institutions, and (3) self-help mechanisms, where health services to be offered must be fully integrated into the sponsoring cooperatives, address major health problems faced by cooperative members, and financed by the membership. The use of these concepts will require that the three cooperative health programs deal initially with the most basic services and that they be expanded over time in proportion to the cooperatives' ability to finance more extensive services. Based on the lessons learned from initial implementation, USAID/Bolivia's long-term strategy contemplates the replication of the self-financing primary health care delivery systems in the Departments of La Paz, Cochabamba and Santa Cruz during the FY 1985-1987 period. Working primarily through private institutions, the integrated approach of the initial FY 1983 Self-Financing Primary Health Care Project will be implemented through a follow-on FY 1985 Private Sector Health Care System Project.

In accordance with the Mission CDSS, this project will contribute to enlarging the role of the private sector in the improvement of the health status of the semi-urban and rural population in the project area. In addition, given the importance of the self-financing aspect of the project for future replication in the Corridor, the A.I.D./W centrally administered Primary Health Care Operations Research (PRICOR) Project

plans to fund the National Federation of Savings and Loan Cooperatives (FENACRE) to research the feasibility of the self-financing hypothesis of this project. Through this mechanism, FENACRE will receive technical assistance from research and evaluation advisors.

III. PROJECT RATIONALE, GOAL, PURPOSE, STRATEGY

A. Rationale

As described in Section II, A, 2, the health status of the Bolivian rural and semi-urban poor, including those people living in the target area, is among the worst in Latin America. A major contributing factor to this situation is that these segments of the population have extremely limited access to health care services. Traditionally, the MSW/PH has had the responsibility to provide such services. Moreover, the Ministry, in theory at least, is structurally organized to implement primary health care programs. However, a series of factors (e.g. an internal bias toward curative medicine, concentration of resources in urban areas and a chronic shortage of funds) has inhibited the MSW/PH from effectively carrying out its responsibility. A clear example of the Ministry's limitations was evidenced in the recently completed Montero (Santa Cruz) Rural Health project financed by USAID. The purpose of this effort was to develop and implement a low-cost health delivery system. Despite significant technical assistance inputs, the project enjoyed only limited success. Moreover, throughout its implementation, the MSW/PH demonstrated that: (1) it lacked the capacity to implement the project once A.I.D. financing terminated, (2) it was unable to meet recurring financial costs and (3) it was unable to make the necessary administrative changes to implement such a program successfully (e.g. delegation of authority to the field - especially with regard to personnel decisions, provision of incentives for rural service, provision of adequate supervision and continuing education programs, and the installation and maintenance of adequate logistics).

In sum, the Montero experience clearly demonstrated that, without major administrative changes and dramatic increases in funds, the MSW/PH cannot and will not establish the required support systems that will permit the delivery of health services to rural and marginal urban populations with any degree of continuity.

While the MSW/PH health facilities are addressing less than 10 percent of the actual curative and preventive health needs of rural and semi-urban people, this segment of the population has demonstrated a disposition to make substantial expenditures to obtain health services - usually from the private sector in the form of rural pharmacies. A survey, conducted in 1977, under the Montero project, indicated that health expenditures for the average rural family member approximated \$ 55.00 per annum - a sum representing almost 20 percent of the rural family's yearly income. Moreover, of the \$ 55.00 per capita expenditure, 25.9 percent and 29.7 percent, respectively, were utilized for the principal illness categories affecting the target population - gastrointestinal and respiratory diseases.

Given the high cost of health services and the limited resources for public sector rural health programs and the fact that the rural population has demonstrated a willingness to make significant expenditures from private sources, there is a clear opportunity and need to establish private sector health delivery systems to serve the rural and semi-urban populations.

B. Goal

The goal of the project is to improve the health status and, thereby, the productivity of rural and semi-urban agricultural workers and their families. Specifically, the project will attempt to reduce infant and early childhood (age 1-4 years) mortality rates, as well as reduce school-age (5-14 years) and adult morbidity levels.

C. Purpose

The purpose of the project is to establish a pilot self-financing primary health care delivery system to service target populations located in geographic areas influenced by three existing cooperatives - Mineros, San Julián and La Merced. In addition, the project will develop and test a management support unit responsible for carrying out project activities that can be adopted and used by other institutions for replication of the self-financing primary health care systems.

The achievement of the project purpose is dependent upon a series of assumptions. The most important of these is the willingness and capability of the project beneficiaries to pay for the services that will be provided. Critical ancillary assumptions include: (1) that sufficient technical expertise will be available to adequately staff and implement the project, (2) that an institutional framework (e.g. cooperatives) exists for accessing beneficiaries, and (3) that the MSW/PH will not interfere at a political level to hinder timely, efficient implementation.

D. Strategy

Realization of the purpose is based on a strategy through which the health services provided by the system will be paid for by the recipients. The system, modeled on primary health care strategies developed over the past two decades, will be a hierarchical arrangement of three related tiers (Levels I, II and III) of health service outlets. Each stage will provide a combination of curative and preventive measures designed to address, with enhanced degrees of sophistication, the most critical health problems of the beneficiary groups. Patients, whose conditions cannot be adequately treated at a lower level, will be referred to the next stage of the hierarchy.

In line with the self-financing strategy, the various levels of health care will be treated as cost centers capable of generating income to offset incurred expenses. Fees charged for preventive interventions will not cover their cost. The expense of such services will be met through other income producing elements (e.g. curative treatment and sale of medications). Curative services at each level will be divided into discrete treatment packages, each having a fixed cost. For example, the price of an injection may be set at \$.25, a consultation with a doctor at \$1.00 and complete maternity care service at \$5.00. Furthermore, each level of services will receive income from other sources including cooperative membership fees, non-co-op member surcharges and subsidies from cooperatives. The objective will be to structure the source of income so that the service delivery units will be self-supporting, (capable of meeting all supporting costs including a margin for inflation) shortly after being incorporated into the project. The prices for each type of service as well as fee schedules for cooperative members and non-members will be determined by the MSU, in collaboration with delivery system personnel, early during project implementation. The guidelines to be used in determining costs will be beneficiary affordability and the financial requirements to sustain the system.

A financial condition of the project requires that infusions of A.I.D. and Title III resources must be complemented by funds generated by the system to cover further operating costs, or, in the case of commodities, set aside money to replace the equipment after its depreciation. Under this arrangement, start-up contributions become liabilities to the health program that must be addressed to assure its continuity and growth. A complete description of the financing arrangements that will be used to achieve self-sufficiency are found in Section IV., D.

The project strategy also relies heavily on the private sector to achieve successful implementation. The administrative structures of the La Merced, Mineros and San Julián cooperatives will be the main vehicles for gaining access to the beneficiary population. The merger of health services with existing integrated (multi-service) cooperatives is advantageous in that: (1) co-ops are investor owned and represent an acceptable form to Bolivians of capital formation, particularly where social programs are involved, (2) cooperatives, as private institutions, offer flexibility in program design, staffing, implementation and financing, and (3) the participating cooperatives are already promoting other activities (e.g. provision of low cost pharmaceuticals, referral of patients) complementary to a comprehensive health program.

Each cooperative will assign a health service coordinator to assist in promoting the health program among the organizations' memberships, as well as to assure that the health needs of the participants are expressed to the managers of the program. Fully affiliated co-op members will have a choice between two payment plans. Option one will

permit the member to make advance deposits toward the costs of future services. The interest payment on such advance deposits will serve to reduce the cost of health services. Option two will function on a fee-for-service basis and entail a 15 percent reduction below the market price for health care and medicines. The options will be flexible (e.g. schedule payments to coincide with harvest season in rural areas) and will be adapted to local circumstances.

As a complement to the two participation/payment options described above, a third alternative will be available, namely participation without cooperative affiliation. If they so choose, private individuals may subscribe to the services of the system; however, they will be required to pay the full cost reflecting the fact that they are not routinely contributing to the maintenance of the system. It is anticipated that non-member surcharges will be a significant factor at Level III (health clinic). These facilities will be placed at sites, market towns and natural confluence points in semi-urban areas, where the size of the transient population will be relatively high. In sum, it is expected that the three alternative forms of participation, in combination with the reliable delivery of quality health services, will enable the project to capture a significant share of the current health expenditures of the target population.

The second element of the strategy's private sector base will be the establishment of the Management Support Unit. This Unit will assume overall administrative responsibility for the project (see Section IV.B. for details). After an initial infusion of project funds to cover start up costs, the Unit will be financed completely with funds generated through the provision of health services.

E. End of Project Status

With regard to each of the major components, the following objectives will be achieved by the end of the project.

1. Health Delivery System

A pilot, comprehensive self-financing primary health care delivery system, consisting of three graduated levels (Levels I, II and III) will be fully staffed, equipped and functioning. This system will provide services for approximately 37,000 people. The services will be more economical and qualitatively improved over those currently available. Moreover, the services will contribute to improved health and, by extension, greater productivity of the target population.

2. Management Support Unit

A management support unit capable of administering all aspects of the delivery system, and completely financed by funds generated

through the provision of health services will fully staffed, equipped and functioning. At the end of the project, an active decision will be made as to whether the management support unit will continue under the tutelage of La Merced or becomes an independent entity.

IV. PROJECT DESCRIPTION

The project consists of two major components: (1) development of a primary health care delivery system and (2) creation of a management support unit to buttress the delivery system and coordinate the provision of services. This section contains a description of each of the components and their relationship to an overall implementation strategy. These descriptions are followed by an elaboration of the financial arrangements that will govern the funding of the various activities.

A. Health Delivery System

1. Background

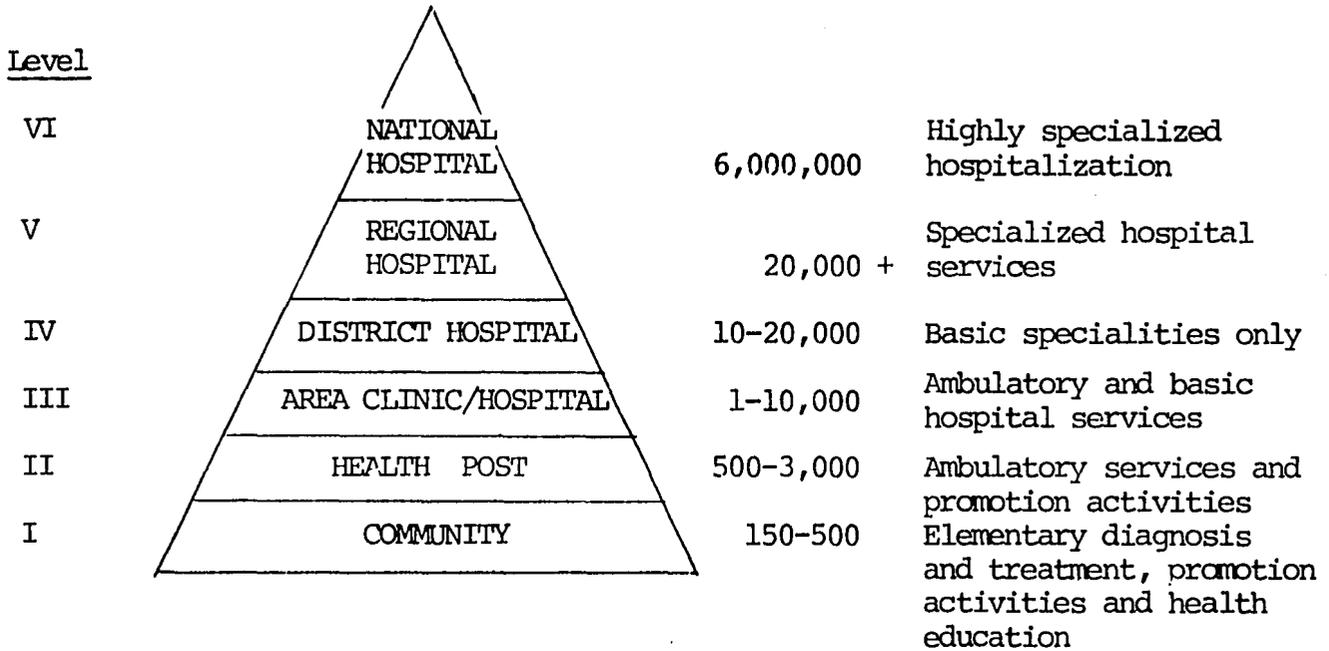
As noted previously, the delivery system to be installed will be a three-tiered hierarchical arrangement offering progressively more comprehensive packages of preventive and curative health services. In essence, the system does not differ markedly from the MSW/PH model for the provision of health care services developed under the USAID/Bolivia supported Montero Health Project (see Figure 3). As described above, a series of problems, including severe financial constraints, have resulted in Ministry concentration of its resources at Levels IV to VI. Attention to Levels II and III is minimal and practically nonexistent at Level I. The scarcity of operating funds, even at Levels IV to VI, and the current economic crisis suggest that it will be some time before general tax revenues can conceivably finance significant population coverage at lower health service levels. This project, therefore, focuses on the lower three levels and will install a delivery system that will provide quality health care services to rural and semi-urban populations, while simultaneously developing a revenue generating package that will cover all recurring costs, including supervision and equipment maintenance and amortization.

2. Level I

There will be 149 Level I outlets in the project. Clinical services at this Level will be the least sophisticated offered by the system. Emphasis will be promotion on the environmental sanitation practices and elemental treatment and surveillance of diseases and injuries. Health and nutrition education will be basic components supported by pregnancy screening for high risk cases and child growth monitoring. A standard package of immunizations will be made available to beneficiaries on a scheduled basis. Essential medicines will be in constant supply in course of therapy packaging for such common, yet life-threatening, conditions as dehydration and pneumonia, as well as for intestinal parasites. Prenatal vitamin and iron supplements will also be included as standard inventory items.

FIGURE 3

MSW/PH HEALTH SERVICE DELIVERY MODEL



Level I will be staffed by two part-time promoters selected from among the recipient group that they will serve. Each promoter team will consist of one male and one female in order to coincide with social norms of modesty among the beneficiaries, which indicate a preference for health services to be administered by a person of the same sex. The promoters will operate from their own homes or from facilities provided by the participant group and will secure compensation for their efforts from the beneficiaries they service. While the amount of payment will vary from one area to another, it is estimated that the average compensation to promoters will be \$10 per month, generally provided through commissions charged for the provision of services and medicines.

In addition to carrying out preventive and curative services, the Level I promoters will undertake certain data gathering tasks. These assignments will include keeping logs of preventive efforts (e.g. educational talks and meetings with beneficiaries, sanitation work) and curative interventions (e.g. diseases encountered, drugs administered and referrals). The maintenance of financial, immunization and child growth records, as well as the preparation of reports on communicable diseases, will also be a part of their duties. Finally, the promoters will be responsible for keeping adequate stocks of medicines and accounting for their use.

Training to enable the promoters to carry out their assignments will be furnished by the MSU. The training will be pragmatic and task oriented and will cover such topics as community organization, prevention and treatment of the most common medical conditions (enteric and respiratory diseases) affecting the target populations and maternal-child health care (see Annex J) for further details on promoter training).

The promoters will receive technical supervision from auxiliary nurses working at Level II outlets. The nurses will provide backstopping on a scheduled basis as well as monitor overall job performance. Administratively, the promoters will be responsible to Health Committees organized within each group of recipients. The Committees will monitor the promoters' revenue collections, generated from the sale of medicines and fees-for-service charges, and supervise the use of resources furnished by the MSU.

3. Level II - Health Posts

There will be 23 Level II outlets - health posts - included in the project. At this level, the emphasis will shift slightly from the basic promotion, treatment and surveillance to the management and treatment of patients referred from Level I. With regard to preventive interventions, in addition to offering those available at Level I, health posts will have the capability, for example, of confirming the diagnosis of high risk pregnancies and the seriousness of child malnutrition made at Level I and recommending appropriate treatment, coordinating the care of TB patients referred by the promoters, coordinating distribution of malaria prophylaxis and conducting blood pressure and urine protein examination. In the context of curative medicine, the services available at the health posts will include: (1) treatment of emergencies involving trauma (e.g. stop severe bleeding, immobilization of fractures, treatment of burns and poisonings), (2) handling of medical emergencies (e.g. initiation of intravenous therapy in cases of severe dehydration, initiation of treatment for asthma and pneumonia), and (3) treatment of minor illnesses such as tonsillitis, parasitosis, skin infections, gastritis and other diseases. Additionally, the health posts will have a formulary of about 35 basic, course-of-therapy, medications and function as a pharmaceutical resupply center for the Level I outlets.

Level II outlets will be housed in basic 2-room health post structures provided through the participating cooperatives. The outlets will include basic office furniture for the staff and a stock room, as well as medical equipment, such as that contained in the United Nations Children's Fund (UNICEF) "MCH-A-CENTRE-EQUIPT" basic kit (e.g. scales, stethoscope, catheter, syringes, forceps).* In addition, each health post will have a refrigerator for the storage of vaccines and some drugs. All of these items will be procured with project funds.

* A complete list of items included in the kit is found in Annex H.

Each Level II facility will be staffed by one Auxiliary I nurse and one Auxiliary II nurse recruited and paid by the MSU*: Both will be full-time project employees with salaries (estimated at \$75 per month for Auxiliary I and \$90 per month for Auxiliary II). The Auxiliary I nurse will be responsible for managing the health post, including the provision of the offered services. The Auxiliary II nurse will assist with the provision of services and supervise the Level I promoters.

Although it is anticipated that the auxiliary nurses, as a selection qualification, will have the technical training required to execute their assignments, they will receive additional preparation under the project. This training will include personnel supervision, management of health post information and financial systems, community relations, and the logistics of drug distribution networks. The MSU will be responsible for the training, design and implementation of the training.

4. Level III - Health Clinics

The Level III facilities form the apex of the primary health delivery system, providing the most specialized services offered under the project. There will be six such clinics established: 3 in Santa Cruz, 2 in San Julián and 1 in Mineros. Their principal function will be to serve as referral points for cases which cannot be adequately diagnosed and treated at Levels I and II. The clinics will have the capability of providing the entire range of services available at the lower levels, while simultaneously assuming a larger supervisory role, especially with regard to the sanitation and maternal and child health programs of Level I and II outlets. The clinics will offer a full gamut of primary care activities to which promoters and auxiliary nurses can refer patients. These services will include: (1) treatment of all illnesses requiring either definitive care at the clinic or arranging for referral to a Level IV - V facility, (2) availability of a supply of pharmaceuticals adequate for either providing definitive care or initiating treatment in cases that require referral to a higher level of attention, (3) management of high-risk deliveries, and (4) provision of basic laboratory services. Level III clinics will also assume a larger supervisory role, especially with regard to the sanitation and maternal and child health programs.

Level III clinics will be staffed by a full-time physician, a technical nurse, two auxiliary nurses, a lab-technician, a nurse-midwife, a sanitarian and a clerk/record keeper. The physicians will provide curative care for patients whose conditions require skills beyond those of the

* An Auxiliary I nurse has completed primary school and a basic nurses training program. An Auxiliary II nurse has completed a nurse supervisor's training course in addition to the above qualifications.

nurses, recommend referral to a higher more sophisticated level of health services and carry out the overall management of the clinics. The physicians will be available on a permanent basis in order to sustain the comprehensiveness of the care and referral system proposed in this project. The MSU will supply a substitute physician when required to maintain permanent coverage.

The technical nurse will assist the physician in attending to patients and supervise the auxiliary nurses at the Level II health posts within the area of coverage. In those cases where the clinic assumes the function of Level II facility, the technical nurse will supervise the promoters at the affiliated Level I outlets. The two auxiliary nurses at the clinics will provide curative and preventive services similar to that of the promoters at Level I and the auxiliaries at Level II. Additionally, they will assist with in-patient care. The nurse mid-wife will develop and implement pregnancy related health education programs throughout the clinic's area of influence. The sanitarian's work will be related entirely to preventive interventions. The incumbent will spend the majority of his/her time in the field, assisting promoters and auxiliary nurses to design and execute sanitation projects and serve as a link to organizations (e.g. DDC's Geobol) which can finance larger scale sanitation interventions. The laboratory technician will undertake diagnostic tests in hematology, urinalysis, bacteriology and stool examination. He/she will also instruct health workers at all three levels in the proper collection of samples for analysis. The clerk-record keeper will collect patient data and compile the statistical information on preventive and curative procedures performed and incidence of communicable diseases from all of the facilities within a clinic's area of influence. Additionally, in cooperation with the technical nurse, the incumbent will develop and maintain a logistical system for supplying drugs and materials for all affiliated Level I and II outlets as well as the clinic. Finally, the clerk-record keeper will collect fees for the provision of services and medicines and manage the financial accounts of the clinic.

The Level III clinics will be 5-6 room structures with sufficient space to house the examination rooms, laboratory, stock-room and staff offices and accommodate 7-10 beds for patients. The buildings will be rented with project funds. In those cases necessary, project funds will also be available for doing limited remodelling to convert structures into functional health clinics. A more complete list of services by level appear in Annex G .

B. Management Support Unit (MSU)

The project will be implemented with La Merced as the Grantee and administrative umbrella for the Management Support Unit. While La Merced, as the Grantee, will provide a legal basis for the MSU, the Unit will be developed in consultation with all participating cooperatives

Moreover, it is anticipated that, the Unit may eventually become a completely independent economic and legal entity separate from La Merced. For purposes of classification, the MSU will be distinct from La Merced's current health activities. The Unit will support all participating cooperatives equally.

1. Staffing

With the signing of the Grant Agreement, La Merced will participate in the formation of a project management team to serve as the nucleus of the Management Unit. This team will be composed of a Health Delivery System Program Director as well as an Assistant Director, each for Health and Administrative Services. This team's role will be to define and monitor the progress of tasks to be performed in establishing the delivery system and determine which of the tasks will be performed directly by the MSU and which will be parceled out (via contract or direct delegation) to qualified entities. In addition, this team will hire additional personnel for MSU (e.g. a health educator, a training coordinator, a participant recruitment coordinator, a personnel manager, an accountant, and a logistics coordinator) as well as all delivery system personnel, except for the promoters. Complete job descriptions for key MSU personnel appear in Annex K.

2. Project Management

The MSU will have overall responsibility for managing the project. This responsibility will be exercised through the Program Director in consultation with the Program Board of Directors (see Section IV.B.3. for description of PBD role) and will focus on two areas critical for project success: (1) delivery of health services and (2) personnel administration, each of which will be coordinated by an assistant director.

a) Delivery of Health Services

Under the direction of the Assistance Director for Health Services, the primary health services to be delivered at Levels I, II and III, including referral arrangements to Levels IV through VI, will be defined. The service delivery standards will be developed in coordination with MSW/PH and will serve as a basis for the staff recruiting training, supervision components of the project.

(i) Staff Training and Orientation

Project funds will underwrite staff orientation and training costs for personnel in the MSU and all levels of the delivery system. At the professional levels, within both the MSU and the delivery system, training will consist of orientation to the program's medical/administrative procedures and the philosophy of a self-financing health care scheme targeted at the poor. Observational training to similar

programs in other countries will also be offered.

The auxiliary nurses and technical members of the staff (i.e. sanitarian, laboratory technician) will receive a combination of instructional modules to cover program administration and basic skills training. To conserve limited training funds, the MSU will make every effort to hire project staff above the promoter level, who already have the basic skills to perform their role.

In the case of the promoters, a modular learning program, consisting of 10 modules, will be developed to provide basic skills training. The modules will include the specific skills required by the technical functions the promoters must perform (e.g. midwife, care of newborn) and the related administrative financial management functions to be carried out in support of the project. Each module will contain an evaluative test to ascertain the comprehension and skill level of the trainee. The modules themselves will be relatively short (6-8 hours) and will include adequate additional practice of all required skills. The training will be provided as close as possible to the work sites of the trainees and will be presented in segments, so as not to interfere with the main income-producing activities (e.g. farming) of the promoters.

(ii) Health Education

In accordance with the health service to be delivered, health education modules will be developed for presentation by the promoter or other project personnel to program participants. In addition to traditional teaching aids (e.g. posters, flip charts) video and audio cassettes equipment will be provided to facilitate learning.

(iii) Staff Supervision

Under the direction of a Nurse Supervisor, a supervisory system will be established. The system will serve as a "quality control" check on the services being provided at the different levels of the program. The Nurse Supervisor at Level III will review the performance of the Level II auxiliary nurse in turn will oversee the performance of the promoters. The supervisory network will complement the management information system in the collection of project monitoring data.

b) Administration

The Assistant Director for Administrative will be responsible for the design, implementation and monitoring of the administrative support functions needed for the timely delivery of quality primary health care. These functions include personnel management, financial management, operations research and general services.

(i) Personnel Management

The personnel management function will consist of developing and implementing the norms and procedures for defining the relationship between the employees and the system. These norms and procedures will deal with such matters as job descriptions, selection criteria, salary scales, working hours, incentive packages, promotion standards and the reporting/supervisory system. They will apply to all program personnel, although the Level I promoters, because they will be selected and administratively supervised by beneficiary Health Committees, will be affected by them in a limited way.

(ii) Financial Management

MSU's responsibility concerning financial management will be to design and install two separate accounting systems which track the funds provided by the grant as well as those generated by the program. The first system will conform to procedures employed by USAID/B and, hence, will require direct Mission participation in its formulation. The second system will be designed to demonstrate the anticipated financial self-sufficiency of the pilot initiative, assuring that project generated funds are channeled back into the system. As a means of establishing control procedures for the second accounting system, A.I.D. will provide the MSU financial management section with forms which detail project revenue generations by source and planned useage. Back-up accounting information will also be required from the MSU which documents the purchase and delivery of all materials utilized under the project.

(iii) Operations Research and Management Information System

The Operations research function will consist of the data collection and analysis to be carried out by FENACRE, assisted by an A.I.D. centrally funded grant to PRICOR, and the Management Information System (MIS) established within the MSU. The former will consist of primary data collection through the use of sample surveys on health status and economic matters of beneficiaries. Included among the data gathered will be family demographics (size, composition ages) family economic conditions (source of income, employment, health expenses), family health status (current and past illness episodes, recent adult and infant mortality) and current utilization of health services (types of providers used for different sorts of illnesses, frequency and cost of consultation). The first sample will be taken early in project implementation (before the delivery of health services begins) and every six months thereafter. This approach will provide baseline data against which to measure progress and execute mid-course corrections in project design. In addition, the initial sample will assist the MSU to refine trial service packages and establish realistic costs for services.

The MIS will be composed of service logs, financial records, supervisory reports and service delivery reports. It will be the principal means for determining achievement of end-of-project status indicators. In addition, it will, on a continual basis, provide project staff with information essential for measuring the operational effectiveness of the delivery system. For example, at Level I, recorded information will include names and numbers of persons enrolled in the program, status of participants' payments, patient encounters and service utilization rates, types of identified health problems, kinds of drugs and number of units sold, income generated from drug sales and fee-for-service data. The project will make use of micro computers, available through La Merced, for processing information dealing with project finances, as well as reporting information to FENACRE for evaluating the financial feasibility of the project.

(iv) General Services Function

The general services function will deal with a variety of activities including commodity procurement, communications and transportation, and maintenance of facilities and equipment. Concerning commodity procurement, the MSU will manage the acquisition of all equipment, supplies and pharmaceuticals, giving special attention to drug packaging, distribution and storage. Medication formularies for Levels I-III, using standardized, course-of-therapy packages, will be developed, as will preventive maintenance schedules for project equipment (e.g. laboratory and office furniture, vehicles).

Reliable communications are essential to meeting the objectives of the project. In conformance with the geographic conditions of specific target areas, trail bikes and bicycles will be procured for transportation within each service delivery area. The cooperatives will supplement these modes of transportation with vehicles already owned by them. At the MSU level, two stretch jeep type vehicles will be purchased as well as six motorcycles for use by the project's health membership recruitment coordinators. A two-way radio network will be established between the MSU in Santa Cruz and all rural Level III facilities and rural Level II facilities. Finally, the project will experiment with a one-way radio system between the rural Level II posts and some extremely isolated Level I outlets.

3. Organizational Linkages

As mentioned above, administratively, the MSU will be housed within the La Merced Cooperative. USAID/Bolivia will enter into a Cooperative Agreement with the La Merced through which the Cooperative will be required to establish the MSU. The Unit will operate under the legal auspices of La Merced's Board of Directors the Cooperative's President and the Project's Advisory Board. The Co-op's Board of Directors and administrative staff will be responsible for assuring that

the terms of the Agreement are met and that the project implementation schedule is maintained. The Board, through a health committee that will be established to oversee the operation of the project, will be responsible for hiring key MSU personnel, approving the types of services to be offered and the fee schedules for medications and the provision of services. It will also approve procurement plans and contracts entered into by the MSU.

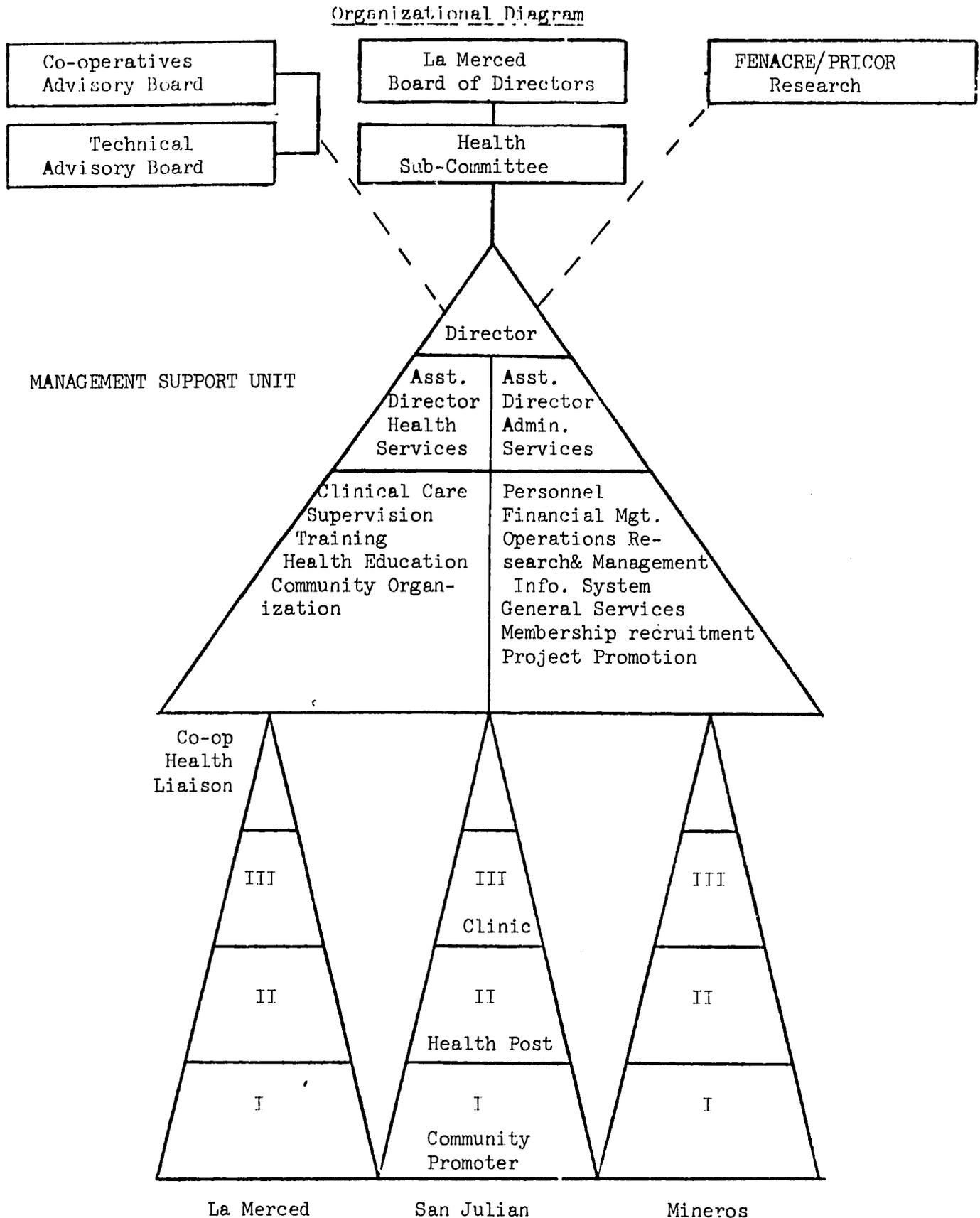
A second body, an Advisory Board of the participating cooperatives and USAID representatives, will be established to assure the participation of all interested organizations in the general implementation of the project and to monitor the progress of the MSU. The Unit will be required to consult periodically, at a minimum quarterly, with the Advisory Board on matters related to progress of project implementation, types of services to be offered by geographic regions and proposed fee schedules and methods of payment. In addition, the Advisory Board will be involved in evaluating the performance of project staff in the field.

The final organization that will play a role in project implementation is a Committee of Voluntary Advisors that will be composed of Bolivian and international health professionals residing in the country. Committee membership will include representatives from Project Concern, USAID/Bolivia, UNDP, the Andean Health Project, the Regional Office of the MSW/PH, etc. The group will gather quarterly, and the meetings will serve as a forum to exchange experiences and ideas concerning project implementation.

Figure 4 below is a diagrammatic presentation of the organizations involved in the administration of the project.

Figure 4

SELF-FINANCING PRIMARY HEALTH CARE PROJECT



C. Implementation Strategy

1. Phasing

Ideally, the complete health care delivery system, supported by the MSU, would be installed simultaneously within each of the three geographic areas influenced by the participating cooperatives. However, administrative constraints (for example, the MSU must be created, personnel must be recruited and trained) preclude such an approach. Therefore, the implementation strategy that will be used is one of phasing, according to which parts of the system will be put in place in successive time periods.

The first phase will last six months and begin with the signing of the Cooperative Agreement. It will be dedicated principally to the establishment of the MSU. During the period, key personnel of the Unit's Health Services and Administration Divisions will be hired, contracts will be let for the development of training modules and initial procurements of drugs and other commodities will be made. The operations research, general services and other support functions will also be established.

Phases two, three and four will be identical. They will each last for a six-month period and be devoted to the installation of the delivery system. In each six-month period the strategy to be used to put the system in place will be to install moduals of the complete system (i.e. Level III clinics with affiliated Level II posts and Level I outlets) in sub-regions of each of the areas covered by the three participating cooperatives. For example, in phase two, when the first set of modules comes on line, one Level III clinic will be located in each La Merced (Santa Cruz), San Julián and Mineros. Each clinic will have a corresponding set of Level II and Level I outlets. The process will be repeated in phases three and four until complete geographic coverage is achieved. Figure 5 below illustrates the chronological and geographical installation of health outlets.

FIGURE 5

INSTALLATION OF THE DELIVERY SYSTEM

Phase 1	Formation of the MSU		
	La Merced	San Julián	Mineros
Phase 2	1 Level III	1 Level III	1 Level III
	4 Level II	4 Level II	1 Level II
	24 Level I	19 Level I	7 Level I
Phase 3	1 Level III	1 Level III	0 Level III
	4 Level II	2 Level II	1 Level II
	24 Level I	19 Level I	7 Level I
Phase 4	1 Level III	0 Level III	0 Level III
	4 Level II	2 Level II	1 Level II
	24 Level I	12 Level I	7 Level I

As a part of the phased activation of health outlets, the recruitment, training and placement of delivery system personnel will also take place in stages. For example, to install initial set of modules, the MSU will recruit, train and assign sufficient numbers of all types of personnel (promoters, auxiliary nurses, technical nurses, laboratory technicians) to operate the facilities. The same procedures will be followed in phases three and four. The only exception will be with respect to the physicians. In phase two, 4 doctors will be hired and 6 will be on-board by the end of phase three. In both instances, this represents one physician in excess of the health clinics on-line. The additional physician will be used as a substitute, filling in for the permanently assigned doctors when absent, thereby providing continual coverage by a trained physician. During phase four, the final (sixth) Level III facility will come on line, thereby equaling the number of clinics and physicians. At this point, the MSU's Assistant Director for Health Services will have dispensed with a significant portion of organizational "start-up" tasks (e.g. recruitment of personnel, procurement of drugs and equipment, design of training modules) and will serve as the substitute physician at the Level III clinics.

This phasing strategy will permit incremental recruitment, training and placement of all levels of health workers to avoid over-taxing the initial limited institutional capacity of the MSU. Moreover, placing a full set of services in a given geographic area, albeit limited initially, will provide the beneficiaries effective access to a complete

health care system. This, in turn, will contribute to favorable receptivity of the program in the target areas, thereby, enhancing beneficiary involvement and, by extension, project success.

2. Geographic Clustering

Final determination of site locations for all health outlets by the MSU will be carried out in coordination with the participating cooperatives. The principle that will guide such selection is geographic clustering. The Level III facilities will be centrally located in areas with sufficient population density (e.g. market towns in rural areas) to support a clinic. Each clinic will be surrounded by approximately four Level II health posts placed in smaller, less accessible locations. In turn, each Level II facility will be ringed by a number (an average of seven per health post) of Level I outlets placed in the smaller, more remote areas. The clustering of outlets coincides with the hierarchical structure of the delivery system and the patient referral strategy in that a facility with a more comprehensive level of coverage is geographically and administratively more accessible to a larger number of program participants.

3. Participant Recruitment

Beneficiary participation is essential to the success of this effort because target group contribution, through payment for medical services, is the key to the project's financial viability. Accordingly, the following strategy will be used to recruit participants.

- MSU staff will meet with the affiliate cooperatives to formally establish the new health section of the cooperative and to orient two to four of the cooperatives' members to the promotional requirements of the project.

- The participating cooperatives will announce the establishment of the new health program and their membership fee requirements. The cooperative promotion staff will work with each potential group of beneficiaries to ascertain its interest in joining the health section of the cooperative. If the interest is positive, a Community Health Committee will be formed.

- Recruitment of members will progress from one geographical area to another, following a set schedule.

- Using the survey results provided by PRICOR, the Community Health Committee will be asked by the MSU to define the kind of health services it wants and is willing to pay for.

- The MSU will assist the Community Health Committee by estimating the cost of requested services.

- After the cost of the requested services is established, the participating cooperatives and the MSU will define the most effective package of services and the package of fees and payments to be used to generate the required financial resources.

- Once the service delivery package is accepted by the Community Health Committee, family enrollment will be initiated.

- When the membership reaches approximately 60 percent of the households in a given locality, the Community Health Committee will select two members of the locality to serve as Level I promoters.*

Following the sequence of procedures listed above will yield a number of benefits for the project. First, beneficiaries acting through their organization(s) will participate in the definition of their own health service system. Second, the beneficiaries will receive professional guidance in making decisions concerning health care. Finally, the promoters will be selected and brought into the program after service packages have been established, participants enrolled and remuneration mechanisms defined.

D. Cost Estimate and Financial Plan

The total cost of activities to be financed under this project is \$1,754,802. The A.I.D. contribution will be a grant for \$1,100,000, which will be distributed as follows: \$347,000 for technical assistance, \$21,000 for training, \$245,112 for operating and development costs, \$386,888 for commodities and \$100,000 for contingency/inflation factors. A.I.D. is providing 63 percent of the total project cost while the host country contribution is 37 percent. The following scheme, which emphasizes the type(s) of funds to be managed by the executing organizations, explains the channeling of project resources.

- A.I.D. Funds

A.I.D. Grant funds will be disbursed in two ways: (1) payments for foreign technical assistance and procurement of certain commodities will be made directly to the suppliers of services and commodities, and (2) payments for operating and development costs, and training will be made to the MSU on the basis of the quarterly requirements to be submitted to A.I.D.

- Title III Resources Generations

These funds will be disbursed by the Title III Secretariat through the La Merced Cooperative to the MSU. Title III resources will finance local costs of training, operating expenses and office furniture

* The percentage of households required to initiate promoter selection will vary from one site to another, depending upon local economic conditions.

and equipment. The disbursement will be made on the basis of quarterly budget requirements.

- Project Generations

The proceeds generated by the provision of health care services and medications will underwrite the entire cost of the delivery system (e.g. salaries of the MSU and Level II and Level III personnel, office furniture and equipment, medications, vehicles and facility maintenance) when A.I.D. and Title III support phase out. The MSU will be responsible for managing these funds. Early in project implementation, Unit personnel will design an accounting system specifying procedures for income collection and disbursement to this end. In general, the procedures will require that funds are relayed, on a regular basis, to the next highest level of the delivery system until they reach the MSU, at which point they will be deposited in an interest bearing bank account. In turn, the Unit will make allocations, according to a set schedule, to meet operating and program costs at all levels of the health care system.

FIGURE 6

COST ESTIMATE AND FINANCIAL PLAN
(In U.S. Dollars)

	<u>A.I.D.</u>			<u>HOST COUNTRY</u>			<u>GRAND</u> <u>TOTAL</u>
	<u>G R A N T</u>			<u>Project re-</u>	<u>Title</u>	<u>TOTAL</u>	
	<u>FX</u>	<u>LC</u>	<u>TOTAL</u>	<u>venues and</u>	<u>III</u>		
			<u>contribution</u>	<u>LC</u>	<u>LC</u>		
1. Technical Assistance							
1.1 Long term (33 w/m)	280,500		280,500				280,500
1.2 Short term (29 w/m)	66,500		66,500				66,500
2. Training							
2.1 Management training	21,000		21,000				21,000
2.2 Community and field staff training					35,730	35,730	35,730
2.3 Materials Development					25,000	25,000	25,000
3. Operating and Development Costs							
3.1 Personnel		198,246	198,246	346,382	37,316	383,698	581,944
3.2 Administrative supporting costs		46,866	46,866	49,517	26,567	76,084	122,950
3.3 Facilities and renovations				57,991	25,353	83,344	83,344
4. Commodities							
4.1 Health equipment	41,338		41,338	34,012		34,012	75,350
4.2 Office furniture and Equip.	59,000	3,000	62,000	6,900	8,550	15,450	77,450
4.3 Vehicles							
- Stretch jeeps (2)	30,000		30,000				30,000
- Motorcycles (18)	27,000		27,000				27,000
- Bicycles (35)	4,375		4,375				4,375
4.4 Medications	211,000	11,175	222,175				222,175
	740,713	259,287	1,000,000	494,802	158,516	653,318	1,653,318
Contingency/Inflation	74,071	25,929	100,000		1,484	1,484	101,484
Subtotal	814,784	285,216	1,100,000	494,802	160,000	654,802	1,754,802

FIGURE 7

DISBURSEMENT SCHEDULE
(in U.S. Dollars)

	<u>Year 1</u>		<u>Year 2</u>		<u>Year 3</u>		<u>TOTAL</u>
	<u>FX</u>	<u>LC</u>	<u>FX</u>	<u>LC</u>	<u>FX</u>	<u>LC</u>	
<u>A.I.D.</u>							
1. Technical Assistance							
1.1 Long term (33 w/m)	93,500		93,500		93,500		280,500
1.2 Short term (29 w/m)	37,000		29,500				66,500
2. Training							
2.1 Management training	10,000		11,000				21,000
3. Operating and Development Costs							
3.1 Personnel		109,825		88,421			198,246
3.2 Administrative supporting costs.		9,373		14,060		23,433	46,866
4. Commodities							
4.1 Health equipment	21,088		20,250				41,338
4.2 Office furniture and equipment.	42,650	3,000	16,350				62,000
4.3 Vehicles							
- Stretch jeeps (2)	30,000						30,000
- Motorcycles (18)	13,500		13,500				27,000
- Bicycles (25)	1,125		3,250				4,375
4.4 Medications	42,213	2,288	84,426	4,443	84,361	4,444	222,175
	291,076	124,486	271,776	106,924	177,861	27,877	1,000,000
Contingency/Inflation	29,107	12,449	27,178	10,692	17,786	2,788	100,000
Subtotal	320,183	136,935	298,954	117,616	195,647	30,665	1,100,000

	Year 1		Year 2		Year 3		TOTAL
	FX	LC	FX	LC	FX	LC	
<u>PROJECT REVENUES</u>							
3. Operating and development costs							
3.1 Personnel		8,940		82,684		254,758	346,382
3.2 Administrative supporting costs				36,717			36,717
3.3 Facilities and renovations				20,147		9,250	29,397
4. Commodities							
4.1 Health equipment		16,762		17,250			34,012
4.2 Office furniture and equipment				6,900			6,900
Subtotal		25,702		163,698		264,008	453,408
<u>TITLE III</u>							
2. Training							
2.2 Community and field staff training.		8,117		16,994		10,619	35,730
2.3 Materials development		25,000					25,000
3. Operating and Development Cost							
3.1 Personnel				37,316		13,284	37,316
3.2 Administrative supporting costs		5,313		7,970			26,567
3.3 Facilities and renovations		13,625		11,728			25,353
4. Commodities							
4.2 Office furniture and equipment				8,550			8,550
Contingency/Inflation		52,055		82,558		23,903	158,516
Subtotal		490		772		222	1,484
Subtotal		52,545		83,330		24,125	160,000

	Year 1		Year 2		Year 3		TOTAL
	<u>FX</u>	<u>LC</u>	<u>FX</u>	<u>LC</u>	<u>FX</u>	<u>LC</u>	
<u>COOPERATIVES/COMMUNITY (IN-KIND)</u>							
3. Operating and development costs							
3.2 Administrative supporting costs		2,560		3,840		6,400	12,800
3.3 Facilities and renovations		4,952		12,158		11,484	28,594
Subtotal		7,512		15,998		17,884	41,394
Grand Total	320,183	222,694	298,954	380,642	195,647	336,682	1,754,802

FIGURE 8

SUMMARY BUDGETS

Levels I, II and III, MSU and Cooperatives / Community

	(in US\$ Dollars)			
	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Total</u>
<u>Level I</u>				
2. Training				
2.2 Community and field staff training	8,117	16,994	10,619	35,730
3. Operative and Development Costs				
3.1 Personnel	8,940	26,820	35,760	71,520
3.3 Facilities and renovations	9,250	18,750	9,250	37,250
3. Commodities				
4.1 Health equipment	5,588	16,762		22,350
Total Level I	<u>31,895</u>	<u>79,326</u>	<u>55,629</u>	<u>166,850</u>
<u>Level II</u>				
3. Operating and Development Costs				
3.1 Personnel	13,081	38,238	52,325	103,644
3.3 Facilities and renovations	2,875	8,625		11,500
4. Commodities				
4.1 Health equipment	5,750	17,250	-	23,000
4.2 Office furniture and equipment.	5,050	15,150	-	20,200
4.3 Vehicles				
- Bicycles (23)	719	2,156	-	2,875
Total Level II	<u>27,475</u>	<u>81,419</u>	<u>52,325</u>	<u>161,219</u>
<u>Level III</u>				
3. Operating and Development Costs				
3.1 Personnel	23,310	69,930	93,240	186,780
3.3 Facilities and reservations	1,500	4,500		6,000
4. Commodities				
4.1 Health equipment	6,750	20,250		27,000
4.2 Office furniture and equipment	5,550	16,650		22,200

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Total</u>
4.3 Vehicles				
- Motorcycles (12)	4,500	13,500		18,000
- Bicycles (12)	375	1,125		1,500
Total Level III	<u>41,985</u>	<u>125,955</u>	<u>93,240</u>	<u>261,180</u>
Total Level Levels, I, II and III	<u>101,355</u>	<u>286,700</u>	<u>201,194</u>	<u>589,249</u>

MSU

1. Technical Assistance				
1.1 Long term (33 w/m)	93,500	93,500	93,500	280,500
1.2 Short term (29 w/m)	37,000	29,500	-	66,500
2. Training				
2.1 Management training	10,000	11,000	-	21,000
2.3 Materials development	25,000	-	-	25,000
3. Operating and Development Costs				
3.1 Personnel	69,377	74,711	76,212	220,300
3.2 Administrative supporting costs	34,689	37,356	38,105	110,150
4. Commodities				
4.1 Health equipment	3,000	-	-	3,000
4.2 Office furniture and equipment	7,010	14,020	14,020	35,050
4.3 Vehicles				
- Stretch jeeps (2)	30,000	-	-	30,000
- Motorcycles (6)	9,000	-	-	9,000
4.4 Medications	44,435	88,870	88,870	222,175
Total MSU	<u>363,011</u>	<u>348,957</u>	<u>310,707</u>	<u>1,022,675</u>

Cooperative/Community (in-kind)

3. Operating and development costs				
3.2 Administrative supporting costs	2,560	3,840	6,400	12,800
3.3 Facilities and renovation	4,952	12,158	11,484	28,594
	<u>7,512</u>	<u>15,998</u>	<u>17,884</u>	<u>41,394</u>
Subtotal	471,878	651,655	529,785	1,653,318

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Total</u>
Subtotal (from previous page)	471,878	651,655	529,785	1,653,318
Contingency/Inflation	<u>42,046</u>	<u>38,642</u>	<u>20,796</u>	<u>101,484</u>
Total project cost	513,924	690,297	550,581	1,754,802
Less: In-kind Contribution	<u>7,512</u>	<u>15,998</u>	<u>17,884</u>	<u>41,394</u>
Total project cash expenditures	506,412	674,299	532,697	1,713,408
Less: Revenues Levels, I, II and III.	<u>25,397</u>	<u>131,093</u>	<u>296,918</u>	<u>453,408</u>
Subtotal	481,015	543,206	235,779	1,260,000
Less: Title III	<u>52,545</u>	<u>83,330</u>	<u>24,125</u>	<u>160,000</u>
A.I.D. Contribution	<u>428,470</u>	<u>459,876</u>	<u>211,654</u>	<u>1,100,000</u>

FIGURE 9

LEVEL I TOTAL COST PER UNIT

(in U.S. Dollars)

Salaries:

1 part-time promoter at \$10/moth (1 year) 240

Promoter Training:

1 promoter for 3 weeks 120

Facility Renovation:

Roofing and screening for health facility 250

Furniture and Equipment:

Community level equipment (e.g. drug cabinet) 150

Total Unit Cost 760

San Julián. 56 units

Minero: 21 units

La Merced: 72 units

149 Level I units

FIGURE 10

LEVEL II TOTAL COST PER UNIT

(in U.S. Dollars)

Salaries:

Auxiliary nurses orientation, 1 month salary	385
Auxiliary nurse I salary at health post 1 year	690
Auxiliary nurse II salary at health post 1 year	900

Facility Renovation:

Roofing and screening for health facility	500
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Furniture & Equipment:

Health Post furniture, equipment (e.g. refrigerator and health post radio and batteries (San Julian and Mineros)	1,878
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Motorcycles and Bicycles:

Bicycle	125
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Total Unit Cost 4,478

San Julián: 8 health posts
Mineros: 3 health posts
La Merced: 12 health posts
23 Level II Units

FIGURE 11

LEVEL III TOTAL COST PER UNIT

(in U.S. Dollars)

Salaries: 15,540

(1) Full time M.D.	450/mo.
(1) Technical Nurse	150/mo.
(2) Auxiliary I Nurses	150/mo.
(1) Trained Nurse/Mid-wife	90/mo.
(1) Lab Technician	90/mo.
(1) Sanitarian	90/mo.
(1) Clerk/Record Keeper	90/mo.
	<hr/>
	\$1,110/mo.

Estimated 14 person/months

Facility Renovation:

Conversion of existing facilities 1,000

Health Equipment:

(e.g. surgical instruments, lab equipment, etc.) 4,500

Office Furniture and Equipment:

(e.g. desks, filing cabinets, typewriter, etc.) 3,700

Motorcycles and Bicycles:

2 bicycles	125
2 motorcycles	2,000
	<hr/>

Total Unit Cost 26,865

San Julián: 2 health clinics

Mineros: 1 health clinics

La Merced: 3 health clinics

6 Level III Units

Notes to Figure 6 - LOP Cost Estimate and Financial Plan

General Notes:

Host country counterpart contribution is calculated at Bolivian Pesos (\$b.) 196 to one dollar, which is the official rate for obligations as established by Government Decree and Bolivian Central Bank regulations.

Specific Notes:

A. A.I.D. Funds

1. Technical Assistance - \$347,000 will be provided to the MSU in the form of (a) long-term TA for 33 person/months in the areas of financial, information, and logistic systems, and (b) short-term TA for 29 person/months in the areas of health services delivery, training and supervision.

2. Training - \$21,000 will be used for the management training of MSU senior staff.

3. Operating and Development Costs - \$245,112 will finance the following: (a) MSU's personnel salaries during years 1 and 2 of project and part of year 3, (b) Level II nurses salaries for year 1, (c) Level III personnel salaries during year 1 and part of year 2, and (d) approximately 45% of the MSU's operating costs (office supplies, maintenance, etc.).

4. Commodities - \$386,888 will be expended to purchase part of the project health and office equipment and furniture, 2 stretch-jeeps, type vehicles, 18 motorcycles, 35 bicycles, two-way radios, audio visual equipment and medications.

B. Host Country Contribution

1. Project Revenues and Cooperatives/Communities

a) Operating and development costs - \$453,890 will finance the following: (a) Levels II and III salaries of year 3, (b) approximately 35% of the MSU's operating costs (office supplies, maintenance, etc.), and (c) repair and renovation of a portion of the existing health units at Levels II and III.

b) Commodities - \$40,912 will be expended to purchase a portion of the health and office equipment and furniture for Levels I and II.

2. Title III

a) Training - \$69,730 will finance the cost of training of 298

promoters in the areas of deliveries, neonatal care and general maternal child care will also finance the purchase of materials to carry out the training.

b) Operating and development costs - \$89,236 will be utilized to pay for the following expenditures: (a) Level II through year 2 salaries, (b) part of year 3 of MSU's salaries, (c) approximately 20% of the MSU's operating costs (office supplies, maintenance, etc.), and (d) repair and renovation of the existing health units at Levels I, II and III.

c) Commodities - \$8,550 will be used to purchase approximately 75% of the office furniture and equipment for Level II.

V. SUMMARY OF PROJECT ANALYSES

A. Technical Feasibility Summary

The technical feasibility of the project is based on deriving strategies to deal with the following existing constraints to the delivery of health services through existing means: (1) unevenness of services, (2) a general non-availability of pharmaceuticals, and (3) unreliable communications.

1. Unevenness in Present Delivery Structure

Traditionally in Bolivia, primary health care has been furnished by an array of providers (e.g. MSW/PH pharmacists, private physicians and traditional healers) offering unreliable incomplete, poorly coordinated services. This mosaic of delivery modes is both qualitatively deficient and relatively expensive to the user.

To correct this situation, the project will implement a regionalized hierarchy of service levels capable of furnishing primary health care to the beneficiaries. The system will consist of three related tiers (Levels I, II and III) of health service outlets. Each tier will provide a combination of curative and preventive measures designed to address, with enhanced degrees of comprehensiveness, the most common health problems of the beneficiary groups. Patients, whose conditions cannot be adequately treated at a lower level, will be referred to the next stage of the hierarchy.

The services to be offered will be designed to address the principal causes of morbidity and mortality, as determined by field research, affecting the beneficiary populations*. The service packages will include:

- Growth monitoring, promotion of breast feeding, health and nutrition education and, where feasible, supplementary feeding;
- identification and treatment of high risk pregnancies;
- promotion of oral rehydration therapy and training in its use;
- basic immunizations;
- emergency treatment for injuries and minor ailments;
- promotion of environmental sanitation, including construction and use of latrines and potable water systems;

* USAID/Bolivia Montero Health Study.

- basic medicines and supplies in support of these services, and;
- circumstances permitting, information and referral concerning child spacing services.

2. Non-Availability of Medicines

Medicines, including vaccination, are required to both prevent and treat illnesses, thereby, maintaining and improving the health status of the patient. In Bolivia, the availability of drugs in the delivery system is a principal concern to the user. The system in which the availability of pharmaceuticals is not reliable, rapidly loses the patronage of the target population when given a more reliable alternative.

To avoid the loss of clientele, the project design includes a systematic strategy to assure the availability of medicines at prices that are affordable to the participants. First, a pharmaceutical formulary has been developed for each level of services. The formulary addresses the most common pathologies, ease of administration and the expectations of the user population. Second, a procurement, storage and distribution system will be designed. Technical assistance will be provided to assure that the system satisfactorily addresses the needs of the project. Third, a pricing system will be adopted that will assure that medicines are sold at full replacement cost, thereby, avoiding the decapitalization of the resources available for purchasing pharmaceuticals. Fourth, taking into account that the procurement of pharmaceuticals is a dollar cost, the project budget includes \$222,175 for medicine purchases to capitalize the fund and provide sufficient resources for its continued operation.

On a related matter, the Social Analysis revealed that the majority of the target population, as an initial stage in the treatment process, self-prescribes the medications they consume. Under this method, the quantity of medication purchased is usually below the amount required to achieve its therapeutic value. To assure that the full therapeutic value of drugs is afforded the beneficiaries, medications will be prescribed and distributed to the purchaser in course-of-therapy doses. For a set package price, the patient will have the complete medication needed to bring about the desired therapeutic effect. The staff of the delivery system, at all outlet levels, will be required to provide instruction to the user on this proper application of consumption of the medications.

3. Unreliable Communications

The timely, efficient delivery of health services requires

a communication network that affords the target population ease of access to the health care outlets and the converse. The principal elements of a communication system are roads and telecommunications. Concerning the former, the road network in the project area is generally sub-standard. While there is an adequate all-weather road linking Santa Cruz and Mineros, the trunk road between Santa Cruz and San Julián is cut by the Río Grande and is impassable for much of the rainy season. The secondary road system throughout the project area is generally in a poor state of repair. It is subject to periodic washouts and often is closed for extended period of time. With regard to telecommunications, there is phone service, albeit extremely unreliable, to Mineros; while San Julián is completely without telephone or telex linkages. Roads and communications in the immediately adjacent areas of the city of Santa Cruz are reasonably good.

The project will establish a communications system to deal with any communications constraint. This system, comprised of bicycles, motorcycles, four wheel drive vehicles and two-way radios, will be used by the delivery system staff to enhance its capability of providing services to the beneficiaries. Moreover, as precaution against isolation caused by flooding, a 3-month supply of pharmaceuticals and other essential items will be stockpiled at all rural Level II facilities and a minimum one-month supply will be available at all Level I facilities.

To provide all weather communications, a radio network will be established between the MSU in Santa Cruz and the Level III facilities in Mineros and San Julián. In some cases, the two-way radio network will incorporate rural Level II facilities as well. In addition, rural Level II health posts will be linked, on an experimental basis, with some of the most remote Level I outlets through one-way radio communications (a radio set that is permanently tuned to the frequency used by the communications network). The one-way radio communication will allow the reception of administrative messages, travel schedules of key staff, shipping reports, general news of interest, reminders for submission of information and short-term training. All radios will have a dual voltage (12 v. and 22 v.) capability and will use solar battery charging units.

As documented in the "Development Communications Report", a publication of the Clearing House on Development Communications supported by the Bureau for Science and Technology of A.I.D./Washington, the utilization of radios for project support is a well-conceived and applied technology. The project will also experiment with radio supported patient diagnosis, treatment and referral. Also, member recruitment and patient education will also be achieved through broadcasts by commercial radios stations serving the project area.

By combining appropriate land transportation and existing telecommunications with a complementary radio network, the project will be taking the necessary steps to reduce, as much as possible, the constraint of poor communications.

B. Social Analysis Summary

1. Background

A complete description of the project beneficiaries appears in Section II, B, 3. The following is a discussion of the principal potential social constraints that must be taken into account to assure successful project implementation.

2. Potential Constraints

a) Beneficiary Participation

Beneficiary participation is a key element to the success of all projects. Active target group involvement is even more critical in this case, as it is required both to effect the transfer of improved health services, as well as to underwrite the cost of delivering such services. However, the limited sense of community and the fragility of social structures in the project areas present serious obstacles to achieving the required involvement.

The design strategy that will deal with this potential constraint will be the use of existing cooperatives as a vehicle for accessing the beneficiary participation. In each of the geographic target areas, the relevant cooperatives (San Julián, Mineros and La Merced) have established an organizational structure and achieved a degree of acceptance by local people. As a point of fact, project related field research revealed that in both rural and semi-urban locations, the residents identified more closely with the cooperative that services the area rather than with the community or the neighborhoods in which they live. Taking advantage of this presence, each co-op will establish a staff position to coordinate health program recruitment activities. These activities will be directed at existing cooperative members as well as at non-members living in the areas to be serviced by the project. While a main thrust of the recruitment drive will be to encourage participation in the health program through the cooperative, it will be made clear that: (1) cooperative membership is not a prerequisite for participation in the program - private individuals can also obtain the services, although the cost will be slightly higher, and (2) participation in the health program as a co-op member does not necessarily entail involvement in any other cooperative activities. This flexibility with respect to modes of participation will be congruent with the loose network, limited obligations arrangements that dominate existing relationships among participants and will facilitate their involvement in the program.

b) Payment Formulas

Project design related research revealed that people in the target area currently are paying significant sums of money for a

patchwork of health services. Further, the research suggested that they would pay similar amounts and perhaps more for better organized, higher quality services. While these indications exist, the problem is presented with regard to the form(s) that such payment should take.

From an economic perspective, the pre-payment schemes, i.e. health care associated savings accounts, are the arrangements that would be most beneficial to the system. Obtaining sums of money in advance would permit the establishment of interest bearing accounts which would generate additional revenue for the system participants. A second advantage of pre-payment is that it would increase the probability of the target group using the system, which is the objective of the project; an enrollee is more likely to use the system when ill if he had made an investment in advance.

Project design related research indicated that fee-for-service payments in cash are the most common and preferred method of meeting health care obligations. The research further revealed that other types of payment schemes (e.g. health insurance plans, health package oriented savings accounts) are largely unknown to members of the target groups.

The apparent contradiction between the economic needs of the project and the customary practices of the participants will be resolved through a strategy which combines flexibility in methods of payment with promotion activities. The program will include a variety of payment options and program managers will have the latitude to use whichever system is most appropriate for a particular target group. Clearly, "fee-for service" will be a key method of payment throughout the life of the project. Nevertheless, early in the implementation phase, the MSU will experiment with establishing health savings formulas. These experiments will be carried out in conjunction with the participating cooperatives which will have the responsibility for explaining the concepts to the beneficiaries, pointing out both their advantages (e.g. interest-based reduced rates for services) and disadvantages (e.g. a commitment of resources that might be used for other purposes). It is probable that acceptance of health care plans will be relatively limited in the initial stages of the project. However, assuming that the beneficiaries are satisfied with the quality of services offered by the system and recognize the advantages offered by savings, this method will grow in acceptance.

c) Social Distance Between Participants and Health Workers

A third potential constraint is the social distance between the participants and the health workers. Participants and workers come from separate segments of society. The former have a strong moral base and belong to the large mass of Bolivian poor, which, through a combination of cultural and economic factors, has remained marginal to

the mainstream of contemporary Bolivian society. The latter, with the exception of the Level I promoters, are urban oriented representatives of the upwardly mobile middle class. These differences in social class and orientation contribute to mutual ignorance, distrust and difficulty in establishing constructive interpersonal relationships.

The solution to this constraint is a matter of structuring relationships so as to reduce the cultural gap and the apprehension and misinformation that exists between the two groups. To achieve this end the project will use two related design elements. First, promoters from the communities being served will be hired not only to staff the Level I outlets, but also to act as bridge between the delivery system and the participants. In essence, the promoters will be culture brokers serving as a conduit of information from the target groups to the delivery system and the converse. As the promoters will be selected from among the participants, they will have first-hand knowledge of beneficiary beliefs and attitudes concerning disease, curing and modern medical practitioners. These insights will be shared with the delivery system's professional staff and help formulate strategies dealing with patients in a culturally sensitive manner. Simultaneously, as employees of the delivery system, they will present the essential principles and values of modern health care to the beneficiaries in a manner that is comprehensive and unthreatening.

Second, an important project design element is staff orientation and training. It is assumed that the professional staff will come to the program with the requisite technical skills to carry out their assignments. Accordingly, except for the promoters, no major input of technical training is contemplated. However, the professional staff will receive refresher training continuing education, in a number of key areas, including cultural sensitivity issues relative to dealing with patients from rural and urban poor backgrounds, as well as technical matters.

d) Availability of Health Service Personnel

A potential constraint, closely related to the question of social distance between health workers and beneficiaries, is the difficulty of identifying sufficient numbers of skilled personnel (above the level of promoter) to staff the outlets in rural areas. Traditionally, for reasons of increased economic and social access to educational opportunities, professionals in all fields, including health, generally from middle and upper class urban backgrounds. Possessing a largely urban orientation, health professionals (doctors, nurses, laboratory technicians) have little understanding of, or interest in the hinterland and, generally, prefer to fashion their professional careers in the cities. Of the limited number of health professionals working in rural areas, most are there to satisfy a training requirement (i.e. doctors serving an obligatory year of rural medicine to qualify for a license to practice medicine) and leave as soon as the mandatory period ends. Moreover,

during the period of rural intern service, absences from work sites are both frequent and prolonged. The net result is that the delivery of rural health services is extremely inefficient. The placement of adequate numbers of health professionals in rural and marginal urban sites is critical to the success of this project. The question, then, is one of assuming that staffing requirements are met in a social climate that places little value on working with poor people in isolated locations.

The staff requirements of the project will be satisfied by a combination of para-professional and professional personnel. The Level I outlets, those that will be in the most isolated areas, will be staffed by para-professional promoters. These promoters will be chosen from among project beneficiaries and, hence, should have no social environment adaptation problems.

It can be expected that the promoters' primary source of income will be derived from farming; provision of health services will be a secondary occupation and supplementary source of income. Given that there will be two promoters per community, the volume of health encounters will be shared without interfering with the main source of income. Promoters will be provided with no fixed income. Instead, they will receive a share of the fees for services and drugs they administer. In addition, they will receive training and continual support from the supervisor auxiliary nurse from the Level II facility. The combination of a source of income, training, supervision and adequate supplies to carry out their role is seen as a valuable set of incentives that will attract community members to the promoter role.

The Level II auxiliary nurses (clinic nurse and supervisor) are seen as the key element of the delivery system. The auxiliary nurse is the formal link between the professional staff at Level III and the village level worker. Work incentives to be provided the auxiliary workers and the technicians working at Level III include adequate salaries, training, proper equipment, low cost housing, and work schedules that permit concentrated rural assignments with blocks of time off each month, so that they can travel to the city. (For example, 3 weeks on duty with one full week off).

Project related research included a study of physicians attitudes toward rural service and career formation for the purpose of establishing diverse incentive packages to attract and retain doctors in the program. Elements under consideration to be included in the these packages are realistic working schedules that allow blocks of time off similar to the auxiliary nurses, opportunity to borrow money from the participating cooperatives, good equipment and further educational opportunities paid by the project in limited amounts or from other sources (e.g. scholarships). The research on physician attitudes further revealed that

an additional impediment to rural service is a fear of becoming professionally dated and socially isolated. To address the concern, the project will experiment with rotating schedules which will allow all senior professional staff (physicians and technicians) to serve set periods of time in both rural and urban areas. In the Bolivian work context, which provides few benefits and low salaries, the incentives described above to be tested in this project are considered at this time to be adequate to assure the continuity of service in rural areas.

In summation, the regionalized delivery model is a comprehensive coordinated delivery system that overcomes the shortcomings of the existing fragmented array of services.

C. Institutional Analysis

A description of the MSU and its supporting organizations (e.g. Program Board of Directors, Participating Institution Advisory Board, Voluntary Advisory Committee) appears in Section IV. B. This section contains a review of institutional capacity of the cooperatives that will participate in the project as well as a discussion of the principal institutional constraints to project implementation.

1. Participating Cooperatives

a. Cooperativa Multiactiva La Merced, Ltda.

La Merced Cooperative will be both the grantee institution that will establish the MSU and assist it in carrying out the objectives of the project, as well as an affiliate cooperative providing potential membership health services.

Founded in 1961, La Merced has grown into a multi-service integrated cooperative based in the city of Santa Cruz. It has 40,000 members and currently provides a variety of service programs, including a savings and loan system, a middle-income housing program, life and property insurance, correspondence education courses, agricultural credit, a consumer store and pharmacy, and a limited health program consisting primarily of a referral system to private physicians.

Because of its institutional stability, La Merced has been able to improve its technical and administrative capability with each new undertaking, including the current AID-financed La Merced Small Farm Credit Project No.511-0533. Moreover, La Merced is a well-established and respected institution which has played an active role in the development of the region. For example, La Merced's leadership was instrumental in establishing the electricity and telephone cooperatives which currently serve the needs of Santa Cruz and surrounding rural areas.

In the mid-1970's La Merced became aware of the difficulties its members had in obtaining quality health services. To address the problem, in 1979, it organized a simple referral service to a qualified panel of private physicians specializing in family medicine. Under this system, the member paid 75 percent of the cost of the visit and the cooperative paid the balance. The referral system was complemented by nursing services which administered the treatment prescribed by the physicians, as well as a pharmacy which provided a full line of drugs at lower-than-average retail prices. This system is still in operation.

While its health program has enjoyed considerable success, La Merced officials have been interested in expanding its scope to include preventive services which would complement the current curative care focus. Additionally, an expanded program would provide enhanced access to health care for many of the cooperative's 4,000 members living in the relatively isolated rural and semi-urban areas north and south of the city of Santa Cruz. Participation in the project will provide La Merced with the opportunity to implement the desired changes in its current program.

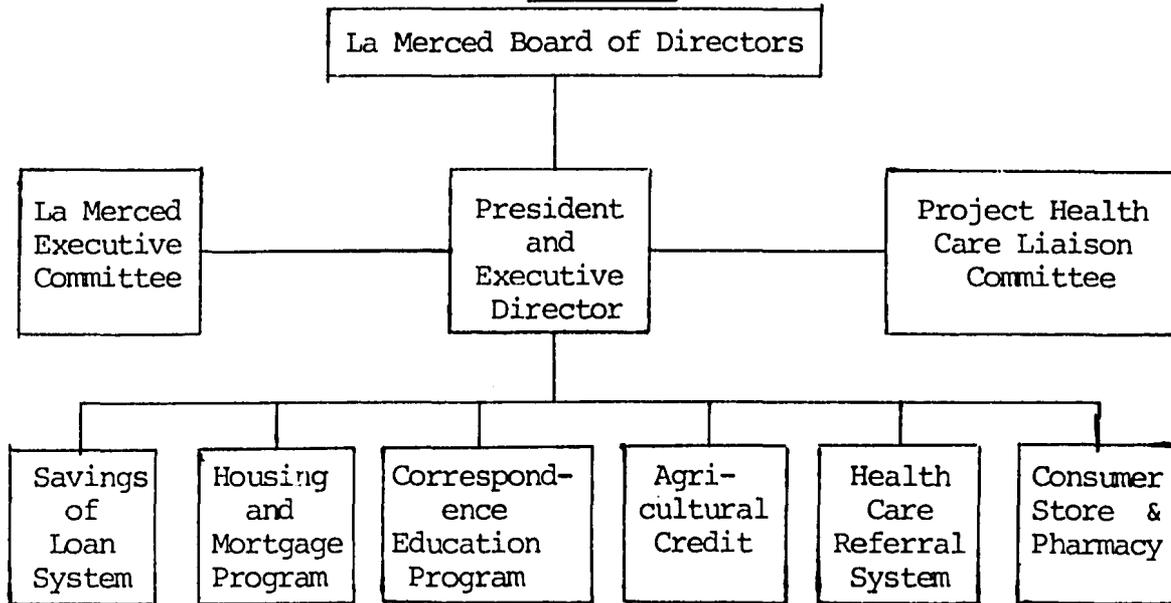
La Merced is an institution of sufficient organizational maturity and financial soundness to warrant its proposed dual role. To provide administrative support for the project, the Co-op has a computer-assisted record-keeping system for serving its savings and loan customers. This system presently contains much of the information (e.g. membership listings, credit ratings, geographical locations) that will be needed to put the health system in place. In addition, available data will supplement the health and vital statistics information system to be developed under the operations research component of the project.

The project proposes to provide Level I services to the semi-urban areas using neighborhoods of 60-80 families as the basic delivery unit. With the assistance of the MSU and La Merced, a health committee will be organized to carry out Level I organizational functions described in the model. Level II services and support functions will be carried out from centrally located points relative to the Level I neighborhoods. Level III services will be established at approximate ratio of one to every four Level II facilities. Level II and III facilities will consist of already existing health posts or clinics that need renovation or modification, and will be furnished by the co-op or rented with funds generated from project revenues. The project will undertake a small amount of building repairs, in addition to financing determined amounts of furniture, equipment and supplies. The La Merced Cooperative will have 72 Level I units, 12 Level II health posts and three Level III clinics.

La Merced will establish, as a precondition to disbursement of project funds, a health liaison committee within its administrative structure composed of the President of the Co-op, and two to three present members of the La Merced health referral service and pharmacy operation. The committee will facilitate contact between MSU daily operations and the decision making apparatus of La Merced's Board of Directors. Likewise, La Merced will assist the MSU in identifying Level II and III facilities and, where possible, will

provide help in the renovation of existing facilities to bring them up to project standards. The following diagram shows the present La Merced organizational structure and the corresponding placement of its health liaison committee.

FIGURE 12



b. Central de Cooperativa Agropecuaria Mineros

Mineros is a confederation of 14 member cooperatives with central offices in the town of Mineros located 75 kms. north of the city of Santa Cruz. Each of the affiliated coops consist of 40-50 families. The confederation includes approximately 700 households. While the founding of some of the member cooperatives dates to 1973, Mineros received its incorporated status in 1980.

The present focus of the Mineros Co-op is directed toward providing services in the agricultural sector. Ongoing programs include: agricultural credit, rental of heavy equipment for land clearing, truck transportation for marketing products, a heavy equipment repair shop, rice milling facilities and a savings and loan system.

As a complement to provision of agricultural services, the confederation has an involvement, albeit limited, in health matters. Mineros' area of influence is the same region originally incorporated into the Montero Rural Health project. Moreover, a few communities in the area participate in the health program sponsored by the MSW/PH District headquarters in Montero. However, this latter effort has been beset with critical problems such as a shortage of funds and lack of continuous administrative supervision, and has languished. Currently,

there are no promoters left in the program, the drug system has been depleted, and the capital generated from drug sales to replenish stock has been used for other purposes.

In spite of these setbacks, the Mineros leadership is aware of the need for an improved health care system for its membership and is committed to seek out an alternative, more effective program. To meet this commitment, the Mineros Co-op is prepared to set up a health care project committee within its organizational structure. Responsibilities of this committee will include assisting the MSU in selecting project promoters from the Mineros community who have the potential skills and desire to participate in the project. A member of the committee will also serve on the project's Advisory Board, attending quarterly meetings to assess the project's progress and advise on policy matters related to types of services to be delivered and fee for service scheduling. Another key contribution of the Mineros Co-op health committee will be the identification of existing buildings which could be used for Level II and III health facilities. In addition, the committee will organize community volunteer groups to assist with health facility renovation as well as project promotion and membership recruitment activities.

Specifically, the proposed health project delivery mechanism will provide services to the Mineros membership by introducing Level I services to each affiliate cooperative. Level II services will be located at strategic locations from where the Auxiliary Nurse supervisor can adequately support the Community Level Promoters. As planned, there will be a modified Level III facility established for the Mineros Cooperative due to the existence of two small nearby hospitals that will assist the project area and target population by offering a full range of Level III services. Specific administrative responsibilities of the Level III services (e.g. supervision, collection of health statistics and financial data) will be divided between the staffs of the centrally located Level II facilities and the staff of the modified Level III health facility.

Some Level II facilities will be rented and paid for by operating revenues. The project will undertake only minor repairs on existing facilities, along with the provision of limited amounts of furniture and equipment. Within the area of the Mineros Cooperative, there will be 21 Level I facilities and three Level II health posts.

c. Cooperative Multiactiva San Julián

San Julián originally functioned as an extension and legal dependency of Cooperativa San Juan Obrero located in the city of

Santa Cruz. As a component of the integrated colonization project, San Julián was incorporated as an independent multi-service cooperative. The colonization and the cooperative areas are located 300 kilometers southeast of the city of Santa Cruz. The area was first settled through spontaneous colonization in the late 1960s. Subsequent colonization involved the establishment of symmetrically distributed communities each centered within 25 square kilometers of land. By 1972, the National Institute of Colonization (INC) began to provide roads and water systems for each community, an effort eventually supported by USAID/Bolivia's Subtropical Lands Development Project No.511-T-050.

The Cooperative presently has approximately 850 member families and offers the following services: a savings and loan system and an agricultural credit operation which provide for the sale of general consumer products and agricultural supplies and equipment. Within the San Julián Cooperative, each of these activities has been established as a distinct service which may be utilized separately according to the needs and interests of the colonists. By utilizing one service, however, a person automatically becomes a member in the cooperative and has access to other services as well.

San Julián offers no health services at the present time. Colonists have limited access to the services offered by two INC employed physicians, who provide primarily curative health services. In addition, there are traditional health providers resident in the area.

The colonists, with assistance from FIDES, have been able to establish village health committees and introduce volunteer promoters in over 10 of the Cooperative's nucleos (centers). These committees and services will be expanded and complemented by the primary health care interventions offered under the project. As a means of supporting these new interventions, San Julián will mobilize Cooperative membership support for the project by establishing a co-op health committee comprised of colonists involved in existing village health committees, and current volunteers health promoters serving the co-op's nucleos. The committee will elect one member to represent San Julián on the project Advisory Board. The objectives of the health committee will include program education and membership campaigns designed to promote the project and elicit community needs with regard to demand for pharmaceuticals and health services. The committee will also foster an awareness among colonists of the benefits of preventive health care.

In the context of the San Julián colonization project, Level I services will be delivered at each nucleo. These services will

be staffed by two promoters who will work in conjunction with the co-op Health Committee and receive supervision from the Level II Auxiliary Nurse Supervisor. There will be 56 Level I facilities established throughout the San Julián colonization project.

The eight Level II health posts will be located at the núcleos centrales and will provide a referral service for the 8 surrounding núcleos. Level II services will use existing facilities - usually a 2-3 room adobe house. In those cases where no facilities exist, the co-op health committee will assist in organizing support for building facilities out of local material provided by the community. The project will contribute to all facilities durable roofing material and wire screen needed to keep out insects and rodents. All building upkeep required beyond renovation will be financed from operating revenues of the project. Two Level II health clinics will be established, one in Núcleo 38 and the other at the base camp of the colonization project. The health clinic at Núcleo 38 will utilize an existing facility belonging to the agriculture service center. At the base camp, existing buildings can be converted at minimal cost. The project will provide funds for repair of these buildings; all rent and upkeep expenditures will come from operating revenues.

2. Administrative Constraints

a. Delivery Service Efficiency and Affordability

Given the absence of successful health care delivery programs to marginally poor rural and semi-urban populations, the proposed project will serve as a pilot means of providing efficient summary health care. The questions of whether or not the project can adequately address the health care needs of rural poor Bolivians and deliver health care services through an efficient and affordable system, remain the primary constraints to successful completion of project objectives.

The PRICOR research project, providing \$138,856 in funding over the 3-year life of project, will furnish the Management Support Unit, as well as USAID, with continuing data to set project policy. This information will be used to guide the project toward the most practical application of primary health care services. Operations research data will contribute to the design of the primary health care packages, the structure of pricing mechanisms, as well as provide data on the delivery system's fixed and variable costs, anticipated increases in the cost of inputs over time, and the estimated costs for consumables used in the project. In addition, PRICOR will provide assistance for the development of a management information system (MIS),

undertake periodic analyses of MIS data to identify unanticipated changes in membership, utilization rates, revenues and/or costs, assist in preparation project reporting documentation, and participate in evaluating project progress.

In addition to the PRICOR research, it is essential that hands-on project guidance be provided by people with appropriate business and technical acumen. Accordingly, the project will provide funds for both long and short term technical assistance. One long-term advisor will be financed for the duration of the project. The incumbent will have expertise in the organization and delivery of the type of health care systems to be developed, and specialized experience in the implementation of specific components of the delivery system, such as management information systems, health care training programs and administration of primary health care services through a hierarchical structure.

Short-term technical assistance will be used to strengthen those areas of project implementation not assisted by the local project staff or long-term advisor. It is expected that short-term technical assistance will most likely be provided in the areas of fee for service applications, logistical systems, drug procurement and distribution, and personnel management and incentive packages.

Lastly, the backbone of the entire primary health care delivery program is the project's Management Support Unit (MSU), designed to administer all project components whose combined effort will successfully carry out project objectives. Under the MSU's two-columned organizational structure, the Health Services Division will be responsible for the direct delivery of pharmaceutical and other forms of curative services, as well as preventive care interventions associated with hygiene, vaccinations and health educational programs. Incumbent upon the Health Services Division, in addition to the provision of primary health care services, will be the organization of training and technical assistance programs, and program membership recruitment and promotional activities.

With regard to administrative services, the MSU will undertake all logistical and pharmaceutical drug distribution responsibilities. This will include procurement functions for all commodities purchased under the project and systems design for distribution of commodities that will ensure timely delivery according to project implementation schedules. Also Administrative Services will establish collection procedures for the project's fee-for-service schemes, which will correspond to inventory control and schedules for pharmaceutical and medical supply replenishments. Linked to the PRICOR operations research program will be an in-house management information system within the

Administrative Services Division. The MIS will serve as a management tool for ongoing project revisions, particularly as related to pricing policies and service utilization rates. Administrative Services will also handle personnel administration and be responsible for developing optimum salary incentive packages necessary to maintain a qualified cadre of health and management professionals.

b. Self-Financing Probability

The project's self-financing premise is key to the continuance and replication of the primary health care delivery system. Assuming the cost of a standard package of health care services offered under the project is affordable to the average project participant, there still remains the problem of sufficient volume of sales necessary to meet the financial obligations incurred by the project.

Each participating cooperative will provide a staff member to carry out recruiting and promotion activities. These individuals, paid in part by commissions, will be responsible for explaining and advertising the project to potential members and ensuring that membership quotas are achieved. In addition, the Recruiter/Promoter personnel will be supported by the Cooperative Health Liaison Committee through membership mobilization campaigns and health program presentations to target area communities. Other forms of membership drives will be developed as the project unfolds and more demographic and socio-economic information is made known. It is envisioned that other communities located on the fringe of the project target area will gradually have access to the health delivery system by means of feeder roads which connect into main roads serviced by the project.

c. Active Participation of All Cooperatives

Given that La Merced is the largest of the co-ops involved and that La Merced will sign the Cooperative Agreement and therefore be legally responsible to A.I.D. there is a danger of the project being dominated by the leadership of La Merced. Full active participation of affiliated entities must be achieved to guarantee the project's success.

The Project Advisory Board is designed to be a representative entity that will provide the MSU and the Board of Directors of La Merced with project feedback and assessment from all project participants. Representatives from the Mineros and San Julián health liaison committees will have full involvement in formulating the Board's proposals regarding project implementation procedures and other policy recommendations, for example, the selection of health care delivery services provided by the delivery system and appropriate pricing strategies. Moreover, as a means of establishing its autonomy, the

MSU will be located in Santa Cruz apart from La Merced, in a rented facility financed with project funds. The facility will be of adequate size to provide office space for a staff of 14 people, sufficient space for technical assistance personnel and PRICOR research staff.

D. Economic Analysis

1. Affordability

a. Historical Data on Rural Family Income and Health Care Expenditures

A major premise of the project is that the participants can and will pay for the health services to be provided. This premise is supported by the results of research conducted on health care expenditures. The 1977 Montero Study found that the surveyed population, which included a large representation of this project's target beneficiaries, incurred substantial expenditures for health services. For example, informants indicated that, in the two-week period prior to the collection of the data, the average expenditure per illness episode was \$2.13. When projected over one year, the average expenditure per person for health care was \$ 55.38. (See Figure 13).

Figure 13

Expenditure in Dollars for Illness Episodes During Prior Two Weeks, Montero Region, Bolivia, 1977

	Average Expenditure *		Percent of Total Expenditure Per Person
	Per Illness Episode**	Per Person***	
Medication	\$ 3.38	\$ 1.63	76.4
Fees	0.64	0.31	14.6
Transportation	0.22	0.11	5.0
Other	0.18	0.08	4.0
Total	\$ 4.42	\$ 2.13	100.0

* U.S. dollars (1 dollar = 20 Bolivian pesos).

** 1,625 illness episodes during prior two weeks.

*** 3,372 persons in total population.

Figure 14 , below contains the illness categories and the average expenditures for 1,625 illness episodes recorded during the survey.

As can be seen, the cost per illness episode was greatly increased for the treatment of conditions requiring the assistance of a health worker. For example, in 80 percent of the gastrointestinal cases, health workers were not consulted, and the average expenditure for treating these illnesses was \$ 1.58. However, for the remaining 20 percent who visited a health worker, the average expenditure per episode was \$ 8.25.

FIGURE 14

Illness Episodes During Prior Two Weeks and Average Expenditure by Condition for Which Health Workers Were and Were Not Consulted, Montero Region, Bolivia 1977

Illness Category	Number of Illness Episodes	Health Worker Consulted*			Health Worker Not Consulted		
		Number	Percent of Illness Episodes	Average Expenditure**	Number	Percent of Illness Episodes	Average Expenditure**
Gastrointestinal	419	82	19.6	\$ 8.25	337	80.4	\$ 1.58
Respiratory	329	74	22.5	9.62	255	77.5	0.83
Eye, ear, nose, throat	220	29	13.2	6.69	191	86.8	0.77
Skin	47	7	14.9	14.26	40	85.1	0.73
Physical injury	46	14	30.4	91.66	32	69.6	0.72
Pregnancy related	14	4	28.6	57.13	10	71.4	1.22
Other, nonspecific	548	107	19.5	19.47	441	80.5	2.17
Unknown	2	0	0	0	2	100.0	0
Total	1,625	317	19.5	\$ 16.65	1,308	80.5	\$ 1.46

* consultation with a physician, nurse, health promoter or midwife

** U.S. dollars (1 dollar = 20 Bolivian pesos)

Given that the average family size in the Montero Health Survey was 5.6 persons, the total annual family expenditure on health was \$ 310.13 (5.6 times the per person annual rate of \$ 55.38). The "1982 Statistical Abstract of Socio-economic Data for Selected Areas of Bolivia", prepared by USAID and the Bolivian Ministry of Agriculture and Campesino Affairs (MACA), indicated that the 1978 yearly net cash income for the average small farm household in the Santa Cruz area was \$1,086, or \$194 per person. Accordingly, a comparison of net family income (\$1,086) with annual family expenditures on health (\$310), reveals that rural families in the target area spent approximately 29 percent of their incomes on health care.

b. Current and Projected Expenditures for Health Care Services

The following analysis examines the impact of the current economic crisis in Bolivia on the ability of the farmer to pay for an adequate amount of health care services. By using baseline income and expense data developed from the Montero Study in 1977, the analysis demonstrates that the Bolivian rural population's current and projected health care expenditures will keep pace with the factors of inflation and currency devaluations, enabling payment for an adequate supply of medicines and health care services provided under the project.

As previously mentioned, 1977 income and expense data showed average rural farm per capita income to be \$194, with average health expenditures per capita totalling approximately 29 percent of that amount, or \$ 55.38. Current estimates of farm earnings indicate that per capita income has increased from \$194 in 1977 to \$256 in 1983, based on a peso income index (i.e. multiple) of 26.4 and an exchange rate deflator of 20 ($\text{\$b. 400} = \text{\$ 1, 1983} \div \text{\$b. 20} = \text{\$ 1, 1977}$). If it is assumed that health care expenditures as a proportion of income have remained constant since 1977 at 29 percent (i.e. an elasticity factor of 1.0), then projected health care expenditures are approximately \$ 73 per person. However, given the effects of a depressed Bolivia economy as well as natural disasters in the Santa Cruz region, which have decreased agricultural productivity, income spent on health care as a percentage of net income can be assumed to have declined since 1977. By using a more conservative elasticity factor of .50, current per capita health care expenditures are calculated at \$36.50.

Under the proposed health care delivery system, an average participant will pay approximately \$ 11 per year to obtain an adequate amount of health care coverage (see Section VI.E4). Accordingly, the project's per capita health care expenditure of \$ 11 is a demonstrably affordable cost, one which is well within the outer range of estimated current individual health care expenditures of \$ 36.50.

c. Health Care Expenditure Affordability Constraint

This analysis was carried out to determine the maximum amount that beneficiaries can spend on health care given the decline in consumer purchasing power that has occurred since 1977. In the absence of current farm level income data, wholesale agricultural prices were used to determine the change in farm earnings. The increase in agricultural prices for the first quarter of 1983 was 61 percent, with a projected rise for the entire year of 271 percent. This increase, when measured from the base year 1977, translates into a Wholesale Price Index (WPI) of 26.4. By measuring the WPI against a Consumer Price Index (CPI) of 44.3, developed for the same 1977-1983 period*, it is evident that the buying power of the farmers in the target area has declined by 40 percent. ($26.4 \div 44.3 = 60\%$ $100\% - 60\% = 40\%$ loss in purchasing power). Applying this reduction equally to all consumer items, including health care, it is estimated that the project participants can spend a maximum of \$21.93 per year on health services (See Figure 15).

* CPI was calculated by assuming a 150 percent inflation rate for 1983 and measuring prices against the 1977 base year.

FIGURE 15

HEALTH CARE EXPENDITURE CONSTRAINT

	<u>Increase in Farm Income</u>	<u>Purchasing Power</u>	
<u>1977 Montero Study</u>	<u>1977-1983</u>	<u>Discount Factor</u>	<u>Elasticity Factor</u>
<u>Average Health Care Expenditure</u>	<u>WPI 26.43</u>	<u>.6 or 60%</u>	<u>.5</u>

$$\begin{array}{r}
 \$ 55.38 \\
 \times \left(\begin{array}{l} \text{US\$ deflator} \\ 26.43 \div 20 \\ = 1.32 \end{array} \right) \times \left(\begin{array}{l} 26.43 \text{ WPI} \div 44.27 \text{ CPI} \\ = .6 \end{array} \right) \times .5 =
 \end{array}$$

\$ 21.93 Health Care Expenditure Constraint

d. Cost Analysis of Health Care Expenditures

Participants will have three types of health care expenditures under this project: (1) the cost of medications, (2) membership fees, and (3) the price of health services. First, project cost analysis estimates yearly expenditures of \$88,887 in medications to adequately cover the target population. With an allowable mark-up of 15 percent for medications, the project will generate yearly revenues for medications of \$102,220, which transposes to a per capita (36,900 beneficiaries) expenditure of \$2.77. Second, preliminary calculations indicate that participation in the project through a cooperative will require a yearly membership fee of \$10 per family. * This rate is judged reasonable both from the perspective of beneficiary affordability and from the revenue needed to support the delivery system. Calculating 5.6 persons per family unit, the yearly per capita cost for participation in the program is \$1.78. Finally, data provided by the Montero study, indicate that annual per capita expenditures for health care services under the Montero project were \$3.67, which when converted to current dollars is \$6.45. The sum of the three types of per capita expenses (medications \$2.77, membership fee \$1.78 and health services \$6.45) is \$11. Comparing this figure with the estimated maximum amount beneficiaries can spend on health care per annum (\$21.93), it is apparent that project health care costs are affordable and well within the target population's economic reach.

2. Self-Financing Feasibility Analysis

A primary assumption used in developing the feasibility study of the self-financing aspect of the project was the existence of a potential health program membership of 36,900 people found within the project's geographical area of concentration (i.e. the La Merced, Mineros and San Julián cooperatives, and surrounding vicinities). Another primary assumption derived from the affordability analysis is that the average cost of health care for a project participant of \$11 per year is affordable given the participant's average disposable income for health care services.

By the end of third year of the project, the \$11 per capita revenue generated from full participation by the target population, will be sufficient to cover all operational costs associated with the primary health care delivery system. It is envisioned that project revenues will be generated at incremental rates, increasing over the life of the project and in direct proportion to the number of Health Care facilities (i.e. Levels I, II and III) in operation at that time. Accordingly, revenue estimates have been made on a quarterly basis (see Figure 16) starting with the third quarter of the

* It is estimated that 90 percent of the beneficiaries will participate in the program through membership in a cooperative.

first year under the assumption that it will take 9 months for the project to begin generating revenues.

As can be seen in Figure 16, at the end of the first year of activity, slightly more than 4,600 people will be participating in the project. Their participation will raise first year generations to about \$24,400. The number of participants and revenues increase progressively to the end of the third year, when there will be 36,900 people involved, and the yearly generations will be approximately \$300,000.

FIGURE 16

PROJECT REVENUE PROJECTIONS

	<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>
<u>Year 1</u>				
Number of Participants	-	-	(1/8)4,613	(1/8)4,613
Medicine Revenues			\$ 3,194	\$ 3,194
Service Revenues			7,637	7,637
Advance Payment (36 percent Int.) for Medicines			-	29
Dues				
+ Services			1,853	1,853
Sub-total			\$ 12,684	\$ 12,713
Yearly total	\$ 25,397			
<u>Year 2</u>				
Number of Participants	(1/5)7,380	(1/4)9,225	(1/3)12,288	(1/2)18,450
Medicine Revenues	\$ 5,111	\$ 6,389	\$ 8,689	\$ 12,778
Service Revenues	12,219	15,274	20,772	30,547
Advance Payment (36 percent Int.) for Medicines	46	58	78	115
Dues	2,965	3,705	4,934	7,412
Sub-total	\$ 20,342	\$ 25,426	\$ 31,473	\$ 50,852
Yearly total	\$131,093			
<u>Year 3</u>				
Number of Participants	(1/2)18,450	(2/3)24,575	(3/4)27,675	(1)36,900
Medicine Revenues	\$ 12,778	\$ 17,122	\$ 19,166	\$ 25,555
Service Revenues	30,547	40,933	45,821	61,094
Advance Payment (36 percent Int.) for Medicines	115	154	172	230
Dues	7,412	9,874	11,120	14,825
Sub-total	\$ 50,852	\$ 68,083	\$ 76,279	\$101,704
Yearly total	\$296,918			
<u>Year 4</u>				
Number of Participants	(1)36,900	(1)36,900	(1)36,900	(1)36,900
Medicine Revenues	\$ 25,555	\$ 25,555	\$ 25,555	\$ 25,555
Service Revenues	61,094	61,094	61,094	61,094
Advance Payment (36 percent Int.) for Medicines	230	230	230	230
Dues	14,825	14,825	14,825	14,825
Sub-total	\$101,704	\$101,704	\$101,704	\$101,704
Yearly total	\$406,816			
Estimated Quarterly Operational Costs	96,128	96,128	96,128	96,128
Quarterly Surplus (Project Expansion and System Maintenance Purposes)	\$ 5,576	\$ 5,576	\$ 5,576	\$ 5,576

As seen in Figure 16, total project cash expenditures, minus in-kind contributions provided by the participating cooperatives and funding from Title III resources, are \$453,867 in year one. It is apparent that project revenue generations of \$25,397, derived from the first year of project operations, will not be adequate to cover the cost of project expenditures in that year. Therefore, an A.I.D. contribution of \$428,470 will provide for the budget deficit during the initial year of the project. Likewise, A.I.D. contributions of \$459,876 in year two, and \$211,654 in year three (primarily in the first two quarters of the year) will be required in order to sustain the project's infrastructural development and allow for achievement of full capacity by the end of the project. A.I.D. and Title III contributions are in effect a pump priming mechanism for the system. These resources will provide the monies necessary to initiate and continue operations until the delivery system begins to generate revenues. Based on project participation of the full target population, in the 4th quarter of year three of the project, revenue generations of \$101,704 will be sufficient to cover project operational expenses incurred in that quarter of \$96,128. Such expenses will be comprised of personnel costs for Levels I, II and III (\$45,331), MSU personnel and administrative support costs (\$28,579) and the supply of medicines (\$22,218). (See Figure 17).

With the project target population remaining constant in the fourth year and the health delivery system maintaining operational costs at previous levels, project revenues will be adequate to allow for self-financing as well as to provide a quarterly surplus of \$5,576 that will be used for project expansion purposes. (See Figure 16).

FIGURE 17

TOTAL PROJECT CASH EXPENDITURES

Total project cost	513,924	690,297	550,581	1,754,802
Less: In-kind Contribution	7,512	15,998	17,884	41,394
Total project cash expenditures	506,412	674,299	532,697	1,713,408
Less: Revenues Levels, I, II and III.	25,397	131,093	296,918	453,408
Subtotal	481,015	543,206	235,779	1,260,000
Less: Title III	52,545	83,330	24,125	160,000
A.I.D. Contribution	428,470	459,876	211,654	1,100,000

VI. PROJECT IMPLEMENTATION ARRANGEMENTS

A. Role and Responsibility of USAID

The project will be managed by a project manager in the Health and Human Resources Division (HHR) of USAID/Bolivia, who will be responsible for monitoring scheduled activities and project inputs. The project manager will be the USAID representative on the project's Advisory Committee, and close ties will be maintained with the directors of all the participating cooperatives, particularly La Merced, to assure that the terms of the Cooperative Agreement are followed for all procurement and selection of technical assistance. In the early stages of the project, the project manager will make at least monthly trips to the project site to assist the establishment of the Management Support Unit, define and clarify its responsibilities, coordinate project inputs to be provided through USAID and assist in the solution of implementation problems that arise. A Mission project committee composed of the project manager and representatives of other Mission offices, will review project status bi-weekly to identify potential problems in implementation, develop appropriate solutions and prepare quarterly status reports.

The Project Development and Implementation Office (PD&I) will be responsible for preparing the Cooperative Agreement as well as the Project Implementation Letters (PILs). PD&I will also assist in tracking the project's procurement plan and will carry out the purchase of medications through A.I.D./W PD&I will develop the PIO/Ts, which, with the assistance of the Executive Office will establish contract arrangements for the project's long and short term technical assistance, which will be done on an A.I.D. direct basis. The Office of the Controller will review all disbursement requests for conformity with A.I.D. regulations and ensure that appropriate accounting practices are followed by La Merced and other participating organizations. The Office of Development Planning (DP) will coordinate all evaluations in collaboration with the project manager and the FENACRE operations research team.

B. Implementation Plan

As explained in the implementation strategy (Section IV.C.), this project will be carried out in four phases. The first phase will essentially establish the MSU, giving the project the capacity to enter into the subsequent phases involving staffing of Level I through III facilities by specific geographic clusters, recruitment of members and delivery of services. Once the MSU is operational, the recruitment of the target population needed to make the project self-sustaining will be accomplished in the phases or cycles of six months each. Because of the cyclical nature of the member recruitment activities, details for only the first cycle - establishment of the MSU - and the second cycle - first membership recruitment cycle - will be presented below.

PHASE ONE - ESTABLISHMENT OF THE MSU

DATE

1983

- August (1)*
- Project Cooperative Agreement signed.
 - Implementation Letter No. 1 issued explaining priority implementation steps.
- September (2)
- La Merced establishes Health Sub-Committee within its Board of Directors.
 - Participating cooperatives select representatives to the Advisory Board.
 - La Merced to document the steps to establish the MSU showing role, relationship to Board of Directors and staffing.
 - Develop selection criteria, conditions of employment, and recruit MSU management team.
 - La Merced develops an agreement between the participating co-ops describing the respective responsibilities of each co-op in the project.
- October (3)
- Implementation Letter issued explaining procurement procedures, disbursement and local procurement regulations, and accounting system to be adopted for tracking USAID funds.
 - Hire MSU management team (Director and two Assistant Directors) and move into project offices, providing space for FENACRE staff.
 - Define selection criteria for remaining MSU staff and commence recruitment.
 - FENACRE Operations Research staff meet with MSU Director to define roles, responsibilities and work schedule in Letter of Understanding.

* Number of months of project implementation.

- FENACRE to initiate baseline survey.
- USAID issues procedures for international procurement of drugs.
- Establish accounting system to manage grant funds.
- MSU to develop expanded project implementation plan.
- MSU to issue a technical assistance plan consisting of job descriptions, selection criteria and work schedule.
- Initiate recruitment of long and short-term advisors.
- Conduct first quarterly process evaluation.
- Complete hiring of MSU staff.
- Initiate development of following systems and components:
 - . personnel
 - . services to be delivered
 - . accounting system for project - generated funds.
 - . staff training and orientation
 - . logistical system including drugs
 - . management information system
- Conduct inventory of existing services in project area.
- Hire short-term advisors to work on following systems:
 - . logistics including drug procurement
 - . financial management and accounting
 - . management information
- Complete drug formulary and place first order.

November (4)

- Develop specifications and order radios, supplies, vehicles and equipment.
- Contract training institution to develop training materials.
- December (5)
 - Complete the development of the following systems:
 - . personnel
 - . services to be delivered
 - . services delivery plan by geographic area
 - . staff training and orientation
 - Conduct formal orientation of MSU staff to project.
 - Develop service delivery plan showing for each geographic area the service clusters or zones to be incorporated in the program and the dates of incorporation.

1984

- January (6)
 - Complete development of the following systems:
 - . accounting for project-generated funds
 - . logistical system including drugs
 - . management information system
 - FENACRE and MSU to define service package, cost and income collection method(s).
 - Present communications plan showing location of radios.
 - Establish maintenance plan for radios, equipment and vehicles.
 - Order vehicles, radios, and equipment.
 - Conduct second quarterly process evaluation.

START PHASE TWO - DELIVERY OF SERVICE - FIRST SERVICE ZONE

February (7)

- Conduct survey of existing facilities to be incorporated in the first service zone.
- Meet with co-op directors to identify communities to be included in the first service zone and review implementation schedule.
- Conduct survey of existing facilities to be incorporated in the first zone.
 - . identify new facilities needed and existing facilities that require modification.
 - . prepare work plan to have all facilities ready by April.
- Membership recruiters contact selected communities, explain program and establish health communities.
- Health committees select promoters.
- MSU selects staff for Levels II and III facilities.
- Training materials are field tested.
- Vehicles arrive.

March (8)

- First shipment of drugs arrives and are packaged for distribution.
- Radios, equipment and supplies arrive and are prepared for distribution.
- Develop supervisory schedule showing responsibilities by level.
- Train promoters and Level II and III staff.
- Verify completion of facilities to program standards.
- Commence inscribing members.

- April (9)
- Management support systems operational to all levels.
 - Facilities are staffed at all levels.
 - Equipment, radios and supplies are distributed to all levels.
 - Vehicles are distributed to Levels III and II.
 - Medicines are distributed to all levels.
 - Supervisory system implemented for all levels.
 - Promoters continue recruiting participants in their geographic area of coverage.
 - Third quarterly evaluation.

COMMENCE DELIVERY OF SERVICES

- May (10)
- Initiate vaccination campaign at all levels.
 - Initiate health education program.
 - Continue recruitment of members.
 - Commence continuing education.
 - Fine-tune support systems.
- June (11)
- Commence drug restocking.
 - Continue service delivery.
 - Continue membership recruitment.
 - Initiate preventive maintenance programs.
 - Continuing education ongoing.
- June (12)
- Continue service delivery.
 - Continue membership recruitment.

- Continue membership recruitment.
- Drug restocking.
- Refinement of training program base on performance feedback.
- Refinement of support systems.
- Fourth quarterly evaluation (this in-depth review will propose improvements for the implementation of the second service zone).

The service delivery phases for reaching the remaining two service zones will follow the same events as outlined above.

The dates of the third phase for incorporating the second delivery zone are from August 1984, to the end of January 1985. The fourth phase for incorporating the third delivery zone begins February 1985, and terminates July 1985. The balance of the time left in the project will be dedicated to membership recruitment throughout the entire geographic area covered by the project in an effort to reach the 37,000 target population.

C. PROCUREMENT PLAN

1. Procurement of Professional and Technical Services
2. Procurement of Commodities
3. Procurement of Construction Services

1. Procurement of Professional and Technical Services

- A. Consultants and Advisors

1. Responsible Agency

USAID/B will be responsible for international contracting of all long and short-term technical assistance. La Merced will be responsible, with USAID/B concurrence for all local technical assistance contracts.

2. Budget

- a) Long-term technical assistance is calculated \$8,500 per work month x 33 w/m = \$280,500. This includes salary, travel and transportation, housing and other costs.

- b) Short-term technical assistance is calculated \$2,293.10 per work month x 29 w/m = \$66,500, which includes salary, travel and transportation costs for consultant only, per diem and other expenses.

3. Illustrative List of Technical Assistance Required

- a) One long term advisor for life of project (33 months) in the field of Health Administration.

- b) Short term consultants (29 months) in the following field of expertise:

- Financial Management
- Medication Logistics
- Information System
- Personnel Management
- Communications
- Training and Curriculum Development

4. Source and Origen

All technical assistance will be from either A.I.D. Geographic Code 000 (United States) or A.I.D. Geographic Code 935.

5. Method of Procurement

Competitive negotiation or negotiation without solicitation of competitive proposals for personal services contracts will be the contracting method used by USAID/B and the Management Support Unit (MSU).

6. Payment Methods

Long term and short term advisors will be paid on a direct payment and reimbursement basis, through a U.S. treasury check payable to the contractor, mailed to the contractor to reimburse dollar costs. Local currency payments will be made by USAID/B. All payments will be made upon presentation of invoices and A.I.D. Form 1034 (voucher).

B. Personnel of Management Support Unit (MSU)

1. Responsible Agency

La Merced will execute, with USAID/B concurrence, all local technical assistance and project personnel contracts.

2. Budget

Costs of these services are estimated to be \$581,944 for three years, \$198,246 to be provided by the A.I.D. Grant and the balance by the host country (contributions and Title III funds).

3. Illustrative List of Personnel

- Director
- Assistant Director, Health Services
- Assistant Director, Administrative Services
- Training Coordinator
- Health Education/Nutrition Coordinator
- Supervisor Health Services
- Community Organizer
- Financial Analyst
- Logistic Specialist
- Program Recruiter/Promoter (6)
- Drivers (2)
- Administrative Assistant/Bookkeeper
- Secretary/Typist (2)
- Physicians (6)
- Technical Nurses (6)
- Auxiliary Nurses (52)
- Trained Nurses Mid-wives (6)
- Lab. Technicians (6)
- Clerk/Record Keepers (6)
- Sanitarians (6)

2. Procurement of Commodities

A. Responsible Agency

Cooperativa La Merced, through the MSU's logistic coordinator, will be responsible for all foreign exchange and local procurement. USAID/Bolivia will provide all necessary procurement assistance and information, especially for international procurement, as well as a list of A.I.D./W certified procurement agents that could assist with procurement.

B. Budget

A total amount of \$436,350 is the estimated budget for this activity. Host country contribution will be up to \$152,800 and the balance will be covered by A.I.D. funds. This budget includes transportation costs to the project site. The total local currency authorization is \$63,637.

C. Equipment and Commodity List

According to current projections, the general equipment and commodity list attached in Annex H will be purchased with project funds. Refinement of the list may result in minor shifts from one commodity to another, or minor substitutions, but the overall dollar costs will not be raised. More precise details and specifications will be developed by the MSU for both local and international procurement.

The following example items will be purchased locally: scales, chemical and laboratory analysis equipment, office furniture, office supplies, construction material.

Other local currency costs will include the charges for the following lines of goods and services: vehicle operation and maintenance (1 year) personnel (see technical services section) labor contribution to training rent.

D. Origin and Source

A.I.D. Geographic Codes 000 and 941, including Bolivia, are the authorized sources and origins, except for motorcycles as states in Sections below. Medications will be procured from UNICEF through A.I.D./SER/COM. Local procurement will comply with regulations stated in HB 11, Chapter 3 and HB 1B, Chapter 18.

E. Waivers

Waivers of A.I.D.'s source and origin requirement is required to permit the procurement of 18 motorcycles from Japan (A.I.D. Geographic Code 935).

F. Method of Procurement

a) A.I.D. direct procurement will be used to purchase equipment and material available through Excess Property for medical and dental equipment, A.I.D./SER/COM will arrange for the purchase of drugs from UNICEF.

b) Host country contracting rules will be followed by the MSU in the purchasing of equipment and material locally and/or internationally.

G. Payment Methods

a) Purchase orders and other A.I.D. payment documents will be used to procure commodities from suppliers.

b) A.I.D. Direct Letter of Commitment will be used for commodities imported specially for the project.

c) Local purchasers will be paid by the MSU in local currency.

H. Shipping

All project commodities imported into Bolivia will be shipped on the basis of CIF La Paz or Santa Cruz. Suppliers will provide all risk insurance in the amount of 120% CIF cost of the commodities. A.I.D. marking requirements will apply.

I. Delivery

Delivery schedules will be set up according to the necessities of the project, and the availability of commodities.

J. Arrival Disposition

La Merced/MSU will be responsible for the proper reception and clearance of incoming project commodities consigned to them. USAID/B - EXO will be in charge of customs clearance of those commodities procured by USAID/B on behalf of the MSU. Inspection of incoming shipments must be made and receiving documents shall be annotated with comments on evident or possible damage when there are losses. La Merced/MSU will initiate all insurance claims. Delivery to the project site will be arranged by MSU.

K. Procurement Schedule

September	- PIL for local procurement prepared.
	- PIO/C's, PO's for all A.I.D. direct purchases prepared.
	- IFB's or other solicitation documents prepared and advertised as necessary.

- October - Bids or offers received.
- Award of contracts.

- December - Arrival of commodities.

3. Procurement of Construction

A. Responsible Agency

La Merced/MSU will be responsible contracting for all construction services.

B. Budget

Costs of these services are estimated to be \$83,344 for the life of the project. Funds will be provided by the host country.

C. Facilities to be Constructed

Existing structures may be adapted to the specific use of the MSU. A small warehouse for drugs and medical supplies will be installed in the main office either by converting existing space or adding on new facilities. Clinic facilities for Level III will be modified, when necessary within existing facilities.

D. Source

Construction for facilities will be undertaken by local firms. Given the small value of the construction element, it is highly unlikely that U.S. firms would be interested.

E. Method of Procurement

Construction firms will be selected from those solicited on a negotiated procurement basis. Following host country contracting regulations, at least three offers will be solicited.

F. Method of Payment

All construction services will be paid in local currency using a fixed price contract.

G. Construction Schedule

- February 1984 - Conduct survey of existing facilities to be used in the first zone.

- Prepare work plan to have all facilities ready by specified dates.

- March
- Identify constructions needs and facilities that require modification.
 - Work plan and specifications prepared.
 - Request for proposals or other solicitation documents prepared and advertised if necessary.
 - Reception of bids, qualifications of firms and award of contracts.
- May
- Termination of construction and verification of completion of facilities to program standards.

D. Evaluation Plan

1. General

The evaluation is designed to examine activities at two distinct, yet related, levels: (1) achievement of the project purpose, and (2) adherence to the implementation schedule. These two aspects of the evaluation plan will be carried out by different groups within the project following a coordinated evaluation schedule.

2. Responsibilities

Two organizations will be responsible for evaluating the progress and achievements of the project. The FENACRE/PRICOR Operations Research Team is responsible for evaluating the attainment of the project objectives. The MSU, as implementing organization, will conduct periodic checks on the provision of project inputs and will assess project accomplishments according to the master implementation schedule.

a) FENACRE/PRICOR Operations Research

The A.I.D./Washington centrally-funded Primary Health Care Operations Research (PRICOR) program, in conjunction with its local counterpart FENACRE, will complement the planned project with an operations research component that will not only provide project decision makers with needed financial information and recommendations, but also will serve as an outside evaluation entity to assess the attainment of project objectives.

The activities to be completed under the operations research component will be divided into three phases:

- I. Household baseline data collection and diagnosis,
- II. Development of service packages and financing schemes, and
- III. Systems implementation and refinement.

The activities of each of these phases will be carried out sequentially, although with overlap in Phases I and II. Phase I will concentrate on the collection of household baseline data, which will be used to project anticipated demand for, and cost of, health services in the target areas. In Phase II, the baseline data will be analyzed to estimate the population's ability and willingness to pay for health care and to design alternative service packages and payment plans. Eighteen months after the project begins PRICOR will conduct a second household survey which, combined with this generated information will serve to measure mid-term progress.

Phase III will coincide with the actual implementation of the self-financing health project. FENACRE/PRICOR-supported resources will be used to carry out ongoing analysis of project activities, including

utilization and revenue data. These activities will yield information for making the mid-term adjustments in the financing mechanisms, pricing structures and service packages which may be necessary to ensure the self-sufficiency of the delivery systems.

At the end of the third year, FENACRE/PRICOR will also conduct a major household survey and data collection effort similar to those carried out in Phases I and II. This survey will serve to measure the impact of the project on the participating households in terms of improved health and economic status. It will also serve to issue recommendations concerning: (1) ways to maintain the self-financing aspect of the delivery system beyond USAID/Bolivia's assistance, and (2) ways of transferring the concepts developed and experience gained under the project to other co-ops in Bolivia.

In effect, the FENACRE/PRICOR operations research will provide the project with the baseline data which will be used in the final evaluation to assess the impact of the project. Because co-op membership is an important variable, FENACRE/PRICOR will also continuously assess co-op attitudes, management capability and willingness to support the project in order to make the necessary adjustments to the project.

b) Management Support Unit (MSU)

The MSU will be responsible for conducting periodic "process evaluations" to measure project progress and adherence to the implementation schedule. Included in these evaluations will be components such as commodity and technical assistance procurement, recruitment, training and placement of personnel, and installation of service delivery modules. The information gathered by the MSU will be passed to the Advisory Board for review and recommendations. These evaluations will take place at the conclusion of each of the project's four phases: organization of the MSU and installation of the first, second and third sets of service delivery modules.

The FENACRE/PRICOR operations research team and MSU will jointly participate in the process evaluations to be carried out after the second set of modules has been installed. This evaluation will serve as the mid-terms review of activities and will evaluate the appropriateness of key design elements and make necessary adjustments in the implementation schedule. Items to receive close scrutiny will include: income generating mechanisms, adequacy of the membership base and appropriateness of service delivery packages.

In conclusion, the operations research activities and periodic process evaluations, coupled with USAID/Bolivia monitoring, are the elements of the evaluation plan, which will assure project implementation according to schedule. As organized, the evaluation mechanisms will be sensitive to those factors that may hinder project implementation and will allow the adoption of corrective actions, as needed.

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project: Annex A
From FY _____ to FY _____
Total U.S. Funding _____
Date Prepared: _____

(INSTRUCTION: THIS IS AN OPTIONAL FORM WHICH CAN BE USED AS AN AID TO ORGANIZING DATA FOR THE PAR REPORT. IT NEED NOT BE RETAINED OR SUBMITTED.)

FORM 100-20
1-6-61

Project Title & Number: Self-Financing Primary Health Care Project No. 511-0569

PAGE 1

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes:</p> <p>To improve the health status and, thereby, the productivity of rural and semi-urban agricultural workers and their families within the area of influence of 2 rural and one semi-urban cooperative in the Department of Santa Cruz.</p>	<p>Measures of Goal Achievement:</p> <ol style="list-style-type: none"> 1. Infant mortality reduced. 2. Child mortality reduced. 3. Chronic and acute malnutrition in children under 6 yrs. reduced. 4. Nutritional deficiencies among target population reduced. 5. Morbidity attributed school absenteeism reduced. 6. Morbidity attributed adult (15-44) disability reduced. 	<p>Baseline and follow-up surveys</p> <p>Health system statistics/reports</p> <p>Child growth charts</p> <p>School attendance records</p> <p>PRICOR research</p> <p>USAID/Bolivia project manager monitoring</p>	<p>Assumptions for achieving goal targets:</p> <p>Purchasing power for health care service remains constant or increases.</p>

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PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

ANNEX A

Life of Project:
From FY _____ to FY _____
Total U.S. Funding _____
Date Prepared: _____

Project Title & Number: Self-Financing Primary Health Care Project No. 511-0569

PAGE 2

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Project Purpose:</p> <p>establish a pilot self-financing primary health care system, including management support unit, which will serve the population within the area of influence of 2 rural and 1 semi-rural cooperative in the Department of Santa Cruz, and which can serve as a model for other private sector health care programs.</p>	<p>Conditions that will indicate purpose has been achieved: End of project status.</p> <ol style="list-style-type: none"> 1. A pilot, comprehensive self-financing health care delivery system will be fully staffed, equipped and functioning. 2. A management support unit capable of administering all aspects of the delivery system and completely financed by funds generated through the provision of health services, fully staffed, equipped and functioning. 	<p>End of project evaluation</p> <p>MSU management information system</p> <p>MSU reports</p> <p>USAID/Project manager monitoring</p>	<p>Assumptions for achieving purpose:</p> <ol style="list-style-type: none"> 1. Technical assistance to project will be sufficient. 2. Proportion of disposable income of target population devoted to health care does not decrease. 3. Sufficient technical expertise will be available to adequately staff and implement the project. 4. An institutional framework exists for accessing beneficiaries. 5. The MSW/PH will not interfere at a political level to hinder timely, efficient implementation.

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PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project: ANNEX A
From FY _____ to FY _____
Total U. S. Funding _____
Date Prepared: _____

Project Title & Number: Self-Financing Primary Health Care Project No. 511-0569

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Outputs:</p> <ol style="list-style-type: none"> 1. Monitoring and evaluation system designed and installed. 2. Standard packages of the services designed. 3. PHC workers and supervisors trained in service delivery and management. 4. Financial management system and pricing criteria designed. 5. Health and vital statistics reporting systems designed and operating. 6. Medicines and supply logistics system designed and operational. 7. Supervision and personnel management system designed and operating. 8. Health delivery service outlets established. 	<p>Magnitude of Outputs:</p> <ol style="list-style-type: none"> 1. One 2. 6 types 3. Level I 298, Level II 46, and Level III 30. 4. One system and set of criteria 5. One system 6. One system 7. One system 8. 149 Level I, 23 Level II and 6 Level III. 	<ul style="list-style-type: none"> -MSU work plan and reports -Manual and project reports -PRICOR survey reports -Detailed job descriptions -USAID/B project manager monitoring -Site visits 	<p>Assumptions for achieving outputs:</p> <ul style="list-style-type: none"> - Inputs provided in a timely manner - Qualified trainers can be identified and recruited - Suitable candidates for training can be recruited - Physical structures for health facilities exist and are made available.

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PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

ANNEX A

Life of Project: _____
From FY _____ to FY _____
Total U.S. Funding _____
Date Prepared: _____

PROJECT TITLE

Project Title & Number: Self-Financing Primary Health Care Project No. 511-0569

PAGE 4

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Inputs:</p> <p>D</p>	<p>Implementation Target (Type and Quantity)</p>		<p>Assumptions for providing inputs:</p>
<p>clinical Assistants:</p> <p>Long term: 13 pm</p> <p>Short term: 29 pm</p>	<p>\$ 347,000</p>		
<p>trainees: 3 months of continued education, all levels</p>	<p>\$ 21,000</p>		
<p>Commodities:</p> <p>Health equipment, office furniture and equipment, vehicles (2 stretch jeep-type, 18 motorcycles, 35 bicycles), medicines and supplies.</p>	<p>\$ 396,888</p>		
<p>Operating and Development Costs:</p> <p>search:</p>	<p>\$ 245,112</p> <p>\$ 75,000</p>		
<p><u>ST. COUNTRY</u></p>			
<p>title III</p>			
<p>Training</p>	<p>\$ 60,730</p>		
<p>Commodities</p>	<p>\$ 8,550</p>		
<p>Operating and Development Costs</p>	<p>\$ 89,236</p>		
<p>Project Operations</p>			
<p>Operating and Development Costs</p>	<p>\$ 40,912</p>		
<p>Operating and Development Costs</p>	<p>\$ 453,890</p>		

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5 C(1) - COUNTRY CHECKLIST

Listed below are statutory criteria applicable generally to FAA funds, and criteria applicable to individual fund sources: Development Assistance and Economic Support Fund.

A. GENERAL CRITERIA FOR COUNTRY ELIGIBILITY

1. FAA Sec. 481. Has it been determined that the government of the recipient country has failed to take adequate steps to prevent narcotic drugs and other controlled substances (as defined by the Comprehensive Drug Abuse Prevention and Control Act of 1970) produced or processed, in whole or in part, in such country, or transported through such country, from being sold illegally within the jurisdiction of such country to U.S. Government personnel or their dependents, or from entering the U.S. unlawfully?
2. FAA Sec. 620(c). If assistance is to a government, is the government liable as debtor or unconditional guarantor on any debt to a U.S. citizen for goods or services furnished or ordered where (a) such citizen has exhausted available legal remedies and (b) the debt is not denied or contested by such government?
3. FAA Sec. 620(e)(1). If assistance is to a government, has it (including government agencies or subdivisions) taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking steps to discharge its obligations toward such citizens or entities?

Bolivia has been strengthening the effectiveness of its narcotics control program. This project is an integral part of that effort.

N/A

N/A

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4. FAA Sec. 532(c), 620(a), 620(f), 620D; FY 1982 Appropriation Act Secs. 512 and 513. Is recipient country a Communist country? Will assistance be provided to Angola, Cambodia, Cuba, Laos, Vietnam, Syria, Libya, Iraq, or South Yemen? Will assistance be provided to Afghanistan or Mozambique without a waiver?
No.
5. ISDCA of 1981 Secs. 724, 727 and 730. For specific restrictions on assistance to Nicaragua, see Sec. 724 of the ISDCA of 1981. For specific restrictions on assistance to El Salvador, see Secs. 727 and 730 of the ISDCA of 1981.
N/A.
6. FAA Sec. 620(j). Has the country permitted, or failed to take adequate measures to prevent, the damage or destruction by mob action of U.S. property?
No.
7. FAA Sec. 620(l). Has the country failed to enter into an agreement with OPIC?
Yes. Bolivia is a member of the Andean Pact.
8. FAA Sec. 620(o); Fishermen's Protective Act of 1957, as amended, Sec. 5. (a) Has the country seized, or imposed any penalty or sanction against, any U.S. fishing activities in international waters?
No.

(b) If so, has any deduction required by the Fishermen's Protective Act been made,
9. FAA Sec. 620(a); FY 1982 Appropriation Act, Sec. 517. (a) Has the government of the recipient country been in default for more than six months on interest or principal of any AID loan to the country?
No.

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- (b) Has the country been in default for more than one year on interest or principal on any U.S. loan under a program for which the appropriation bill appropriates funds? No.
10. FAA Sec. 620(s). If contemplated assistance is development loan or from Economic Support Fund, has the Administrator taken into account the amount of foreign exchange or other resources which the country has spent on military equipment? (Reference may be made to the annual "Taking into Consideration" memo: "Yes, taken into account by the Administrator at time of approval of Agency OYB." This approval by the Administrator of the Operational Year Budget can be the basis for an affirmative answer during the fiscal year unless significant changes in circumstances occur.) N/A
11. FAA Sec. 620(t). Has the country severed diplomatic relations with the United States? If so, have they been resumed and have new bilateral assistance agreements been negotiated and entered into since such resumption? No.
12. FAA Sec. 620(u). What is the payment status of the country's U.N. obligations? If the country is in arrears, were such arrearages taken into account by the AID Administrator in determining the current AID Operational Year Budget? (Reference may be made to the Taking into Consideration memo.) No arrearages.
13. FAA Sec. 620A; FY 1982 Appropriation Act Sec. 520. Has the country aided or abetted, by granting sanctuary from prosecution to, any individual or group which has committed an act of international terrorism? Has the country aided or abetted, by granting sanctuary from prosecution to, any individual or No.

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group which has committed a war crime?

14. FAA Sec. 666. Does the country object, on the basis of race, religion, national origin or sex, to the presence of any officer or employee of the U.S. who is present in such country to carry out economic development programs under the FAA ?

No.

15. FAA Sec. 669, 670. Has the country, after August 3, 1977, delivered or received nuclear enrichment or re-processing equipment, materials, or technology, without specified arrangements or safeguards? Has it transferred a nuclear explosive device to a non-nuclear weapon state, or if such a state, either received or detonated a nuclear explosive device, after August 3, 1977? (FAA Sec. 620E permits a special waiver of Sec. 669 for Pakistan.)

No.

No.

16. ISDCA of 1981 Sec. 720. Was the country represented at the Meeting of Ministers of Foreign Affairs and Heads of Delegations of the Non-Aligned Countries to the 36th General Session of the General Assembly of the U.N. of Sept. 25 and 28, 1981, and failed to disassociate itself from the communique issued? If so, has the President taken it into account? (Reference may be made to the Taking into Consideration memo.)

Bolivia was represented at the Meeting of Ministers by the Torrelio government. It did not formally disassociate itself from the communique issued.

17. ISDCA of 1981 Sec. 721. See special requirements for assistance to Haiti.

N/A.

V. FUNDING SOURCE CRITERIA FOR COUNTRY ELIGIBILITY

1. Development Assistance Country Criteria.

a. FAA Sec. 116. Has the

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Department of State determined that this government has engaged in a consistent pattern of gross violations of internationally recognized human rights? If so, can it be demonstrated that contemplated assistance will directly benefit the needy?

No.

2. Economic Support Fund Country Criteria

a. FMA Sec. 502B. Has it been determined that the country has engaged in a consistent pattern of gross violations of internationally recognized human rights? If so, has the country made such significant improvements in its human rights record that furnishing such assistance is in the national interest?

N/A

b. ISDCA of 1981, Sec. 725(b). If ESF is to be furnished to Argentina, has the President certified that (1) the Govt. of Argentina has made significant progress in human rights; and (2) that the provision of such assistance is in the national interests of the U.S.?

N/A

c. ISDCA of 1981, Sec. 726(b). If ESF assistance is to be furnished to Chile, has the President certified that (1) the Govt. of Chile has made significant progress in human rights; (2) it is in the national interest of the U.S.; and (3) the Govt. of Chile is not aiding international terrorism and has taken steps to bring to justice those indicted in connection with the murder of Orlando Letelier?

N/A

STANDARD ITEM CHECKLIST

A. Procurement

1. FAA Sec. 602. Are there arrangements to permit U.S. small businesses to participate equitably in the furnishing of commodities and services financed?
Yes.
2. FAA Sec. 604(a). Will all procurement be from the U.S. except as otherwise determined by the President or under delegation from him?
Yes.
3. FAA Sec. 604(d). If the cooperating country discriminates against marine insurance companies authorized to do business in the U.S., will commodities be insured in the United States against marine risk with such a company?
Bolivia does not so discriminate.
4. FAA Sec. 604(e); ISDCA of 1980 Sec.705(a). If offshore procurement of agricultural commodity or product is to be financed, is there provision against such procurement, when the domestic price of such commodity is less than parity? (Exception where commodity financed could not reasonably be procured in U.S.)
N/A
5. FAA Sec.604(g). Will construction or engineering services be procured from firms of countries otherwise eligible under Code 941, but which have attained a competitive capability in international markets in one of these areas?
No.
6. FAA Sec.603. Is the shipping excluded from compliance with requirement in section 901(b) of the Merchant Marine Act of 1936, as amended, that at least 50 percentum of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U.S. flag commercial vessels to the extent that such vessels are available at fair and reasonable rates.
No.

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7. FAA Sec.621. If technical assistance is financed, will such assistance be furnished by private enterprise on a contract basis to the fullest extent practicable? If the facilities of other Federal agencies will be utilized, are they particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs? Yes.
8. International Air Transport. Fair Competitive Practices. Act. 1974. If air transportation of persons or property is financed on grant basis, will U.S. carriers be used to the extent such service is available? Yes.
9. FY 1982 Appropriation Act Sec.504. If the U.S. Government is a party to a contract for procurement, does the contract contain a provision authorizing termination of such contract for the convenience of the United States? Yes.

B. Construction

1. FAA Sec.601(d). If capital (e.g. construction) project, will U.S. engineering and professional services be used? No. Local procurement will be used.
2. FAA Sec.611(c). If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable? Yes.
3. FAA Sec.620(k). If for construction of productive enterprise, will aggregate value of assistance to be furnished by the U.S. not exceed \$100 million (except for productive enterprises in Egypt that were described in the CP)? Yes

C. Other Restrictions

1. FAA Sec.122(b). If development loan, is interest rate at least 2% per annum during grace period and at least 3% per annum thereafter? N/A

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2. FAA Sec.301(d). If fund is established solely by U.S. contributions and administered by an international organization, does Comptroller General have audit rights?
3. FAA Sec. 620(h). Do arrangements exist to insure that United States foreign aid is not used in a manner which, contrary to the best interests of the United States, promotes or assists the foreign aid projects or activities of Communist-block countries? Yes.
4. Will arrangements preclude use of financing:
 - a. FAA Sec.104(f); FY 1982 Appropriation Act. Sec. 525: (1) To pay for performance of abortions as a method of family planning or to motivate or coerce persons to practice abortions; (2) to pay for involuntary sterilization as method of family planning, or coerce or provide financial incentive to any person to undergo sterilization; (3) to pay for any biomedical research which relates, in whole or part, to methods or the performance of abortions or involuntary sterilizations as a means of family planning; (4) to lobby for abortion? Yes.
 - b. FAA Sec.620(c). To compensate owners for expropriated nationalized property? Yes.
 - c. FAA Sec.660. To provide training or advice or provide any financial support for police, prisons, or other law enforcement forces, except for narcotics programs? Yes.
 - d. FAA Sec.662. For CIA activities? Yes.
 - e. FAA Sec.636(i). For purchases, sale, long-term lease, exchange or guaranty of the sale of motor vehicles manufactured outside U.S., unless a waiver is obtained? Yes.

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- f. FY 1982 Appropriation Act, Sec.503.
To pay pensions, annuities, retirement pay, or adjusted service compensation for military personnel? Yes.
- g. FY 1982 Appropriation Act, Sec.505
To pay U.S. assessments, arrearages or dues? Yes.
- h. FY 1982 Appropriation Act, Sec.506.
To carry out provisions of FAA section 209(d) (Transfer of FAA funds to multilateral organizations for lending)? Yes.
- i. FY 1982 Appropriation Act, Sec.510.
To finance the export of nuclear equipment, fuel, or technology or to train foreign nationals in nuclear fields? Yes.
- j. FY 1982 Appropriation Act, Sec.511.
Will assistance be provided for the purpose of aiding the efforts of the government of such country to repress the legitimate rights of the population of such country contrary to the Universal Declaration of Human Rights? No.
- k. FY 1982 Appropriation Act, Sec.515.
To be used for publicity or propaganda purposes within U.S. not authorized by Congress? Yes

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PROJECT CHECKLIST

A. General Criteria for Project

1. FY 1982 Appropriation Act, Sec.523; FAA Sec.634A; Sec.535).
(a) Describe how authorizing and appropriations committees of Senate and House have been or will be notified concerning the project;
(b) Is assistance within (Operation- all Year Budget) country or international organization allocation reported to Congress (or not more than \$1 million over that amount)?
Committees have been notified using normal congressional notification procedures.
Yes
2. FAA Sec.611(a)(1). Prior to obligation in excess of \$100,000, will there be (a) engineering, financial or other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U.S. of the assistance?
Yes.
Yes.
3. FAA Sec.611(a)(2). If further legislative action is required within recipient country, what is basis for reasonable expectations that such action will be completed in time to permit orderly accomplishment of purpose of the assistance?
N/A
4. FAA Sec.611(b); FY 1981 Appropriation Act, Sec.503. If for water or water-related land resource construction, has project met the standards and criteria as set forth in the Principles and Standards for Planning Water and Related Land Resources, dated October 25, 1973? (See AID Handbook 3 for new guidelines.)
N/A
5. FAA Sec.611(e). If project is capital assistance (e.g. construction), and all U.S. assistance for it will exceed \$1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability effectively to maintain and utilize the project?
Yes.

6. FAA Sec. 209. Is project susceptible to execution as part of regional or multi-lateral project? If so, why is project not so executed? Information and conclusion whether assistance will encourage regional development programs.

Such other donors will collaborate with project activities (e.g. PANO)

7. FAA Sec. 601(a). Information and conclusions whether project will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; and (c) encourage development and use of cooperatives, and credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions.

Project will encourage efforts in all of the noted areas except for f which is not relevant to this project.

8. FAA Sec. 601(b). Information and conclusions on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).

Private U.S. suppliers may sell goods and source to project.

9. FAA Sec. 612(h). 636(h); FY 1982 Appropriation Act, Sec. 577. Describe steps taken to assure that, to the maximum extent possible, the country contributing local currencies to the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized in lieu of dollars:

Bolivia will provide 40% of total project costs, which is substantially above the 25% minimum. There are no U.S. owned local currencies.

10. FAA Sec. 612(c). Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release?

No.

11. FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise?

Yes.

12. FY 1982 Appropriation Act, Sec.521. If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar or competing commodity? No.
13. FAA 118(c) and (d). Does the project comply with the environmental procedures set forth in AID Regulation 16? Does the project or program take into consideration the problem of the destruction of tropical forests? Yes. See I.E.E.
14. FAA 121(d). If a Sahel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditures of project funds (dollars or local currency generated therefrom)? N/A

B. Funding Criteria for Project

1. Development Assistance Project Criteria

- a. FAA Sec.102(b), 111, 113, 281(a). Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, spreading investment out from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using the appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing

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- countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries?
- Project will have a direct impact in all these items with the exception of "e"
- b. FAA Sec.103, 103A, 104, 105, 106. Does the project fit the criteria for the type of funds (functional account) being used? Yes.
- c. FAA Sec.107. Is emphasis on use of appropriate technology (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)? Yes.
- d. FAA Sec.110(a). Will the recipient country provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or is the latter cost-sharing requirement being waived for a "relatively least developed" country)? Yes.
- e. FAA Sec.110(b). Will grant capital assistance be disbursed for project over more than 3 years? If so, has justification satisfactory to Congress been made, and efforts for other financing, or is the recipient country "relatively least developed"? (M.O. 1232.1 defined a capital project as "the construction", expansion, equipping or alteration of a physical facility or facilities financed by AID dollar assistance of not less than \$100,000, including related advisory managerial and training services, and not undertaken as part of a project of a predominantly technical assistance character. No.

f. FAA Sec. 122(b). Does the activity give reasonable promise of contributing to the development of economic resources, or to the increase of productive capacities and self-sustaining economic growth?

Yes.

g. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development, and supports civil education and training in skills required for effective participation in governmental processes essential to self-government.

Project will meet Bolivia's need to provide primary health care services to rural and semi-urban poor by means of a self-financing mechanism. Project will improve the health status of productive Bolivian worker and thereby enhance productivity through reduced rates of morbidity and mortality.

2. Development Assistance Project Criteria (Loans Only)

a. FAA Sec. 122(b). Information and conclusions on capacity of the country to repay the loan, at a reasonable rate of interest.

N/A

b. FAA Sec. 620(d). If assistance is for any productive enterprise which will compete with U.S. enterprises, is there an agreement by the recipient country to prevent export to the U.S. of more than 20% of the enterprise's annual production during the life of the loan?

N/A

c. ISDCA of 1981, Sec. 724(c) and (d). If for Nicaragua, does the loan agreement require that the funds be used to the maximum extent possible for the private sector? Does the project provide for monitoring under FAA Sec. 624(g)?

N/A

3. Economic Support Fund Project Criteria

a. FAA Sec. 531(a). Will this assistance promote economic or political stability? To the extent possible, does it reflect the policy directions of FAA Section 102?

N/A

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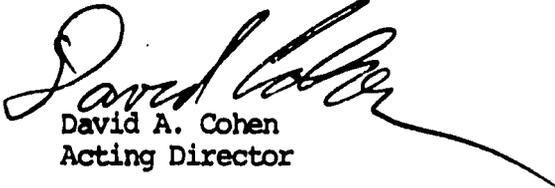
- b. FAA Sec. 531(c). Will assistance under this chapter be used for military, or paramilitary activities. N/A

- c. FAA Sec. 534. Will ESP funds be used to finance the construction of the operation or maintenance of, or the supplying of fuel for, a nuclear facility? If so, has the President certified that such use of funds is indispensable to non-proliferation objectives? N/A

- d. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made? N/A

Certification Pursuant to Section 611(e) of the
Foreign Assistance Act of 1961, As Amended

I, David A. Cohen, the principal officer of the Agency for International Development in Bolivia, having taken into account among other factors the maintenance and utilization of projects in Bolivia previously financed or assisted by the United States, do hereby certify that in my judgement Bolivia has both the financial capability and human resources capability to effectively maintain and utilize the capital assistance project: Self Financing Primary Health Care.


David A. Cohen
Acting Director

COOPERATIVA MULTIACTIVA "LA MERCED" LTDA.

PERSONERIA JURIDICA No. 01028

OFICINA JUNIN: No. 363

TELEFONO 4-3002

CASILLA No. 297

SANTA CRUZ - BOLIVIA

ANNEX D

4 de Marzo de 1983

Señor
Henry Bassford
DIRECTOR DE USAID/BOLIVIA
La Paz.

Estimado Sr. Director:

Como es de su conocimiento, hace varios años la Cooperativa Multiactiva "La Merced" Ltda., ha tenido interés en proporcionar servicios de salud en forma muy precaria a sus socios, comenzando con ellos el año 1967 y los cuales fueron ampliados con un servicio de Farmacia creado el año 1974 y un servicio de Enfermería que funciona desde el mismo año 1974, ambos con éxito social y económico.

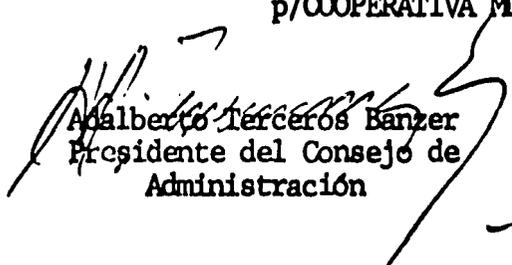
El Servicio de Salud ha sido atendido por médicos privados, que de acuerdo con la Cooperativa ofrecían sus servicios profesionales básicos, con honorarios especiales con que se favorecía la economía de sus socios.

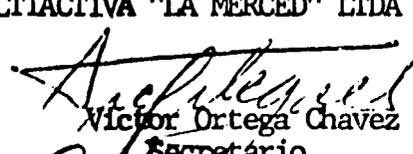
Con el transcurso de los años y debido al deterioro que tienen los servicios de salud en el sector público, con notoria escasez de medios, hemos creído necesario estudiar y explorar nuevos mecanismos de servicios de salud para nuestros socios con escasos recursos y a la vez expandir estos servicios en beneficio de otros socios de cooperativas existentes en el departamento de Santa Cruz y para ello deseamos hacerle conocer el interés de los Consejos, a través de la Cooperativa, para establecer y participar en un proyecto piloto que pudiera ofrecer servicios indispensables de salud autofinanciables dentro del sector privado a socios de nuestra institución y de otros del mismo género sin fines de lucro que funcionen en esta región, dando énfasis a las zonas periféricas de nuestra ciudad y las rurales.

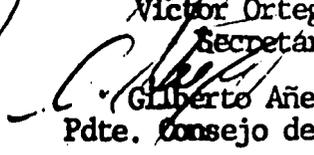
Tenemos la esperanza y entendemos que USAID/Bolivia nos puede cooperar en el desarrollo y financiamiento de este tipo de proyecto social en el cual está muy interesado el personal de la Cooperativa, sus Consejos y nosotros personalmente, para lo cual nos sería muy grato colaborar y participar asociados con USAID en un proyecto de esta naturaleza - tan importante para el capital humano de nuestro país y para la salud del pueblo boliviano que vive en las áreas de nuestro departamento.

Con la esperanza de que nuestros deseos sean favorablemente acogidos por su organización, Ud. y sus colaboradores, nos es grato presentarle los sentimientos de nuestra consideración y aprecio.

p/COOPERATIVA MULTIACTIVA "LA MERCED" LTDA


Adalberto Terceros Banzer
Presidente del Consejo de
Administración


Víctor Ortega Chávez
Secretario


Gilberto Añez Hoffer
Pdte. Consejo de Vigilancia

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ENVIRONMENTAL STATEMENT

An Initial Environmental Examination (IEE) was submitted to AID/W with the PID in January 1983. The recommended threshold decision in the IEE was - Categorical Exclusion. This recommendation was concurred with by Mr. James S. Hester, Environmental Officer, Bureau for Latin America and the Caribbean on January 13, 1983. A copy of the IEE and Mr. Hester's concurrence are included as a part of this annex.

UNITED STATES INTERNATIONAL DEVELOPMENT COOPERATION AGENCY
AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON D C 20513

E.2

LAC/DR-IEE-83-18

ENVIRONMENTAL THRESHOLD DECISION

Project Location : Bolivia

Project Title and Number : Self-Financing Primary Health Care
511-0569

Funding : \$892,000 - Grant

Life of Project : Three years

IEE Prepared by : Roberto León de Vivero
USAID/La Paz

Recommended Threshold Decision : Categorical Exclusion

Bureau Threshold Decision : Concurrence with recommendation

Action : Copy to Henry Bassford
Director, USAID/La Paz

: Copy to Roberto León de Vivero ✓

: Copy to Peter Orr, LAC/DR/SA

: Copy to IEE file

James S. Hester Date 13 January 1983

James S. Hester
Environmental Officer
Bureau for Latin America
and the Caribbean

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INITIAL ENVIRONMENTAL EXAMINATION (IEE)

A. IEE Recommendation

Project Location	:	Bolivia	
Project Title	:	Self-Financing Primary Health Care	
Funding	:	LOP	\$ 1,850,000
		USAID/Bolivia Grant	892,000
		PRICOR	75,000
		Participating Cooperatives	883,000
Life of Project	:	FY 1983-1986	
IEE Prepared by	:	Roberto León de Vivero Development Planning and Evaluation Officer USAID/Bolivia	

The purpose of the project is to establish primary health care delivery systems in three cooperatives in the Department of Santa Cruz. To achieve its purpose, the project will develop and test packaged management support systems which can adapted and used by other private institutions in the development and replication of self-financing primary health care delivery systems. The project components could impact directly on the environment (e.g. infrastructure to be constructed health facilities) will be limited as existing facilities and institutions in target areas will be utilized to the extent possible. Other project components which will impact indirectly, but favorably, on the environment are the improved health conditions that will increase productivity and income of the small to medium agricultural worker and his/her family. This analysis also noted that the three cooperatives (i.e., La Merced, Mineros, San Julián) responsible for project implementation have demonstrated a substantial level of concern for environmental issues related to their other activities having an indirect impact on the environment (e.g., campesino credit, land clearing, testing of model farming system alternatives, low to medium income housing).

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Based on the purpose of the project the attached IEE Checklist and the guidance provided in Handbook 3, Appendix 2D, Section 216.2 (c)(viii), the requirement for carrying out a full Environmental Assessment does not appear to be applicable. In this regard, Section 216.2 (c) (viii) categorically excludes "programs involving nutrition, health care of population and family planning services except to the extent designed to include activities directly affecting the environment (e.g., construction of facilities, water supply systems, water waste treatment)."

To this effect, it is recommended that the Environmental Officer, Bureau for Latin America and the Caribbean, find that the proposed project falls within the parameters of those categorically excluded from following the environmental procedures outlined in 22 CFR Part 216. Nevertheless, it is recommended that both the project and PRICOR funded baseline survey and census, to be carried out during the project paper preparation and initial project implementation phases, include sufficient specificity so as to be able to evaluate the project's expected indirect impact on the environment (e.g., changes in economic/employment patterns; changes in population levels, improved health conditions, dilution of cultural traditions).

Date

:

12-21-82

Concurrence

:

David A. Cohen

David A. Cohen
Acting Director
USAID/Bolivia

B. IEE Checklist
Impact Identification and Evaluation Form

LAND USE

IMPACTS

- 1. Changing the character of land through
 - a. Increasing the population L
 - b. Extracting natural resources N
 - c. Land clearing N
 - d. Changing soil character N
- 2. Altering Natural Defenses N
- 3. Foreclosing Important Uses N
- 4. Jeopardizing Man and His Works N
- 5. Other Factors -

WATER QUALITY

- 1. Physical State of Water N
- 2. Chemical and Biological States N
- 3. Ecological Balance N
- 4. Other Factors -

ATMOSPHERIC

- 1. Air Additives N
- 2. Air Pollution N
- 3. Noise Pollution N
- 4. Other Factors -

NATURAL RESOURCES

- 1. Diversion, Altered Use of Water N
- 2. Irreversible Inefficient Commitments N
- 3. Other Factors -

CULTURAL

- 1. Altering Physical Symbols N

- 2. Dilution of Cultural Traditions L
- 3. Other Factors -

SOCIO-ECONOMIC

- 1. Change in Economic/Employment Patterns M
- 2. Change in Population L
- 3. Changes in Cultural Patterns L
- 4. Other Factors -

HEALTH

- 1. Changing a Natural Environment N
- 2. Eliminating an Ecosystem Element N
- 3. Other Factors -

GENERAL

- 1. International Impacts N.
- 2. Controversial Impacts N
- 3. Larger Program Impacts N
- 4. Other Factors -

Symbols used are: N: No Environmental Impact
L: Little Environmental Impact
M: Moderate Environmental Impact

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ANNEX FTECHNICAL ASSISTANCE JOB DESCRIPTIONS
AND SHORT TERM TECHNICAL ASSISTANCE

The function of all technical assistance will be to strengthen the capability of the MSU to build the administrative infrastructure the project needs to meet its objectives. Advisors will have a MSU staff person as counterpart who will be responsible for implementing the mutually agreed upon action.

All advisors will be fluent in Spanish at the FSI R and S level 3. The long term advisor must have an equal rating in English. The short-term advisors will also need a knowledge of English, depending on their area of expertise. Knowledge of English is recommended for all advisors, so that they may have access to the vast literature on health care management and self-financing concepts that have been published in the last five years. The advisors should have prior consultation experience, preferably in a Latin American culture.

Short-term advisors will prepare a schedule of their proposed consultation services to the project, so that there may be a continuity of assistance at key points in the overall implementation schedule. The consultation schedules will be approved by the MSU and USAID.

A. Long Term Advisor

One long-term advisor will be hired by the project to serve for a 33 month period. The incumbent will serve as the counterpart to the Program Director of the MSU providing advice and expertise on the overall installation and management of the health delivery system. Included among his specific duties will be:

- participation in development of health delivery subsystems (e.g. financial management, training, commodity procurement, data collection);
- programming of short-term consultants;
- preparation of internal program documents (e.g. operating procedures, job performance standards, supervisory roles);
- design of strategies to overcome implementation problems that arise;
- monitoring of financial plans and income generating aspects of project to assure that the self-sufficiency objective is being met.

Basic to the qualifications for this position, will be a broad overview of the operation and management of a private sector health care program. More over, the incumbent must be able to relate and provide general advice to

the MSU staff, which will include a range of professional and technical expertise. Likewise, this advisor will affectively work with the short term advisor who also represent expertise in a variety of related technical areas. The long-term advisor must be more than a health generalist. He/she must have expertise in one or more of the following fields (e.g. financial management, management information systems, logistics), which are essential to the successful implementation of the project.

B. Short-Term Technical Assistance

As a complement to the long term advisor, the project will finance 27 months of short term technical assistance. Final definition of the particular specialities of this assistance will be made by the MSU and USAID early in project implementation and will depend, in part, on the expertise of the long term advisor. However, it is probable that included in the areas to be addressed with short term technical assistance will be financial management, medications, logistics, and management information systems.

The financial management expert will be required to establish the complete accounting and financial management sub-system for the program. In designing this system, the incumbent will coordinate with advisors of the PRICOR research effort to assure that the accounting sub-system responds to all the financial data needs of the health program. A key element of this expert's task will be to formulate an income forecasting methodology to monitor the progress of the system toward achieving self-sufficiency. In addition, he/she will be required to teach this methodology to MSU's accountant who will serve as a counterpart throughout the consultancy period.

The medications and logistics advisor will assist in the development of a pharmaceutical equipment and supply sub-system. The task will include design of procedures for identifying the most appropriate source(s) of procurement (both local and international) and for effecting such procurements. The incumbent will consult with USAID/Bolivia in developing the procurement procedures and will train an MSU counterpart in their use.

The management information advisor will assist in conducting an inventory of all the information that will be needed to manage the project and elaborate procedures for the flow of information within the health delivery system. In addition, this advisor will develop job descriptions for those persons responsible for handling data at all levels of the delivery system and identify key reports that need to be generated and assist in their development.

Other potential areas for short-term technical assistance include radio communications, manpower development and delivery of primary health care service delivery.

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Self-Financing Primary Health Care
Project - 511-0569

PREVENTIVE AND CURATIVE HEALTH CARE SERVICES

AT LEVELS I, II, AND III

PREVENTIVE AND CURATIVE HEALTH CARE SERVICESAT LEVELS I, II AND III

This section presents the objectives of the health care system at each level. These objectives are based on the need to reduce major causes of mortality and morbidity. Some of these objectives of the system are basic and essential, i.e. those which definitely will be included in the program. Beyond these basic objectives are others which could be included depending on the desire of each community and the feasibility of inclusion added objectives. Feasibility could depend on the availability of added financial resources, the abilities and time constraints of the various health workers, and logistical problems.

Objectives are delineated below for each of the 3 levels of the system. The services to be offered at each of the levels are related directly to each objective.

I. LEVEL I: THE PROMOTOR AT THE COMMUNITY LEVEL

A. Objectives at Level I: Preventive and Curative Medicine

1. Preventive

a) (Basic) Decrease incidence of parasitic and other infectious enteric disease.

b) (Basic) Decrease incidence of anemia.

c) (Basic) Decrease impact on morbidity and mortality of other preventable infectious diseases.

d) (Basic) Improve maternal and child health for children up to age 5 and pregnant women.

e) (Optional) Be available as a resource to help the community with other preventive programs: e.g. avoidance of pesticide poisonings, accident, preventive health programs in the schools in coordination with the rural school teachers, nutrition programs.

2. Curative

a) (Basic) Be available as a source of first contact primary care to take care of emergencies and minor illnesses.

b) (Basic) Be able to recognize serious health problems requiring referral to a higher level, especially abnormal deliveries.

c) (Basic) Have a small supply of basic drugs for the community so as to be able to treat minor illnesses before they become major.

d) (Basic) Be available for administration of treatment ordered at a higher level: e.g. injections, administration of TB

drugs or follow-ups.

e) (Basic) Be able to do uncomplicated deliveries, with or without the help of a trained midwife (who may also be a promoters).

B. General Considerations for Level I Services

At Level I, there will be two promoters for each community. They may operate out of their own homes, or from a room in a house provided by the community, whichever seems better for the community given individual circumstances. The promoters will be part-time workers (approximately one-quarter time) who earn most of their income at their usual work, but who will be reimbursed for their services by any means each individual community chooses (e.g. profit-sharing on drugs sold). The outlines provided below of services to be provided by the promotor is mainly a general guideline. Some of the services may not be feasible in a given situation, whereas, in other situations the promotor may fill some additional community need and may have to be trained specifically to meet that need.

In addition to the preventive and curative services to be offered by Level I, the promoters will do certain information and statistical tasks which will be decided upon by the MSU. These tasks will include keeping a log of preventive efforts (talks, meetings, sanitation work) and curative encounters, including types of diseases encountered, drugs administered and referrals made. Keeping track of immunizations and accounting for their use. They could also keep a health file for each member of the community. In addition the promoter will keep track of charges and collections.

C. Services to be Offered at Level I: Preventive and Curative Medicine

1. Preventive

a) Basis to decrease the incidence of parasitic and other infections enteric diseases, the promoter will be able to:

1) instruct the community on the reasons for using only safe drinking water and how to reach this goal, be it through installing a well, boiling or filtering the water, etc. They should have the skills to follow through to make this instruction effective,

2) instruct the community on the reasons for hygienic and safe waste/feces disposal, be it through the construction and/or use of latrines and/or the modification of sanitary practices that lead to the spread of enteric pathogens. The promoters must follow through to make the instruction effective,

3) following (2), instruct the community in the construction of latrines.

b) Basis to decrease the incidence of anemia, the promoter will:

1) know and introduce means in his community to interrupt the spread of hookworm,

2) encourage nutritional practices which will decrease the incidence of anemia; and

3) be able to recognize anemia and prescribe medicines to eliminate hookworm and build up iron stores (iron) and/or folic acid in pregnant women.

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c) Basic to decrease the impact on morbidity and mortality of other preventive infectious diseases, the promotor will:

1) be able to recognize dehydration with diarrhea and provide instructions for oral rehydration or referral if the oral rehydration is not successful;

2) be able to suspect possible tuberculosis cases and refer these appropriately;

3) be able to help with immunizations, both in organizing the community and in giving the immunizations;

4) in areas where malaria is a problem, be able to give instructions on means of preventing the illness and coordinate his work with the malaria program; and

5) be able to instruct the community in general hygienic means to minimize the spread of enteric, eye, skin, and respiratory diseases.

d) Basic to improve maternal health in pregnant women and the health of children up to age 5, the promotor will:

1) be available and accessible. Since there will be two promotors in each community, one will be available at all times in case of emergency.

2) have basic knowledge in handling emergencies involving trauma specifically:

i) how to stop severe bleeding,

ii) how to splint and handle fractures,

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- iii) how to handle snake bites,
 - iv) some knowledge of resuscitation in cases of drowning or electric shock, and
 - v) emergency treatment of burns and poisonings.
- 3) know how to recognize, and, if feasible, initiate treatment in medical emergencies, specifically:
- i) initiating oral rehydration in cases of moderate to severe dehydration, along with referral if indicated,
 - ii) initiating antibiotic therapy especially in cases of severe respiratory problems being referred to a higher level.
- 4) be able to distinguish minor self-limited illness from more serious illness and initiate treatment for minor illnesses such as:
- i) URI's,
 - ii) otitis extern/otitis media,
 - iii) tonsillitis,
 - iv) bronchitis,
 - v) mild diarrhea/gastroenteritis,
 - vi) mild parasitoses, including ascaris and hookworm,
 - vii) minor skin infections, abrasions, cuts, burns,
 - viii) mild conjunctivitis,
 - ix) muscle aches and pains, strains, contusions,
 - x) anemia,
 - xi) gastritis/dyspepsia,

- xii) minor fungal skin infections, and
- xiii) mild allergy problems.

b) (Basic) The promotor will be able to recognize when there is a serious health problem requiring referral to a higher level, including:

- 1) pneumonia or other severe respiratory problems,
- 2) asthma,
- 3) severe otitis media,
- 4) tuberculosis,
- 5) complications of pregnancy and post-partum period,
- 6) moderate to severe gastroenteritis, including possible typhoid, shingella, amoebiasis, or giardiasis,
- 7) urinary tract infections/nephritis,
- 8) venereal disease,
- 9) peptic ulcers,
- 10) cholecystitis, appendicitis, volvulus, or other possible "surgical abdomen,"
- 11) severe abscesses or skin infections, and
- 12) malaria,
- 13) contagious diseases preventivable by immunization: yellow fever, polio, measles, whooping cough, diphtheria,
- 14) liver disease,
- 15) heart failure,
- 16) seizure disorder or possible meningitis,
- 17) goiter, and
- 18) any other apparently minor condition which does not respond to initial treatment in a reasonable period of time.

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c) (Basic) The promotor's services include the availability of a basic drug supply to allow him to treat the basic conditions in (2) (a) (4) above.

d) (minimal) The promoters' services will include the ability to administer intramuscular injections at the local level, as dictated by a health provider at Level II or III, so as to allow better patient compliance, since the patient could stay in his own village. The promotor will be able to follow up on chronic health problems (as per instructions from Level II or III) such as: tuberculosis and chronic skin infections.

e) (Basic) All promoters will be able to do simple or uncomplicated deliveries in the home. If an auxiliary nurse from a Level II facility is immediately available, then it will not be necessary to have the promoters doing deliveries. There may be empirical midwives in the community who could be trained in sterile technique and in how to recognize complications. If it is necessary for the promotor to be able to do uncomplicated deliveries, then this service will include:

- 1) sterile technique,
- 2) care of the newborn including the umbilical cord, and
- 3) the avoidance of an episiotomy, if possible, and the

referral to a Level II or III facility. The problems to be recognized should specifically include:

- i) malpresentation,
- ii) pre-eclampsia or eclampsia,

- iii) premature or prolonged rupture of membranes,
- iv) fetal death,
- v) infection in the mother, pre or post-partum,
- vi) excessive bleeding,
- vii) failure to progress in labor,
- viii) multiple birth,
- ix) prematurity, and
- x) macrosomic baby.

II. LEVEL II: THE AUXILIARY NURSES AT THE HEALTH POST

A. OBJECTIVE AT LEVEL II: Preventive and Curative Medicine

1. Preventive

a) (Basic) Decrease incidence of parasitic and other infectious enteric diseases.

b) (Basic) Decrease incidence of anemia.

c) (Basic) Decrease impact on morbidity and mortality of other preventable infectious diseases.

d) (Basic) Improve maternal and child health for children up to age 5 and pregnant women.

e) (Basic) Provide direct supervision of Level I, including at meetings involving promoters and their communities.

f) (Optional) Availability as a resource to help commodities with other preventive programs, such as health programs in the schools with the collaboration of the rural school teachers.

2. Curative

a) (Basic) Availability for first contact primary care and

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to receive patients referred from Level I; will be able to handle emergencies and minor illnesses.

b) (Basic) Ability to recognize serious health problems requiring referral to a higher level, especially abnormal deliveries.

c) (Basic) Have slightly expanded drug supply (compared to Level I) to be able to treat the range of minor illnesses elaborated in the Curative Services section below.

d) (Basic) Availability for treatment ordered at a higher level: e.g., infections, administration of tuberculosis drugs, follow-ups.

e) (Optional but encouraged at most sites) Ability to do uncomplicated deliveries, either in the patient's home or at the health post.

f) (Basic) Provide supervision of the curative services performed at Level I.

B. GENERAL CONSIDERATIONS FOR LEVEL II SERVICES

At each Level II facility, it is planned to have one Auxiliary I nurse and one Auxiliary II nurse, both of them full-time and both on salary. Each Level II facility will be responsible for the supervision of the promoters in several communities, depending on geographic and demographic considerations. The Auxiliary II nurse will do most of this supervision. The facility is contemplated to be a basic 2 or 3 room health post provided by the cooperative or rented in the village center. Level II will serve as Level I's resupply point for drugs and other supplies, as well provide a continuous supply of vaccines. It will be a goal to have a supervisory visit to each Level I community at least once a month from Level II (one half day per month for each visit).

The division of time for various services of the auxiliary nurses at Level II will be approximately (combined for the 2 types of nurses):

Curative care (including waiting time for patients)	
6 nurse-hr./day	37.5%
Supervisory Time (50% curative 50% preventive) - 1 day/mo in each community	20%
Emergencies and Deliveries	12.5%
Preventive programs - MCH, vaccinations, etc.	25%
Drug Supply, information, etc.	5%

The auxiliary nurses will have informational and statistical tasks as well as the preventive, curative, and supervisory tasks. These will be similar to the information gathered at Level I, and will be specified by the MSU and will include data on:

- 1) preventive meetings, campaigns, etc.,
- 2) curative visits,
- 3) referrals,
- 4) supervisory activities,
- 5) communicable diseases,
- 6) drugs distributed and ordered, and
- 7) charges/collections/costs.

C. SERVICES TO BE OFFERED AT LEVEL II: Preventive and Curative Medicine

1. Preventive

a), b), c), d), e) (all Basic) and f) (Optional, but encouraged)

The preventive services to be offered at Level II are essentially the same as those provided by the promotor (see Level I preventive services),

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except that the nurses will act both on a community level in association with the promotor as a team (or on their own if there is no promotor), and on a supervisory level, when they will oversee the work of the promotors. The only other specific difference is that the auxiliary nurses generally the Auxiliary II) will have more direct organizational roles in health education programs, maternal and child health program, vaccination programs, and TB programs.

Some specific amplifications in the Level II preventive services over Level I (see Level I preventive services) are:

- 1) can start intravenous rehydration if necessary when patient is referred from Level I,
- 2) coordinate the care of TB patients,
- 3) has a refrigerator for the storage of vaccines and serves as distribution center for vaccines to the community,
- 4) can coordinate distribution of malaria prophylaxis if indicated, and
- 5), v) blood pressure and urine protein will be checked, as well as other services at Level I.

2. Curative

a) (Basic) Availability for first contact primary care and for referral care from Level I; to have the ability to handle emergencies and treat minor illnesses, the auxiliary nurses should:

- 1) be available, as there are 2 nurses assigned to each Level II post and one should be easily reached at all times in case of an emergency,

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2) have basic knowledge in handling emergencies involving trauma, specifically:

- i) how to stop severe bleeding, including some ability to do basic suturing,
- ii) immobilization of fractures,
- iii) how to handle snake bites and how to administer antivenom (some would be available at the Level II post if it were appropriate),
- iv) knowledge of how to do resuscitation,
- v) emergency case of burns and poisonings, and
- vi) stabilization with IV fluids in a shock following trauma, especially chest or abdominal trauma and/or loss, while arranging referral;

3) be able to handle medical emergencies, specifically:

- i) severe dehydration: may initiate IV therapy before transferring to Level III facility, and

- ii) initiating treatment in asthma and pneumonia;

4) be able to treat or at least initiate treatment for minor illnesses, including:

- i) URI's,
- ii) otitis external/otitis media,
- iii) tonsillitis,
- iv) bronchitis/mild pneumonia/mild asthma,
- v) diarrhea/gastroenteritis/bacterial dysentery,
- vi) parasitoses,

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vii) skin infections, including the lancing of minor abscesses,

viii) abrasions, contusions, and lacerations, including minor suturing,

ix) conjunctivitis,

x) muscle aches and pains, strains,

xi) anemia,

xii) gonorrhea, syphilis,

xiii) urinary tract infections,

xiv) gastritis/dyspepsia,

xv) allergies,

xvi) fungal infections,

xvii) vaginitis, and

xviii) continuing treatment of chronic diseases, such as tuberculosis, and thyroid disease.

b) (Basic) The auxiliary nurses will be able to recognize when there is a serious health problem requiring referral to Level III or above, including:

- 1) severe respiratory problems, including pneumonia, asthma that does not respond readily to treatment, and possible pneumothorax,
- 2) suspected tuberculosis,
- 3) complications of pregnancy, including those cases that have been referred from Level I and have been confirmed as truly complicated pregnancies; these would include:

- 1) bleeding in pregnancy, especially 3rd trimester,

- ii) malpresentation or pre-eclampsia,
 - iii) fetal death,
 - iv) hypertension or pre-eclampsia,
 - v) suspected multiple pregnancy,
 - vi) premature rupture of membranes or suspected
 amnionitis,
 - vii) macrosomic fetus,
 - viii) diabetes in pregnancy,
 - ix) tuberculosis in pregnancy, and
 - x) excessive alcohol consumption in pregnancy;
- 4) severe gastroenteritis or enterocolitis, including some cases of dysentery that may require more laboratory diagnosis (e.g. amoebiasis), and those cases where IV rehydration is necessary, although the nurse may begin the IV therapy,
- 5) possible "surgical abdomen," including appendicitis, perforated ulcer, volvulus;
 - 6) severe skin infections and large abscesses,
 - 7) malaria if laboratory diagnosis is required;
 - 8) contagious diseases preventable by immunization:
 yellow fever, polio, whooping cough, diphtheria, tetanus, complications of measles;
 - 9) liver diseases;
 - 10) heart disease, including failure and possible Chaga's Disease or rheumatic fever;
 - 11) nephritis;

12) seizure disorder or meningitis;

13) any other apparently minor condition which does not respond to initial treatment in a reasonable period of time.

c) (minimal) The services at Level II include the availability on site of a basic drug supply that will allow the treatment of these conditions in 2) a) 2) 3) 4) above. The specific drugs are listed in Annex F. In addition, some other drugs may be stored at Level II for the specific treatment of a specific patient, e.g., a tuberculosis patient.

d) (Basic) The services at Level II will include the capability to carry out services ordered at a higher level, including intramuscular and intravenous injections. This could include follow up for:

- a) tuberculosis,
- b) other chronic diseases, infections, and
- c) pediatric problems.

e) (Basic) The auxiliary nurses will be capable of doing uncomplicated normal deliveries, either at the home of the patient or at the health post. This service would include the ability to repair minor lacerations and follow the patient post-partum. The service should include sterile technique, care of the newborn, and the use of methergine or ergotrate post-partum. They will be able to recognize complications of labor and delivery and appropriately refer them to a Level III (or higher) facility. The complications which should be recognized are listed at Level I.

f) (Basic) The auxiliary nurse (usually the auxiliary II) will supervise the curative services performed by the promoters at Level I and will participate (with the technical nurse from Level III) in the evaluation of these services.

III. LEVEL III: THE HEALTH CLINIC

A. OBJECTIVES AT LEVEL III: Preventive and Curative Medicine

1. Preventive

- a), b), c), d) **Basic** These minimal objectives are the same at Level III as they are at Levels I and II (see Levels I and II), although the role at Level III will be more supervisory.
- e) **Basic** Provide direct supervision to Level II, and when appropriate, to Level I as well, especially as regards sanitation and maternal and child health programs,

2. Curative

- a) **Basic** Provide a full range of primary care activities to which promotors and auxiliary nurses at Levels I and II can refer patients, with the presence of a physician, including:
- 1) emergency care, and
 - 2) primary care of all illnesses with either
 - (i) definitive care at the Level III facility, or
 - (ii) arranging of referral to a Level IV or V facility.
- b) **Basic** Availability of a "medicine" supply adequate for either definitive care in a) 1) & 2) or for initiating care when referred to a Level IV or V facility is contemplated.

- c) Basic . at San Julian and Mineros, optional in peri-urban Santa Cruz) Management of normal deliveries and possibly some abnormal labors, as necessary, not including Caesarean section except in dire emergency.
- d) Basic laboratory services available.
- e) Basic . at San Julian and Mineros, optional but encouraged in ~~peri-urban~~ Santa Cruz) Availability of a limited number of hospital beds for treatment of more severe illnesses requiring observation or intravenous treatment, or for deliveries.
- f) (Optional) Basic dental services.

B. GENERAL CONSIDERATIONS FOR LEVEL III SERVICES

The Level III Health Clinics will be comprehensive primary care facilities to which referrals will be made from Levels I and II, although they will function in curative medicine as a Level I or II facility in that the Level III facility may be the first health care-source to be approached by the patient, especially for the population in direct proximity to the facility. Depending on what seems most appropriate, some of the peri-urban areas of Santa Cruz may have only Level I and Level III facilities, in which case Auxiliary II nurses from the Level III facility would do the supervisory functions for the Level I health workers in the same way which the Level II nurses would do it in the Mineros and San Julian areas.

Information

The staff at Level III will all partake in informational and statistical reporting, but at this level, the work will be coordinated by the clerk/record keeper.

C. SERVICES TO BE OFFERED AT LEVEL III: Preventive and Curative Medicine1. Preventive:

The basic services at Level III to meet the preventive objectives are much the same as they are at Levels I and II, except that, besides actually doing some of the preventive tasks, personnel from Level III will also be in the key supervisory roles for the different preventive programs in the area. The preventive programs are elaborated in more detail in the discussions of Levels I and II, but, briefly, the basic preventive services supported by Level III will include:

- 1) water and waste disposal programs (including latrines)
- 2) efforts to control hookworm and decrease the prevalence of anemia,
- 3) nutrition programs,
- 4) early treatment of diarrheal diseases,
- 5) cooperation with vertical programs for specific diseases: i.e., tuberculosis, yellow fever, malaria, immunization programs, and
- 6) support of maternal and child health program, including
 - a) pre-natal care,
 - b) recognition of abnormal pregnancies, and
 - c) well child care.

Basic preventive services at Level III would include supervisory functions in:

- a) sanitation, and
- b) maternal and child health.

Objective (f) would be beyond the basic services listed above; if the communities desired, and if it were feasible, Level III could help in such programs as the prevention of pesticide poisonings or accidents or give health programs in the schools in cooperation with the school teachers, or help in specific nutrition-oriented programs, family planning, or preventive dental programs.

2. Curative

- a) The Level III facility should be able to provide a full range of primary care activities within the capability of a general

practice physician. Since patients are being referred from Levels I and II, it is specially important that definitive care be given at Level III if it is within the range of "primary care", i.e., not requiring hospitalization or specialized diagnostic services not available in the facility.

These definitive services will include:

- 1) emergency care,
 - i) lacerations,
 - ii) simple fractures, or splinting and stabilization of more serious fractures with arrangement of referral to a Level IV or V facility. An X-ray machine is not contemplated at start-up, but is an option to be considered at a later date, if it seems appropriate and there is a documented need as well as the financial capability,
 - iii) burns, poisonings,
 - iv) the capability to do an emergency Caesarian section under local anesthesia, either at the facility or in the patient's home,
 - v) treatment of snake bite,
 - vi) capability to do resuscitation,
 - vii) stabilization of patients in hypovolemic shock through administration of intravenous (IV) fluids, including destran,

- viii) IV rehydration,
 - ix) initiate treatment of meningitis, including the capability to do lumbar punctures,
 - x) treatment of asthma,
 - xi) initiate treatment of pulmonary edema,
 - xii) treatment of tension pneumothorax,
 - xiii) capability to do emergency tracheostomy under local anesthesia,
 - xiv) capability to initiate parenteral antibiotic treatment in cases of sepsis in the newborn, child or adult, and
 - xv) stabilization of any patient requiring referral;
- 2) primary care of a general range of illnesses: mentioned above, the general range of illnesses treated by the general physician will be treated at the Level III facility. The exceptions would be:
- i) illnesses beyond the knowledge and capability of the physician, requiring the services of a specialist,
 - ii) elective or semi-elective surgical procedure requiring specialist care or more than local anesthesia, and
 - iii) cases requiring diagnostic procedures beyond the capability of Level III.

If a referral is necessary, there should be arrangements made by the physician so that the patient is transferred as smoothly and as quickly (if necessary) as possible.

- b) (Basic) A drug supply which would enable the physician to treat a full range of primary care problems as well as the emergencies should be available at the Level III facility. To be cost effective, a limited, but adequate formulary is planned along with the logistics system to re-stock drugs.

- c) (Basic at San Julfan and Mineros, optional but encouraged in peri-urban Santa Cruz) Deliveries: Although, baby deliveries will most likely be done at the Level III facilities at San Julfan and Mineros, they would be an option in the Santa Cruz peri-urban areas, as the Maternity Hospital in Santa Cruz already does most of the deliveries in the area. The complicated deliveries will be done with the physician present, except those requiring non-emergency Caesarian section. As mentioned above, only emergency Caesarian sections, done with local anesthesia would be done at the Level III facility. The physician would have to use his judgement on which abnormal labors to refer to a higher level facility.

- d) Laboratory Services: The scope of laboratory services is discussed in the specific section on laboratory services.

- e) (Basic at Santa Julfan and Mineros, optional, but encouraged in peri-urban Santa Cruz) The availability of a limited number of hospital beds at Level III would be a prerequisite for fulfilling the capability of doing deliveries and for the

stabilization and/or observation of patients either awaiting referral or being rehydrated. Obviously, a staff member would have to remain at the facility if a patient was there. In the case of a normal delivery, it is not contemplated that the patient would occupy the bed for a long time unless it was specifically indicated.

- f) Basic dental services would be an option available at Level III to be determined by the MSU. This would require the hiring of a full or part-time dentist and/or dental assistant, or an option would be to have a dentist come at intervals and work on a fee-for-service basis, with the Level III facility supplying the space and equipment.

LABORATORY SERVICES AT LEVEL III

To be able to provide more scientific medical services at the Level III facilities, it is planned to have a small laboratory at each Level III health clinic with a laboratory technician. The laboratory will allow more reliable prescribing of medications, thus effecting an overall savings. Also, the physicians will be able to provide more effective services.

The basic laboratory services that will be provided are listed below:

I. PARASITOLOGY

A. Exams will be done to identify:

- 1) roundworms: ascaris, hookworm, strongyloides, trichiuris, schistosomiasis, oxyuris, etc.
- 2) tapworms..
- 3) protozoans: amaebae, giardia, trichamonads, malaria, etc.

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II. HEMATOLOGY

A. Exams done will be:

- 1) hematocrit or hemoglobin,
- 2) white cell count,
- 3) differential, and
- 4) white cell count in spinal fluid.

III. EXAMINATION OF THE URINE

A. Exams done will be:

- 1) specific gravity,
- 2) urine protein, sugar, acetone,
- 3) microscopic exam of the urine, and
- 4) (optional) pregnancy test.

IV. BACTERIOLOGY

A. Exams done will be:

- 1) gram stains of various body substances: sputum, pus, wound material, urethral discharge, cerebrospinal fluid,
- 2) collection of samples in transfer media for culture and sensitivity: tuberculosis and other cultures, and
- 3) staining of sputum for tuberculosis.

The basic tests, above are the minimum contemplated for the Level III laboratory. If the laboratory technician is capable of doing further tests, and there are resources available to get more equipment, as well as the demand for other kinds of laboratory tests, the following useful tests could be done:

(all optional in order of importance)

- 1) blood typing and crossmarking for transfusions,
- 2) VDRL,
- 3) some minimal culturing: wound, sputum, urine, and
- 4) if equipment were available, some simple blood chemistries.

Outreach to Levels I and II

In order to support the preventive programs of the project and to give Levels I and II some laboratory capability, the laboratory technician will travel to selected outlying health posts (and even possibly some Level I communities) at regular intervals to do screening programs for such diseases as intestinal parasites and anemia. The average time of 8 hours per week has been programmed for this.

The stool exams could be done right on the site on fresh samples, since the microscope and other materials are easily transported. Hematocrits could either be done at the site or transported back to the Level III facility and done there. Slides for tuberculosis screening could be done at the same time.

The laboratory technician would also train the auxiliary nurses at Levels II and III to check urine for protein (important in pre-natal care) and to prepare slides for tuberculosis and malaria. If it were appropriate, other staff in the program could be trained to do lab work as seemed necessary by the lab technician. No outside training program would be necessary.

Equipment necessary for the laboratory is listed in Annex H on Equipment and Supplies for Levels I, II, and III.

ANNEX H

Self-Financing Primary Health Care
Project - 511-0569

MINIMAL EQUIPMENT AND SUPPLIES FOR FACILITIES

AT LEVELS I, II, AND III

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MINIMAL HEALTH EQUIPMENT AND SUPPLIES FOR FACILITIESAT LEVELS I, II, AND III

The equipment to be provided for Level I, II and III facilities is described below. Each list represents the minimum equipment necessary at each level to deliver the services outlined in the service delivery plan. There will likely be some variation in equipment among the facilities because of different customs and/or capabilities of the health staff. Furniture and beds will be purchased locally or donated by the communities.

LEVEL I

At Level I, the promoters will be equipped for assisting with child births as well as basic primary care. To provide the equipment necessary for deliveries, a UNICEF "Midwifery Kit Type 3 Basic" or equivalent is included for each Level I facility. This kit includes many items which can be used in primary care as well. The complete contents of the kit are described in Appendix 1.

LEVEL II

A gas, kerosene or electric refrigerator will be provided at Level II facilities for the storage of vaccines and some drugs. A two or three room facility will be furnished. In order to allow the performance of deliveries either in the facility or in the home, each Level II facility will have a UNICEF "MCH-A-CENTRE EQUIPT" basic kit or equivalent or a Maternal and Child Health Center kit. Many of the items in the kit can be used for primary care as well. The individual items of the kit are listed in Appendix 2.

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LEVEL III

Level III facilities will need more extensive furnishing, including several beds, examination tables, office equipment, and more storage capacity for drugs and supplies. Each Level III facility will be provided 2 Maternal and Child Health Center kits (omitting the two scales from the second kit) to allow enough equipment for doing both deliveries and primary care (see Appendix 2).

These facilities will be supplied with enough surgical instruments to permit the physician to do emergency and minor Surgical procedures. Casting materials are included.

Laboratory equipment is included at this level. No equipment for bacteriology (culturing), or serology, has been included, in accordance with the initial limited functions of the laboratory. These materials could be added later if it is appropriate. Enough laboratory materials, reagents, etc. have been programmed at this level to allow supplying the Level II facilities for any laboratory procedures they may do.

Dressings, Disposables, Drapes

Most dressings have been listed for each facility, and will probably be obtained locally. Disposable items, such as garbage bags and cleaning materials have not been listed. Also launderable items, such as sheets and drapes, have not been included.

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EQUIPMENT FOR LEVEL I FACILITY

<u>I t e m</u>	<u>Quantity</u>
<u>Furniture:</u>	
2 chairs and 1 table	
Cabinet for drugs	
<u>Equipment:</u>	
UNICEF Midwifery Kit Type 3 Basic (Cent. Alum. Case) or equivalent	1*
Scale, metic/hanging, for children	1
Forceps, dressing, spring type SS, 150 mm	1
Bag hot/cold rubber 2 Ltr	1
Jar. dressing w/cover 2.13L SS	1
Syringe, hypodermic 2ml x 0.1 Nylon luer	2
Needle, hypo luer 20G x 1" Box of 12	1
" " " 22G x 1 1/2" Box of 12	1
Scissors, bandage 182 mm	1
Flashlight	1
Tongue Depressor, metal 165 mm	3
Syringe, ear & ulcer, rubber tip 100ml	1
<u>Dressings, Solutions:</u>	
Elastic Bandage 75 mm x 5m roll	3
Bandage, Gauze, Non-St. 25mm x 9m roll	4
" " " 50mm x 9m "	4
" " " 75mm x 9m "	4
Gauze Pad Sterile 76mm x 76mm	30
Umbilical Tape 3mm x 100m	1
Isopropyl Alcohol	1L
Alcohol Dispenser	1
Tincture of Iodine	1L
Adhesive Tape 25mm x	
Liquid Soap	
Lubricant Jelly	
Band-Aids	
Cotton-tipped Applicators	
Cotton	
Diluent: Dist. H ₂ O for Ing. 2ml amps	50
" NaCl 0.9% 2 ml amps	50

* See Appendix 1 for detailed description.

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EQUIPMENT FOR LEVEL II FACILITY

<u>I t e m</u>	<u>Quantity</u>
<u>Furniture:</u>	
4 chairs, 2 tables	
Cabinet for drugs, large	
2 beds	
Instrument cabinet	
Light, examining, floor 110/220	1
<u>Equipment:</u>	
MCH-A-CENTRE-EQUIPT BASIC (Metric-Cent- Luer) Kit (UNICEF)* or equivalent	1
Refrigerator LP Gas/Electric 7.4 cu.ft.	1
Vaccine carrier, complete with 4 ice packs	2
Bag. Hot/cold rubber 2 LTR	1
Flashlight	2
Splint set. multipurpose	1
Suture, Obst/Gyn GUT Pkt 12	1
Syringe ear & ulcer, rubber tip 100ml	1
Otoscope set	1
Holder, needle straight 150 mm	2
Hammer, reflex	1
Suture, silk black set 3 sizes	5
Scissors, surgical straight SS 140mm B/B	3
Sterilizer, Instr. Boiling 410x250x100 Fuel	1
Stethoscope Binaural Complete	1
<u>Dressings, Solutions:</u>	
Elastic Bandage, 75mm x 5m roll	12
Bandage, Gauze Non-St 25mm x 9m roll	20
" " " 50mm x 9m "	20
" " " 75mm x 9m "	20
Gauze pad, sterile 76mm x 76mm	200
Umbilical tape 3mm x 100m	1
Cotton-tipped applicators	
Cotton	
Adhesive Tape 25 mm x	
Vaseline Gauze	
Band-Aids	
Lubricant Jelly	
Liquid Soap	
Isopropyl Alcohol	3L
Alcohol Dispenser	1
Tincture of Iodine	
Merthiolate	

*See Appendix 2 for detailed description.

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EQUIPMENT FOR LEVEL III FACILITY

<u>I t e m</u>	<u>Quantity</u>
<u>Furniture:</u>	
Tables, chairs, exam tables, beds as necessary	
Large cabinet(s) for drugs	
Instr-ment cabinet(s)	
Light, examining, floor 110/220	3
IV Stand	2
<u>Equipment</u>	
MCH-A-CENTRE-EQUIPT BASIC KIT (UNICEF)	
(Metric-Cent-Luer) or equivalent	2
Refrigerator LP Gas/Electric 7.4 cu. ft.	1
Vaccine Carrier Complete with 4 ice packs	3
Otoscope set	1
Otoscope Ophthalmoscope set	1
Stethoscope, Obstetric	1
Flashlight	2
Hammer, reflex	2
Sterilizer Hot Air 220V 250x250x300	1
Syringe ear and ulcer rubber tip 100ml	2
Resuscitation (Ambu) Bag	1
<u>Surgical Instruments:</u>	
Suture Obst/Gyn Gut Pkt 12	4
Suture Silk black set 3 sizes	50
Gloves, Surgeon's Latex Size 7 pair	50
Forceps Hemostat Curved Pean Baby 140mm SS	4
Forceps Hemostat Straight Crile Baby 140mm	4
Forceps Hemostat Mosquito Halsted 125mm	4
Forceps, Obstet. Simpson Long 350mm	1
Curette, Uterine Blunt 280mm Size 1	1
" " " " Size 4	1
" " Sharp "	1
Forceps, dressing, spring-type 150mm SS	2
Forceps, placenta 300mm	1
Forceps, splinter 100mm	2
Forceps, Sponge, straight 225mm	2
Forceps, tissue 125mm (teeth) fine	2
Forceps, tissue 125mm coarse	2
Forceps, Uterine Tenaculum 280mm	1
Holder, needle 125mm	3
Holder, needle straight 150mm	2
Knife Handle # 3	2
Knife Blade Pkg of 5 # 10 PKT	5
" " " # 11 PKT	5
" " " # 15 PKT	5

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Level III (Cont.)

<u>Surgical Instruments, Continued:</u>	<u>Quantity</u>
Needle, spinal child 22G x 1 1/2"	2
Needle, spinal 22G X 3 1/2"	2
Needle, hypo 22G x 1 1/2" box of 12 BOX	5
" " 20G x 1" " " luer	5
" " 18G x 1 1/2" " "	5
" " 24G x 3/4" " "	5
Needle, suture Pkt of 6 asst. PKT	2
Needle, suture, catgut, Mayo PKT	2
Sound, uterine 300mm	1
Retractor, abdom. Richardson	1
Retractor, Gen. Op.	1
Retractor, Gen. Op. set of 2	2
Scissors, dissect 132mm	1
" " curved Mayo 140mm	1
" " straight Mayo 140mm	1
" surgical straight 140mm	2
Syringe, hypo 5ml luer glass	2
" " 10 ml "	2
Tracheotomy set Complete	1
Cast Spreader	1
(optional) Cast Cutter	1
Anoscope	1
 <u>Dressing, Solutions:</u>	
Plaster of Paris Bandage 3" x 3 yd. roll	100
" " " 4" x 3 yd. "	100
Elastic Bandage, 75mm x 5m roll	30
Bandage, Gauze, Non-St 25mm x 9m roll	50
" " " 50 mm x 9m roll	50
" " " 75 mm x 9m roll	100
Gauze, absorbent, N-St 200mm x 6m	20
Umbilical Tape 3mm x 100 m	2
Gauze Pad Sterile 76mm x 76mm	1000
Finger Cot. Surgeon's Large Box 72	3
" " " Medium	3
Adhesive Tape 25mm x 10m	30
Diluent Dist. H ₂ O for Inj. 2 ml amp	500
" " " 5 ml amp	200
Diluent NaCl 0.9% for inj. 2 ml amp	500
" " " 5 ml amp	200
Vaseline Gauze	
Lubricant Jelly	
Liquid Soap	
Isopropyl Alcohol	10L
Tincture of Iodine	
Merthiolate	
Alcohol Dispenser	3
Cotton	
Cotton-tipped applicators	

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Quantity

Laboratory Equipment Level III Continued:

Sulfosalicylic Acid 100G	12
Wright Stain Powder 25G	3
Gram's Iodine	
Normal Saline solution	2L
10% HCl solution	
Ethanol	
Stains for tuberculosis stains	
Cytological fixative	
(optional) Urine test paper (e.g. Labstix)	
(optional) Slide pregnancy test	
Lugol's Iodine	

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APPENDIX 1

	<u>Quantity</u>
Midwifery-kit (cent-alum case)	1 kit
<u>Includes:</u>	
Sterilizer instrument, 222x82x41 mm stainless	1
Basin kidney, 825ml (28 oz) stainless steel	1
Bowl, sponge 600ml stainless steel	2
Irrigator, 1.5 ltr stainless steel	1
Apron utility 900 mm x 1m opaque plastic	1
Catheter, urethral nelaton solid-tip one-eye 12fr	2
Connector, 3 in 1 for 6 to 8 mm tubing nylon	1
Pouch, clear polypropylene 250x380mm long	1
Sheeting plastic clear vinyl 910mm wide	2
Tube, rectal one eye funnel-end 22fr-500mm rubber	1
Tubing latex rubber for irrigator 1.5m length	1
Bottle, dropping 10ml amber glass	1
Bottle, n/m-round screw-cap 60ml amber glass	1
Bottle, w/m-round screw-cap 60ml amber glass	2
Thermometer, clinical oral dual cels/fahr scale	1
Thermometer, clinical rectal dual cels/fahr scale	1
Brush hand, Surgeon's white nylon bristles	1
Case for MIDW fe kit with lid empty aluminium	1
Cotton wool, absorbent non-sterile 100G	1 roll
Gauze-pad, sterile 12-ply 76x76mm square	20
Lamp, alcohol with screw cap 60 ml metal	1
Pins, safety medium size 40mm bag of 12	1
Soap box 2 piece hinged plastic	1
Soap, toilet 118G bar unwrapped	1
Scale, spring baby 10KG 100G graduations	1
Tape measure 1.5m/60-vinyl-coated fibreglass	1
Towelrack, 430x500 mm	2
Urinalysis outfit (albumin) test tubes/botl/CLMP	1
Stethoscope binaural complete	1
Forceps, hemostat straight roche-str-pean 160mm SS	2
Forceps, sterilizer *utility) 200mm vaughn CRM	1
Scissors, surgical straight 140mm B/B SS	1
Clamp, tubing regulating Hoffman 13x19mm	1

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APPENDIX 2

	<u>Quantity</u>
NCH-A-Centra-Equipt Basic (metric-cent-luer)	1
<u>Includes:</u>	
Scale, physician adult metric 140kgs x 100g	1
Scale, infant metric 16kgsx20g	1
Sterilizer, Instr.boiling type 320x170x100mm fuel	1
Basin, kidney 475 ml (160oz) stainless steel	2
Basin, solution deep approx 6 litre SS	2
Bowl, sponge 600ml stainless steel	4
Cup,solution 180ml stainless steel	2
Irrigator ,1.5 ltr stainless steel	1
Jar,dressing w/cover 2.13 litre stainless steel	2
Measure graduated w/handle 500 ml/1 pint SS	1
Tray,instrument/dressing w/cover 310x95x63mm SS	1
Tray instrument,shallow 480x330x19mm SS	1
Catheter,urethral nelaton solid tip one-eye 14fr	2
Connector,3 in 1 for 6 to 8mm tubing nylon	2
Gloves, surgeon's latex size 7	3
Sheeting, plastic clear vinyl 910mm wide	2
Shielded nipple-glass shell, rubber nipple	5
Syringe,ear & ulcer rubber tip 100ml	1
Syringe,rectal infant rubber bulb hard tip 30ml	1
Tube, rectal one-eye funnel-end 20fr 500 mm rubber	2
Tube, rectal one-eye funnel-end 24fr 500mm rubber	1
Tubing,latex rubber for irrigator 1.5 m length	2
Dropper,medicine curved tip ungraduated	6
Measuring cup,1 ltr/32 oz/4 cups pyrex	2
Thermometer,oral clinical dual cels/fahr	3
Thermometer,clinical rectal dual cels/fahr scale	3
Brush hand,surgeon's white nylon bristles	2
Duster (dust-gun),hand	1
Lancet (Hagedornsuture needle),straight 75mm	6
Stone sharpening,oil Arkansas 50x19x6. 3mm	1
Suture cotton,white non-sterile 00 USP 91m	1
Tape measure,1.5m/60" vinyl coated fiberglass	1
Tourniquet,web heavy olive drap 38x106mm	1
Urinary test set,complete	1
Tongue depressor,165mm metal	3
Pelvimeter collyer external grad. CMS/in.	1
Sphygnomanometer,aneroid 300mm w/bandage cuff	1
Stethoscope,binaural complete	1
Stethoscope,fetal pinard monaural	1
Catheter,urethral female 12fr metal	1
Forceps,dressing spring type 150mm SS	2
Forceps,hemostat straight kelly 140mm SS	2
Forceps,sponge holding straight 225mm SS	1
Forceps,sterilizer (utility) 200mm Vaughn CRM	1
Holder,needle straight narrow-jaw mayo-HGR 150mm	1

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Quantity

Appendix 2 Cont.

Knife-handle, surgical for minor surgery # 3	1
Knife blade, surgical for minor surgery #10 PKT 5	1
Knife blade, surgical for minor surgery #11 PKT 5	1
Knife blade, surgical for minor surgery #12 PKT 5	1
Needle, hypo 0.70x32mm/22GX1-1/4" luer box Of 12	1
Needle, hypo 0.55x10mm/24GX3/4" luer box of 12	2
Needle, hypo 0.90x38mm/20GX1 1/2" luer box of 12	1
Needle, suture 3/8 circ tri pt pkt of 6 asstd.	1
Scissors, bandage angular lister 182mm SS	1
Scissors, gauze STR 215mm sharp/blunt point SS	1
Scissors, surgical stright 140mm S/B SS	2
Speculum, vaginal BI-valve graves small SS	1
Speculum, vaginal BI-valve graves medium SS	1
Syringe, hypodermic 2MLXO .1m. nylon luer	3
Syringe, hypodermic 5MLXO.5ml nylon luer	2
Syringe, hypodermic 10MLXO .1ml nylon luer	2
Clamp, tubing regulating hoffman 13 x 19 mm	2

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ANNEX I

FORMULARY OF MEDICATIONS FOR USE

AT LEVELS I, II, AND III

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A formulary is presented which includes 19 items at Level I, 44 items at Level II, and 72 items at Level III, not including anti-tubercular drugs and vaccines.

The vaccines that will be necessary for the project to have routinely include: DPT, oral polio, measles, adult-type tetanus-diphtheria, and BCG. Rabies vaccine should also be available. It is contemplated these vaccines will be made available by the Ministry of Health. The project will maintain refrigeration capabilities for vaccines at Levels II and III.

The overall total of prescriptions dispensed per year within the system will be about 282,000, not including vaccines.

The kinds of drugs used at the different levels will vary depending not only on the types of drugs available, but on the types of illnesses seen. Level III will have a variety of emergency drugs as well as a wider variety of antibiotics to meet the needs of patients referred there from lower levels.

The estimated courses of therapy at each level are based not only on the number of prescriptions issued, but also on the spectrum of diseases encountered. An estimate of the type of illness encountered in the target population requiring prescriptions is:

20%	Parasitoses
15%	Respiratory infections
15%	Other G.I. disturbances
10%	Anemia
5%	Pregnancy related
10%	Skin infections
15%	Pain

10% Other

These estimates are based on:

- i) data from the Montero project
- ii) data from San Julian health survey, July 1982
- iii) data from the Unidad Sanitaria in Santa Cruz, 1981
- iv) personal experience of medical consultants to this project.

The above estimates have been applied in estimating the courses of therapy for each drug at each level.

An attempt has been made to tailor the formulary to the stated objectives and services outlined in the section on services provided at the different levels. In addition to the drug formulary, each level also should be supplied with some antiseptic and/or cleaning solutions. Soap and clean water are probably as effective, but custom dictates the use of colored solutions or alcohol for skin problems or wounds. Bandages, cotton swabs, and dilutents for injectables have also not been included in the formulary.

Herbal remedies have not been included in the formularies, but their use is encouraged when appropriate and safe. Often the use of herbal remedies is preferable to that of some currently prescribed drugs which are potentially harmful.

The following formulary (Table # 1) will likely be augmented on an individual basis by a few locally obtained drugs and/or herbs for the reasons

outlined above. However, the listing can be considered a "minimal" formulary for each of the levels. This formulary is by no means static. It will be modified according to perceived needs, and if the preventive programs are successful, many fewer drugs will be needed in subsequent years, especially drugs such as the anti-helminthals and iron.

The formulary (Table # 1) lists:

- (1) the medication, or the type of medication (If the type of medication is listed, then the specific names are listed in the boxes showing the alternative drugs available from different sources);
- (2) briefly, why the drug was selected (Often this reason is because it is recognized as the standard drug for the particular condition. Sometimes there is no practical alternative. Other times, low cost is a key reason, and some drugs have been omitted completely because their cost is prohibitive and cheaper alternatives are available. On occasion, it may become necessary to purchase one of these more expensive drugs not in the formulary (e.g., because of patient allergy to the less expensive drug), but these purchases should be considered on an individual basis by the project physicians); and
- (3) the level of the system at which each one of the drugs will be used (I, II, III) (All level I drugs are included within the levels II and III formularies, and all level II drugs are included in the level III formulary. For convenience, a summary of the

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formulary for level I is shown in Table # 2, and the formulary for level II in Table # 3.)

TABLE # 1: FORMULARY FOR LEVELS I, II, AND III

Medication	Why drug selected	For what pathology	Level at which drug will be used
1. Oral Rehydration Salts	inexpensive, effective rehydration	diarrhea and dehydration	I, II, III
2. Mebendazole 100 ^{mg}	only effective drug for hookworm, also treats other roundworms	hookworm ascaris trichuris	I, II, III
3. Anti-Diarrheal	inexpensive, safe in limited use	diarrhea	I, II, III
4. Alternative Anti-diarrheal	in common use, inexpensive, safe in limited use	diarrhea	II, III
5. Piperazine	inexpensive if treating ascaris only	ascaris	II, III
6. Laxative: Milk of Magnesia	safe, effective	constipation	II, III
7. Laxative: Bisacodyl	alternative much less expensive	constipation	I, II, III
8. Anticholinergic	safe, inexpensive	bowel spasms ulcers	I, II, III
9. Metronidazole 250 ^{mg}	most effective safe drug for giardiasis and amoebiasis	giardiasis amoebiasis trichomoniasis	III
10. Anti-emetic, oral	safe and effective	nausea, vomiting	II, III

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TABLE # 1, Continued

Medication	Why drug selected	For what pathology	Level at which drug will be used
11. Anti-emetic, IM	safe and effective	nausea, vomiting	II, III
12. Antacid pills	safe, effective inexpensive	dyspepsia peptic ulcer	I, II, III
13. Antacid liquid	safe, more effective	dyspepsia peptic ulcer	II, III
14. Atropine IM	standard drug anticholinergic	bowel spasms, bradycardia	III
15. IV solution: D5W	standard	rehydration, giving IV medications	III
16. IV Solution: Ringer's Lactate	standard	rehydration, hypovolemic shock	II, III
17. Chloramphenicol 250 mg	inexpensive, usual- ly effective for typhoid	typhoid fever infections resistant to other antibiotics	III
18. Diphenhydramine, oral	standard treat- ment for allergic reaction	allergic reaction	I, II, III
19. Penicillin, oral	inexpensive effective	respiratory and skin infections sensitive to penicillin	I, II, III
20. Procaine, Penicillin, IM	inexpensive parenteral antibiotic	same as # 19 when not feasible to give oral antibiotic	I, II, III

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TABLE # 1, Continued

Medication	Why drug selected	For what pathology	Level at which drug will be used
21. Benzathil Penicillin, IM	long-acting penicillin	impetigo strep infections, syphilis	II, III
22. Ampicillin, injectable	wider spectrum than penicillin	emergency treatment severe respiratory, G.I., or meningeal infect.	III
23. Ampicillin, oral	same as # 22	Otitis media hemophilus infections typhoid	III
24. Ampicillin, suspension	same for children too small to take capsules	same as # 23	III
25. Tetracycline, oral 250 mg	inexpensive, wide spectrum: esp. for gonorrhea, NSU	Bronchitis Gonorrhea, NSU penicillin allergy	II, III
26. Erythromycin 250 mg	covers infections occ. not covered by other antibiotics	mycoplasma, legionella, staph. penicillin allergy	III
27. Ear drops	for relief of pain, available locally	ear pain or otitis externa	II, III
28. Chlorpheniramine 4 mg	inexpensive, effective antihistamine	congestion allergy	I, II, III
29. "Cold tablet"	inexpensive effective	U.R.I.	II, III
30. Cough Medication	not harmful	symptomatic relief of cough	I, II, III

TABLE # 1, Continued

Medication	Why drug selected	For what pathology	Level at which drug will be used
31. Aminophylline, tablets	inexpensive effective	asthma COPD	II, III
32. Aminophylline, IV	standard drug	severe asthma	III
33. Throat lozenges	inexpensive harmless	relief of sore throat	I, II, III
34. Iron (adult)	inexpensive	iron deficiency anemia	I, II, III
35. Iron (children)	in liquid form	same as # 34	I, II, III
36. Multivitamins with Fe	inexpensive	for iron and vitamin deficiency	I, II, III
37. Antibiotic Derm. Ointment	inexpensive	skin infections burns	I, II, III
38. Scabicide	for scabies	scabies	II, III
39. Steroid Cream	inexpensive not harmful	allergic skin reactions	II, III
40. Permanganate	inexpensive	superficial fungal infections	II, III
41. Anti-fungal ointment	fairly inexpensive	superficial fungus infections	II, III
42. A & D ointment	fairly inexpensive not harmful	diaper rash, minor skin irritation	II, III

TABLE # 1, Continued

Medication	Why drug selected	For what pathology	Level at which drug will be used
43. Gentian violet	in common use inexpensive	fungal inf., vaginitis	I, II, III
44. Aspirin (ASA)	inexpensive and effective	malaise, pain, fever, arthritis	I, II, III
45. Acetaminophen	alternative to ASA	malaise, pain, fever	II, III
46. Anti-inflammatory	effective, least expensive	arthritis, gout, inflammation	III
47. Morphine IV	standard	pulmonary edema, M.I., severe pain	III
48. Narcotic pain med. (IM)	effective analgesia	severe pain	III
49. Narcotic pain med. (oral)	effective analgesia	severe pain	III
50. Iron & folic acid	inexpensive	for use in pregnancy	I, II, III
51. Ergometrine Maleate 0.2 mg. IM	standard	to prevent ute- rine bleeding post-partum	II, III
52. Ergometrine tabs 0.2 mg	standard	same as # 51	I, II, III
53. Pitocin IM	alternative to ergometrine standard	uterine bleeding, augmentation of labor	III
54. Polyvalent anti- venom	standard treatment for snake bite	snake bite	II, III

TABLE # 1, Continued

Medication	Why drug selected	For what pathology	Level at which drug will be used
55. Epinephrine	standard treatment in emergency anaphyl. shock & asthma	anaphylactic shock, severe asthma	II, III
56. Diphenhydramine, IM	standard treatment severe allergic reaction	severe allergic reaction	III
57. Dextran 70	colloid replacement in severe blood loss	hypovolemic shock	III
58. 50% Glucose solution	standard	hypoglycemia	III
59. Sulfa-Trimethoprim	wide spectrum antibiotic, esp. for UTI's shibella	shigellosis, otitis, UTI's bronchitis	II, III
60. Sulfa	alternative # 59 for UTI	UTI	II, III
61. Ophthalmic Antibiotic Oint.	inexpensive to treat conjunctivitis	conjunctivitis	I, II, III
62. Furosemide, IV	standard drug diuretic	congestive heart failure	III
63. Furosemide, oral	standard diuretic	same as # 62	III
64. Hydrochlorothiazide	inexpensive, alternative to # 63	hypertension congestive failure	III
65. Nystatin suppositories	standard treatment for yeast vaginitis	yeast vaginitis thrush	II, III

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TABLE # 1, Continued

Medication	Why drug selected	For what pathology	Level at which drug will be used
66. Valium, IV	standard	status epilepticus	III
67. Prednisone	inexpensive	severe allergic reactions, severe asthma	III
68. Chloroquine	standard for malaria prophylaxis and treatment	malaria	II, III
69. Dilatin 100 mg	standard	seizure	III
70. Phenobarbital tabs	inexpensive	seizure disorders anxiety	III
71. Diguxin 0.25 mg	standard	congestive heart failure	III
72. Lidocaine 2%	most generally used local anesthetic	local anesthesia	II, III
ANTI-TUBERCULOUS DRUGS:			
73. INH	standard	tuberculosis	II, III
74. Streptomycin	standard	tuberculosis	II, III
75. Thioacetazone	standard expensive	tuberculosis	II, III

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TABLE # 2FORMULARY FOR LEVEL I*

Oral rehydration salts
Mebendazole
Anti diarrheal and anticholinergic: belladonna with phenobarbital
Laxative: bisacodyl
Antacid pills
Diphenhydramine, oral
Penicillin tablets
Penicillin, procaine, injectable, with diluent
Chlorpheniramine 4 mg.
Ophthalmic antibiotic ointment
Aspirin
Cough medication
Antibiotic dermatological ointment
Iron (for adults and children)
Iron with folic acid
Multivitamins with iron
Erythromycin maleate, tablets
Throat lozenges
Gentian Violet

* See overall formulary for reasons why drug was selected and for what pathology drug is to be used.

TABLE # 3

FORMULARY FOR LEVEL II*

All drugs listed in formulary for Level I, plus:

Alternative anti-diarrheal: iodochlorhydroxyquinolone.

Piperazine

Milk of Magnesia

Oral anti-emetic: Promethazine

Parenteral anti-emetic: promethazine

Liquid antacid

IV solution: Ringer's Lactate

Benzathil Penicillin, IM

Tetracycline, 250 mg. tablets

APC

Aminophylline tablets

Scabicide

Steroid Cream

Potassium Permanganate

Anti-fungal ointment

A + D ointment

Acetaminophen

Ergometrine maleate, IM

Polyvalent Anti-venom

Epinephrine 1:1000

Sulfa-trimethoprim

Sulfa

Nystatin suppositories

Chloroquin

Lidocaine 2%

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TABLE # 2, continuation

Anti-Tuberculous drugs

Vaccine

* See overall formulary for reasons why drug was selected and for what pathology drug is to be used.

ANNEX J

TRAINING PROGRAMS

The health staff in the project at Levels I, II and III will be trained to carryout the functions described in the Section IV.C. The staff of the MSU will also receive instruction to perform their assigned functions. The project will undertake five distinct training programs:

1. training of 298 Level I personnel - the promotors and community health committee members;
2. at Level II, training of 46 auxiliary nurses involved in the supervision of Level I promoters along with re-training of staff as necessary to meet specific project goals. Similarly, at Level II, 6 MDs, 6 technical nurses, 12 auxiliary nurses and 6 sanitarian will be trained as supervisors for Level II and Level I workers;
3. continuing education for all health staff;
4. training for staff of the MSU as appropriate;
5. orientation for all MSU and some La Merced personnel.

1. Promoters and Community Health Committee Members

In terms of number of people involved, promoter instruction will be the largest element of the training program. A total of 298 promoters, 2 from each Level I outlet will be trained in three training cycles. In addition, provisions will be made to repeat the cycles to prepare the replacements for promoters who leave the program. The training sessions will be structured so as to coincide with the promoters actual patterns. For example, to the extent possible, the instruction sessions will be held close to the community(ies) of the promoters to preclude prolonged absences from their homes. Similarly, training for promoters in the rural areas will take place in the slack period between agricultural planting and harvesting to avoid interference with the promoters' main source of income.

The training program will be of 3-5 weeks duration. The teaching methods used will be a combination of formal instruction (25 percent to 50 percent) and supervised practice time (50 percent to 75 percent). The training will be designed on competency based learning modules.

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Each module will consist of approximately 8 hours of instruction. They will be developed during the first 6 months of the project and will include:

- Prevention: Maternal-child health, nutrition (especially child feeding) and its relation to agriculture, home and community hygiene, clean water, immunizations, pregnancy, child-birth and child spacing.

- Diagnosis and Treatment: History and physical exam, care of the sick, diagnosis, treatment and prevention of specific illnesses, medical emergencies, use and misuse of medicines, record keeping.

- Community and Social Promotion: Needs assessment, awareness raising, community development and health, teaching methods and aids (and practice time in the community), leadership, home visits.

Training for Community Health Committee members will be closely allied to the instruction for the promoters. Representatives of the committees will receive orientation concerning the choice of and relationships with promoters, as well as guidance relative to decisions on the type(s) of services best suited for their needs. The training module will include 3-4 hours of instruction, will be designed and carried out by MSU personnel and will be repeated periodically to instruct new committee members.

2. Training of Level II and III Personnel

The auxiliary nurses at Level II will be trained in supervisory techniques, if they do not already have these skills. At the very least, they will be involved with the training of the promoters they are to supervise to develop the "team concept" in the project. Level III personnel will in turn be involved with the training of Level II personnel.

Also, there will be project-specific tasks for which Level II and III personnel will be trained. These tasks include:

- 1) specific supervisory roles
- 2) techniques of evaluation
- 3) use of the specific drugs in each formulary
- 4) project information systems
- 5) project financial systems
- 6) logistics/drug distribution systems
- 7) specific health programs, as necessary
- 8) community relations
- 9) project goals function

The Training Coordinator and other MSU staff will design and implement these training programs. The actual training will mostly be done

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by project personnel, supported by technical assistance contractors.

3. Continuing Education for all Health Personnel

Continuing education, in both preventive and curative medicine, for all the health personnel at Levels I, II and III is crucial to maintain the quality of care, as well as the interest and enthusiasm of the personnel. A continuing education program is especially essential for the personnel in the more remote rural areas where there is no access to an organized medical education program.

The project will finance a continuing education program that will be a requirement for all health delivery system personnel. The training will be a formal short-course (2-3 days duration) given once yearly and will consist of:

- 1) review and update of curative and preventive knowledge and procedures,
- 2) review and update of the use of drugs,
- 3) review of project progress toward goals and objectives, allowing for feedback from the health staff, and
- 4) specific programs aimed at specific levels (e.g. promoters, nurses, physicians, and others).

The Training Coordinator and the Assistant Director for Health Services will organize and design these programs.

4. Training for MSU Staff

The particular types of training programs for MSU staff members will be determined early in project implementation and will be dependent, in part, on the skills that the incumbents bring with them to their assignments. Undoubtedly, staff skills will need to be improved and this upgrading will come about through the following channels:

- a) Technical assistance - the consultants will train counterparts on a one-on-one basis in their (the consultants') particular field of expertise.
- b) Observational travel - visits will be made to neighboring countries to observe the structure and operation of self-financing health care initiatives.

In addition to these forms of training, all personnel hired by the MSU will have the benefit of a 3-4 day orientation seminar dealing with

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- 4 -

the overall philosophy and strategy of the program, especially the self-financing aspect). These sessions will be planned by the long term advisor in conjunction with the Primary Health Care Program Director.

ANNEX K

JOB DESCRIPTIONS FOR THE PRINCIPAL STAFF
OF THE MANAGEMENT SUPPORT UNIT

1. Program Director

The Program Director will be the chief officer of the MSU and will have overall responsibility for managing the implementation of the project. He/she will take the lead, in consultation with the La Merced Board of Directors and USAID/Bolivia, in formulating the programs policies and oversee the contracting of delivery system personnel. In addition, the Director will monitor the operation of the program's sub-systems (e.g. financial management, personnel, logistics) and related technical assistance. Moreover, the Director will be responsible for establishing constructive working relationships with representatives of the participating cooperatives and members of health-related institutions in the Department of Santa Cruz and the nation as a whole. Finally, the Director will take the lead in informing and enlisting the support of key civic leaders for the program.

Principal qualifications for this position include a Public Health or Business Administration academic background with first-hand experience in the management of self-financing health care delivery programs. Sound public relations skills and ability to effectively interact with people from various sectors of society are also essential.

2. Assistant Director for Health Services

The Assistant Director for Health Services will have overall responsibility for the design of the preventive and curative health services to be provided by the system. In particular, he/she will develop job descriptions for the remaining positions in the Health Services Division, and, with the approval of the Program Director, recruit qualified individuals to fill them. Moreover, the incumbent will program the activities of short term consultants dealing with technical health matters, assist in developing job descriptions for the health delivery staff, and design medication formularies for the project and monitor their use. Finally, the Assistant Director will carry out supervisory field visits to the health service outlets and serve as the alternate physician at the Level III facilities.

This position will be filled by a physician with a background in public health, preferably in maternal and child health care or in family practice. The candidate should have a strong clinical background and the ability to instruct project staff in carrying out their responsibilities in preventive and curative services. The physician should have

demonstrated work experience in a public health primary care program, and have completed a residency in family practice or maternal and/or child health care is required.

3. Assistant Director for Administrative Service

The Assistant Director for Administrative Services will have general responsibility for managing the delivery system's logistical support functions. He/she will develop scopes of work for technical assistance related to the administrative sub-systems. The incumbent will assist in writing the job descriptions for, and the recruiting of, administrative staff and coordinate work regarding the financial management and management information systems with the FENACRE/PRICO operations research team. Finally, the Administrative Services Assistant Director will monitor the progress of the project toward the achievement of self-sufficiency.

This position will be filled by an individual with a Business Administration background who has experience in managing financial and logistical systems. The incumbent will have an academic degree in Business Administration, information systems or financial management, and demonstrated ability to handle large amounts of information and prepare concise reports. In addition, the person to occupy this position must have strong supervisory skills and the ability to work with a diverse group of professionals and consultants in the fields of medicine procurement and distribution, personnel management, financial management and account communications, and computer-assisted information systems.

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SUBJECT: GUIDANCE CABLE: SELF-FINANCE HEALTH CARE
 PID (511 2569)

1 THE D/EC REVIEW OF THE SUBJECT PID WAS HELD ON JANUARY 18, 1983. THE PID WAS APPROVED, AND SUBJECT TO THE FOLLOWING CONDITIONS AND GUIDANCE. THE MISSION MAY AUTHORIZE THE PROJECT. ACCORDING TO THE PID, MISSION PLANNED TO OBLIGATE FUNDS FOR THE PROJECT IN MARCH 83. AFTER REVIEWING THIS CABLE, MISSION SHOULD ADVISE REPLY WITH NEW ESTIMATED OBLIGATION DATE.

2 INSTITUTIONAL DESIGN. ON THIS ISSUE MISSION IS REQUESTED TO PROVIDE BY CABLE THE RESULTS OF INTENSIVE REVIEW. CONCERN WAS EXPRESSED IN THE IACG THAT THE AD HOC ARRANGEMENT FOR ESTABLISHING THE PROVIDER ORGANIZATION COULD JEOPARDIZE THE SUCCESS OF THE PROJECT. IF THE PROVIDER ORGANIZATION HAS NO INDEPENDENT LEGAL STATUS: A) ON WHAT BASIS WOULD ITS BOARD OF DIRECTORS HAVE ANY AUTHORITY; B) HOW WOULD IT ENTER INTO CONTRACTS OR ACCOMPLISH OTHER PROCUREMENTS; C) WOULD IT HAVE THE NECESSARY STATUS TO DEAL WITH THE MINISTRY OF SOCIAL WELFARE AND PUBLIC HEALTH; D) WOULD ITS ASSETS AND PERSONNEL BE LEGALLY PART OF THE LA MERCED; AND UNCLASSIFIED 2

3 WOULD THE OTHER COOPERATIVES VIEW IT SIMPLY AS PART OF THE LA MERCED? SOME OF THESE QUESTIONS WILL REQUIRE AN EXAMINATION OF LOCAL LAWS TO ANSWER. THEREFORE WE SUGGEST THAT THE RLA BE CONSULTED. PERHAPS THERE ARE OTHER CUES TO OBTAINING LEGAL STATUS, OR POTENTIAL PROBLEMS MAY BE MINIMIZED BY OBTAINING A PROVISIONAL STATUS THAT IS LESS THAN FULL PERSONERIA JURIDICA.

4 THE REMAINING GUIDANCE WILL NOT REQUIRE CABLE ADVICE PRIOR TO AUTHORIZATION.

5 FINANCIAL FEASIBILITY AND DEMAND ANALYSIS. WHILE RECOGNIZING THAT THE PROJECT IS A PILOT PROJECT AND THAT DEMONSTRATING FINANCIAL VIABILITY IS ONE OF THE

OBJECTIVES OF THE PROJECT. IT WAS NONETHELESS CONSIDERED ESSENTIAL THAT THE INTENSIVE REVIEW PROVIDE AN ANALYSIS OF COSTS AND EFFECTIVE DEMAND FOR SERVICES. THE REVENUE AND EXPENDITURE MATRICES CONTAINED IN THE PID SHOULD PROVIDE AN ADEQUATE FORMAT FOR PRESENTING THIS ANALYSIS ON THE COST SIDE. FOR EXAMPLE, THE MISSION SHOULD EXAMINE POTENTIAL SOURCES OF DRUG SUPPLIES TO DETERMINE UNIT ACQUISITION PRICES. ON THE REVENUE SIDE, THE MISSION SHOULD FIRST EXAMINE THE UNIT PRICES FOR PRESENTLY AVAILABLE DRUGS AND SERVICES. SUPERIOR SERVICES AND BETTER ACCESS SHOULD FAVOR UTILIZATION OF THE HEALTH PROGRAM BY INTENDED BENEFICIARIES, BUT, AS A GENERAL PRINCIPLE, THE ANALYSIS SHOULD NOT ASSUME (UNLESS IT CAN BE PROVEN OTHERWISE) THAT MEMBERS OR NON-MEMBERS WILL BE PREPARED TO PAY MORE UNDER THE PROJECT FOR AN INDIVIDUAL VISIT TO A CLINIC OR A PRESCRIPTION THAN THEY PRESENTLY PAY. IN THIS REGARD, ACCESS TO SUBSIDIZED PUBLIC OR PRIVATE HEALTH CARE WILL HAVE TO BE TAKEN INTO CONSIDERATION. ONCE THE MAXIMUM MARK-UPS DETERMINED IN THIS FASHION, SAMPLE SURVEY WOULD PRESUMABLY BE REQUIRED TO DETERMINE EFFECTIVE DEMAND FOR SERVICES FOR DIFFERENT COMBINATIONS OF FEES-FOR-SERVICE AND MEMBERSHIP FEES.

AS A RESULT OF THIS ANALYSIS, THE MISSION MAY WISE TO CONSIDER EMPHASIZING AT LEAST AT THE BEGINNING OF THE PROJECT, CERTAIN SERVICES WHICH WOULD NOT CONTRIBUTE TO THE FINANCIAL VIABILITY OF THE PROJECT. THESE SERVICES SHOULD BE EXAMINED. THE ANALYSIS SHOULD CLEARLY INDICATE HOW THE PROPOSED MODEL ACHIEVES THE SAVINGS THAT WOULD MAKE IT MORE COST-EFFECTIVE THAN THE ALTERNATIVES.

6. GIVEN THE COMPLEXITY OF THE ISSUES INVOLVED IN THE PROJECT, THE DAEC REVIEW ENCOURAGED THE MISSION TO CAREFULLY CONSIDER THE PROPOSED LEVEL OF TECHNICAL ASSISTANCE TO DETERMINE ITS ADEQUACY.

7. LESSONS LEARNED. THE PP SHOULD INCLUDE A SECTION ON LESSONS LEARNED FROM PREVIOUS HEALTH PROJECTS IN BOLIVIA, PARTICULARLY THE MONTERO PROJECT.

8. REPLICATION. AS THIS IS AN EXPERIMENTAL PILOT PROJECT THE PP SHOULD INCLUDE A SECTION DETAILING THE VARIOUS HYPOTHESES THAT ARE TO BE TESTED AND THE MEANS BY WHICH THEY WILL BE EVALUATED, INCLUDING THE COLLECTION OF BASELINE DATA. THIS EVALUATION PLAN WILL PROVIDE A BETTER PICTURE AS TO WHEN THE MISSION SHOULD BE CONSIDERING A FOLLOW-ON PROJECT. THE PP SHOULD ALSO ADDRESS HOW THE MISSION WOULD FORESEE REPLICATING THE PROJECT AND HOW THIS RELATES TO DESIGN OF THE PILOT PROJECT. FOR EXAMPLE, WHAT OTHER PRIVATE ORGANIZATIONS BESIDES COOPERATIVES COULD POTENTIALLY PARTICIPATE AND

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 INFO RUESLM/AMEMBASSY LIMA PRIORITY 8234
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AIDAC LIMA FOR RLA TGEIGER

WOULD THE PROVIDER ORGANIZATIONS BE EXPANDED OR WOULD
 NEW PROVIDER ORGANIZATION BE DEVELOPED?

0 AS MENTIONED IN THE POLICY REFORM PID GUIDANCE
 CABLE. MISSION WILL BE ADVISED BY SEPIEL HOW THESE
 PROJECTS FIT INTO THE THREE FY 83 BOLIVIA ASSISTANCE
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NEW PARAGRAPH 5.

COST-EFFECTIVENESS. RELATED TO BUT DISTINCT FROM THE ABOVE ANALYSIS IS
 THE QUESTION OF COST-EFFECTIVENESS OF THE PROPOSED MODEL. ALTERNATIVES,
 SUCH AS A RENEWED EFFORT ALONG THE LINES OF THE PUBLIC SECTOR MONTERO
 PROJECT, A PRIVATE INSURANCE SCHEME OR AN EXPANSION OF THE REFERRAL
 SYSTEM PRESENTLY USED BY LA MERCED, SHOULD BE EXAMINED. THE ANALYSIS
 SHOULD CLEARLY INDICATE HOW THE PROPOSED MODEL ACHIEVES THE SAVINGS THAT
 WOULD MAKE IT MORE COST-EFFECTIVE THAN THE ALTERNATIVES.