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UNCLASSIFIED

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

Peru

PROJECT PAPER

STRENGTHENING HEALTH INSTITUTIONS PROJECT

AID/LAC/P-687

PROJECT NUMBER: 527-0319

UNCLASSIFIED

AGENCY FOR INTERNATIONAL DEVELOPMENT <b>PROJECT DATA SHEET</b>		1. TRANSACTION CODE A = Add C = Change D = Delete <input type="checkbox"/> A	Amendment Number	DOCUMENT CODE 3
2. COUNTRY/ENTITY PERU/USAID		3. PROJECT NUMBER 527-0319		
4. BUREAU/OFFICE LAC		5. PROJECT TITLE (maximum 40 characters) STRENGTHENING HEALTH INSTITUTIONS		
6. PROJECT ASSISTANCE COMPLETION DATE (PACD) MM DD YY 1 2 3 1 9 6		7. ESTIMATED DATE OF OBLIGATION (Under "B:" below, enter 1, 2, 3, or 4) A. Initial FY <u>91</u> B. Quarter <u>4</u> C. Final FY <u>95</u>		

8. COSTS (\$000 OR EQUIVALENT \$) =						
A. FUNDING SOURCE	FIRST FY 91			LIFE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total	1,740	1,285	3,025	8,500	9,500	18,000
(Grant)	(1,740)	(1,285)	(3,025)	(8,500)	(9,500)	(18,000)
(Loan)	( )	( )	( )	( )	( )	( )
Other U.S.						
Host Country						
Other Donor(s) PERUM					1,000	1,000
<b>TOTALS</b>	1,740	1,285	3,025	8,500	10,500	19,000

9. SCHEDULE OF AID FUNDING (\$000)									
A. APPRO- PRIATION	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) HE	HEDD							3,670	
(2) CS	HERM					18,000		11,330	
(3) PN	PNPD							3,000	
(4)									
<b>TOTALS</b>						18,000		18,000	

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each)							11. SECONDARY PURPOSE CODES (HECS, HERI, NUBF, N)	
12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)								
A. Code	CHS	INS	PRT	PVO	TWN	WDP		
B. Amount	9,000	9,000	9,000	9,000	9,000	9,000		

13. PROJECT PURPOSE (maximum 480 characters)

To evaluate and identify models of private primary health care services delivery which improve access, coverage, efficiency, and sustainability of services in two areas of Peru.

14. SCHEDULED EVALUATIONS				15. SOURCE/ORIGIN OF GOODS AND SERVICES				
Interim	MM YY	MM YY	Final	MM YY	<input checked="" type="checkbox"/> 000	<input type="checkbox"/> 941	<input checked="" type="checkbox"/> Local	<input type="checkbox"/> Other (Specify) PERU
	0 3 9 4			1 0 9 6				

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of 3 page P1 Amendment)

Mission Controller has reviewed and concurs with the methods of implementation and financing included herein.

  
Paul Kramer, Controller

17. APPROVED BY	Signature	18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION
	Title	
	Craig G. Buck, Director	Date Signed 09/24/91

USAID/Peru  
Project Paper  
Strengthening Health Institutions Project

September 28, 1991

2.

## **PROJECT AUTHORIZATION**

Name of Country: PERU  
Name of Project: Strengthening Health Institutions Project  
Number of Project: 527-0319

1. Pursuant to Section 104 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Strengthening Health Institutions Project for Peru involving planned obligations of not to exceed Eighteen Million United States Dollars (\$18,000,000) in grant funds over a five 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 the project is sixty three months from the date of initial obligation.

2. The project will improve the health status of Peruvians through greater coverage of quality primary health care (PHC) services, by testing the operational and financial feasibility of different PHC service delivery models. The resulting models will serve to develop and sustain cost recoverable PHC services within marginal income areas, as well as bring about improved collaboration and coordination between private and public sector health care providers.

3. The project consists of one cooperative grant agreement (CA) and one contract for training and technical assistance (TTA). The CA will be awarded to the U.S. private voluntary organization (PVO) CARE, and the TTA contract will be awarded following an RFP and Formal Competitive Negotiation to an international contractor firm.

4. Peru is presently under FAA Section 620(q) and Brooke-Alexander Amendment sanctions. These provisions prohibit A.I.D. from obligating funds for services that will directly assist Peru (either its people or its government/private institutions). However, FAA Section 123(e) permits the obligation of funds with a qualified private voluntary organization, for support to the ongoing and continuing program of the PVO. The TTA contract will be competitively negotiated once these sanctions are lifted. The Mission has reasonable grounds to believe that these conditions will be met by the second quarter of FY92. Under the SHIP project, until such point that sanctions are lifted, there will be no services provided to any GOP institution.

5. The Cooperative Agreement and Contract, 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 major conditions, together with such other terms and conditions as A.I.D. may deem appropriate.

a. Source and Origin of Commodities, Nationality of Services

Commodities financed by A.I.D. under the Project shall have their source and origin in Geographic Code 000 and Peru (for local cost financing as set forth in paragraph 6.

below), except as A.I.D. may otherwise agree in writing. The suppliers of commodities or services financed under the Project, including those of ocean shipping services, shall have Geographic Code 000 and Peru as their place of nationality, except as A.I.D. may otherwise agree in writing.

b. Special Provisions

(1) To assist in the implementation of the project cooperative agreement, USAID from time to time will issue cooperative agreement involvement letters furnishing additional information on requirements about matters stated in the Agreement. Such letters shall not modify the terms of the Agreement.

(2) The Parties agree to establish an evaluation program as part of the Project and to carry out joint evaluations of the project. Except as the Parties otherwise agree in writing, the Program will include, during the implementation of the Project and at one or more points thereafter:

- (a) evaluation of progress toward attainment of the objectives of the Project;
- (b) identification and evaluation of problem areas or constraints which may inhibit such attainment;
- (c) assessment of how such information may be used to help overcome such problems; and,
- (d) evaluation, to the degree feasible of the overall development impact of the Project.

c. Waivers

(1) Waiver of 25 Percent Contribution Requirement

A waiver of the 25 percent contribution requirement is effective as of the date of the signature of this Project Authorization. (See attached waiver)

(2) Waiver for Non-competitive Award

A waiver for exception of competitive award procedures for the project's cooperative agreement with the PVO CARE\USA is effective as of the date of the signature of this Project Authorization. (See attached waiver)

(3) Authority for Project Authorization by the Mission Director

Although 620 (q) and Brooke-Alexander Amendment sanctions have prohibited the provision of A.I.D. assistance to the GOP, the intended award of grant assistance will be to CARE\USA for the performance of project activities under project component 1. CARE\USA

is a PVO registered with A.I.D./W, eligible under Section 123(e) provisions, and meets the criteria for a sole source award of A.I.D. assistance.

6. Based upon the financial plan, the description of Project activities and implementation arrangements, local cost financing with appropriated funds is hereby authorized for the Project, as necessary to fulfill program objectives and to best promote the objectives of the Foreign Assistance Act. Local cost financing will be in accordance with A.I.D. HB 1B CH 18A, 1c and, pursuant to the Buy America Policy Guidance Cable (90 State 410442), the source, origin and nationality requirements of the Standard Provisions of the Cooperative Agreement and Grant will apply.

Pursuant to HB 5 Delegation of Authority Number 752, I have the authority to approve projects in amounts of up to U.S. Dollars 20 million and with lives-of-projects that do not exceed ten years. The A.I.D./Washington review of the SHIP project recommended Mission approval of the draft SHIP PID and development of the Project Paper for field authorization (reference cable STATE (91)259948, August 8, 1991).

Based on the above justification and that contained in the attached justification for waivers, by signing below I also hereby approve a waiver of 25 percent contribution requirement to the CARE cooperative agreement, as per the justification for and nature of solicited proposals; a waiver for non-competitive award of the cooperative agreement, as contained in A.I.D. Handbook 13, Chapter 2 para. 2 3b; over the five year life-of-project.

Date: September 28, 1991



Craig G. Buck  
Director  
USAID/Peru

Drafted by:HPN:AJWind:[id]\_\_\_\_\_  
Cleared by: A/HPN:ENecochea:[id]\_\_\_\_\_  
A/HR:HGoldman:[id]\_\_\_\_\_  
A/PDP:EVarillas: cew  
CONT:PKramer:[id]\_\_\_\_\_  
RLA:JBorns:[id]\_\_\_\_\_  
DD:BCKennedy: BK

d.

10/01/91

14:47

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AID/LAC/DR/RD

+++ PERU

001/004

HPN

AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON, D.C. 20523

LAC-IEE-90-99

ENVIRONMENTAL THRESHOLD DECISION

Project Location : Peru

Project Title : Strengthening (Private Sector)  
Health Institutions Project (SHIP)

Project Number : (527-0319)

Funding : FY91 - FY96 \$18.00 Million (CS,  
HE, POP)

Life of Project : 5 Years

IEE Prepared by : Alonzo Wind  
USAID/PERU/HPN

Recommended Threshold Decision : Categorical Exclusion

Bureau Threshold Decision : Concur with Recommendation

Comments : None

Copy to : Craig Buck, Director  
USAID/Peru

Copy to : Alonzo Wind, USAID/Peru

Copy to : Howard Clark, USAID/Ecuador

Copy to : Carrie Thompson, LAC/DR/SA

Copy to : IEE File

*James S. Hester* Date SEP 30 1991

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

- 2 -

## ENVIRONMENTAL DETERMINATION

Project Country: Peru  
Project Title: Strengthening [Private Sector] Health Institutions Project (SHIP)  
Project Number: 527-0319  
Funding: FY91 - FY96 \$18.00 Million (CS, HE, POP)

### A. Project Description

The Strengthening Health Institutions Project (SHIP) is designed to address some of the principal constraints to increasing the coverage of high quality primary health care services to low income populations in Peru. In particular, the project will help improve maternal/child health status indicators in the regions of Puno and Arequipa in the South, and Chiclayo in the North. The proposed \$19.0 million private sector intervention includes A.I.D. funding of \$18.00 million, and an estimated \$1,000,000 in project counterpart contributions from both the public and private sectors.

Since the project is focused on two separate geographical regions with differing socio-economic conditions (i.e. Puno and Arequipa in the South, and Chiclayo in the North), project components will support the accomplishment of the following objectives in each respective geographic area:

1) In the South -- the project will increase the coverage of high quality PHC services and test the potential for sustaining these services within marginal income communities. Long and short term technical assistance will be contracted under a cooperative agreement the U.S. based PVO CARE. The project will establish PHC systems for providing financial, technical and training assistance, as well as the procurement and distribution of pharmaceuticals. The Project's financial mechanism will employ sub-grants and contracts to finance and test various PHC delivery models developed and implemented by local private sector health care providers in Puno and Arequipa (e.g. NGOs, PVOs, private groups and universities). The estimated target population for increasing the coverage of PHC services in the South is 150,000 marginal income people. For this component, SHIP will provide \$5,942,000.

2) In the North -- the project will develop a self-sustainable network of health centers for the delivery of high quality PHC services to Peruvians of limited economic resources. Key outputs will include the establishment of a separate, private sector, self-sustainable primary health care organization (PHO). The PHO will incorporate a minimum of 11 health centers in the Chiclayo region. The self-sustainable model will be capable of covering all PHC network operational costs through a fee-for-service and cross-subsidy pricing structure. An international contractor will provide both long and short-term technical assistance in establishing and managing the PHO. The international contractor, in turn, will contract locally the services of a management support unit (MSU) for the development and implementation of systems for social marketing, finance, information dissemination, and the procurement and distribution of

pharmaceuticals. The estimated cost is \$10,158,000. The project's PHC network will provide high quality health care coverage to approximately 300,000 low income people in the northern zone of Chiclayo, and a significant number of employment opportunities for local professional medical personnel and related technical assistance.

A third component of SHIP will fund a series of operational research and other technical studies designed to provide guidance and support for project activities. Studies in the north include baseline data surveys for tracking project results, social marketing and financial analyses, and other technical and applied research activities. Studies for the southern component will be defined once the project's system for reviewing proposals for PHC sub-grant and contracted assistance is fully developed. This component will also fund external project evaluations. Total cost of the project component is \$500,000. Approximately US\$1,400,000 in project funds will also be provided for the services of two USAID PSCs.

Project funds will be obligated through a cooperative agreement and a Training/Technical Assistance (T/TA) contract: one CA with the U.S.-based PVO CARE, to be obligated in FY91, and the other T/TA contract to be competitively negotiated in FY92 for the accomplishment of the project activities of in Chiclayo. The procurement of project studies (most likely through buy-ins to centrally funded projects as appropriate), PSCs, and project audits and evaluations, will be carried out by USAID/Peru with funds obligated in FY91 under the first Cooperative Agreement.

#### **B. Project Goal and Purpose**

The goal of the proposed project is to improve the health status of Peruvians through greater coverage of quality primary health care (PHC) services. The project purpose is to test the operational and financial feasibility of different PHC service delivery models. The resulting models will serve to develop and sustain cost recoverable PHC services within marginal income areas, as well as bring about improved collaboration and coordination between private and public sector health care providers.

#### **C. Identification and Evaluation of Potential Environmental Effects**

The project will have no significant environmental effects. The activities will have no direct effect on the physical environment. The project is for the provision of health care, nutrition, and family planning services. Beyond the effective re-modeling of current MOH health centers and other facilities in urban Chiclayo and Lambayeque, it is likely no new construction will take place. Should however a decision be made that MOH facilities are inadequate, requiring the construction of two centers, an environmental impact examination will be conducted prior to the RFP of the T/TA contract. The assistance to be provided, through one Cooperative Agreement and one principal contract for services, will be primarily used for technical assistance, training, and the provision of primary health care services.

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**D. Statement for Categorical Exclusion**

On the basis of the discussion above, it is the opinion of USAID/Peru that the project does not require an initial environmental examination, because its activities are within the classes of actions described in Section 216.2, Paragraphs c(2)(i) and (viii) cited below. The project is categorically excluded from further environmental review pursuant to 22 CFR 216, as indicated below:

**Section 216.2 c(2)(i):**

The action does not have an effect on the natural or physical environment.

**Section 216.2 c(2)(viii):**

Programs involving nutrition, health care or population and family planning services except to the extent designed to include activities directly affecting the environment (such as construction of facilities, water supply systems, waste water treatment).

**Concurrence of the Mission Environmental Officer and the Director:**

I have reviewed the above statement and concur in the determination that the "Strengthening Health Institutions Project" qualifies for Categorical Exclusion (A.I.D. 216.2 (c)) and does not require an Initial Environmental Examination.



  
Dewey Cárdenas  
Mission Environmental Officer

  
Craig G. Buck  
Director, USAID/Peru

CONGRESSIONAL NOTIFICATION TRANSMITTAL SHEET

DATE: September 13, 1991

We wish to inform you of proposed actions in the Agency's programs during Fiscal Year 1991:

- Centrally Funded (Sub-Sahara Africa) - EDESA S.A. Resource Mobilization Guarantee Facility
- Centrally Funded (Tunisia) - Banque Internationale de Arabe de Tunisie (BIAT)
- Peru - Upper Huallaga Area Development
- Centrally Funded (Sub-Sahara Africa) - Private Enterprise Fund for Africa (PEFA) Direct Loan Facility
- Eastern Europe Regional - Independent Media
- Centrally Funded - AlphaGraphics Franchise Guarantee Facility
- Europe & Near East Regional - Palestinian-Israeli Cooperation Program
- Centrally Funded (Costa Rica) - Corporacion Privada de Inversiones de Centroamerica - Direct Loan Facility - Costa Rica
- Centrally Funded (Eastern Europe Region) - Eastern Europe Enterprise Funds
- Centrally Funded (Hungary) - RGI Hungarian Fund
- RULAF - Central American Development Coordination Commission (CADCC)
- Benin - Children's Learning and Equity Foundations
- Peru - Strengthening Private Sector Health Institutions Project
- Centrally Funded (Poland) - Polish Enterprise Fund
- Bolivia - Child Survival Network II (OPG)
- Dominican Republic TN - Export and Investment Promotion
- Jamaica TN - Health Sector Initiatives
- Centrally Funded TN - Market and Technology Access
- Centrally Funded TN - Environmental and Natural Resources Policy and Training
- Guatemala TN - Rural Electrification
- Philippines TN - Family Planning Assistance
- Philippines TN - Health Finance Development
- Philippines TN - Rural Electrification
- Philippines TN - Private Sector, Investment & Trade Opportunities
- Centrally Funded TN - Energy Technology Resources Asst.
  - Improved Animal Vaccine thru Biotechnology
  - Agricultural Policy Analysis
- American Schools and Hospitals Abroad - Fudan Center for American Studies, Shanghai, China

Centrally Funded TN - Micro-Lending Guaranty Fund Project  
Centrally Funded TN - University Development Linkages  
- Program Development and Support  
- Conservation of Biological Diversity  
- Family Planning Service Expansion and  
Technical Support  
The Gambia - Financial and Private Enterprise (FAPE) Program  
Caribbean Regional TN - Caribbean Justice Improvement  
- Small Enterprise Assistance  
Centrally Funded TN - Health Resource Support  
- ORT-HELP  
- Maternal & Neonatal Health & Nutrition  
- Water and Sanitation for Health III  
- Data for Decision Making in the Hea Sec  
(DDM)  
- Applied Re and Child Surv Serv (ARCSS)  
Philippines - Philippine Capital Infrastructure Support Project  
Ecuador TN - Ag Sector Reorientation Program

The attached notification was sent to the Hill on  
September 13, 1991. Obligation may be incurred on September 28,  
1991.

*Barbara A. Bennett*  
Barbara Bennett  
Program Presentation Division  
Bureau for Legislative Affairs

18 SEP 1991

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AGENCY FOR INTERNATIONAL DEVELOPMENT  
ADVICE OF PROGRAM CHANGE

Date:

Country : Peru  
Project Title : Strengthening Private Sector Health Institutions Project  
Project Number : 527-0319  
FY 1991 CP Reference : None  
Appropriation Category : Population (PN), Health (HE), and Child Survival (CS)  
Life-of-Project Funding : \$15,330,000 (G)  
: \$ 3,000,000 (PN)  
: \$ 1,000,000 (HE)  
: \$11,330,000 (CS)  
Intended FY 1991 Obligation : \$ 3,025,000 (CS)

This is to advise that A.I.D. Intends to obligate \$3,025,000 in FY 1991 from the Child Survival Appropriation for the Strengthening Private Sector Health Institutions Project in Peru.

The purpose of the project is to evaluate and identify models of private primary health care services delivery which improve access, coverage, efficiency, and sustainability in two areas of Peru.

This is a new project that was not presented in the FY 1991 Congressional Presentation.

Annex: Activity Data Sheet

**AGENCY FOR INTERNATIONAL DEVELOPMENT  
ACTIVITY DATA SHEET**

CP 81-48 (4-89)

PROGRAM: Peru	PROJECT: Strengthening Private Sector Health Institutions Project	PROJECT SOURCE: Child Survival, Population, Health	PROPOSED ORIGINATOR & NUMBER OF YEARS: FY 91 3,025	DATE OF PROJECT (YEAR): 15,330
NUMBER: SZ7-0319	NEW: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> CONTINUED	PREVIOUS SOURCE: None	INITIAL ORIGINATOR: FY 91	ESTIMATED FISCAL YEAR OF PROJECT COMPLETION DATE: FY 95

**Purpose:** To evaluate and identify models of private primary health care services delivery which improve access, coverage, efficiency, and sustainability of services in two areas of Peru.

**Project Description:** Critical health care priorities are not being addressed by the public sector in Peru. Inadequate budget resources, inefficient management and administration of delivery services, and poor allocation of personnel and other medical resources are some of the key constraints. The SHIP Project is designed to address some of the principal constraints to increasing the coverage of high quality primary health care services to low income populations. In particular, the project will help improve maternal/child health status indicators in the regions of Puno and Arequipa in the South, and Dnelayo in the North. In the South, and under a Cooperative Agreement with CARE, systems will be established for providing financial, technical, and training assistance, as well as the procurement and distribution of pharmaceuticals. A financial mechanism will employ sub-grants and contracts to finance and test various primary health care delivery models developed and implemented by local private sector providers and service organizations, including provider group practices, PHUs, MDUs, cooperatives, and universities. In the North, a private sector contractor will develop a self-sustainable network of health centers capable of generating sufficient revenues to provide quality services to the poor and indigent through a cross-subsidy pricing system.

**Sustainability:** Recurring costs of project PHC services in the South beyond the LOP will be addressed primarily through funding and in-kind assistance to be provided by the Regional Government Health Budget from both Puno and Arequipa and by means of the sustainable PHC service models to be developed. The self-sustaining PHC model in the North will generate revenues to cover approximately 60-100% of the operational costs of the network.

**Relationship to A.I.D. Country Strategy/Objective:** This project responds to the strategic objective of improved health status through access to quality primary health care.

**Host Country and Other Donors:** Peru continues to be under 620(q) Brooke-Alexander Amendment sanctions. Limiting the degree of cooperation with the host country. The proposed project will build on the continuing efforts of the U.S. PVO CARE in the southern area, and provide a framework for policy issues to be

addressed by future non-project assistance. The proposed project will support the vital technical role of the private sector in the provision of services, and is thus complementary to continuing bilateral and multilateral efforts with the public sector.

**Beneficiaries:** Children under five, pregnant and lactating women, working class and indigent families in the two project areas as well as private primary health care, nutrition, food security and community organizations.

**Major Outputs:**

- one self-financed not-for-profit private primary health organization established and managing a network of 11 centers.
- grants for extension of primary health care coverage
- mechanism for MSD and public-private health collaboration
- studies and seminars for health policy dialogue

<b>A.I.D. Financed Inputs:</b>	<b>LOP (\$000)</b>
Technical Assistance/Training	4,926
Commodities	1,579
Operational Costs	4,482
Sub-grants	2,240
Facilities Renovation	1,157
Policy Development/Dialogue/Studies	946
<b>Total</b>	<b>15,330</b>

**U.S. FUNDING (in thousands of dollars)**

	1989	1990	1991	Estimated Total Cost
Technical Assistance	0	0	0	0
Commodities	0	0	0	0
Operational Support	0	0	0	0
Sub-grants	0	0	0	0
Facilities Renovation	0	0	0	0
Policy Development	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**FINANCIAL COMMITMENTS ON SERVICES**

1. CARE (for the South)
2. Competitively Selected private sector contractor (for the North)

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## **I. EXECUTIVE SUMMARY**

The Ministry of Health (MOH) and the Peruvian Institute of Social Security (IPSS) are officially responsible for providing health care services to the vast majority of Peruvians. National statistics for 1990, however, show that the MOH served less than 40% of the population and the IPSS covered only 15%. At least 7.5 million of Peru's 22.3 million inhabitants, or one third of the total population, have little or no access to modern health services. Peru's high maternal mortality rate of 30 deaths per 10,000 live births is largely due to inadequate family planning services, illegal abortions, unassisted deliveries, malnutrition, and unavailable or limited prenatal care. Child mortality rates are also extremely high, with children under the age of six accounting for more than 40% of all deaths in Peru. Although the infant mortality rate has progressively decreased over the past 30 years, it remains one of the highest in Latin America.

Clearly, critical health care priorities are not being addressed by the public sector. Inadequate budget resources, inefficient management and administration of delivery services, and poor allocation of personnel and other medical resources are some of the key constraints. In addition, the country's economic crisis, which began during the previous Garcia administration, has drastically reduced the real purchasing power of Peruvians in the low and middle income categories. In many households the crisis has severely reduced or virtually eliminated disposable income for basic health care needs. Families and individuals at an economic level above subsistence, who previously could afford minimum health care attention at private clinics or better equipped IPSS facilities are now forced to seek care at the MOH's over-crowded and poorly managed medical centers, health posts and hospitals.

The economic crisis has likewise severely deteriorated Peruvian public health sector resources. The MOH does not have sufficient resources to maintain even the current low level of health care coverage. In real terms, the MOH budget for 1991 is only 68% of the amount spent in 1984. Similarly, IPSS revenues have dropped dramatically due to unemployment and poor investment.

The Strengthening Health Institutions Project (SHIP) is designed to address some of the principal constraints to increasing the coverage of high quality primary health care services to low income populations in Peru. In particular, the project will help improve maternal/child health status indicators in the regions of Puno and Arequipa in the South, and Chiclayo in the North. The proposed \$19.0 million private sector intervention includes A.I.D. funding of \$18.0 million, and an estimated \$1,000,000 in project counterpart contributions from both the public and private sectors.

The goal of the proposed project is to improve the health status of Peruvians through greater coverage of quality primary health care (PHC) services. The project purpose is to test the operational and financial feasibility of different PHC service delivery models. The resulting models will serve to develop and sustain cost recoverable PHC services within marginal income areas, as well as bring about improved collaboration and coordination between private and public sector health care providers.

Since the project is focused on two separate geographical regions with differing socio-economic conditions (i.e. Puno and Arequipa in the South, and Chiclayo in the North), project components will support the accomplishment of the following objectives in each respective geographic area:

1) In the North -- the project will develop a sustainable network of health centers for the delivery of affordable high quality PHC services to Peruvians with limited economic resources. As this component aims for maximally sustainable health, it is referred to as MAXSALUD. Key outputs in MAXSALUD will include the establishment of a private and sustainable primary health care organization (PHO). The PHO will include a minimum of 11 health centers in the Chiclayo region. It is anticipated that nine of these centers will be MOH facilities transferred to the PHO by the Regional Government of Nor-Oriental del Marañon (RENOM). The remaining two centers will be constructed with project funds. The self-sustainable model which will be employed by the PHO will eventually generate enough resources to cover the program's entire operational costs through a fee-for-service and cross-subsidy pricing structure. An international contractor will provide both long and short-term technical assistance in establishing and managing MAXSALUD. The international contractor will locally contract the services of a management support unit (MSU) for the development and implementation of systems for social marketing, finance, information dissemination, and the procurement and distribution of pharmaceuticals.

The estimated cost of MAXSALUD is \$10,158,000. The project's PHO network will provide PHC services to approximately 300,000 low income people in the northern zone of Chiclayo, including employment opportunities for local professional health care personnel.

2) In the South -- the project will increase the coverage of high quality PHC services and test the potential for sustaining these services within marginal income communities. Long and short term technical assistance will be provided under a cooperative agreement with an international PVO. As this component aims for maximum services, it will hereafter be referred to as MAXSERV.

MAXSERV will establish and reinforce PHC information and services systems by providing financial, technical and training assistance, as well as the procurement and distribution of pharmaceuticals. MAXSERV will provide sub-grants and contracts to finance and test various PHC delivery models developed and implemented by local private sector entities in Puno and Arequipa (e.g. NGOs, PVOs, private groups and universities). MAXSERV will also facilitate an open dialogue and information exchange between those private organizations and the public health sector. The estimated target population for increasing the coverage of PHC services in the South is 150,000 marginal income people. For this component, SHIP will provide \$5,942,000.

3) The project will also fund operations research and other technical studies designed to provide baseline information, guidance and feedback on project supported activities. Studies in the north include baseline data surveys for tracking project results, social marketing and financial analyses, and other technical and applied research activities. Studies for the southern MAXSERV will be

defined once the project's system for reviewing proposals for PHC sub-grant and contracted assistance is fully developed. Including the evaluations, total cost of the project component is \$500,000. Approximately US\$1,400,000 in project funds will also be provided for the services of two USAID PSCs through this component.

Project funds will be obligated through a cooperative agreement (CA) with the U.S. based PVO CARE for MAXSERV, and a Training\Technical Assistance (T\TA) contract for MAXSALUD. The procurement of project studies (including some buy-ins to centrally funded projects), PSCs, T\TA Contract audits, and project evaluations, will be carried out by USAID/Peru with funds obligated under the Cooperative Agreement.

### SUMMARY BUDGET

Total Project Costs by Project Component with Contingency Incorporated, Funding Source and by Foreign Exchange (FX) and Local Currency Costs (LC)  
(US\$'000)

PROJECT COMPONENT	A.I.D.			COUNTERPART SUPPORT	GRAND TOTAL
	FX	LC	TOTAL		
I. Self-Financing PHO (NORTH)	5,015	5,143	10,158	1,000	11,158
1. Technical Assistance	2,946	0	2,946	0	2,946
2. Commodities	914	150	1,064	0	1,064
3. Short-term Training	100	100	200	0	200
4. Operating Costs	0	3,741	3,741	0	3,741
5. Renovation/Construction	55	1,102	1,157	1,000	2,157
6. Studies/Audits	0	50	50	0	50
7. Overhead (25%)	1,000	0	1,000	0	1,000
II. NGO Health Providers (SOUTH)	1,921	4,021	5,942	0	5,942
1. Technical Assistance	233	0	233	0	233
2. Commodities	470	30	500	0	500
3. Short-term Training	115	115	230	0	230
4. Operating Costs	0	1,616	1,616	0	1,616
5. Sub-Grants	0	2,160	2,160	0	2,160
6. Studies/Audits	0	100	100	0	100
7. Overhead (10%) & G&A (8%)	1,103	0	1,103	0	1,103
III. Project Monitoring Support	1,200	200	1,400	0	1,400
IV. Studies/Evaluations/Pre-Award	364	136	500	0	500
TOTAL	8,500	9,500	18,000	1,000	19,000

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## II. BACKGROUND AND SETTING

### A. Country Setting

Peru has widely diverse physical, demographic, social and economic characteristics. Although rich in natural resources, the country is suffering a economic and social crisis. Of the total Peruvian population of 22.3 million (1990), at least 6 million live in conditions of absolute poverty, and another 3.5 million are deemed relatively poor according to the International Bank for Reconstruction and Development (IBRD or World Bank) data. Peru's average gross national product (GNP) per capita in 1990 was \$807, expressed in 1985 dollars (Instituto Cuanto S.A. - Peru en Numeros, 1991). That average belies the intensity of impoverishment of major segments of the population in the past ten years, during which time the per capita GNP fell 25%, investment declined 54%, and the annual inflation rate climbed from 60.8% in 1980 to 7,650% in 1990. From 1980 to 1990, salaries fell in the private sector by 69%, in the public sector by 83%, and the minimum wage fell by 73% (Instituto Cuanto, Ajuste y Economia Familiar 1985-1990, 1991). Income distribution in Peru is one of the most regressive and uneven in Latin America. The ratio of income earned by the highest 20% of the population compared to the lowest 20% is 32 to 1. Over 70% of Peru's economically active population is unemployed or underemployed. The lack of jobs and government restrictions have contributed to the generation of an underground economy.

Peru is the fourth largest country in Latin America, and is the fifth most populous country in the region. The population size is large compared to its very small productive land base. Formidable physical barriers (e.g., deserts, mountains, and jungle with difficult access) restrict the development of a transport network, limiting the possibilities of economic integration and trade within the country. Insufficient public investment has caused disintegration of the road network as well as ports, railways, and power generation and transmission networks. Terrorist actions have contributed to deterioration of possibilities for economic development.

For two decades, Peru has experienced a high incidence of de-stabilizing political turbulence and socioeconomic crises. More recently, it has begun to suffer the effects of an active and growing terrorist movement and drug trafficking. During the military dictatorships of the 1970s, widespread economic and socio-political changes were executed, including a massive land reform. These changes modified the structure and ownership of productive resources, and greatly increased the role of the State in the economy. In 1980, Peru elected a democratic government that set out to reverse the statist oriented policies of the 1970s. The world recession of the early 1980s and the resulting sharp drop in prices of Peru's major traditional exports, combined with unprecedented and widespread climatic distortions and inappropriate monetary and fiscal policies, precipitated uncontrolled inflation and rapid deterioration of the economy. By mid-1990, inflation was running at over 3,000% per year, while the economy was in a deep recession. The public sector was operating at a deficit with barely enough resources to pay salaries. Large-scale corruption, generalized subsidies and price controls severely distorted relative prices. A unilateral moratorium on most external debt service isolated Peru from its traditional creditors; arrears reached about \$12 billion, or 65% of external debt. As a

consequence, economic and social infrastructure, normally financed with external funds, deteriorated to unprecedented levels. The "Shining Path" and "Tupac Amaru Revolutionary Movement" terrorist groups, with links to corruptive drug trafficking activities, have created social havoc, destroyed peaceful and normal living conditions in many parts of the country, and contributed to the deteriorated economic situation.

## **B. Peruvian Health Status**

### **1. Health Status**

Peru's population is young with 39% of the total population under age 15. Life expectancy at birth is 63.4 years, which is low compared to other countries in the Latin American region. From 1981-1989, the crude birth rate declined from 37.6 to 32.8 births per 1,000 inhabitants. Due to the more rapid decline in death rates in relation to the birth rate, the population growth rate for 1991 is estimated at 2.1% (INE), which continues to be among the highest in Latin America.

The maternal mortality rate is 301 deaths per 100,000 live births, which is extremely high compared to rates of 3 per 100,000 in developed countries. Along with maternal malnutrition and inadequate perinatal care, high levels of fertility and inadequate birth spacing contribute to poor maternal and infant health. Infant mortality in Peru, at 80.7 per 1,000 live births in 1989, is the third highest in Latin America (INE, Peru 1990 Indicadores Demograficos por Departamentos).

The 1984 ENNSA Survey showed that across all age groups, the most serious health problems facing Peruvians today are respiratory and intestinal illnesses. Acute respiratory infections (ARI) account for almost half of all morbidity in Peruvians over the age of one year, and for nearly a third of all child and adolescent deaths. Digestive tract diseases caused by poor hygiene practices, lack of potable water and other environmental factors resulting in diarrhea, are among the most common health problems affecting Peruvians in all age groups over five years. Diseases such as malaria and tuberculosis have high prevalence rates, especially in rural and marginal urban areas.

### **2. Problem Areas**

#### **a. Maternal Morbidity and Mortality**

Abortion was the main cause (34.4 percent) of maternal morbidity, according to hospital admission and discharge data from 1981. Birth delivery complications were the second leading cause of maternal morbidity (16%), followed by hemorrhages (6.3%), and perinatal complications (3%).

The high maternal mortality rates indicate serious problems in quality of care, as well as coverage. Preventive measures to identify and reduce risks of maternal mortality are urgently

needed, including expanded family planning coverage, pre-natal care, iron supplementation during pregnancy, and childbirth assistance by trained attendants, especially for those births identified as high risk. Use of modern contraceptive methods, which greatly contributes to improved maternal and infant health through child-spacing and reduced child-bearing, is low at 23% of women of fertile age (WFA).

#### **b. Child Morbidity and Mortality**

Child health in Peru ranks among the worst in Latin America. Although actual vital events are underestimated, extreme regional differences exist. Acute respiratory infections (ARI) are the leading cause of death in children under five. Diarrheal disease, particularly the consequences of dehydration, and vaccine-preventable diseases are other significant cause of deaths among infants. Approximately 71% of infant deaths are caused by five problems: acute respiratory infections, perinatal problems, intestinal infections, vaccine-preventable diseases, and malnutrition.

#### **c. Nutritional Status of Children**

The 1984 ENNSA Study reported that 37.8% of the 0 through 5 year old children surveyed (15,314) were chronically malnourished (below two standard deviations of the mean normal height for age). More than 60% of children under six and over 70% of four and five year olds living in the rural sierra were chronically malnourished, while over 50% of children under six and nearly 70% of children 18 to 23 months from the jungle regions of Peru suffered chronic malnutrition.

#### **C. Health Services Availability and Utilization**

Health care is provided by a diversity of public and private institutions. The private sector, which includes fee-for-service physicians and private hospitals, covers an estimated 11% of the total population. The Peruvian Institute of Social Security (IPSS) is charged with providing hospital and ambulatory care for an estimated 28% of the total population (employed workers and their dependents), though actual coverage is less. Another 3% of the population is covered by the Armed Forces and Police and other public and para-statal facilities. All other Peruvians (58%) are considered to be under the care of the MOH. However, the MOH is currently providing services to only 26% of the population, leaving 32% of the total Peruvian population without access to modern medical services.

Even though the number of MOH and IPSS health centers and health posts has increased over the past ten years, lack of adequate coverage continues to be a major problem. In addition, hospital level care is still lacking in many rural areas. In urban centers, hospitals are overused for non-acute ambulatory care. The now yearly MOH strikes lasting three months in 1989-1990 and four months in 1991 also seriously impair the ability of the public sector to provide services.

Manpower and labor are the most costly element in the delivery of health care, accounting for about two-thirds of the recurrent costs currently spent in the public health sector. The proportion of both MOH and IPSS personnel assigned to outlying health centers and health posts, relative to the population, is less than adequate. The geographic distribution of physicians, nurses, paramedics and pharmacists in both health care systems disproportionately favors urban areas, especially Lima.

Use of health services is closely related to their accessibility and to such factors as socio-economic status, age, education, and severity of illness. All population groups use both formal and informal systems. Primarily due to the cost of using the formal health sector, whether public or private, the poor are more likely to seek health services through informal sector practitioners -- pharmacists, traditional healers, traditional birth attendants (TBAs), volunteer community promoters, and others.

#### **D. Health Sector Constraints**

##### **1. Social and Demographic Realities**

In 1990, 80% of Peru's nearly 15.6 million urban inhabitants lived in working-class neighborhoods or peri-urban squatter settlements and slums known as *pueblos jóvenes*. Between 1940 and 1990, the urban population of Peru grew from 40% to 70% of the total population, reflecting the migration of young families and adolescents seeking employment and a better life.

In rural areas, Peru's large size and difficult geography, poor road system, lack of adequate communication facilities, and limited human and financial resources represent major obstacles to the delivery of health services. Logistical and communications problems are even more severe in the poor rural areas of the central and southern sierra, where, in addition, terrorist activities are a constant threat.

##### **2. Curative Versus Preventive Care**

The public health sector has historically devoted considerably more resources to curative, hospital-based care rather than preventive care. Health centers and posts are under-utilized, because they are understaffed, under-equipped, and under-supplied. The national average user rate for IPSS clinics, for example, is only 49%. Because MOH and IPSS hospitals are relatively better equipped, they become the principal service delivery point for PHC. The over-emphasis on hospital-based curative care has also led to an overabundance of hospital beds in both systems, thus draining limited resources.

##### **3. Public Sector Constraints**

The MOH and IPSS are to provide national health coverage. A number of characteristics of the MOH pose problems for the development of an integrated sustainable health care system. These include: severe budget constraints, excessive hospital-based provision of services in large urban

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areas; lack of trained managers to plan, train and supervise personnel at all levels of the health service delivery system; difficulties in coordination between administrative and technical personnel; complicated bureaucratic procedures required to secure funds for the MOH from the MEF; lack of supplies and properly functioning equipment in service facilities; and, lack of an effective management information system.

#### **a. Financial Resources**

The MOH received 2% more of the GOP budget in 1986 than in 1985, and received an increase again in 1987 to 7.2% of the national GOP budget, one of the highest in Latin America. The average health budget in developing countries is approximately 4.5% of the national budget. Total health sector expenditures (public and private) is 4.5% of GDP, which compares favorably with other Latin American countries with a similar per capita income (ANSSA, 1986). Although the current GOP policy gives priority to rural and marginal urban populations, there is still an urban concentration of curative facilities. Per capita health expenditures are four times greater in Lima and Callao--where income is higher and health status indicators are better--than in other areas. Approximately 10% of the MOH operational budget is allocated to PHC, while international donor organizations have financed almost 75% of the costs by supporting PHC projects.

The IPSS receives a direct allocation of only 7% of its total budget from the GOP; the remaining 93% comes from employee and employer contributions, with the GOP one of the largest employers. Of the total budget, 60% is spent on the health care program. A major problem is the failure of the GOP, as an employer, and other private employers to pay their full contributions, resulting in a debt to the IPSS that exceeds \$350 million dollars.

#### **b. Human Resources**

Though many MOH staff received training in administration, financial management and PHC delivery under A.I.D. health sector projects in the past decade, many have been reassigned during reorganizations to positions which could not utilize such training. On the other hand, since 1990 under the administration of President Fujimori, the MOH has been successful in appointing more technically qualified personnel to staff administrative and technical posts. However, a continued high turn-over of high level personnel creates discontinuity in health policy and implementation.

#### **c. Regionalization**

The regionalization process underway is supposed to significantly change the structure of the MOH, transferring most service delivery and program management responsibilities to regional offices and municipal governments. The goal of regionalization has been to delegate health administration down to levels closer, and more attuned, to local needs. Decentralization is well advanced in five regions: Arequipa, Grau, Amazonia, Mariategui, and Ucayali. The regionalization of the IPSS is not anticipated.

When regionalization is completed, national ministries will no longer have direct supervisory authority over services provided within the Regions. It appears the new role of the Ministry of Health will focus less on service delivery and more on public health policy and management issues. The central MOH will be in charge of: strategic planning, financing and economic analysis, quality control of medicines and health care services, and the provision of technical assistance to the Regions.

While the regionalization process may be a positive factor in the organization of the health sector in Peru by moving decisions and resources closer to the problems being addressed, at this time it is causing some problems. Decentralization and reorganization of geo-political boundaries has created leadership problems in the transformation of Departmental Health Units to Regional and Sub-Regional Health Offices. The transition is uneven, affecting different regions selectively.

### III. PROJECT RATIONALE AND STRATEGY

#### A. SHIP Rationale

There is a great unmet need for primary health care services to low income populations in Peru through private sector alternatives. Although the MOH has recently been more effective in the promotion of preventive health care services, including nationwide vaccination campaigns for children and infants, indications of increased coverage of services by the MOH have been scarce. The vast majority of marginal income Peruvians in urban, peri-urban, and rural areas receive little if any quality primary health care service from the MOH. As a result, Peru is faced with extremely low health status indicators, particularly for expectant mothers, infants, and children under the age of six. Moreover, government resources for the provision of PHC and other health services have been significantly reduced, with little indication of future increases beyond the current social safety net, which mainly focuses on food assistance through community-based organizations, such as *comedores populares*, mothers' clubs, and the *Vaso de Leche* program.

The proposed project site locations of Puno and Arequipa in the South, and Chiclayo in the North, present many challenges and opportunities. Both regional government authorities in Puno (RGJCM) and in Arequipa (RGA) have expressed their support for the project concept of increasing PHC coverage through private sector models. Given the GOP regionalization program and new local decision-making authority, the project will help facilitate a stronger relationship between the providers of PHC services assisted under the project, and the regional MOH authorities. Benefits can be derived through both policy design and implementation, and the potential for leveraging project counterpart resources from the regional MOH (including health centers and other operational resources). The capability of sustaining high quality PHC services which provide increased coverage is necessary if the project is to have an impact beyond the five-year LOP. The sustainability of PHC services will be tested in various ways, including fee-for-service, leveraging of other resources, and the joint participation of various private sector

entities. By so doing, the project is expected to have a significant impact as an agent for change in the provision of PHC services to low income populations.

Puno represents one of the poorest, most isolated areas of the country. Cooperatives and other non-governmental and community based organizations are prevalent, but primary health care coverage through these organizations is almost non-existent. Arequipa is somewhat more advanced in the provision of PHC services on a limited basis through NGOs and church groups. There exists an informal process for health care policy dialogue between community organizations and the regional government and MOH authorities. However, both Puno and Arequipa have extensive pockets of poverty where little or no coverage of primary health care is provided. Although regional government authorities are gradually being delegated authority for the region's health care operations and policies, resources are extremely limited and will most likely continue to remain this way for the foreseeable future.

There is a need to test various health care models and to see which ones can have the greatest impact on increasing the coverage of PHC services to people of limited economic means. Although NGO programs provide a network for low income communities to mobilize support for their own development, major constraints are found in the lack of health care priorities and absence of the human and infrastructure capabilities needed for the provision of effective PHC services. Support for the development and expansion of PHC services in low income areas requires further analysis and practical application. For example, in addition to working with NGOs that meet minimum criteria for undertaking PHC programs, the project will test other models for contracting necessary services through local private sources of medical assistance, and support for community organizations such as mothers' clubs and other community level entities including labor and/or farmer-peasant groups.

In the North, the rationale for project activities is based on economic and other key factors which differ from the South. The region of Chiclayo is a fast growing area and is conducive to an entrepreneurial approach for the design of a self-sustainable primary health care network. Chiclayo represents the center of commercial activity of the Nor-Oriental del Marañon Region comprised of the three departments of Lambayeque, Cajamarca and Amazonas. This region also is the third largest generator of tax revenues for Peru behind Lima and Arequipa. The median income level of the region is 12.5% greater than the country's overall average. On the negative side, however, Chiclayo has increasingly become a crossroads for coca trafficking shipments.

NGOs that provide health care services are relatively undeveloped in Chiclayo, thus limiting private sector alternatives to PHC delivery. Ministry of Health (MOH) facilities and centers in Chiclayo are virtually non-functional and cover a very small percentage of the population. Needed to effectively address the causes of morbidity and mortality among marginal income people is a primary health care network that stresses community outreach, health education, and primary health care services. There is a huge unmet demand within Chiclayo for high quality PHC services within low income urban and peri-urban communities. The project proposes to fill a major need within this community.

Increasing private sector services to expand the coverage of high quality PHC services is a better alternative than focusing on the current MOH health care system in Chiclayo. The ability to sustain the provision and coverage of high quality PHC services is essential. The most viable alternative is the proposed self-sustainable PHC model, which is capable of increasing PHC coverage to low income populations in the Chiclayo region, and at the same time sustaining these services beyond the life-of-project.

## **B. SHIP Strategy**

The five-year, \$19.0 million project is designed to evaluate and identify models of private primary health care services delivery which improve access, coverage, efficiency, and sustainability of services in two areas of Peru. The SHIP responds to the lack of health care availability in Peru, and to the inability of the public health system to provide such care. The project consists of three components: MAXSALUD, establishment of a self-sustaining primary health care network in the Northern region of Chiclayo; MAXSERV, assistance to health care providers in the project areas of Puno and Arequipa in the South; and operations research and other technical studies and information dissemination activities in support of project implementation and as a way of influencing health care policy. There are also budget elements for project management support (i.e. 2 PSCs and related support materials, audits and evaluations) and contingency.

### **1. MAXSALUD**

The project will establish the systems, procedures and methodologies for a new, self-sustainable primary health care network to serve the areas of Chiclayo, *pueblos jovenes* located in peri-urban areas, and one section of the district of Lambayeque. The MOH of RENOM has suggested that nine health centers be ceded to the PHO. A legal study at the beginning of the project will determine mechanisms for doing so. An important issue will be what happens to current MOH staff of these clinics. An international firm will be awarded a competitively negotiated training and technical assistance (T/TA) contract in CY92 for the performance of all project activities. The contract will provide for the services of long- and short-term technical assistance. The contractor will be responsible for contracting the staff of a management support unit (MSU) to be comprised of local professional medical, management and staff support personnel. Key implementation activities of the PHC system will include: 1) an appropriate geographical location for 11 health centers (2 to be constructed as part of this project) and a target population of approximately 300,000, low income people; 2) demand estimates for services, fees and the cost of PHC services; 3) the development of PHC service delivery packages; 4) health education modules; 5) health marketing, advertising campaigns and community mobilization efforts; 6) testing of pricing strategies and risk-sharing alternatives; and 7) development of an incentive system for health service providers and employers.

A fundamental principle of the self-financing primary health care model is a system of cross subsidies to be employed at three levels: health center subsidies from urban areas to peri-urban

population; subsidies from curative activities to the preventive activities; and subsidies from patients in better condition to pay for services, to patients who are less capable of meeting the minimum fee for service requirements. There may be different levels of services provided in the various centers. Essential preventive services will be provided free of charge. Basic services will include immunizations, control of diarrheal diseases, nutrition interventions, family planning, treatment of acute respiratory infections, and pregnancy care.

Marketing strategies will be applied to needed services such as immunizations, prenatal control and deliveries. The project's social marketing approach will include advertising campaigns through mass media such as radio and television, as well as in print media. The objective of these promotional activities will be to educate people and stimulate increased utilization.

Several activities will be undertaken to encourage community participation, including local boards of directors at each health center; training of promoters and volunteers; establishment of an effective board of directors for the PHO; social marketing as described above; organization of community health fairs; support groups such as mothers' clubs and youth groups; and the integration of health centers with other community development endeavors. Direct involvement by the local communities is an integral part of the self-sustaining objective. PHO health centers will have a community room available at all times for meetings and educational programs.

**MAXSALUD**, the self-sustainable model in the Northern region of Chiclayo, will be capable of attracting well qualified medical personnel through a competitive salary structure (see Financial Analysis section VII.D.). The proposed salaries for project Medical Doctors, Nurses, and other professional level personnel for operation of the centers and the management support unit, will be equivalent to salaries earned by IPSS professionals and for private medical practitioners. Thus, the project will contribute to reducing unemployment in the health sector through the provision of well paying jobs. The MSU will also seek to develop additional income for covering its own costs of operation through fund raising activities, training, research, consulting work, government grants or subsidies, and other donor contributions.

## **2. MAXSERV**

The project strategy employed in the South is based on the need to test out various private sector models for increasing the coverage and the potential for sustainability of PHC services in project areas of Puno and Arequipa. To accomplish these objectives, the project will provide a Cooperative Agreement to an international NGO. The NGO will be responsible for the establishment of basic systems for the development and expansion of PHC service models under the project. PHC service priorities will be immunizations, control of diarrheal diseases, nutrition interventions, family planning, treatment of acute respiratory infections, and pregnancy care. Systems will include a financial mechanism for funding PHC models through sub-grants, contractual services, and other financing arrangements such as fund guarantees and a revolving procurement mechanism for essential medicines and supplies. Other key systems to be developed under the grant will include technical assistance and training, and procurement and distribution of pharmaceuticals.

For establishing the above systems, grant funds to an international NGO will be used to create a separate primary health care division. To develop and establish project systems in the areas of Puno and Arequipa, grant funds will be used to contract several key long-term personnel as well as short-term technical assistance and training as required. The long-term personnel will include one program director, two sub-directors, accountants and secretaries, who will comprise the project's technical and managerial presence in the two locations of Puno and Arequipa. An estimated 35 months of short-term technical expertise is required to assist in all phases of project implementation. In addition, the South component will finance one PSC, to be located in Lima, who will be responsible for back-stopping project activities, and providing project documentation, communication and Mission management support.

Implicit in the project strategy is the development of a close, mutually beneficial relationship between representatives of private sector health care providers and regional government authorities and health officials. This relationship is viewed as key to the effective collaboration of health care providers and the sustainability of PHC services to marginal income populations. A collaborative relationship between public/private sector health care representatives and policy officials will be facilitated by the Mission's proposed FY93 health sector non-project assistance resources. It is anticipated that influence in health policy design and implementation, and GOP counterpart funding, may be leveraged under the planned USAID/Peru health sector NPA.

#### IV. PROJECT DESCRIPTION

##### A. Project Goal and Purpose

The goal to which the project will contribute is to improve the health status of the population in the project areas. The sub-goal of the project is to contribute to health policy dialogue in Peru regarding health care financing and health care delivery. At the purpose level, the project will evaluate and identify models of private primary health care delivery which improve access, coverage, efficiency, and sustainability of services in two areas of Peru.

##### B. Project Components

###### 1. MAXSALUD: A Self-financing Primary Health Care Network in the North

The first component, a Self-financing PHC Network in the Nor-Oriental de Marañon Region of the country, will establish a network of health centers in the Department of Lambayeque, covering by 1996 up to 50% of the population of about 300,000 inhabitants in the 3 districts of Leonardo Ortiz, Chiclayo and La Victoria in the city of Chiclayo, and part of the population in the city of Lambayeque. Approximately 165,000 people in the urban and peri-urban areas of Chiclayo and Lambayeque will be served by MAXSALUD annually by 1996 with a wide "menu" of preventive and curative primary health services, combined with 24-hour maternity and emergency services, complemented by laboratory services, pharmaceutical sales and health promotion in the community of the health center catchment areas.

A total of 11 health centers will be physically planned and organized, supported by a Management Support Unit (MSU). Two of the health centers will be constructed by the project, on land to be contributed by the Regional Government (RENOM) health management of Lambayeque (Region II of RENOM), for which tentative sites have been identified and where the Region II health administration has land and land/buildings, offered to the project. These two health centers, located at Las Mercedes and San Lorenzo neighborhoods in the respective Districts of Chiclayo and Leonardo Ortiz, are key ingredients to the sustainability of the project.

The other 9 PHC centers will be located on land and in buildings contributed by the same regional government (currently estimated to be worth US\$1.0 million of counterpart contribution), and will be significantly renovated by the project. A selection of locations was made in the city of Chiclayo which identified a combination of health centers in medium and low socio-economic population areas, whose combination had the potential to produce surplus and deficits that balance into equilibrium by Year 5, not including the costs of the Management Support Unit (MSU). In the city of Lambayeque, there seemed to be only one center needed and the preferred location would appear to be quite evidently in the center of the city. All three management levels at the RENOM, Region II and the Health Directorate have indicated their interest and willingness to contribute the mentioned physical assets. The RENOM has also indicated there is the possibility of their contributing with some, albeit limited, funds for renovation and construction of the health centers.

The PHC services are to be provided in the context of a strong community motivation and social marketing effort to establish a clear and widely perceived image and the reality of a high-quality primary health care "franchise", for the middle and low income population of Chiclayo and Lambayeque. It is expected that this effort will result in intensive utilization of health center facilities by the beneficiary population, increasing the volume of services to the levels needed to make the health network financially viable. These combined efforts are also oriented to increase the proportion of the populace using the health centers or "the market share" to approximately 60% in the fifth year of their respective operation.

**a. Development of MAXSALUD Project Component Activities**

The proposed MAXSALUD project component will establish the system's procedures and methodologies of a self-financing, non-profit private health organization through a new form of health care system serving the cities of Chiclayo and Lambayeque.

**Design of the new system will include the following components:**

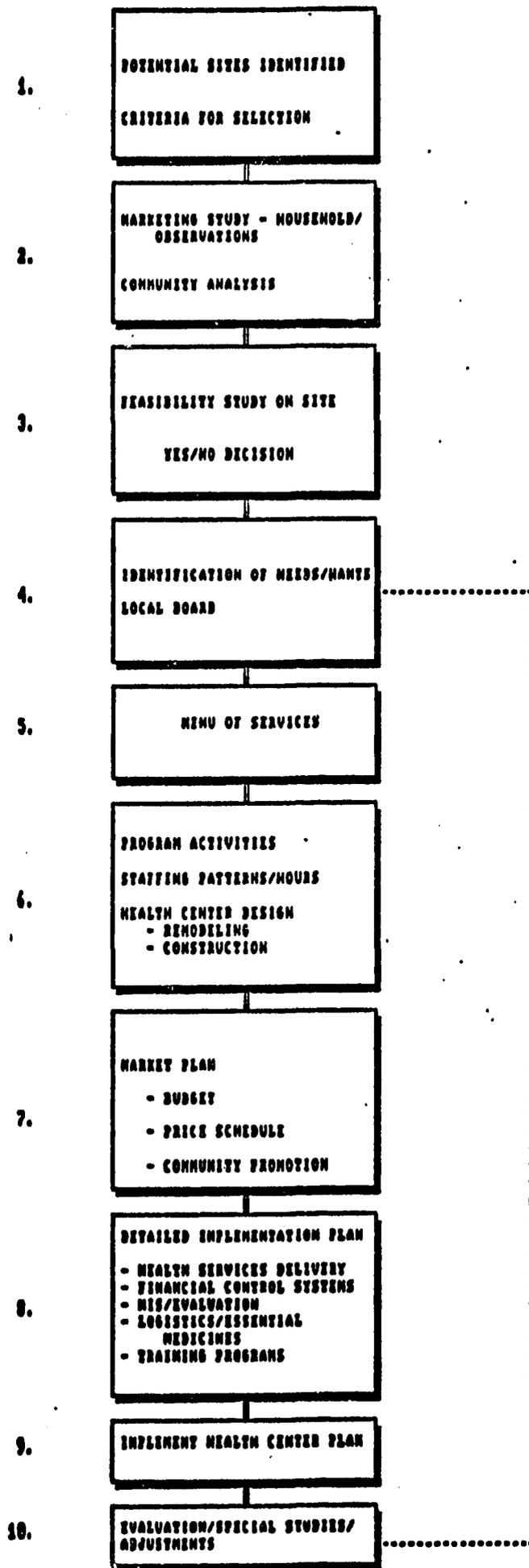
- 1) Based on detailed analysis, finalize the appropriate geographical distribution of health centers according to location of patient populations;**
- 2) Refine the estimate of demand for services and associated income and service costs;**
- 3) Identify community health needs and wants**
- 4) Develop health service delivery packages, or "menus";**
- 5) Develop health education and community promotion modules;**
- 6) Develop detailed implementation plan**
- 7) Conduct health marketing, advertising campaigns, and community mobilization efforts;**
- 8) Test pricing strategies and risk sharing alternatives;**
- 9) Develop an incentives system for health service providers and employers;**
- 10) Develop management support systems to ensure efficient and effective delivery of health services;**
- 11) Conduct continuous operations research to allow rapid assessment and adjustment of project activities, strategies, services, and price structures.**

**Figure 1 is a model for implementation of the project strategy and is shown below.**

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**FIGURE 1**  
**Model of Project Strategy**

**STEP**



## b. Primary Health Care Services Delivery

### 1) Services to be Offered

Based on the preliminary analysis of epidemiology of the target population, its demography, and the gap between health needs and services available, the project can develop a list of basic services that will be offered in each health center. These services form the basis for the self-sustainable concept and are reflected in the financial projections found in the financial analysis. These services include both preventive and curative activities in the following areas: diarrheal diseases, acute respiratory illnesses, nutrition, childhood immunizations, family planning, and maternal health care (prenatal and delivery services).

#### a) Preventive Services

These services will be offered gratis to the population and will be subsidized by curative services and deliveries. Preventive services will be provided under the overall policies and guidelines of the Ministry of Health, and will receive both technical and material support from the Ministry of Health. This will include, for example, guidelines for immunization by age group, as well as the actual vaccines themselves. Included under this category are the following preventive maternal and child health services:

- (1) Prenatal care;
- (2) Post-partum care and breastfeeding education;
- (3) Tetanus toxoid immunization of women between the age of five and forty-nine with two tetanus shots;
- (4) Expanded program in immunizations with priority on the under ones but expanding it to the 1-4 year-old age group, as needed, providing DPT/polio, measles, and BCG vaccines;
- (5) Well child visits, which would include growth monitoring and nutritional interventions, and application of immunizations;
- (6) Home visits. When appropriate, follow-up visits or promotion may be done by using home visits, especially for high-risk families. Volunteer community promoters trained by the PHO will conduct most of these visits.
- (7) Family Planning. Services to be offered free, but clients to pay for supplies.
- (8) Gynecological examinations. Educational programs will stress the need for women of reproductive age, who are sexually active, to have an annual gynecological examination, including Papanicolaou smear, and testing for sexually transmitted diseases. The Papanicolaou smear may not be provided initially within the project, but experience with PROSALUD/ Bolivia indicates that this could be a potential revenue generator for the project, in addition to providing a recognized need for women of reproductive age. Once a central laboratory is set up within the project to process Papanicolaou smears, this service can also be available for a fee to other physicians outside of the PHO network of services. Gynecological and family planning services are budgeted under Consultations due to ease of budgeting, since these services are potentially revenue-generating.

#### b) Safe Uncomplicated Deliveries

As described in the technical analysis, Chiclayo has one of the highest percentages of home deliveries on all of Peru, 95% of which are done by *parteras empiricas* and *comadronas*, or traditional birth attendants. The pediatric wing of the hospital is filled with newborns that have significant complications of these home deliveries, including neonatal sepsis and tetanus, not to mention the newborns that never make it because they die before getting to the hospital. Therefore, safe delivery practices will be important within the health centers. The project PHO

will provide facilities and personnel to attend births in special maternity units with inpatient beds within each health center. Promotion of these services within the community will be critical to the strategy to change health behaviors and to reduce maternal and perinatal mortality. Given that "parteras empiricas" charge approximately thirty new soles for delivery at home, plus an additional twenty for supplies, at fifty soles a delivery, this could be a significant revenue generator for the health center as well. The PHO will, therefore, provide a source of improved delivery care for communities. As part of the community liaison work of each center, the traditional birth attendants will be encouraged to cooperate with the centers. See discussion below of community participation.

#### **c) Curative Services**

Curative services will be oriented towards the ten leading causes of morbidity, which together account for 87% of the consultations given in 1990 in Chiclayo. Priority will be given to treatment of major illnesses in children: acute respiratory infections and acute and chronic diarrheal diseases. Tuberculosis cases will also receive priority for treatment and careful follow-up.

Curative services will all be provided as fee-for-service activities. The marketing plan, promotional and health educational activities will assist people within the community to recognize the severity of the illness and when it is important to come into the health center to seek assistance. Consultations will be provided for children under one year of age, children 2-14 years of age, and adults who will be considered anyone fifteen years or older. We anticipate a different pricing structure would apply to each one of these categories of people, since it would be wise to keep prices lower for infants to encourage utilization, and higher for adults, who generally are the people that have the economic resources to pay for services.

#### **d) Diseases of Public Health Importance**

A number of consultations will be provided to individuals suffering from diseases that normally would be considered public health programs. These include tuberculosis, sexually transmitted diseases, cholera, leishmaniasis and other parasitic diseases, etc. However, the consultation fee will still be charged for the services. Nevertheless, evaluation should be done of these charges to make sure that by doing so we are not putting a barrier to treatment and, thus, increasing the prevalence of these diseases.

#### **e) Dental Consultations**

Experience in PROSALUD/Bolivia, has shown that people are willing to pay a reasonable fee for good high quality dental services close to their home. Dental services are an integral part of the maternal-child health program since a woman of gestational age whose teeth are so diseased or infected that she can not eat a good diet will be malnourished and produce a low birth weight infant. Therefore, early intervention in younger children and young adults is considered an important part of a primary health care outreach program. Experience suggests

that a moderate charge for fillings and extractions will not only cover the cost of the services, but will generate surplus to cover some of the preventive services. As an alternative, dental services can be offered on a cost-sharing basis. Private dentists would contract to locate a dental office within the health center and share revenues on a fifty-fifty basis.

## **2) Health Service Support Services**

A number of services provided through a health center, described below, are considered supportive of the consultation and preventive programs. However, they need to be identified separately because each of them requires technical skill as well as supplies and equipment. In order to recover these costs, a charge needs to be assigned to each one.

### **a) Sale of Medicines**

A preliminary analysis of the current health center network in Chiclayo indicates that the supply of essential medications is virtually non-existent, and is one of the major reasons leading to low utilization of health centers. When people know that there will be no medication provided to them, and that they will be given an expensive prescription that they'll have to buy in the open market at high prices, they tend to delay going until they are in advanced stages of illness. Guaranteeing a supply of high quality medications at a reasonable cost, will promote utilization of health services, and improve the overall perception of the quality among the people being served. Given that the Ministry of Health supply system is functioning poorly, a new logistics and supply system will be established within the primary health organization. This a complex enough task that a long term advisor will need to be assigned to the project for period of two years. This is described in more detail in the Technical Assistance Plan, below.

### **b) Laboratory Examinations**

A number of the health services described above will need laboratory examinations to assist in diagnosis and treatment. These will include hemograms, urinalysis, gram stains, other microscopic examinations of wet preparations and smears, and simple chemistries. Laboratories in larger health centers will provide services for a number of the smaller health centers thus centralizing activities and making them more cost effective. People in the Lambayeque region are accustomed to paying for laboratory services and a modest charge will be applied to them to generate revenue. Over the five-year life of the project, over 320,000 laboratory examinations will be provided.

### **c) Emergency Services and First Aid**

The fifth leading cause of morbidity in Chiclayo is trauma; people are much more willing to pay for a service when they hurt than when they feel well. Thus each health center will need to establish its hours of operation in order to maximize the amount of time that staff is available to attend to emergencies and trauma. This may range from suturing lacerations and setting simple fractures to minor first aid, such as cleaning wounds and dressing minor wounds and

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giving tetanus toxoid. Again, a charge will be associated with each of these services and this would also be considered a revenue generator.

### **3) Community Promotion and Educational Services**

Linkages with community groups and promotion of activities within the health center are considered an important component of successful self-sustainable activities. No charge will be applied to these, yet they do not necessarily fall under the rubric of preventive services. These activities include a wide range of services such as meetings with local boards to discuss health center functions and activities; meetings with other community groups to acquaint them with the project and to report on progress of services; and health educational efforts on specific topic areas such as reproductive health, diarrheal disease control, immunizations, growth monitoring, etc. Since reduction of maternal mortality is one of the major project goals, stress will need to be placed on outreach through community promoters to encourage women to use safe birthing practices within the health center, and to utilize contraceptives and child spacing services. Because the health center could be seen as competing with them for business, special efforts will be made to incorporate the traditional birth attendants into this system of improved pregnancy care. They will be considered as candidates to serve as health promoters, and arrangements will be worked out locally so that they can contribute, rather than detract from, improved prenatal, delivery, and postpartum care.

#### **c. Locations and Population Coverage**

The location of each of the health centers that could be initially included in this component will be determined on the basis of more detailed studies on the most appropriate sites in Chiclayo where health service facilities would be well utilized. Figure 2 shows the current situation of health centers in the Department of Lambayeque that could potentially be included in the MAXSALUD network. As noted in the figure, some of the health centers cover as low a population as 9,000, and others as high as 44,000. Construction of two new health centers is suggested in two areas where profits could be made from the fee-for-service: in San Lorenzo and in San Juan. San Lorenzo would essentially divide up the population served by Leonardo Ortiz which currently is around 80,000, and San Juan would be established in a new area of somewhat lower population but higher income. Overall, these 11 health centers cover a geographic area with a population of approximately 300,000 people. Conversations with both Ministry of Health staff and the Regional Government of Nor Oriental de Marañon, indicated that all these health centers could be made available to the project although the exact legal mechanism by which this would be accomplished was not clear. Studies will be conducted at baseline to determine the legal mechanism transferring health centers from the MOH to the PHO.

FIGURE 2

CURRENT SITUATION OF POSSIBLE HEALTH CENTERS IN THE DEPARTMENT OF LAMBAYEQUE

Name of Center	Population	%	Socio-economic level	Current Size (m2)	Building & Land current characteristics			Age in years
					building	land	Type	
<u>District Leonardo Ortiz</u>								
J. Leonardo Ortiz	40,613	33%	low	building	350		brick	20
Atusparias	43,406	35%	low	land		1,000	brick	5
San Lorenzo (N)	40,000	32%	middle, low	building	120	2,000	brick	0
				land	500	1,000		
<b>Total District</b>	<b>124,019</b>	<b>100%</b>			<b>970</b>	<b>4,000</b>		
<u>District Chiclayo</u>								
Hospital Las Mercedes	40,000	18%	middle	building	500		cane & cement	50
Jose Quiñonez	17,671	8%	middle	land		600	brick	8
Jose Olaya	17,672	8%	middle, low	building	120	1,500	brick	16
				land	500	600		
Cerropon	8,835	4%	middle, low	building	70		cane & cement	3
				land		4,000	brick	0
San Juan (N)	15,000	7%	middle	building	500	800		
				land				
<b>Total</b>	<b>99,178</b>	<b>45% of Total District</b>			<b>1,690</b>	<b>7,500</b>		
<b>Total District</b>	<b>200,905</b>							

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FIGURE 2 (cont...)

District La Victoria

La Victoria I	43,646	51%	middle, low	building land	120		brick	7
La Victoria II	23,105	27%	low	building land	180	1,000	brick	15
El Bosque	11,982	14%	low	building land	150	180	brick	4
<b>Total</b>	<b>78,733</b>	<b>92%</b>	<b>of Total District</b>	<b>total</b>	<b>450</b>	<b>1,330</b>		
<b>Total District</b>	<b>85,578</b>							
<b>Total Covered</b>	<b>301,930</b>	<b>99%</b>	<b>of Total District</b>					
<b>Total District</b>	<b>306,483</b>	<b>49%</b>	<b>of Total Provincia</b>	<b>total</b>	<b>3,110</b>	<b>12,830</b>		
<b>Total Provincia Chiclayo</b>	<b>621,919</b>							

District Lambayeque

San Martin (1)	7,641	17%	middle, low	building land	150		brick	10
<b>Total District</b>	<b>44,940</b>					<b>500</b>		
<b>Total Covered</b>	<b>309,571</b>	<b>88%</b>	<b>of Total Districts</b>					
<b>Total Districts</b>	<b>351,423</b>				<b>3,260</b>	<b>13,330</b>		

Notes

- (N) New to established  
 (1) Actual coverage that can be achieved is much larger due to disfunctional Hospital Belen and virtual absence of other organized ambulatory primary health services.

FIGURE 3

HEALTH CENTER LEONARDO ORTIZ  
PROJECTED STAFFING OVER FIVE YEARS

Dependent Personnel Costs Staffing	No. of hours/ shift	Year 1	Year 2	Year 3	Year 4	Year 5	AVERAGE
Medical Director	8	1	1	1	1	1	1
General Practitioner	6	1.0	2.0	3.0	4.0	4.0	3
Pediatrician	6	0.5	1.0	1.0	1.0	1.0	0.9
Mid-wife	8	1.1	1.8	2.3	2.8	2.9	2.2
Supervisory nurse (8 hours)		1	1	1	1	1	1
Auxiliary nurses (3 x 8 hours)		6.6	11.6	15.2	19.0	19.5	14.4
Dentist		0.9	1.5	2.0	2.5	2.5	0.0
Laboratory technician (8 hours)		0	0	0	0	0	0
Biochemist (8 hours)		1	1	1	1	1	1
Lab assistant (8 hours)		0	1	1	2	2	1
Administrator		0	0	0	0	0	0
Secretary-receptionist		1	1	1	1	1	1
Cleaning personnel		1	1	1	1	1	1
Laundry personnel		1	1	1	1	1	1
Ambulance chauffer		1	1	1	1	1	1
<b>Total</b>		<b>17</b>	<b>26</b>	<b>31</b>	<b>38</b>	<b>38</b>	<b>28</b>

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#### **d. Projected Use of the PHC Network, or Market Share**

In projections of sustainability of the project, an average market share of 25% is used in the first year, i.e. 25% of the population will use the health centers. This is based on the percentage of pregnancies attended at Ministry of Health facilities, as well as the projected demand for consultations for sick children and adults, and the amount of coverage that could be attained for well child visits. With well run health centers it is anticipated that this could rise to as high as 40% by the end of the second year and to 50% by the end of year three. These are the figures that will be used in the computer model generated for estimating self-sustainability.

#### **e. Staffing Requirements**

Figure 3 lists the staffing requirements for an average health center. In the larger health centers this would increase over time as the market share increases, and thus Figure 3 shows how this might occur in one of the larger health centers. Each health center should have as a minimum a medical director, a generalist who can do both pediatric and adult medicine as well as deliveries and has had some experience in health center management, either in the public or private sector. This physician would be supplemented as demand increases with other medical generalists, nurses, and trained midwives to assist with women health programs, safe deliveries within the health centers, and home visits. As demand increases, a pediatrician would be added to act as a referral source within the health center for more difficult pediatric problems such as failure to thrive, chronic malnutrition, recurrent infections and probable immune deficiencies.

The other technical staff will be required to assist caring for emergencies, providing simple first aid, pharmacy, and laboratory. Since the project is divided in three large districts, Leonardo Ortiz, Chiclayo and La Victoria, as well as the town of Lambayeque, it might be possible to station one vehicle in each of these districts to be shared by them as an ambulance for emergency cases. Therefore a vehicle and driver will not be needed for each health center.

#### **f. Equipment**

Figure 20 shows the basic equipment list for one health center for start-up. This equipment list is based on actual experience both in Peru and in the PROSALUD project in Bolivia. Of course, the equipment listed for the medical consultation room would need to be increased in the larger health centers as staffing increased.

#### **g. Medicine and Supplies**

Annex 2 is a listing of the basic drugs that would be utilized in one month for a moderate size health center. This formulary is also based on Ministry of Health requirements in Peru and PROSALUD experience in Bolivia. It is anticipated that the project will need to develop its own logistics system for medications and supplies. Consideration will be given to collaboration with PRISMA, which distributes contraceptives throughout the country to the UTES level. Given the complex nature of the task, the services of a long-term technical advisor in logistics and essential

medications will be needed to assist in setting up selection, procurement, storage, distribution, and effective utilization systems for essential medications.

#### **h. MAXSALUD Primary Health Organization Structure**

Implementation of complex project activities and management support systems described above will require the creation of an entirely new institution within the Chiclayo area. This project proposes a non-profit, non-governmental organization incorporated under the laws of Peru. Prior to start-up a legal analysis needs to be completed to determine the specific structure of the organization, its board of directors and by-laws. However, at this time we can describe in general terms what the necessary elements of the PHO. (Figure 4 is a model of the organizational structure of the PHO.)

##### **1) Board of Directors**

The working concept of MAXSALUD, the PHO, is oriented to a not-for-profit service organization, dedicated to improving the health and welfare of people in need within the community, managed in a business-like manner and operating on a continuing basis - including after the PACD.

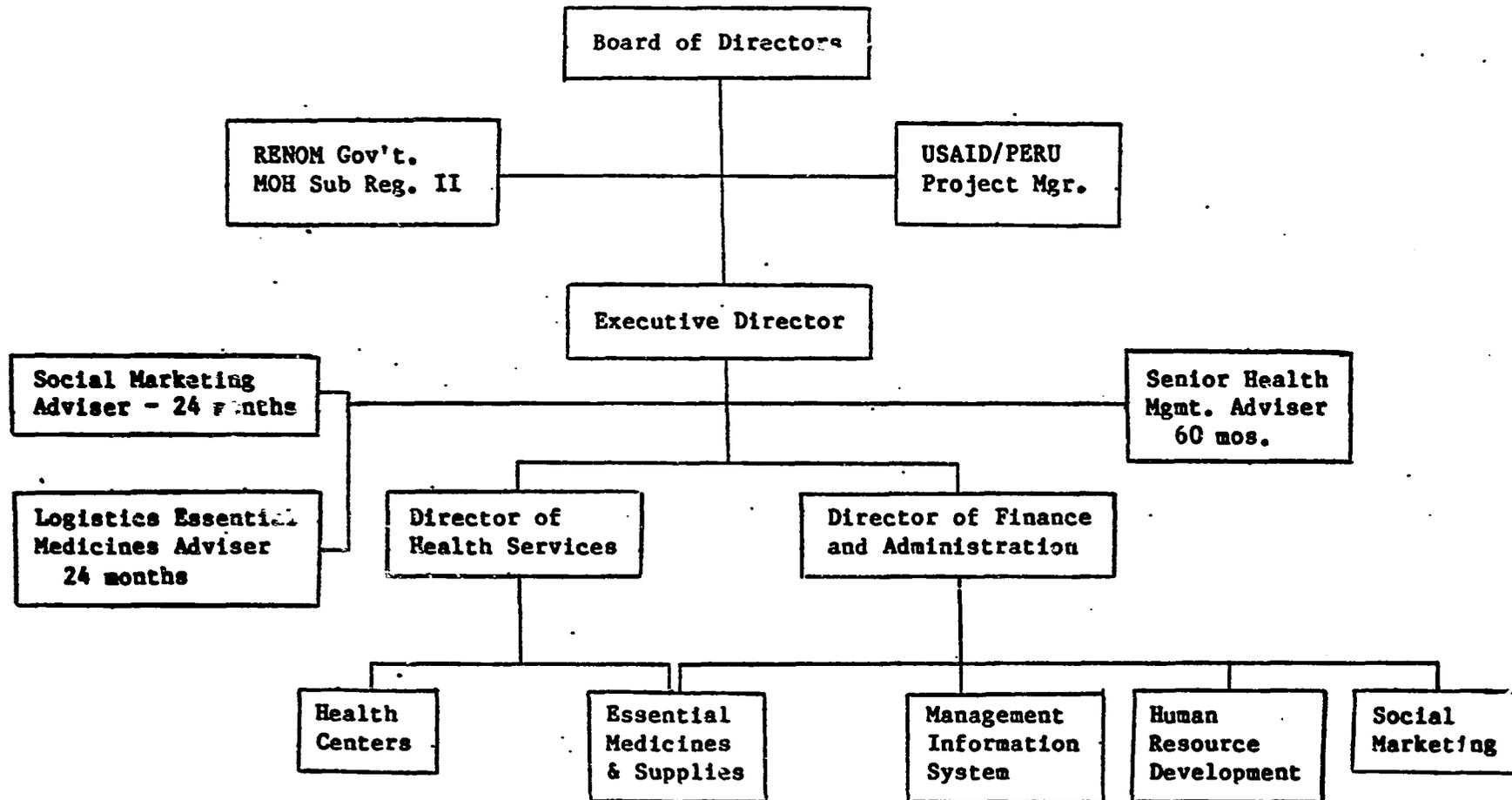
As such, the intention is to recruit for the Board of Directors community individuals who share this perspective, and also have particular skills to offer to the organization. Members of the board of directors should represent a cross-section of the skills available within the community. A mixture of people from government entities such as RENOM and the Ministry of Health should be included, as well as representatives from the private sector (progressive members of the medical community) and university faculty in the region. The initial analysis should determine the recommended size of the board; experience suggests seven to fifteen people will provide a number large enough to include a cross-section of skills and interests described above. The Executive Director of MAXSALUD will be the permanent Secretary of the Board. The Chairman of the Board of Directors will have a large responsibility in the first year. Observation trips to other projects similar to this, organized by the PSC for this component, are proposed so that the Chairman can understand how the program can function. The Chairman of the Board of Directors should be someone of good will who is willing to commit a significant amount of time within the first several years to the organization's development.

The basic concept behind the Board of Directors is that it is a non-profit organization created by the community, composed of members of the community, to serve the needs of the community, on an on-going basis, in a business-like manner. It is very important that the people in Chiclayo and Lambayeque feel an ownership of the organization. Thus, it will be a function of the Chairman of the Board to assure sufficient input be made by the community, into the thinking and acting of the Board. This will include meeting at least once a semester with a sampling of health center community boards, at project expense.

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FIGURE 4

ORGANIZATIONAL CHART OF PHO



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## **2) Management Support Unit**

In order for the primary health organization to manage and operate this extensive network of health centers in an efficient manner, a central management support unit will be needed. The Management Support Unit (MSU) will be the nucleus of management services to the PHC centers and the health services network. The basic responsibilities of the MSU are:

- Assure the adequate provision of quality health services to the satisfaction of the beneficiary population.
- Plan and implement the overall project strategy. These activities include establishing a work plan and determining the location of health centers and corresponding health posts, as well as budgeting, allocation of project resources and community promotion activities in representation of the PHO organization to outside health care entities. This also includes managing personnel and funds, training both within the organization and outside, gathering and storing project data, and reporting project results to the board of directors, AID, and project evaluators as required.
- Work with project technical advisors in the development of overall policy guidelines, and addressing service priorities, health interventions, and other issues as they arise.
- Provide direction and leadership for the project by clearly establishing and assuring application of MAXSALUD's "health franchise" through health care standards and procedures, training and supervision, and through joint collaboration with MOH programs and officials.
- Provide monthly reports on health activities to the regional health units and help coordinate and participate in management of health interventions by the MOH such as vaccination campaigns and cholera control that will occur in the PHO project areas.
- Ensure quality control of services provided by the health care network through the organization of local boards at each health center. The local boards will serve as a means of providing feedback on the quality of project services. Moreover, the board will help supervise and evaluate the impact that the PHO has on health status of project beneficiaries.

**MAXSALUD's board of directors will be established early to provide guidance for the development of the health care network, set policy, develop by-laws for overall function of the organization, and collaborate in the negotiations with RENOM and Region II. The MSU will be responsible for the day-to-day management of the PHO activities, and as such, it will be necessary to have a variety of staff members. These are described below.**

**i) Executive Director**

The Executive Director will be responsible for building and maintaining strong relationships with policy planners and decision-makers and other officials of the municipalities, RENOM, the Ministry of Health in Chiclayo, the board of directors, other NGOs and community groups linking up with the organization, and all project entities. The Executive Director will be responsible for planning, developing and implementing the organization's strategy and supervision of the overall operations of the PHO in Chiclayo and Lambayeque. The Executive Director will need to motivate project personnel using a team concept of management so as to more effectively and efficiently achieve the project purpose.

**ii) Director of Health Services**

The Director of Health Services (or Medical Director) will direct, plan and supervise the effective and efficient provision of primary and other health care services. He will also supervise and provide technical backstopping in the delivery of project pharmaceuticals and health care logistical support functions. The Director of Health Care Services will have the major responsibility for supervising each of the individual health centers on a regular basis to maintain high standards of quality.

**iii) Director of Finance and Administration**

The Director of Finance and Administration will manage, control and supervise use of project funds and revenues, assets, liabilities, and equity capital. He will provide essential financial information and reports to internal and external sources and develop and apply the procedures and systems required to budget, control, and administer PHO funds for the network of health centers and for each cost center. The Director of Finance and Administration will also supervise the development of personnel and human resource development and systems, information systems, and supply systems with the technical support of the Health Services Director.

**iv) Chief of Social Marketing**

The Chief of Social Marketing will supervise the effective management of social marketing activities and sales programs on the primary health care network. This individual will also have responsibility for designing marketing surveys to help assist in feasibility studies to decide on potential project sites. He/she will also be responsible for design and implementation of rapid assessment programs for market strategies to assess how effectively they are working under changing conditions, and to assist other project management in adjusting strategies, pricing structures, and service programs.

**v) Chief of Management Information**

The Chief of Management Information Systems (MIS) will plan, organize, direct and control the computer operations including installation, implementation of hardware and software, provide

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technical assistance to all members of the management support unit and to technical staff within the health centers in the implementation of the MIS. The MIS to be used will be that developed under the Child Survival Action Project with the Ministry of Health. He will also be responsible for maintenance of the program and of training users of both hardware and software. An important aspect that is often overlooked is the generation of reports in an easily understood format and training of people to improve utilization of these reports.

**vi) Chief of Logistics and Essential Medications**

This individual will ensure the timely supply of pharmaceuticals, medications and other necessary supplies to each health service location within the PHO network. He will also be responsible for developing procurement procedures, effective and secure storage facilities with inventory and quality control systems, distribution programs to all health service sites, and educational programs for providers on effective utilization of medications.

**vii) Chief of Human Resources Development**

The Chief of Human Resources Development will have two major responsibilities:

- To develop a personnel system which will include job descriptions, technical requirements for each position, salary scale, and incentives for performance, in consultation with the Director of Finance and Administration. Incentives are considered an integral component of project success, since there must be some motivation for health care professionals to want to increase utilization of the care center. Only through increased utilization of the health center will the self-sustainability objectives be achieved.
- To improve the quality of the PHO's organization of human resources through high quality training services in support of the project's technical components. A separate training section is included as part of this analysis that identifies anticipated training needs through life of the project. The intention will be to create the capabilities to continue the training process once the PHO is organized and running. This would include initial orientation of all staff as well as the development of specific programs to upgrade skills within the PHO. In addition, training of community promoters and other individuals in the community are considered an essential ingredient of project success, and responsibility for that will be in this position.

Considering the variety of fields to be covered under project activities and the anticipated study pace of construction, remodeling and equipment in the start out phase of the health centers, MSU personnel should be contracted by the end of the first six months of the project. The contracting of MSU personnel will be followed by intensive training and some observation visits to other functioning self-financing projects, such as PROSALUD in Bolivia.

**i. Long Term Technical Assistance**

In order to assist the MSU in its development, three long term technical advisors are proposed. The first will be a Senior Health Management Advisor who will be on site for five years and

be responsible to provide technical assistance in the establishment of the primary health organization, the board of directors, the development of the management support unit, and the development of all management support systems. This individual will function as Chief of Party, and should be included as part of the long term contract with the organization responsible for establishing the primary health organization, as well as providing all the short term technical assistance.

A second long term advisor will be needed for two years in Social Marketing given the overall importance of site selection, development of a marketing strategy, and assessment of results. A third advisor will be needed for two years in the area of Logistics and Essential Medications. The scope of work and technical requirements to each of these positions are described in more detail in the technical assistance plan.

The Social Marketing Advisor and the Logistics and Essential Medication Advisor could be obtained through buy-ins to centrally managed projects. However, the Mission may want to consider including these positions in the long term contract since there may be some advantages obtained by having these three members operate as a team under the same contract. Whatever mechanism is decided, the Senior Health Management Advisor will function as the Chief of Party and will supervise the technical assistance of other advisors both long term and short term under this project. Each position will require highly specialized technical skills to be used in establishing systems and managing and supervising their respective operations. This will require training of MSU staff as colleagues, and transferring technology and assistance to personnel who are directly involved in the day to day operations of the health care network.

## **2. MAXSERV: Expansion of PHC Services in the South**

While there are a number of PVOs and other private entities providing health care in Arequipa, there are fewer in Puno. This project will support a number of different models for providing health care and health education and promotion through the private sector, taking into account the different needs and provider organizations in urban and rural areas of the project zones. Careful records will be kept of the costs and results obtained. In this way, it will be possible to use these experiences to guide the development of private sector primary health care in Peru, and demonstrate to the MOH new potential mechanisms for providing health care in collaboration with the private sector. The results can be disseminated to policy makers and other interested parties as part of the studies component of this project, described below.

### **a. Program Systems/Mechanisms**

This project is designed to provide financial, technical and pharmaceutical inputs to the providers of primary health care and related services in Puno and Arequipa. These will include, but are not limited to: NGOs, PVOs, universities, associations, church agencies, private clinics, community organizations, mother's clubs, and individual health promoters and providers.

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### **1) Sub-Grants Program**

**Sub-grants will be made to private organizations for establishing, expanding, and improving the quantity and quality of primary health care services and promotion in Arequipa and Puno. This will be done principally through grants and/or contracts made to/with the above mentioned entities, although other means, such as guarantees will also be considered where appropriate.**

**The project will finance and provide technical assistance and training to test the feasibility of models to support and sustain PHC services in the private sector in the south of Peru. There will be two major types of programs supported--those which support services delivery per se, and those which provide health education and support the promotion of use of existing health services.**

**Financial assistance will be provided based on proposals and financial plans submitted by the potential recipient to CARE. Particularly on the larger projects, it would be best to have the Area Director involved in this process from the very beginning.**

**Proposal components will include at a minimum:**

- Executive summary**
- Description of the implementing agency**
- Background**
- Description of program activities**
- Implementation schedule**
- Justification**
- Budget**
- Training and technical assistance required**

**Once completed, the proposal would be reviewed by the Area Director, the Program Director and at least two other independent persons (including one from the local MOH) familiar with the technical aspects of the proposed activities. These latter inputs could come from persons serving on the Advisory Committee and/or persons at large.**

**The decision-making process for the larger projects would hopefully be completed within a three-month time period, with the smaller project reviews taking no more than 30-40 days to complete.**

**The criteria to be applied include the following:**

- high levels of beneficiary participation, especially by low- and middle-income populations;**
- well developed implementation and financial plans;**
- provisions for cost recovery, including plans for pricing, revenue projections, and identifying the indigent and providing them with subsidized or free services;**
- evidence of substantial collaboration with other primary health care providers, such as MOH and IPSS;**

- inclusion of the basic package of primary health care services: immunizations, diarrheal disease control, nutrition interventions (growth monitoring and advice, supplemental feeding, breastfeeding promotion), prevention of high risk births (family planning), and pregnancy and delivery care;
- proven or well-founded methodologies for the delivery of primary health care services;
- institutional technical capabilities;
- potential for replicability;
- contribution from the institution or community, either in cash or in-kind;
- monitoring and evaluation systems that will facilitate the flow of information back to the managers of the project and others interested in the primary health care in Peru.

Grantees will be expected to use the Health and Management Information systems developed for the MOH under the Child Survival Action project, except for portions specific to the MOH, such as personnel management. Items to be monitored could include utilization of services by the primary target groups, provision of primary services (as defined above, at a minimum), unit costs of services, and cost recovery.

The level of funding for specific activities will include provisions for several major projects, ie. \$50-100,000 per year, as well as a larger number of smaller inputs of \$5-10,000 per year.

In general terms multi-year financial assistance will be encouraged and preferred over short-term activities, based on the assumption that changes and improvements in the primary health care systems require an extended time to accomplish.

Once funded, the Area Director would make regular visits to the grantee site and have periodic meetings with the implementing agency to monitor, document, and evaluate the processes.

#### a) Primary Health Care Services Models

##### (1) Primary Health Care Grants

Direct grants or contracts to technical groups such as the Colegio de Enfermeria and PLAFAMI, based in Puno, and the CEMPOS center of the Universidad Catolica de Santa Maria of Arequipa to carry out direct care in one or more model health posts or centers. This model would allow the provision of direct high quality PHC services and health education to children and women as models for project and other quality clinical care. It is anticipated that the bulk of the grants provided would follow this model.

In addition, the health clinics could serve as a site for the training and practice of health workers from NGOs and other institutions. This model allows for the operational research of issues such as the expanded use of non-physician health practitioners, cost recovery, effects of health education and promotion on patient compliance to treatment regimes.

## **(2) Medicos Asociados**

There has been significant success in other countries with a model for expansion of service delivery which involves facilitating the initiation of medical practice in an underserved area. Equipment and supplies to initiate practice, as well as access to technical advice and training are usually provided. In some cases this has meant procuring equipment and leasing it to the physician, or donating it to his/her practice if primary care services are provided in the target area for a minimum number of years. Alternatively, arrangements could be made to loan physicians the money to purchase equipment, and assistance provided to purchase the necessary equipment at reasonable prices. Similarly, supplies (including pharmaceuticals) can be provided on a rotating fund basis, or arrangements can be made for the physicians to purchase them at favorable prices. No matter what the exact arrangements to facilitate the initiation of a practice in an underserved area, the idea is to require a minimum package of primary health care services be provided, and that fees charged to the public account for the ability of the community to pay.

### **b) Health Education and Promotion Models**

#### **(1) CARE Promotion and Referral**

Direct implementation activities by CARE to add several key PHC promotion and referral activities to their current populations covered. For example, to the current 100 child centers with a coverage of 3,000 three to six year olds and their mothers, and to the 3,000 children age 0-3 in the early child stimulation program and their mothers, CARE would add a component to identify children at high nutritional risk and those with acute respiratory and diarrheal conditions, and other conditions for action and/or referral to health posts and centers. In addition, the project would identify women with maternal health risks and implement a strong identification, referral and follow-up system to health posts and centers for prenatal care, treatment of reproductive tract conditions, family planning and other priority needs. The project would also implement a strong follow-up system of health education/promotion to increase compliance with treatments given in health posts to children and women. Post natal follow-up will be given high priority in this model. The model also will include the health promotion, referral and follow-up of women in community kitchens ("comedores populares") whose current 300 centers, managed by mothers clubs, will cover some 9,000 women.

The model's first phase will focus on consolidation and amplification of PHC promotion, referral and follow-up activities of the population currently covered by child centers and child stimulation (PIATBAF) activities. The second phase, anticipated to start in the second or third year will expand coverage to additional communities, anticipating adding 30% to 50% to the project target population.

## **(2) Child Center/Food Supplementation Programs**

Direct sub-grants to other NGOs to add or strengthen the PHC activities of their child center/food supplementation programs. For example, project assistance to CARITAS could provide assistance in needs analysis, personnel training and supervision, additional equipment and supplies, ie. weighing scales, purchase and distribution of health promotion materials to improve PHC promotion and referral activities in food distribution centers. This should result in improved child nutrition and PHC information to center parents, improved quality food provision, increased growth monitoring and health promotion activities and increased referrals to MOH health posts and centers of children with ARI, diarrhea, etc., and women for prenatal and maternal care visits. In addition, this model will allow increased availability of pharmaceuticals managed by the NGO to health centers within the area of the food centers' populations.

### **c) Community Promotion**

Campesino groups such as UNCA can implement yet another model of project PHC activity expansion. UNCA promotes community organization and production and social service activities. The system of organization could be used to implement a series of PHC promotion and direct service activities. For example, the club network can be used to organize communities to cooperate with MOH immunization campaigns. Clubs can implement a growth monitoring system with improved nutrition education focused not only on children under five but with emphasis on the nutritional needs of women of childbearing age.

Project training in use of simple community based methods for the identification of acute respiratory infections, advanced cases of diarrhea and dehydration, other childhood illnesses requiring care and pharmaceutical treatment can be developed. Mothers clubs should be logical organizations to be stimulated by the project to implement a community based identification and referral system for high risk women to seek adequate prenatal care, attend deliveries and provide sufficient postnatal follow-up care. Included in this as well as other models could be the promotion of family planning services within a model of comprehensive maternal care.

UNCA has a coverage of some 200 communities working closely with mothers clubs. They have previously received technical assistance from PROCAN, a project which has had funding from UNICEF. The project can fortify the technical assistance provided with support directly to UNCA for subcontracting to a TA agency within the sub-grant process or provide technical assistance through broader project technical assistance to realize some economies of scale.

## **2) Support Systems**

The project can provide technical assistance and training on a variety of health service delivery and support systems through multi-agency, component-wide activities to achieve economies of scale and a larger impact. There is a universal need for pharmaceutical products at reasonable prices in the project areas; that element is described separately, below. Since many of the NGO

programs which will serve as the nucleus for expansion are similar and have common experiences, this model promotes the sharing of experiences through periodic meetings and conferences, and sharing TA for systems development and technical areas among a number of agencies at the same time. This encourages not only maximization of project and other resources but implicitly encourages information exchange and helps to avoid duplication of NGO field activities.

Although sub-grantees will be entities with a high degree of skill and experience in one or more areas of primary health care delivery, technical and managerial aspects of these same entities will likely require upgrading. It should be anticipated that some agencies will be strong in some areas, and able to provide technical assistance to others, but need to receive technical assistance in other areas. Technical areas might include such elements as immunizations, oral rehydration therapy and other responses to diarrhea, family planning, nutrition, and pre-natal, delivery, and postpartum health care. Support systems which may need attention include training, supervision, health education, promotion, health and management information systems, and equipment maintenance. At the institutional level, there might be a need for assistance with strategic planning, financial planning, personnel management, administration, fund raising, monitoring, evaluation and report writing.

As a result of observations made by the Area Director, and after substantial discussions with Advisory Committee members, as well as the entities providing the primary health care services and promotion, each Area Director will design and develop an annual plan for extending these services to those receiving financial assistance and others.

The means for offering the technical assistance will include workshops, seminars and individual one-on-one consultations. Whenever possible, these skills will be sought from local sources, including entities receiving grants. The Program Director and the Primary Health Care Technical Advisor will also provide technical assistance. In cases where the appropriate technical experience is not available locally, offshore assistance and Peruvian nationals from other regions may be called upon.

The Program Director will serve as the necessary link to ensure the sharing of technical resources, whenever appropriate, and to facilitate the sharing of technical and programmatic information between the Puno and the Arequipa offices of the program.

In all cases, every effort will be made to maximize the number of individuals and agencies benefiting from the technical assistance and to minimizing the cost. In addition, the individuals and agencies benefiting from the technical assistance will be asked to bear a portion of the costs, as appropriate.

Training will be provided to personnel of grantee organizations, and, in some cases, to other primary health care providers, generally in groups. If appropriate, this could include traditional birth attendants and other indigenous healers, who might then be associated with one of the primary health care providers for supervision and follow-up. This will enable economies of

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scale and instill minimum quality standards for provision of primary health care and education. This is described in more detail in section VI. E. 2. of this paper.

Should U.S. Government sanctions against assistance to the Government of Peru be lifted during the course of this project, MOH or IPSS staff could participate in training or technical assistance activities, if doing so would support the provision of primary health care services or education by private entities in the project areas.

Project staff will develop resource clearinghouses in Arequipa and Puno. The USAID PSC will support liaison contacts with centrally-funded A.I.D./W projects for additional materials and technical support for the clearinghouses. Materials will be identified and purchased by the project for the use of technical advisors, project staff, NGOs and other institutions. It is anticipated that this resource will expand the access of grantees and potential grantees to literature, other models, techniques and content areas related to the project. These modest resource centers can be managed by the project staff or possibly by one of the local technical assistance groups.

### 3) Pharmaceuticals Provision

Based on the A.I.D. Health Sector Assessment, and the observations of the Project Paper team visiting Puno and Arequipa, it is clear that the PVOs and other private entities delivering primary health care services as part of this component will need a reliable source of low-cost, high-quality pharmaceuticals in order to provide quality services at a reasonable cost. Given the economies of scale, joint procurement is planned for the various PVOs providing services as part of this component of the project, and, after it starts, with the self-financing component as well. Should the sanctions against USG assistance to the GOP be lifted during the project, it may be possible for CARE to also serve as a procurement services agent (PSA) for the MOH in project areas.

Selection of products to be offered would be based on the WHO essential drug lists, last amended in 1989, and the MOH lists of drugs approved for use by level of health care facility. This includes supplies needed for all priority primary health care services of this project, including family planning. Illustrative lists were prepared by the pharmaceutical advisor on the PP team; the final lists will be prepared by the pharmaceutical technical advisor for this component of the project. Long term, this component will also be able to rely on the pharmaceutical technical advisor who works with the primary health care organization in the North as part of the other component of this project.

Quantities will be estimated based on the services to be offered and recent experience of the MOH in the project areas.

Procurement will be undertaken by CARE and, later jointly with the PHO in the North, to obtain the benefits of lower unit pricing by buying in bulk. The Pharmaceutical technical advisor will assist the Program Director to prepare the lists of products to be procured, with

detailed specifications. The PSC assigned to this component will assist with final preparation of tenders and necessary waivers. For price reasons, CARE plans to compete such procurements internationally, with a waiver to utilize Public International Organizations (PIOs) such as UNICEF/UNIPAC, under Chapter 6F Handbook 15. CARE will use the Formal Competitive Bidding method of contracting, or its own procurement system method, with approval in writing from USAID.

CARE will receive the commodities in Matarani, warehouse them temporarily, and then ship to their local warehouses in Arequipa and Puno. From there, pharmaceuticals and medical supplies will be transferred to the storage rooms of the individual institutions providing health care. Clients will purchase needed pharmaceutical products and medical supplies from the grantee institutions. In some cases, grantees will establish community pharmacy outlets, called *botiquines populares*, where the most basic of drugs and supplies can be sold. In other cases, PVOs may establish a pharmacy outlet at or near an MOH clinic, enabling MOH clients to purchase needed medications at a reasonable price. (Often, the MOH does not have drugs to distribute, and either the drug is not available or the price in a commercial pharmacy is prohibitively high, resulting in clients who are not able to take the drugs prescribed for them.) The proceeds from drug sales will be used to purchase replacement drugs and supplies. Pricing will require some skill, and should be as uniform as possible in the project area. Some PVOs have expressed interest in setting prices such that the drug sales could also provide support for community health promotion activities, especially from *botiquines populares*.

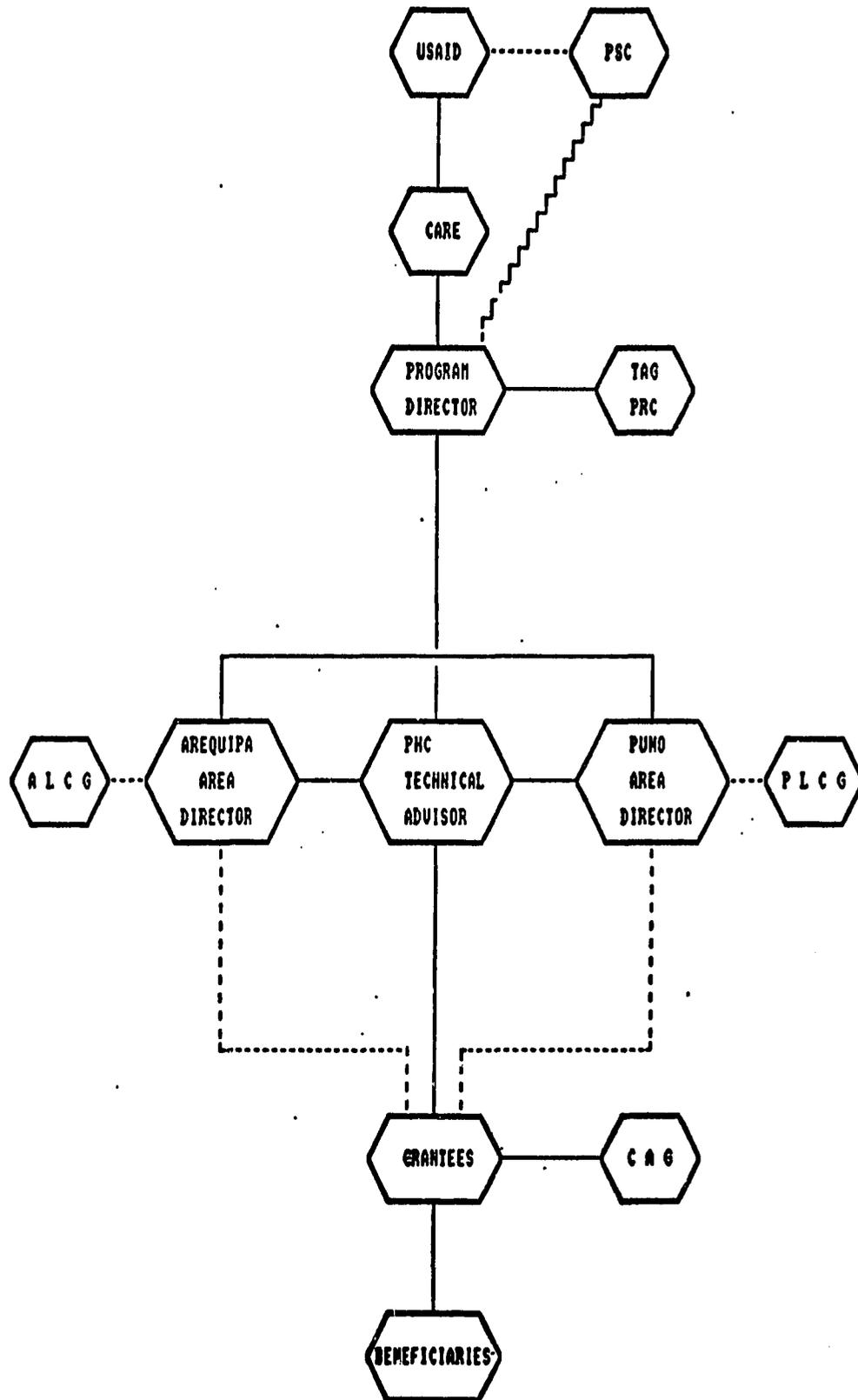
Training will be conducted by the short-term pharmaceuticals advisor. Management of the component and the grantee agencies will be trained in pharmaceuticals management and logistics. Clinical personnel will be trained in improved prescribing practices, focusing on rational drug use, use of generics, etc.

Six months of short-term technical assistance are planned as part of this component. The long-term pharmaceuticals advisor who will work with the Primary Health Care Organization in the North will also provide some consultations to CARE for this component, as needed.

#### b. Administrative Structure

The SHIP activities in the South will be overseen by a team of individuals skilled in organizational management and primary health care delivery services. The team will be composed of a Program Director, an Area Director for Arequipa, an Area Director for Puno, and a PHC Technical Advisor. A Technical Advisory Group will also be formed for the purpose of providing the program with overall program guidance, and will be the source of members of Proposal Review Committees constituted to advise the Director regarding proposal approval. The program grantees may form a council in order to discuss common issues and interface jointly with CARE. PVOs will be expected to have Community Advisory Groups to ensure the maximum possible level of community involvement, support and participation. An organizational graph is presented on the following page (see Figure 5).

# Expansion of PHC Services in the South Administrative Structure



## **1) MAXSERV Team**

### **a) Program Director**

The Program Director, who will reside in Lima, will have the responsibility to facilitate the design of the program's various systems, ie. financial, management, personnel, logistics, materials, information, technical, and pharmaceutical; coordinate with the diverse program participants; monitor on-going progress; control the program expenses; and prepare relevant reports for all interested parties.

The Program Director will develop the five-year and annual work plans for the program. S/he will define, together with the USAID PSC and the Puno and Arequipa Area Directors and the PHC Technical Advisor, the overall guidelines for the development of sub-grants. S/he makes final decisions, after consultation with USAID and the Proposal Review Committee of the Technical Advisory Group, regarding the award of sub-grants to NGOs and other organizations. S/he is responsible for the management/administration of sub-grants to NGOs, and provides overall guidance for administrative aspects of NGOs sub-grants.

In collaboration with the other team members, the Program director will also be responsible for developing work plans and supervising the day-to-day activities of these individuals. The Program director will report to the CARE Director in Lima and also be the primary CARE liaison with USAID/Peru, through the Personal Services Contractor (PSC) for the South.

The Program director will have at least 5 - 10 years of administrative experience with similar, multi-faceted programs. S/he will possess considerable financial, program planning, interpersonal and language skills in order to undertake the demands of this position. This person could be either an expatriate or a Peruvian national.

### **b) Puno and Arequipa Area Directors**

These individuals will be responsible for designing and overseeing the program activities in Puno and Arequipa. This will require them to organize and liaise with a Local Council of Grantees.

The Puno and Arequipa Area Directors will also be responsible for managing the various program systems that are established, ie. the provision of financial assistance, technical assistance and the procurement and distribution of pharmaceuticals. They will develop, expand, and maintain contacts with NGOs in Puno, and will guide proposal preparation concerning appropriate activities and information to include. They will review proposed activities and proposals in the Puno and Arequipa areas for support to NGOs and presents these to the Program director with recommendations. They will coordinate component-wide activities with the Program director.

The Area Directors assist in the preparation of reports, budgets, and other documentation as necessary, coordinating with the PSC. They provide technical and systems development

guidance to component activities to NGOs and other organizations in the development of training, pharmaceuticals, referral systems, materials development and other technical areas. They identify the need for technical assistance, and work with the PSC to prepare draft scopes of work for short term technical assistance.

The Puno and Arequipa Area Directors will report to the Program director. Because they will be in the regions, where the CARE regional offices are, they will likely serve as the day-to-day liaison between the project activities and CARE.

These individuals should have at least 5 - 10 years of previous experience with primary health care programs, including skills in the areas of program, financial planning and supervision, as well as the ability to coordinate with a diverse group of persons representing the agencies that provide primary health care and related services. Effective Spanish language skills will be required; local language skills in Quechua and Aymara are desirable. This individual should be Peruvian and preferably local to the specific regions.

#### **c) PHC Technical Advisor**

A PHC Technical Advisor will provide long-term technical assistance to this component of the project for the first three years. The Advisor will report to the Program director, but will work closely with the Area Directors as well, and the NGOs and other institutions as they develop and implement their primary health care activities under this component. The Advisor will provide assistance both with the technologies of primary health care (immunizations, diarrheal disease control, nutrition, family planning, acute respiratory infections, and pregnancy and delivery care) and with the basics of health care management, such as training, supervision, logistics, information systems, etc.

The PHC Technical Advisor will most likely be an Peruvian national, but must be able to work in English. A strong health background, preferably a physician with a master's degree in public health, and several years work experience in primary health care programs, will be required.

#### **d) Secretaries**

Both the Puno and Arequipa program offices will each require a secretary to assist in the processing of reports, correspondence and general office management. The Program Director in Lima will also require a secretary, who will need to be bi-lingual, in order to process reports for the USAID/Peru Mission. These persons should be Peruvian nationals and local to their respective areas.

#### **e) Accountants**

Each area will further require an accountant to keep records of the program expenses and prepare periodic financial reports and budgets. These persons should be Peruvian nationals local

to their respective areas. The roles of secretary and accountant could be embodied in the same person, if these combined skills are available locally.

## **2) Technical Advisory Group**

The Program director will be advised by a Technical Advisory Group composed of local officials, ie. NGO representatives, university officials, community leaders, public health care officials and other providers of health care services. This will provide the opportunity for input from other sources besides the cooperating agency, especially the MOH, which has a normative role in health care, and will increase local legitimacy. The Technical Advisory Group will be the source of individuals to serve as a Proposal Review Committee, which will always include at least one person from the MOH, the USAID PSC, the Area Directors, and a person from an organization other than the one making the proposal. The Proposal Review Committee can be constituted to review one or more proposals, and may change, based on the proposal(s) to be reviewed.

## **3) Local Councils of Grantees**

There are a number of interests which PVOs and other grantees will have in common; therefore, they may find it useful to form a group to deal with CARE as a group. This could enable the Area Directors to deal with common problems and information sharing in an efficient manner. There should be separate Local Councils of Grantees in Arequipa and Puno, so that the grantees do not need to travel back and forth.

## **4) Community Advisory Groups**

These groups would be constituted by individual grantees (or groups, if working in the same area) to provide a mechanism to obtain community consent to program activities, and a way for communities to advise the grantees of their wishes and needs. They would relate directly to grantees, not the program management structure.

## **3. Project Studies and Policy Dialogue/Dissemination**

In addition to establishing the two health care service delivery mechanisms, SHIP will conduct a limited number of health sector studies, which will include activities: (a) occurring in the two project areas, (b) designed to develop and assess approaches to increasing the efficiency, coverage, or sustainability of basic health services, and (c) focusing on influencing the development of regional health policies. Studies will also help determine the unmet demand for health care in the regions; quantify household patterns of health care utilization and expenditure; provide a more in depth market feasibility study of the second stage T/TA contract; and assess the health impact of the provision of private sector health care. The results of the studies, as well as the lessons learned through project implementation, will comprise the basis of SHIP's policy formulation and dissemination activities, and possibly help form new implementation models. The third project component will carry out technical and policy studies, and the results

will be disseminated and incorporated into project activities planned for the northern and southern project areas, and serve to strengthen the policy dialogue process and influence regional officials in the formulation and promotion of new health policy. The third component will be obligated as part of the CARE CA, and commence during project year one.

**a. Studies in the North Macro Region**

The following is a list of studies to be carried out for the Northern component of the project. These studies are viewed as critical to the preparation of project start-up activities, ongoing implementation and the achievement of project objectives.

**1) Legal Study**

Both the MOH, through the Director of Sub-Region II, and the Regional Government, through the President of Regional Government of Nor-Oriental de Marañon, have verbally indicated their willingness to "cede" to the PHO a number of health centers for this project. However, they were not sure how this could be done legally, i.e., donation, sale for a minimal amount of money, or long term lease. Questions of who would "own" the health centers after remodeling as well as what would happen to current staff once the PHO assumed responsibility for them were also raised. The study will also determine how the PHO will be incorporated as a non-profit institution under Peruvian law, and what types of agreements the PHO could develop with government institutions. The legal study would research and clarify these issues prior to Phase II startup.

**2) DHS Regionally Valid Sample**

When the DHS is performed in Peru during the course of this project (currently planned for 1992 and 1995), samples will be drawn so that the results will be valid for each region of the country. Normally, DHS is performed with a sample which yields national, but not sub-national reliability. The DHS provides basic information on fertility, health status and health-seeking behaviors of the population.

**3) Potential Areas Identified and Criteria for Selection Applied**

The analysis of the situation has identified eleven potential sites for initial analysis. Criteria need to be developed for final selection of which sites to be developed initially. These criteria would include a demographic analysis to decide on service mix, economic analysis to decide on whether or not the population in the area could pay for the services, provide a price structure based on the marketing evaluation, and demand for services. Once potential areas are identified and some broad criteria indicate that it might be useful to proceed further, then the next steps would occur.

#### **4) Marketing Study**

**This would involve several activities:**

##### **a) Household Survey**

**This would involve each potential site, that has been identified for development of a health center under the PHO, and do complete interviews in 200 households distributed according to a sampling frame throughout the catchment area of the health center. The objective of the survey is to identify specifically what health problems people face, where people go for health care, how much they pay, and what would be the types of services they would like to see in their new health center. This survey would also serve to provide baseline data for evaluation of the project. The accumulated data would provide morbidity and possibly some mortality data to follow changes over time.**

##### **b) Longitudinal Observational Study**

**If the information gathered from the household survey needs supplementing with more detailed information, a much smaller group of houses could be observed over a period of 8 weeks on each project site. However, since resources may not allow all eleven areas to be so studied, three or four of them, representative of the types of areas where health centers will be located in could be selected. Trained observers, under the supervision of medical anthropologists would visit the houses two to three times a week to observe what actually goes on when illness occurs, documenting carefully where people go and how much they pay. This would serve to provide more sensitive data to complement the household survey on utilization of health services and willingness to pay. This type of study is valid for the initial analysis and baseline collection of the project, but would not be necessary in future stages of the project for each health center site. Implementation of this would be too expensive to do each time. However, periodically throughout the project, such as during a midterm evaluation and final evaluation at the end of the project, this study could be repeated to see what changes have occurred in the utilization of health services in project areas as a result of project activities.**

##### **c) Community Analysis**

**An important part of the decision as to whether or not to develop a health center in a particular site would be an analysis of what health services are currently available and utilized, the community organizations, their willingness to work directly with the project, and the existence of key individuals who would be willing to volunteer time on a local board for the health center and/or to work as community promoters, etc. All these questions need to be answered prior to the development of the feasibility study.**

## **5) Feasibility Study**

The feasibility study would have several components:

- a) Identify key factors to the success of a health center in that particular site, such as the potential demand, finances, organizational requirements, technical needs, and overall market.
- b) Predict the health center output individually for each center and its contribution to the network, including revenues and costs.
- c) Evaluate optional strategies to developing this particular health center and see whether this health center compares favorably or unfavorably to optional strategies.
- d) Decide whether or not to place a health center in the proposed location.

## **6) Monitoring, Evaluation, and Readjustments**

This entire project has been developed along an operations research model. This implies that implementation of a plan should include rapid assessment and monitoring of project activities so that impact on the community in terms of utilization of services, receptivity to those services, and willingness to pay as a measure of quality, and any changes in morbidity as a result of these services can be evaluated. If something is clearly not working, this should be discovered within a short enough period of time to allow rapid adjustments and development of new strategies, activities or program services. This information should feedback to the local board, as well as to the PHO staff and board of directors, to involve people at all levels in the re-identification of their needs and wants. Special studies may be useful during this phase as well, looking at specific aspects of the marketing plan and the health services delivery program. Operations research needs to be programmed into the mentality of every person working in the organization as a commitment to total quality improvement. Only by continuous assessment of the effect on the consumer of the services can any degree of self-sustainability be achieved.

Another seminar important to the dissemination objective should be held towards the end of the project, once the network is functioning smoothly and information is available on a self-sustaining basis. This would be both a national and international seminar, inviting people from all over Peru and other countries within the Region who would be interested in and benefit from the experience of the PHO, and the PVO.

### **b. Studies in the South Macro Region**

The testing of alternative primary health care service delivery models in the private sector will be documented by studies which record the process and results obtained. While it is expected that most of the service delivery grants will include health and services statistics collection, there will be a need for some more focused operations research activities.

Expansion of services within the southern component could explore the use of non-physician practitioners in expanded roles, i.e. to provide diagnostic and treatment services, provide prescriptions under standing orders, etc. Experiences within the project will provide information on effectiveness and safety of these personnel and procedures for monitoring their performance.

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Based on the lessons learned in the project, dialogue to authorize these expanded roles for non-physician practitioners can be carried out in policy discussions with the MOH. This discussion of the expanded role of non-physician practitioners can be linked to larger/national considerations of the review, regulation, unification of criteria for the initial training of the various categories of technicians being produced by multiple technical schools in Peru.

The pharmaceutical system, its implementation and benefits will be monitored as part of the project studies. project experience with issues of savings with bulk purchase, rational use and cost recovery will be studied. Results both positive and negative will be presented as part of an information base for project adjustment. This information will also be important for the GOP/MOH's proposed broader plans to rationalize pharmaceutical use country-wide.

Project models and activities which increase the access and use of family planning services will be developed and disseminated. Models which offer alternative ways to offer services to rural populations will be of priority.

The project will use information and monitoring systems developed by other AID projects (CSAP, PRISMA) to measure the effect of project inputs and activities. These systems will be studied, reviewed and shared with NGOs and the public sector.

One study which would be useful for the areas in which promotion of use of MOH services are provided by the project would be to study the source of referrals to the MOH clinics.

In addition to operations research studies arising directly from primary health care activities carried out by grantees, there are some studies which are of interest regarding the role of the private sector in the provision of health care in Peru, which can be carried out as part of this project component, to wit:

- Policy analysis of the development and implementation of models for regionalized health systems with budgetary authority and institutional responsibility and resources for program implementation. Studies in this area will include policy definition for site selection and types of services to guide future planning for health facilities and expansion by the private and public sectors.
- Strengthening the legal and operational basis for *convenios* between the MOH/GOP and NGOs is another area of policy importance for the discussion. The leveraging of GOP regional resources is essential for the continuity and sustainability of project-tested PHC services models.

The results obtained can then be disseminated by means of regional or national conferences and workshops, presentations at scientific meetings, and publication in national or, if the results warrant, international health journals. Based on dissemination of project results, we would expect that policy dialogue between private health agencies, health donors, and the GOP would be enhanced, especially with relation to the role of the private sector. The GOP and MOH do

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not have a specific policy regarding the role of NGOs in the provision of health care. Therefore, policy dialogue will help clarify the appropriate role and interrelation between NGOs and MOH in the provision of PHC services, as well as in other health program activities.

### C. End of Project Status and Project Outputs

#### 1. End of Project Status

Models identified improve:

- access: increased % of population within five kilometers of a primary health care center use services
- coverage of basic health services:
  - \*increased % children receiving DPT3, OPV3, BCG, and measles vaccine before their first birthday
  - \*increased % of childhood diarrheas appropriately treated with home fluids, ORS, continued feeding and/or breastfeeding
  - \*increased % of children under 4 months old exclusively breastfed; increased % of children 6-11 months receiving appropriate weaning foods
  - \*increased % MWRA using modern contraception (include LAM and scientific NFP)
  - \*increased % of children with ARI treated according to MOH norms
  - \*increased % of pregnant women receiving 2 prenatal visits
  - \*increased % of pregnant women receiving 2 doses of Tetanus Toxoid
  - \*increased % of births attended by trained personnel
  - \*increased % of postpartum women receiving checkup within 3 months
- lower cost per service delivered
- require less subsidy than others tested

#### 2. Project Outputs

##### a. MAXSALUD

- 1) A non-profit health care system in Chiclayo area is 80% self-sustaining by 1997 in terms of coverage of network operational expenses; revenue generations in project area are sufficient to allow for cross-subsidies
- 2) A non-profit Primary Health Organization (PHO) established with charter, Board of Directors, and By-laws in year 1.
- 3) PHO consists of one central office for administrative and management and at least 12 health centers and corresponding health posts by the end of year 2.
  - a) the MSU central office has the following functions established and operational:
    - financial management and controls
    - logistics, supply and inventory of drugs and supplies
    - standards of quality, procedures, job descriptions established for all clinics
    - personnel system established with wage scales, training, and supervision,

- operations research conducted on systematic basis on key issues
- monitoring system for management, financial and quality control established
- standard approach established for market analysis, clinic location, pricing of services and drugs
- b) Health clinics established and providing high quality health care. PHC services provided to 150,000 low income individuals who would otherwise require public subsidy or not receive professional, high quality care
- c) Clinics perform the following functions
  - provision of preventative services to community consistent with quality standards
  - provision of curative services on a fee for service basis for priority primary health care problems
  - sale of essential medicines to clients and others
- 4) Community boards of directors or advisors established for each clinic

**b. MAXSERV**

1. 30 grants made for primary health care services.
2. 5 grants for support/promotion of primary health care made.
3. TA systems established and functioning
4. System established and functioning for joint procurement of basic medicines
5. Local councils of grantees functioning well: meeting regularly, sharing ideas
6. MOH participates actively in TAG and PHC and local dissemination activities

**c. Studies/Dissemination/Dialogue**

**1. Studies**

- a) The following studies are conducted in the North
  - Legal
  - DHS with regionally valid sample
  - Location of Centers
  - Marketing, including household and possibly observation studies
  - Feasibility
  - Monitoring, evaluation, and readjustment
- b) The following studies are conducted in the South
  - use of non-physicians as clinicians
  - pharmaceutical provision
  - family planning service delivery
  - information and monitoring systems
  - referral sources to MOH clinics
  - regional health care models
  - NGO convenios with regional governments

2. Dissemination: Newsletters, conferences, and workshops implemented
  - Quarterly newsletter published and distributed
  - Annual dissemination meetings in each Macro Region after years 2,3,4
  - Publication of results as warranted in national or international journals
  - Presentation of results at national and/or international meetings
3. National health financing conference held at end of project

**D. Project Relationship to GOP, A.I.D., and other Donor Efforts**

**1. Government of Peru**

Peru is presently under FAA Section 620(q) and Brooke-Alexander Amendment sanctions. Therefore, A.I.D. is currently prohibited from providing assistance to Peru (either its people or its government/private institutions). FAA Section 123(e) permits the obligation of funds to the MAXSERV component under a cooperative agreement with CARE, in support of the ongoing and continuing program of the U.S. based PVO. The T/TA contract proposed for the northern MAXSALUD component will be competitively negotiated once these sanctions are lifted. The Mission expects these conditions may be met by the second quarter of FY92.

The MOH first established a national policy for PHC in 1978, following the publication of the World Health Organization (WHO) Declaration of Alma Ata on PHC in that year. Since 1980, this policy has been continually modified and strengthened, with considerable emphasis placed on family planning (FP), oral rehydration therapy (ORT) and immunizations.

Published in September 1985, the National Health Policy as an integral part of the Policy for National Development called for achievement of a more equitable distribution of health resources, multi-sectoral collaboration, and the facilitation of community participation in all health-related activities. It called for decentralization, i.e., significantly less central level MOH staffing and a delegation of program authority to the UDES, allowing health service planning and resource allocation to more closely match the needs of communities rather than central level priorities.

This policy was formalized in the GOP's new 1986 Integral Health Sector Law, which places priority on the delivery of MOH and IPSS services to certain priority populations by: social groups (rural and urban marginal populations); groups at risk (children under five years of age and women of child-bearing age); and geographic areas (Departments of the southern sierra that comprise the central highlands: Qosco, Puno, Apurimac, Huancavelica, Ayacucho and parts of Arequipa) and priority micro-regions across the country.

Other priorities identified include control of diseases that can be reduced through better nutrition, basic sanitation, immunization and FP and the reorientation of peripheral health services toward health promotion and prevention of illness. A new policy established in 1988 (the Triennial Plan

for Reduction of Infant Mortality) aimed at a 15% reduction of the IMR between 1988 and 1990. It included ARI as its top priority, followed by DDC, Immunizations, child nutrition and high-risk births. Priority departments designated according to need and equity are: Huancavelica, Apurimac, Qosco, Ayacucho, Puno, Amazonas, Cajamarca, Loreto, Ancash, and marginal areas of Lima. The implementation of these official GOP priorities has been haphazard at best.

To date, the MOH has made substantial progress in the development of official norms and standards for the control of diarrheal diseases, the promotion of growth and development of children under five, proper feeding and nutrition, maternal health care, training of health promoters and TBAs, delivery of FP services, including prevention of pregnancy for women at high risk, and other areas related to PHC activities. However, problems in management and administration, logistics, human and financial resources, and community participation, have thus far prohibited full implementation of MOH policies. A major struggle for the MOH is to restructure the budget in favor of PHC and peripheral health services, especially in the context of labor strikes and extraordinary budget limitations.

## 2. Other Donors

In the first half of the 1980s, international donor agencies, including the World Bank (IBRD), Interamerican Development Bank (IDB), United Nations Children's Emergency Fund (UNICEF), Pan American Health Organization (PAHO) and USAID, played a large role in supporting PHC activities at the peripheral health service and community levels, while the GOP fiscal contribution was minimal.

In the mid-1980s, donor assistance to the health sector in Peru, in addition to \$28.45 million provided by USAID, totalled approximately \$148 million. Most of the assistance was used to support PHC. PAHO has provided technical assistance in such areas as oral rehydration and immunizations. PHC activities have been stressed in training supported by German Technical Assistance Agency (GTZ) and World Bank projects at the peripheral level. Both the World Bank and Inter-American Development Bank have supported construction of health centers and health posts in designated areas of the country. On-going assistance by these and other donor agencies is discussed below. Without exception, all, in some manner, are continuing to support PHC, with particular emphasis on CS activities.

### a. World Bank (IBRD)

A World Bank \$33.5 million loan, authorized in May 1983, was designed to increase the availability and access of PHC services for 3.5 million inhabitants of specified geographical areas in four Health Departments--two on the coast and two in the jungle. World Bank funds were to be used to finance equipment, supplies, and medicines for newly constructed peripheral health establishments and training for a new cadre of health post visiting nurses. GOP counterpart funds were to provide all local currency construction costs for new health facilities and salaries for additional health workers. Due to slow implementation, only \$3 million had been spent when the government changed in 1985. The project was redesigned in 1985-1986,

concentrating the project on the northern and southern sierra. The use of cheaper and more appropriate materials in the construction of the health posts meant that a larger population coverage could be achieved.

World Bank funds have not been disbursed since 1985, and have been suspended indefinitely since May 1987. However, \$19 million in GOP counterpart funds have financed the construction of 11 new health centers and 139 health posts. The project covered the departments of Apurimac, Qosco, Huancavelica, Puno, Ancash, Junin, Cajamarca, La Libertad and Lima.

**b. German Technical Assistance Agency (GTZ)**

After USAID, the next largest bilateral donor is the Federal Republic of Germany which provides support through its development agency, GTZ, for PHC and nutrition. GTZ also provided support until July 1987, along with USAID and PAHO, to the MOH's management information system. GTZ currently supports PHC activities in the Departments of Cuzco, Madre de Dios, and Apurimac (\$3.5 million), and in La Libertad (\$5 million).

**c. Inter-American Development Bank (IDB)**

Through its Integrated Regional Development Programs, the IDB disbursed \$11.2 million in loans prior to 1988 for training of health workers and construction of health facilities in three jungle sites. Another \$31.3 million loans funded the construction of urban water and sanitation systems through SENAPAL (National Service for Potable Water and Sewerage Systems) in 1988. The GOP is studying a new proposed IDB loan for \$34.045 million, with a GOP contribution of \$41.611 million, to rehabilitate 15 hospitals in 14 UDES. This is a major reduction from the earlier proposals to rehabilitate 31 hospitals in 19 regions.

**d. United Nations Population Fund (UNFPA)**

During the 1988-91 period, the UNFPA continued implementation of a \$2.4 million grant project in MCH and FP that will provide services to three million women and children under five. The program includes training, FP supplies, education and communication. Smaller sub-projects include: improvement of vital registration system of the National Institute of Statistics (INE); community-based distribution of oral rehydration salts (ORS) and FP supplies in peri-urban slums of Iquitos; and a natural FP method project in five townships of Lima. UNFPA's \$2.4 million grant has been augmented by \$1.35 million in multilateral contributions to be extended through 1991. A new project under consideration would be directed at adolescent health services.

**e. United Nations Children's Emergency Fund (UNICEF)**

A \$5.375 million budget for 1987-92, augmented by \$1.2 million in additional funds, is supporting self-help projects by women's community groups among the poorest populations.

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The five-year program emphasizes CS interventions that are managed through a variety of public and private sector organizations, including the National Planning Institute (INP), MOH, Ministry of Education (MiOE), and Departmental Development Corporations (CORDES). Under the program, priority rural areas receive: technical assistance to train community workers, especially women's groups, in participatory programming; financing to support the production of training materials on low-cost techniques for CS and the role of women; and equipment and supplies for women's groups. In urban areas, UNICEF works through PAIT (*Programa de Apoyo al Ingreso Temporal*--the GOP public works organization), multi-family and child feeding centers, the *Vaso de Leche* program, *Clubes de Madres*, other women's groups, and agencies providing loans to the informal sector. The UNICEF budget also includes \$0.6 million to support the MOH's EPI National Plan of Action in collaboration with USAID, PAHO and Rotary International.

**f. Government of Italy**

The Government of Italy has been funding a \$5 million multisectoral community-based nutrition project (PROCAN) in the Departments of Puno, Moquegua and Tacna, which was implemented by UNICEF and PAHO through the MOH. The GOP also approved a \$5-7 million sanitation project for 1988-90 for the emergency zone, including Ayacucho, Qosco, Apurimac and Huancavelica. In addition, the Government of Italy will provide over a three year period (1990-1992) a \$2 million grant for cancer treatment medicines, a \$6 million loan for essential medicines, and an \$8 million loan for hospital equipment. Furthermore, the Government of Italy is constructing three rural hospitals in the Department of Piura.

**g. Pan American Health Organization (PAHO)**

PAHO provides assistance to special programs of the MOH related to CS: immunizations, DDC, FP, and feeding and nutrition. Other related PAHO-assisted MOH programs include: development of human resources, information systems, statistics, telecommunications, active epidemiological surveillance, and environmental health. PAHO provides the MOH with approximately \$3.5 million annually in the form of technical advisory staff and limited program support, including operations management and supplies. In addition, it has committed \$580,000 over the next five years for the MOH's EPI National Plan of Action in collaboration with USAID, UNICEF and Rotary International.

**h. Rotary International**

Rotary International provided \$800,000 to support the MOH's EPI National Plan of Action in collaboration with USAID, PAHO and UNICEF under a five year Memorandum of Understanding (1987-91).

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### **i. Other Bilateral Assistance**

The Government of the Netherlands is providing \$300,000 in support to buy equipment for health posts. The Government of Belgium is providing \$80,000 in assistance for PHC in the Department of Piura. The Swedish Aid and Technical Cooperation Agency is providing support to the MOH Immunization Program.

### **3. A.I.D. Policy and Strategy**

The project fully conforms to A.I.D. and Mission policies and strategies for health, child survival, nutrition, and family planning.

A.I.D. policy is to assist less developed countries to reduce infant and child mortality and morbidity. Other objectives are to reduce maternal mortality and morbidity, build on child survival interventions to develop a more comprehensive health care system over time, ensure sustainability of gains in child health and survival, and develop new technologies and systems for delivery of child survival services.

A.I.D. Child Survival Strategy is to assist the GOP (MOH and IPSS) and the private sector to provide sustainable services throughout the country, with first priority to the most needy areas, especially to families whose children are at highest risk. The strategy consists of a series of complementary and coordinated sub-strategies in a number of key service delivery and support system areas: diarrheal disease control (DDC), acute respiratory infections (ARI), immunizations, family planning, maternal health, and nutrition. The Mission strategy addresses these key areas. Additionally, the Mission strategy is to strengthen two major support systems for child survival, including a health/management information system (HIS/MIS), and active epidemiologic surveillance (VEA). Guiding principles for implementation of Mission Child Survival strategy are: institutional strengthening, increased private sector participation, and integrated health communications and education. The SHIP will focus on six health and child survival areas (DDC, ARI, Immunizations, Nutrition, FP, and Maternal Health), will coordinate with the current HIS/MIS and VEA systems, involves private sector participation, and will include a strong health communications and education component. The AID strategy with respect to the six major focus areas of the SHIP are as follow.

#### **a. Control of Acute Respiratory Infections (ARI)**

USAID's goal, in conjunction with the GOP and other international donors, is to reduce the death rate due to ARI in children under five and to reduce morbidity through the promotion of preventive and early treatment measures. To achieve this goal, USAID's strategy is to improve early detection and home treatment capabilities of families and communities, provide assistance for investigations of the causes and cost-effective prevention and treatment strategies for ARI, strengthen MOH capabilities to deliver services, and increase public knowledge and demand for services.

#### **b. Diarrheal Disease Control (DDC) Strategy**

Diarrheal diseases account for 22% of all infant deaths in Peru. The problem of diarrheal illness is compounded by the high prevalence of malnutrition in children, which influences the duration and severity of the diarrhea, leading to increased risk of death. The primary tenet of AID's strategy for diarrheal disease control is oral rehydration to prevent death from dehydration, the major danger from diarrhea among infants and children. Promotion of sound nutritional practices, including appropriate breast-feeding practices, proper weaning, and dietary management of diarrhea are important elements of the strategy for diarrheal disease control and nutrition.

#### **c. Immunizations Strategy**

A.I.D. is working closely with the World Health Organization's (WHO/PAHO) Expanded Program of Immunizations (EPI) to reach and maintain the target of 80% national coverage by 1991 of children under age five for six vaccines: polio, measles, diphtheria, pertussis, tetanus and tuberculosis. Recent GOP efforts (1990) have reached 60-70% coverage with USAID support, despite the months-long strike of health workers. In the Americas, A.I.D. also has joined with PAHO, IDB, UNICEF and Rotary International to interrupt the transmission of the wild polio virus, with the objective of eradicating polio from the Americas, eliminating neonatal tetanus, and substantially reducing the incidence of measles.

#### **d. Family Planning (FP) Strategy**

USAID's goal in the FP sector is to help further lower the current population growth rate of 2.10%, a goal consistent with USAID/Peru's Country Development Strategy Statement (CDSS) which cites rapid population growth as "a serious impediment to development" in Peru. One major element of USAID's overall development strategy is to expand the efficiency and coverage of social services, including FP, to low income rural and urban populations as an effective means to increase the real income and living standards of the poor, and to reduce the negative impact of continued high population growth on economic and social development. This goal is consistent with both the A.I.D. Latin American and Caribbean (LAC) Bureau strategy and the target set by the GOP's National Population Commission to lower the fertility rate from 4.2 to 3.7 by 1991. Mission strategy is to continue to support supply methods (OCs, barrier methods) and to increase support for long-term methods. Both the MAXSALUD and MAXSERV components will be providing supply and long-term methods, and encouraging their use among high risk women.

#### **e. Maternal Health Care**

A.I.D.'s strategy for maternal health is to promote adequate prenatal and postnatal care, safe delivery practices, and adequate maternal nutrition in order to reduce maternal mortality and morbidity which affects both mothers and their children. At the same time that safe delivery practices protect mothers' health, the health of newborns in the perinatal period is also improved

for high risk infants who need special medical attention at the time of delivery. Health services provided through the PHO and NGOs will emphasize these services for mothers and newborns.

#### **f. Nutrition**

The malnutrition problem in Peru continues to be severe, as shown in the 1984 ENNSA study where chronic malnutrition (low height-for-age) within the 0-5 year age group was determined to be about three times worse in the rural sierra (63%) than in urban coastal areas (27%) or the poorest areas of Greater Lima (19%). Although full term low birth weight does not appear to be a serious problem in most areas, poor growth begins in the first year of life through a combination of poor weaning practices, with incorrect timing of introduction of non-breast milk and inadequate type of weaning foods in urban areas which contribute to high rates of infectious morbidity. In rural areas, chronic malnutrition is associated with delayed supplementation of breast milk, inappropriate traditional weaning foods, and inadequate household resources to satisfy nutritional needs of children. MAXSALUD and MAXSERV will integrate nutrition education messages into health services delivery activities, focusing on exclusive breastfeeding to 4-6 months and appropriate weaning foods. Also, project activities will coordinate with local supplementary feeding programs to provide food security to the most needy populations of children and pregnant and lactating mothers in project areas, and will provide micronutrient supplements, especially iron to women of fertile age.

#### **4. A.I.D. Projects in Peru**

USAID/Peru has been a major donor to the MOH and IPSS in projects related to child survival.

Family planning was a strong component of USAID's Integrated Health and Family Planning Project (527-0230) implemented by the IPSS, MOH and various PVOs from 1982-85. In 1984, USAID signed an agreement for a \$4.7 million Contraceptive Social Marketing (CSM) project with a local PVO. In 1989 a new USAID-supported \$13 million Private Voluntary FP Expansion project (527-0335) was initiated, creating an umbrella for commodities and technical assistance to 7 local family planning organizations under the Peruvian PVO PRISMA. The new Commercial Family Planning Project (527-0326) has just been authorized by the Mission, to be managed by the local FP PVO APROPO, which will use social marketing concepts to distribute non-clinical FP methods, particularly through the commercial sector of Peru.

The five-year (1988-92) Child Survival Action Project (CSAP: 527-0285) includes a \$19 million grant and \$25 million in counterpart funding through PL480-generated funds and GOP funds. This project supports five existing maternal-child health programs in the MOH: diarrheal disease control, acute respiratory infection control, immunizations, family planning, and nutrition. In addition, it helps strengthen decentralized support systems, including training, supervision, health communications, active epidemiological surveillance, and the development of a health/management information system. This project's progress has been seriously detained due to socio-economic and political instability in Peru and the GOP/MOH, and the application

of USG sanctions which have permitted the obligation of only \$10.8 million of the authorized grant funds to date.

Since 1983, USAID has been supporting Peruvian researchers with the aim of developing program and technology improvements for CS interventions. Since 1985, grant agreements have been signed with the Nutrition Research Institute (IIN), the Peruvian University Cayetano Heredia (UPCH), and PRISMA (a local PVO formed in 1986), to conduct CS research activities in the areas of diarrheal disease treatment and control, nutrition and dietary management of diarrhea, and family risk assessment. Private sector training and development of service delivery methodologies for CS interventions are also being carried out, with USAID grant support, in different parts of the country by CARE, ADRA/OFASA, CARITAS, IIN, PRISMA and UPCH. The IIN is currently conducting two research studies (on the effect of the economic crisis on nutritional status, and on serum retinol levels in Peruvian children), which should provide useful information to the Mission for nutrition intervention strategies.

The USAID food assistance strategy calls for improved targeting of Title II program resources, which are channeled through PVOs (namely, Catholic Relief Services/CARITAS (CRS/CARITAS), Cooperative for American Relief Everywhere (CARE), and Adventist Development and Relief Agency (ADRA/OFASA)), and complementary bilateral Section 416 resources, which are provided to the MOH, in order to improve the nutritional status of Peru's poorest mothers and children. The PVOs and the MOH bilateral supplementary feeding programs are changing their geographic targets to increase program coverage in rural areas.

A.I.D./W centrally and regionally-funded projects also will play an important role in supporting the implementation of this project. HEALTHCOM II, SOMARC, HNS or the Population Communications Services project may serve as sources of technical assistance. Project SUPPORT has been providing technical assistance and a revolving loan fund to purchase equipment for LUSA Laboratories, the major local ORS manufacturer, to expand local ORS production. It is expected that assistance for priority operations research in support of this project will come from several sources of buy-ins currently established through AID/W centrally-funded projects.

## **V. FINANCIAL PLAN**

### **A. Overall Project Estimated Budget**

The total amount of this five-year project is estimated to be US\$19.0 million, of which US \$18.0 million will be financed by USAID/Peru and the equivalent of US\$1.0 million will be the counterpart contribution of project implementing agencies. USAID/Peru grant funds will support all project components and will be obligated under a Cooperative Agreement with CARE to establish MAXSERV, and through a competitively negotiated T/TA Contract with an international firm to create the PHO MAXSALUD. The counterpart contribution has been calculated only for the MAXSALUD component, and will consist of fees collected from clients

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as well as private and public sector contributions consisting of physical infrastructure, administration and personnel. It is impossible to calculate in advance the in-kind and monetary counterpart contributions which the PVOs in the Southern component will provide, since they have not yet been selected.

Total estimated project budget by funding source, and, for AID funds, disaggregated by foreign exchange (FX) and local currency cost (LC) is summarized in Figure 6. Given the nature of the project to develop and pilot test MAXSERV and MAXSALUD as alternative models for the provision of primary health care services with the private sector, it is anticipated, as shown in Figure 6, that USAID/Peru funds will cover most of the total project costs (about 95%) while the counterpart contribution will just complement the local currency costs of the total estimated budget for establishing MAXSALUD.

The Mission considers that a waiver of the 25 percent contribution requirement is justified on the grounds that this is not a typical HB 13 PVO project in which A.I.D. receives a unsolicited proposal from the PVO requesting A.I.D. assistance in carrying out one of their programs. Rather, in this case A.I.D. has selected CARE to be the implementing agency of component 1 of the SHIP on the basis of predominant capability and ongoing experience in Peru.

Every effort will be made by CARE to ensure the greatest possible generation of counterpart contributions through the sub-grant mechanism to NGOs, consistent with other principal project objectives. The criteria for selection of sub-grant proposals will include self-financing elements. The exact mechanisms to be employed for the generation of counterpart contribution will be based on sub-project proposals from the various PVO's. CARE will seek to generate a 10% match from in-kind resources of sub-grant recipients.

This waiver is not necessarily applied to the LOP funding of the SHIP, given that the Mission expects a substantial in-kind contribution from the Regional Government of Nor-Oriental del Marañon for the district health centers, calculated at approximately \$1,000,000. In addition, USAID considers it probable that revenues from service fees will exceed the 25 percent contribution criteria. Nonetheless the Project Paper budget reflects only the Regional Government in-kind contribution.

FIGURE 6  
Summary of Total Project Costs by Funding Source  
and Foreign Exchange (FX) and Local Currency Costs (LC)  
(US\$'000)

	FX	LC	TOTAL	Per Cent
	-----	-----	-----	-----
A.I.D. Grant Funds	8,500	9,500	18,000	95
Counterpart Contribution	0	1,000	1,000	5
TOTAL	8,500	10,500	19,000	100

Overall, an estimated US\$8.5 million in USAID/Peru funds, 45% of the total project budget, will be used to finance the foreign exchange (FX) costs of the project, while the remaining US\$10.5 million (55%), which includes the project's counterpart contributions, will finance the local currency (LC) costs of the project.

**B. Estimated Budget by Project Component**

As described in Section IV.B., the SHIP is composed of the following three major activity components, acting in concert and individually to implement the proposed alternative private primary health care models in the northern and southern project regions.

1. A Self-financing Primary Health Care Network in the Northern Region of Peru (MAXSALUD);
2. Expansion of Primary Health Care Services in the South of the country (MAXSERV); and
3. Special Studies, Policy Dialogue and Dissemination, Audits and Evaluations.

In addition, there are budget elements for a project management component and a contingency fund. These budgetary elements fully coincide with those three activity components of the project, plus project management. Figure 7 below shows the total estimated Project costs by budgetary project component, funding source and by foreign exchange (FX) and local currency (LC) type of expenditure.

**1. A Self-financing Primary Health Network in the North.**

As seen in Figure 7 below, the overall estimated cost to establish the self-financing primary health network in the Northern region of Peru (MAXSALUD), as described in Section IV.B.1., is US\$11.16 million. Of this amount, US\$10.16 million will be financed by the USAID/Peru grant funds, while the equivalent of \$1.0 million will be the PHO's financial and in-kind counterpart contribution. USAID/Peru project funds will be used to finance foreign exchange (US\$5.0 million) and local currency (US\$5.1 million) costs of this component. Specifically, these funds will cover all technical assistance, commodities, short-term training, the operating expenses of the health network, and a few special studies. In addition, overhead of 10% is included in the budget.

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**FIGURE 7**  
**Total Project Costs by Project Component, Funding Source**  
**and by Foreign Exchange (FX) and Local Currency Costs (LC)**  
**(US\$'000)**

PROJECT COMPONENT	A.I.D.		TOTAL	COUNTER PART SUPPORT	GRAND TOTAL
	FX	LC			
<b>1. Self-Financing PHO (NORTH)</b>	<b>4,931</b>	<b>5,143</b>	<b>10,074</b>	<b>919</b>	<b>10,993</b>
a. Technical Assistance	2,946	0	2,946	0	2,946
b. Commodities	914	150	1,064	0	1,064
c. Short-term Training	101	100	201	0	201
d. Operating Costs	0	3,741	3,741	0	3,741
e. Renovation/Construction	55	1,102	1,157	919	2,076
f. Studies/Audits	0	50	50	0	50
g. Overhead (10%)	915	0	915	0	915
<b>2. NGO Health Providers (SOUTH)</b>	<b>1,645</b>	<b>3,561</b>	<b>5,206</b>	<b>0</b>	<b>5,206</b>
a. Technical Assistance	593	0	593	0	593
b. Commodities	485	30	515	0	515
c. Short-term Training	124	112	236	0	236
d. Operating Costs	0	636	636	0	636
e. Sub-Grants	0	2,240	2,240	0	2,240
f. Studies/Audits	192	0	192	0	192
g. Overhead (18%)	251	543	794	0	794
<b>3. Studies/Evaluations/Pre-Award</b>	<b>332</b>	<b>0</b>	<b>332</b>	<b>0</b>	<b>332</b>
<b>4. Project Monitoring &amp; Support</b>	<b>1,200</b>	<b>200</b>	<b>1,400</b>	<b>0</b>	<b>1,400</b>
<b>SUB-TOTAL</b>	<b>8,108</b>	<b>8,904</b>	<b>17,012</b>	<b>919</b>	<b>17,931</b>
<b>5. Contingency Fund</b>	<b>392</b>	<b>596</b>	<b>988</b>	<b>81</b>	<b>1,069</b>
<b>TOTAL</b>	<b>8,500</b>	<b>9,500</b>	<b>18,000</b>	<b>1,000</b>	<b>19,000</b>

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**a. Technical Assistance**

The technical assistance package required under this component will consist of approximately 120 persons/month of long-term and 50 persons/month of short-term technical services as follows:

- One Senior Health Management Adviser - 60 p/m;
- One Social Marketing Adviser - 24 p/m;
- One Logistics/Basic Medicines Adviser - 24 p/m; and
- Short-term technical advisers - 50 p/m.

The scopes of work and technical/academical qualifications for the three long-term advisers are described in detail in Section VI.F. Technical Assistance Plan. The distribution and composition of the short-term technical assistance needed under this component has not yet been determined. Contractors bidding on the provision of the long-term advisers will propose the short-term technical assistance package.

**b. Commodities**

Commodities to be purchased under this component includes medical and laboratory equipment and supplies, ambulances and clinical furniture for the health centers. In addition, office equipment and supplies, furniture, vehicles, and electronic data processing equipment will also be purchased for the Management Support Unit.

**c. Short-term Training**

The training program under MAXSALUD will be conducted largely in-country but some observational trips abroad will also be undertaken. The in-country training program will focus on three primary groups: 1) executive and management staff of the MAXSALUD, including the Board of Directors, Executive Director, and MSU staff; 2) technical staff from the health centers network; and 3) community members from the different participating groups.

The private self-financing PHC model is entirely new in the project's Northern region of Lambayeque Department. Therefore, short-term, project-funded observational and training visits to PROSALUD in Santa Cruz and in La Paz/El Alto, where the model is currently functioning, are planned. This type of exposure will show key project staff the technical and financial feasibility of the model; provide training opportunities on specific topics; and motivate participants to be enthusiastic promoters of this concept.

**d. Operating Costs**

USAID/Peru grant funds will be used to finance the operating costs of both the Management Support Unit (MSU) and the health centers network. The MSU is key to the establishment and maintenance of MAXSALUD as a franchise type of services to be provided by the health centers

network. Revenues and surpluses from the health network will be, in turn, the main funding source for the MSU operation and maintenance after the project terminates. During the life of the project, USAID/Peru funds will be used to finance all personnel, administrative/logistics, vehicle operation, and social marketing activities of the MSU as well as to cover the initial operating deficit and slower revenue generation of the health centers.

#### **e. Renovation and Construction of Health Centers**

Total physical infrastructure of MAXSALUD will consist of the MSU and a network of 11 health centers. USAID/Peru grant funds will be utilized to construct two new health centers and significantly renovate the other nine that will be ceded by the MOH/RENOM. Land lots and land/buildings for all 11 health centers have been already identified and offered by RENOM to the project. The MSU will be physically located in one of the new buildings also housing a health center.

#### **f. Studies/Audits**

Funds will be provided for under the T/TA contract to permit the institutional contractor to make the contract for an annual audit, utilizing the scope of work provided by the Controller's Office of USAID/Peru.

During the life of the project, in-house, mid-term special studies will be conducted to evaluate progress achieved in the overall implementation of this component. These may include rapid assessments of the health network organization, service delivery, social marketing, and community acceptance.

MOH/RENOM land lots and buildings constitute the project's counterpart in-kind contribution which has been estimated to be worth US\$1.0 million, as shown in Figure 7 above. In addition, RENOM management staff has indicated their interest and willingness to contribute some limited financial support for renovation and construction of the health centers.

### **2. Expansion of Primary Health Care Services in the South**

As shown in Figure 7 above, the overall estimated budget required to organize and implement the second major SHIP component (MAXSERV), as fully described in Section IV.B.2., amounts to US\$5.94 million. Of this amount, US\$1.92 million has been budgeted to cover the foreign exchange (FX) costs of this component, while the remaining US\$4.02 million has been allocated to finance the local currency costs (LC). Since the 25% contribution from CARE will be waived, this component is budgeted with USAID/Peru grant funds only.

MAXSERV will be organized and implemented by CARE. Therefore, USAID/Peru funds budgeted for this component will be incrementally obligated under a Cooperative Agreement with CARE. More specifically, these funds will be used to finance the costs of all technical assistance, commodities, short-term training, the operating expenses of CARE's field offices,

sub-grants, and the evaluations and audits required under this component. CARE's overhead and G&A costs will also be covered by USAID/Peru grant funds.

**a. Technical Assistance**

Project-funded long-term technical assistance to support implementation of this project component will be provided by the PHC Technical Advisor, and the two CARE project Area Directors for Arequipa and Puno. These long term advisors will initiate, administer, manage, and provide administrative, managerial and technical-oriented technical assistance to NGOs and other institutions involved.

In addition, specialized short-term technical assistance will be provided as identified and needed by the long term advisors and project monitors. A.I.D./W centrally and regionally-funded projects, such as HEALTHCOM II, SOMARC, HNS, SUPPORT, and others. will play an important role through the buy-in mechanism in the provision of this technical assistance.

The areas of specialized short term TA defined to date are: development of curricula and training materials, pharmaceutical rational use, and pharmaceutical logistics development. An overall Scope of Work for the pharmaceutical TA advisors has been developed and is included as Annex 3. In addition, the scope of work for the long-term pharmaceutical advisor to the MAXSALUD project component in the North, includes the responsibility of providing short-term assistance to CARE.

**b. Commodities**

Commodities to be purchased under this project component include pharmaceuticals to support the provision of primary health care services by the set of participating institutions as well as office equipment, furniture and vehicles for the two CARE's project regional offices in Arequipa and Puno. Pharmaceuticals will be purchased on an international competitive price basis and, whenever practical, in synchronization with those needed under the MAXSALUD component to lower prices by buying in larger quantities.

**c. Short-term Training**

No project funds have been budgeted for long-term training under MAXSERV. The training program under this component will consists of short-term training and observational visits to other similar PHC programs both in-country and overseas. A project-funded training needs assessment for the NGOs participating in the Grants program will be conducted in the start-up year of MAXSERV to better identify the areas in which they need to be trained.

Training will most likely be needed in the following areas:

- 1) Community promotion of MCH and child survival interventions;
- 2) ARI prevention, identification and referral;
- 3) Diarrheal prevention, identification, treatment and referral;

- 4) Identification of high risk maternal conditions, including pregnancies, and referral mechanisms;
- 5) Community nutrition and health promotion activities and referral indicators and mechanisms;
- 6) Community health and nutrition monitoring techniques, systems and basic reporting systems;
- 7) Planning, monitoring and evaluation techniques and systems;
- 8) Information systems, development and management; and
- 9) Training techniques and program and personnel management.

#### d. Operating Costs

USAID/Peru grant funds under this component will be used to finance all operating costs of CARE's project offices in Lima, Arequipa and Puno. This will include all project personnel costs, office supplies and administrative support as well as vehicle maintenance.

#### e. Sub-grants Program

Project funds have been budgeted and will be made available to CARE to set up and manage a sub-grants program to the participating institutions of MAXSERV. In accordance with a pre-established selection criteria, grants will be made to private organizations to establish, expand, and improve the quantity and quality of primary health care services and promotion in Arequipa and Puno.

#### f. Audits

An A133 annual financial and compliance audit will be carried out by CARE. Under the Cooperative Agreement, USAID/Peru will cover the additional costs of auditing the project within that A133 audit. In addition, CARE will provide TA through its own auditor and accounts to support the NGOs receiving sub-grants in the implementation of improvements needed to their current accounting systems, and conducting the appropriate audits.

### 3. Studies, Evaluations and Pre-Award Survey

USAID/Peru grant funds have been budgeted to conduct a series of special studies under both MAXSALUD and MAXSERV which are viewed as critical for the start-up activities, ongoing implementation and the achievement of the overall project objectives. These studies will be contracted directly by USAID, largely through buy-ins to A.I.D./W centrally and regionally-funded projects.

The special studies to be conducted under MAXSALUD are as described in section IV. B. 3. In addition, a series of special technical studies on alternative primary health care service delivery models in the private sector, also described in section IV. B. 3. above, will be conducted to support the implementation of MAXSERV. Finally, project funds will be used to finance both the mid-term and final evaluations of the two principal project components as well as the pre-award survey of the T/TA contract.

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#### 4. Project Monitoring and Support

The sum of USAID/Peru grant funds budgeted for project monitoring and support is US\$1.4 million. The full amount has been allocated to cover the foreign exchange (US\$1.2 million) and local currency (US\$0.2 million) costs of two full-time, 5-year Personal Services Contractors (PSCs), each of whom will primary responsibility for project activities in one macro-region.

#### 5. Project Contingency Fund

The overall project budget was calculated during the period August-September 1991. The foreign exchange project costs were estimated using the most recent financial information available at USAID/Peru, while the local currency project budget was calculated based on prevailing market prices during the same period and converted to US Dollars at the USAID/Peru monthly average rates. Nevertheless, a project contingency fund in the amount of US\$1.07 million has been added which represents close to 6% of the overall project budget. Of this amount, US\$988,000 are USAID/Peru grant funds budgeted to cover unexpected price increases in technical assistance or commodities as well as additional requirements for the T/TA contract. The remaining US\$81,000 of the contingency fund was estimated to account for additional financial and/or in-kind counterpart contribution.

Figure 8 below shows, using the same budgetary breakdown as in Figure 7 above, an application of the contingency funds into specific line items in order to reflect the actual financial requirements from CARE to organize and implement MAXSERV.

Two additional financial tables of USAID/Peru project grant funds are provided on the following pages: Figure 9 presents a breakdown of A.I.D projects costs by project components, inputs and by project years (PY). Figure 10 shows the same budgetary breakdown of Figure 9 but using the contingency funds to increase specific line items, as required by CARE's financial proposal to implement MAXSERV.

Finally, Figure 11 summarizes the projected obligations and earmarkings/commitments of A.I.D. project grant funds by U.S. fiscal year (FY).

In both Figures 9 and 10 below, it should be noted that project implementation year one covers a period of 15 months, from October 1, 1991 to December 31, 1992, while every other subsequent PY represent a 12-month period coinciding with calendar years 1993 through 1996.

As can be seen in Figure 10, obligations of USAID/Peru grant funds are scheduled in accordance with the U.S. fiscal years, while project expenditures have been budgeted by project implementation year.

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**FIGURE 8**  
**Total Project Costs by Project Component with Contingency Incorporated, Funding Source**  
**and by Foreign Exchange (FX) and Local Currency Costs (LC)**  
**(US\$'000)**

PROJECT COMPONENT	A.I.D.		TOTAL	COUNTER	GRAND TOTAL
	FX	LC		PART SUPPORT	
<b>1. Self-Financing PHO (NORTH)</b>	<b>5,015</b>	<b>5,143</b>	<b>10,158</b>	<b>1,000</b>	<b>11,158</b>
a. Technical Assistance	2,946	0	2,946	0	2,946
b. Commodities	914	150	1,064	0	1,064
c. Short-term Training	100	100	200	0	200
d. Operating Costs	0	3,741	3,741	0	3,741
e. Renovation/Construction	55	1,102	1,157	1,000	2,157
f. Studies/Audits	0	50	50	0	50
g. Overhead (25%)	1,000	0	1,000	0	1,000
<b>2. NGO Health Providers (SOUTH)</b>	<b>1,921</b>	<b>4,021</b>	<b>5,942</b>	<b>0</b>	<b>5,942</b>
a. Technical Assistance	233	0	233	0	233
b. Commodities	470	30	500	0	500
c. Short-term Training	115	115	230	0	230
d. Operating Costs	0	1,616	1,616	0	1,616
e. Sub-Grants	0	2,160	2,160	0	2,160
f. Studies/Audits	0	100	100	0	100
g. Overhead (10%) & G&A (8%)	1,103	0	1,103	0	1,103
<b>3. Studies/Evaluations/Pre-Award</b>	<b>364</b>	<b>136</b>	<b>500</b>	<b>0</b>	<b>500</b>
<b>4. Project Monitoring Support</b>	<b>1,200</b>	<b>200</b>	<b>1,400</b>	<b>0</b>	<b>1,400</b>
<b>TOTAL</b>	<b>8,500</b>	<b>9,500</b>	<b>18,000</b>	<b>1,000</b>	<b>19,000</b>

**FIGURE 9**  
**Total A.I.D. Project Costs by Project Components, Inputs and Project Years (PY)**  
**(US\$'000)**

<b>PROJECT COMPONENTS/ INPUTS</b>	<b>PY 1</b>	<b>PY 2</b>	<b>PY 3</b>	<b>PY 4</b>	<b>PY 5</b>	<b>TOTAL</b>
<b>1. Self-Financing PHO (NORTH)</b>	<b>3,082</b>	<b>2,703</b>	<b>1,594</b>	<b>1,552</b>	<b>1,143</b>	<b>10,074</b>
a. Technical Assistance	984	834	426	426	276	2,946
b. Commodities	359	305	150	150	100	1,064
c. Short-term Training	170	8	9	8	6	201
d. Operating Costs	779	766	732	807	657	3,741
e. Renovation/Construction	510	535	112	0	0	1,157
f. Studies/Audits	0	10	20	20	0	50
g. Overhead (10%)	280	245	145	141	104	915
<b>2. NGO Health Providers (SOUTH)</b>	<b>1,325</b>	<b>760</b>	<b>1,114</b>	<b>992</b>	<b>1,015</b>	<b>5,206</b>
a. Technical Assistance	180	162	135	56	60	593
b. Commodities	515	0	0	0	0	515
c. Short-term Training	57	44	51	42	42	236
d. Operating Costs	124	128	128	128	128	636
e. Sub-Grants	140	300	600	600	600	2,240
f. Studies/Audits	107	10	30	15	30	192
g. Overhead (18%)	202	116	170	151	155	794
<b>3. Studies/Evaluations/PreAward</b>	<b>20</b>	<b>25</b>	<b>100</b>	<b>72</b>	<b>115</b>	<b>332</b>
<b>4. Project Monitoring &amp; Support</b>	<b>280</b>	<b>280</b>	<b>280</b>	<b>280</b>	<b>280</b>	<b>1,400</b>
<b>SUB-TOTAL</b>	<b>4,707</b>	<b>3,768</b>	<b>3,088</b>	<b>2,896</b>	<b>2,553</b>	<b>17,012</b>
<b>5. Contingency Fund (5.8%)</b>	<b>273</b>	<b>219</b>	<b>179</b>	<b>168</b>	<b>149</b>	<b>988</b>
<b>TOTAL</b>	<b>4,980</b>	<b>3,987</b>	<b>3,267</b>	<b>3,064</b>	<b>2,702</b>	<b>18,000</b>

**PY 1 = October 1991 - December 1992**

**PY 2 = January 1993 - December 1993**

**PY 3 = January 1994 - December 1994**

**PY 4 = January 1995 - December 1995**

**PY 5 = January 1996 - December 1996**

**FIGURE 10**  
**Total A.I.D. Project Costs by Project Components, Inputs and Project Years (PY)**  
**(US\$'000)**

<b>PROJECT COMPONENTS/ INPUTS</b>	<b>PY 1</b>	<b>PY 2</b>	<b>PY 3</b>	<b>PY 4</b>	<b>PY 5</b>	<b>TOTAL</b>
<b>1. Self-Financing PHO (NORTH)</b>	<b>3,108</b>	<b>2,726</b>	<b>1,606</b>	<b>1,565</b>	<b>1,153</b>	<b>10,158</b>
a. Technical Assistance	984	834	426	426	276	2,946
b. Commodities	359	305	150	150	100	1,064
c. Short-term Training	170	8	8	8	6	200
d. Operating Costs	779	766	732	807	657	3,741
e. Renovation/Construction	510	535	112	0	0	1,157
f. Studies/Audits	0	10	20	20	0	50
g. Overhead (10.9%)	306	268	158	154	114	1,000
<b>2. NGO Health Providers (SOUTH)</b>	<b>1,404</b>	<b>956</b>	<b>1,281</b>	<b>1,147</b>	<b>1,154</b>	<b>5,942</b>
a. Technical Assistance	46	46	46	46	49	233
b. Commodities	500	0	0	0	0	500
c. Short-term Training	52	44	50	42	42	230
d. Operating Costs	350	342	315	309	300	1,616
e. Sub-Grants	190	337	600	500	533	2,160
f. Studies/Audits	10	20	30	30	10	100
g. Overhead (22.8%)	256	167	240	220	220	1,103
<b>3. Studies/Evaluations/PreAward</b>	<b>188</b>	<b>25</b>	<b>100</b>	<b>72</b>	<b>115</b>	<b>500</b>
<b>4. Project Monitoring Support</b>	<b>280</b>	<b>280</b>	<b>280</b>	<b>280</b>	<b>280</b>	<b>1,400</b>
<b>SUB-TOTAL</b>	<b>4,980</b>	<b>3,987</b>	<b>3,267</b>	<b>3,064</b>	<b>2,702</b>	<b>18,000</b>

**PY 1 = October 1991 - December 1992**

**PY 2 = January 1993 - December 1993**

**PY 3 = January 1994 - December 1994**

**PY 4 = January 1995 - December 1995**

**PY 5 = January 1996 - December 1996**

**FIGURE 11**  
**Projected Obligations and Earmarkings/Commitments**  
**of A.I.D. Project Funds by U.S. Fiscal Year (FY)**  
**(US\$'000)**

U.S. FISCAL YEAR	FY 91	FY 92	FY 93	FY 94	FY 95	FY 96
PROJECT YEAR (a)	---	(PY 1)	(PY 2)	(PY 3)	(PY 4)	(PY 5)
1. Beginning of Year Balance	----	3025	775	1288	2821	2702
2. Obligations (b)	3025	2730	4500	4800	2945	----
3. Earmarkings/Commitments (c)	----	4980	3987	3267	3064	2702
4. End of Year Balance	3025	775	1288	2821	2702	0

(a) PY 1 = October 1991 - December 1992

PY 2 = January 1993 - December 1993

PY 3 = January 1994 - December 1994

PY 4 = January 1995 - December 1995

PY 5 = January 1996 - December 1996

(b) Obligations correspond to U.S. fiscal years (FY)

(c) Earmarkings/commitments correspond to project years (PY)

### **C. Methods of Implementation and Financing**

Please refer to the MOI flow chart provided below as Figure 12. The MAXSALUD component will be implemented, following an RFP and direct competitive negotiation, by PIO/T to the Regional Contracting Officer/Quito and a T/TA Contract with the selected firm. The method of financing will be direct payment to the contractor, with the use of advances should the selected firm be a non-profit entity.

The MAXSERV component will be implemented through a PIO/T to the RCO/Quito and a Cooperative Agreement with CARE\USA, based in New York. The Cooperative Agreement will specify the terms of substantial involvement by the Mission, to be executed through numerically ordered Cooperative Agreement Involvement Letters (CAILs). The method of financing will be direct payment under a Letter of Credit through automatic clearinghouse (LOC-TCFS/ACH).

Obligated under the CARE cooperative agreement, USAID will contract for a series of special studies important to project implementation arrangements. These will be contracted for by PIO/T buy-ins, under direct payment by USAID. The audits for the SHIP northern component and project component midterm and final evaluations will also be contracted by USAID through PIO/Ts. Finally, AID will issue PIO/Ts for the contracting of two PSCs to provide AID Project Monitoring and Support.

The USAID/Peru MACS will thus report on the four fundamental elements and project components. The Project Officer will maintain accurate financial monitoring through the Budget Control System (BCS) computer program in dBase III Plus, spreadsheets in Quattro Pro, and the quarterly financial reports required of the institutional contractor and of CARE.

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Figure 12

SHIP PROJECT PAPER  
METHODS OF IMPLEMENTATION FLOWCHART

<u>Obligation To</u>	<u>Contracting</u>	<u>Items</u>	<u>Amount</u>	<u>Methods of Implementation</u>	<u>Methods of Payment</u>	
T/TA CONTRACT Direct Competitive Negotiation \$10,158,000	I. COMPONENT NORTH	MAXSALUD	\$10,158,000	PIO/T - Contract	Direct payment to contractor (If non-profit, organizations, advances will be approved)	
	II. COMPONENT SOUTH	MAXSERV	\$ 5,942,000	.PIO/T for Cooperative Agreement .CALLs for annual work plan and substantial involvement requirements	Direct payment under LOC-TCFS to CARE/New York.	
CARE (CA) Cooperative Agreement \$7,842,000	III. AID CONTRACTS	1. Special Studies	205,000	PIO/T	Direct Payment by USAID	
		2. Pre-Award Survey	20,000	PIO/T	Direct Payment by USAID	
		3. Evaluations				
		- South	80,000	PIO/T	Direct Payment by USAID	
		- North	195,000	PIO/T	Direct Payment by USAID	
	SUB-TOTAL	\$ 500,000				
	IV. AID CONTRACT	Project Monitoring Support	\$ 1,400,000	PIO/T	Direct Payment by USAID	
			<u>\$18,000,000</u>			

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#### **D. Audit and Reporting Requirements**

An A133 annual financial and compliance audit will be contracted by CARE under the Cooperative Agreement, and by the institutional contractor for the T/TA Contract component. A Peruvian firm with an affiliation with a U.S. accounting firm will be acceptable. USAID/Peru Controller's Office will make available the draft scopes of work, review the draft reports, and track efforts to address all material recommendations. The audits will be performed in accordance with GAO standards, with copies provided to USAID/Peru and the RIG/A/T.

Each financial transaction or activity recorded under the component agreement and contract will be reported to the USAID PSC on a quarterly basis. Project disbursements will cover the cost of project operational expenses, technical assistance, training and small grant activities. Sub-grant activity under MAXSERV will be reported on a trimester basis by CARE. Detailed program reports will be provided to USAID on project progress on a semi-annual basis, supplemented by trimester progress updates. Project counterpart contributions of CARE in the South (not estimated in the budget), and the PHO in the North, will be monitored and reported to USAID on a semi-annual basis.

#### **E. Evaluation Requirements**

Two project evaluations are scheduled: interim after a period of approximately 2 1/2 years; and final at the conclusion of the project. The selection, approval, and contracting of the project evaluation firms will be done by USAID/Peru. It is expected that USAID/Peru will conduct a pre-award survey of the selected institutional contractor for the T/TA contract prior to contract award and obligation of this component. If financial reviews are required of any of the implementing entities, the Mission will either direct contract for this service through the cooperative agreement or carry out the assignment with direct hire staff.

#### **F. Recurrent Costs**

##### **1. North**

The primary health care model in the North will be approximately 80-100% self-sustaining for the operational cost of the PHC network by the PACD. It is anticipated that increasing proportions of the remaining costs associated with the PHC network and the cost of the PHO Management Support Unit will be covered by the PACD through a combination of block grants, additional in-kind contributions in infrastructure and possibly personnel, provided by RENOM, and by means of additional project revenue anticipated as a result of greater market share. In each subsequent year after the PACD, it is expected that through adjustments in the cross-subsidy schemes, increased client volume, and market penetration, the PHO will be able to become more self-sustainable until covering most, if not all, of the PHO costs.

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FIGURE 1

NORTH COMPONENT

NETWORK SCHEDULE OF MARKET OPERATIONS

	Y E A R S					TOTAL POPULATION YEAR 5 TOTAL
	1	2	3	4	5	
<b><u>DISTRICT LEONARDO ORTIZ</u></b>						
C.S. L. Ortiz		12.5%*	33%	45%	55%	45,445
C.S. Atusparia			25%**	40%	50%	48,570
C.S. San Lorenzo (new)***		25%**	40%	50%	60%	44,759
Sub-Total						<u>138,774</u>
<b><u>DISTRICT CHICLAYO</u></b>						
C.S. Las Mercedes***		25%**	40%	50%	60%	44,759
C.S. Jose Quiñones			25%**	40%	50%	19,733
C.S. Jose Olaya			12.5%*	33%	45%	19,774
C.S. Cerropon				25%	40%	9,886
Sub-Total						<u>94,192</u>
<b><u>DISTRICT LA VICTORIA</u></b>						
C.S. La Victoria I***		25%**	40%	50%	60%	48,838
C.S. La Victoria II		12.5%*	33%	45%	55%	25,854
C.S. El Bosque			25%	40%	50%	13,407
Sub-Total						<u>88,396</u>
San Martín			25%	40%	50%	<u>8,550</u>
<b>T O T A L</b>						<u><u>329,192</u></u>

Population covered by network north in Year 5: 180,240 which is equal to 55% coverage.

- (\*) Open second semester that year
- (\*\*) Opens January 1 that year
- (\*\*\*) Ambulances and Laboratory equipment

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FIGURE 14

## NORTH COMPONENT

CROSSED SUBSIDIES AMONG HEALTH CENTERS  
OPERATIONAL ANNUAL CASH FLOW (US\$)

	Y E A R S					TOTAL
	1	2	3	4	5	
<b><u>DISTRICT LEONARDO ORTIZ</u></b>						
C.S. L. Ortiz	0	(12,775)	(15,192)	(8,313)	(1,832)	(38,111)
C.S. Atusparias	0	(4,285)	(18,763)	(16,863)	(9,284)	(48,395)
C.S. San Lorenzo	(12,378)	1,500	25,139	41,036	61,581	116,879
Sub-Total	<u>(12,378)</u>	<u>(15,560)</u>	<u>(8,816)</u>	<u>16,660</u>	<u>50,465</u>	<u>30,373</u>
<b><u>DISTRICT CHICLAYO</u></b>						
C.S. Las Mercedes	(8,536)	3,553	24,029	39,949	60,523	119,518
C.S. Jose Quiñones	0	(5,931)	(8,803)	88	12,431	(2,215)
C.S. Jose Olaya	0	0	(13,867)	(12,312)	(5,656)	(31,834)
C.S. Cerropon	0	0	(3,276)	(18,982)	(12,489)	(34,747)
Sub-Total	<u>(8,536)</u>	<u>(2,378)</u>	<u>(1,917)</u>	<u>8,743</u>	<u>54,809</u>	<u>50,722</u>
<b><u>DISTRICT LA VICTORIA</u></b>						
C.S. La Victoria I	(6,483)	16,628	40,505	62,678	85,862	199,190
C.S. La Victoria II	0	(12,605)	(14,108)	(10,770)	(10,834)	(48,316)
C.S. El Bosque	0	(3,276)	(17,887)	(12,260)	(12,194)	(45,618)
Sub-Total	<u>(6,483)</u>	<u>747</u>	<u>8,510</u>	<u>39,648</u>	<u>62,834</u>	<u>105,256</u>
C.S. San Martin	0	(3,666)	(8,237)	(12,002)	(8,027)	(31,933)
<b>T O T A L</b>	<b>(27,395)</b>	<b>(20,857)</b>	<b>(10,460)</b>	<b>53,049</b>	<b>160,081</b>	<b>154,418</b>

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FIGURE 15

NORTH COMPONENT

CROSSED SUBSIDIES AMONG HEALTH CENTERS  
ANNUAL OPERATIONAL SURPLUS (US\$)

	Y E A R S					TOTAL
	1	2	3	4	5	
<u>DISTRICT LEONARDO ORTIZ</u>						
C.S. L. Ortiz	0	(15,665)	(20,973)	(14,094)	(7,613)	(58,345)
C.S. Atusparias	0	(4,285)	(26,444)	(23,744)	(16,965)	(71,438)
C.S. San Lorenzo	(13,997)	(11,181)	12,458	28,355	48,900	64,535
Sub-Total	<u>(13,997)</u>	<u>(31,131)</u>	<u>(34,959)</u>	<u>(9,483)</u>	<u>24,322</u>	<u>(65,248)</u>
<u>DISTRICT CHICLAYO</u>						
C.S. Las Mercedes	(13,536)	(9,128)	11,347	27,268	47,842	63,793
C.S. Jose Quiñones	0	(5,931)	(17,359)	(8,468)	3,875	(27,884)
C.S. Jose Olaya	0	0	(17,507)	(19,593)	(12,937)	(50,038)
C.S. Carropon	0	0	(3,276)	(27,538)	(21,046)	(51,859)
Sub-Total	<u>(13,536)</u>	<u>(15,059)</u>	<u>(26,795)</u>	<u>(28,331)</u>	<u>17,734</u>	<u>(65,988)</u>
<u>DISTRICT LA VICTORIA</u>						
C.S. La Victoria I	(6,483)	5,847	29,723	51,896	75,081	156,064
C.S. La Victoria II	0	(16,133)	(21,164)	(17,826)	(17,890)	(73,013)
C.S. El Bosque	0	(3,276)	(26,444)	(20,817)	(20,751)	(71,286)
Sub-Total	<u>(6,483)</u>	<u>(13,562)</u>	<u>(17,885)</u>	<u>13,253</u>	<u>36,440</u>	<u>11,763</u>
C.S. San Martín	0	(3,666)	(20,294)	(24,058)	(20,084)	(68,102)
<b>T O T A L</b>	<b>(34,016)</b>	<b>(63,418)</b>	<b>(99,933)</b>	<b>(48,619)</b>	<b>58,412</b>	<b>(187,574)</b>

FIGURE 16

NORTH COMPONENT

GIVE-AWAY OF HEALTH CENTERS  
ANNUAL (US\$)

	Z GIVE- AWAY	Y E A R S					TOTAL
		1	2	3	4	5	
<u>DISTRICT LEONARDO ORTIZ</u>							
C.S. L. Ortiz	15	0	11,233	30,039	42,778	53,774	137,824
C.S. Atusparias	20	0	0	32,928	54,186	69,663	156,777
C.S. San Lorenzo	0(new)	0	0	0	0	0	0
Sub-Total		<u>0</u>	<u>11,233</u>	<u>62,967</u>	<u>96,964</u>	<u>123,437</u>	<u>294,601</u>
<u>DISTRICT CHICLAYO</u>							
C.S. Las Mercedes	0(new)	0	0	0	0	0	0
C.S. Jose Quiñones	0	0	0	0	0	0	0
C.S. Jose Olaya	10	0	0	3,351	9,100	12,763	25,214
C.S. Cerropon	10	0	0	0	3,447	5,672	9,119
Sub-Total		<u>0</u>	<u>0</u>	<u>3,351</u>	<u>12,547</u>	<u>18,435</u>	<u>34,333</u>
<u>DISTRICT LA VICTORIA</u>							
C.S. La Victoria I	0	0	0	0	0	0	0
C.S. La Victoria II	20	0	8,521	23,136	32,449	40,790	104,896
C.S. El Bosque	20	0	0	9,090	14,958	19,230	43,278
Sub-Total		<u>0</u>	<u>8,521</u>	<u>32,226</u>	<u>47,407</u>	<u>60,020</u>	<u>148,174</u>
C.S. San Martín	10	0	0	2,898	4,769	6,132	13,799
<b>T O T A L</b>		<b>0</b>	<b>19,754</b>	<b>101,442</b>	<b>161,687</b>	<b>208,024</b>	<b>490,907</b>

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FIGURE 17

5.b. MSU - PERSONNEL COSTS - DETAILED ESTIMATE

	As of Year ±	Monthly Salary (Soles)	US\$ Monthly Equivalent	US\$ Annual Year 1	US\$ Annual Year 2	US\$ Annual Year 3	US\$ Annual Year 4	US\$ Annual Year 5	TOTAL US\$
Executive Director	1	3,300	4,125	49,500	49,500	49,500	49,500	49,500	247,500
Bilingual Secretary	1	700	875	10,500	10,500	10,500	10,500	10,500	52,500
Medical Services Director	1	2,500	3,125	37,500	37,500	37,500	37,500	37,500	187,500
Medical Supervisor	2	1,500	1,875	0	22,500	22,500	22,500	22,500	90,000
Nurse Supervisor	1	1,000	1,250	15,000	15,000	15,000	15,000	15,000	75,000
Secretary	2	400	500	0	6,000	6,000	6,000	6,000	24,000
Finance Director	1	3,000	3,750	45,000	45,000	45,000	45,000	45,000	225,000
Accountant	1	1,800	2,250	27,000	27,000	27,000	27,000	27,000	135,000
Budget/Personnel Assistant	2	1,400	1,750	0	21,000	21,000	21,000	21,000	84,000
Accounting Auxiliary	1	300	375	4,500	4,500	4,500	4,500	4,500	22,500
Marketing Manager	1	2,500	3,125	37,500	37,500	37,500	37,500	37,500	187,500
Special Projects Manager	4	2,500	3,125	0	0	0	37,500	37,500	75,000
Training Chief	1	1,500	1,875	22,500	22,500	22,500	22,500	22,500	112,500
Drug Supply Manager	1	3,000	3,750	45,000	45,000	45,000	45,000	45,000	225,000
Warehouse Assistant	1	500	625	7,500	7,500	7,500	7,500	7,500	37,500
Warehouse Auxiliary	2	300	375	0	4,500	4,500	4,500	4,500	18,000
MIS Chief	1	2,000	2,500	30,000	30,000	30,000	30,000	30,000	150,000
Messenger/Driver	1	200	250	3,000	3,000	3,000	3,000	3,000	15,000
Messenger/Watchman	1	200	250	3,000	3,000	3,000	3,000	3,000	15,000
Watchman	1	100	125	1,500	1,500	1,500	1,500	1,500	7,500
<b>TOTAL</b>		<b>28,700</b>	<b>35,875</b>	<b>339,000</b>	<b>393,000</b>	<b>393,000</b>	<b>430,500</b>	<b>430,500</b>	<b>1,986,000</b>

Based on PROSALID actuals, adapted to Peru, the following is total Personnel cost

Percentages of Total personnel cost		Total Personnel (US\$)	540,972	627,144	627,144	686,986	686,986	3,169,233
Salaries	63%							
Social Benefits	22%							
Transportation	4%							

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The series of tables above provide projections over the project duration, by health center included in the MAXSALUD network, of anticipated market share, operational annual cash flow, annual operational surplus, percentage "give-away", investment into health centers, and Management Support Unit personnel cost estimates.

## 2. South

Recurring costs of project PHC services beyond the five-year LOP will be addressed primarily through funding and in-kind assistance to be provided by the regional government's health budget from both Puno and Arequipa, and by means of the sustainable PHC service models to be developed by the project. Regional authorities have indicated their support for the provision of PHC services to low income populations by means of private and public sector collaboration. Once the regionalization process is more fully developed, CARE will seek to secure block grants, policy concessions and other forms of assistance from the regional authorities.

In addition, CARE International has as one of its stated purposes fund-raising on both a national and international level. Based on project results and potential for sustainability, CARE has indicated its willingness to consider future support for the project PHC service delivery mechanism.

## VI. PROJECT IMPLEMENTATION ARRANGEMENTS

### A. Project Cooperative Agreement and Contracting Requirements

#### 1. Northern Component: Competitively Bid Contract

The self-sustainable, private sector PHC model in the North will require the services of a long-term, highly specialized technical team, short-term TA and training, equipment, supplies and pharmaceuticals. To accomplish this, the contract will provide funding for the procurement of services and commodities through full and open competition. The licitation process and signing of the T/TA contract is expected to take approximately 6 months, with obligation scheduled for CY92. The use of this procurement mechanism is contingent on the successful completion of the rescheduling of arrears payments by the GOP and the lifting of Brooke-Alexander Amendment and FAA Section 620(q) sanctions in early CY92.

Important meetings were carried out in Paris between the GOP and the Paris Club and the Peru Support Group, and in Washington between Presidents Fujimori and Bush during mid-September 1991 to advance the "re-insertion" of Peru into the international financial markets. This is a fundamental goal of the Fujimori Administration, and a significant underpinning to current bilateral relations with the USG. The Mission has reasonable grounds to believe that the GOP will successfully conclude negotiations to permit the settlement of arrears with the IFIs and the USG, and the re-scheduling of the public sector commercial debt. Should delays in these macro-economic events prove damaging or unacceptable to the successful implementation of the North

component, the Mission would analyze options, including the preparation of a Project Paper Supplement to modify the proposed implementation arrangements.

## **2. Southern Component: Cooperative Agreement with CARE**

USAID/Peru will sign a Cooperative Agreement with CARE for the performance of project activities in the South. CARE will contract all management and operational personnel, short-term technical assistance and training. Funding will be included in the Cooperative Agreement for the procurement of two (2) Personal Service Contractors (PSCs), to be directly contracted by USAID/Peru.

In an effort to maintain project continuity in the North, and to plan and coordinate the overall pharmaceutical procurement and distribution system for both the South and North, the CARE Cooperative Agreement will provide for the funding of project studies to be carried out in support of the overall project (with application to the South), and for the services of the MAXSALUD PSC. The services of the MAXSALUD PSC will be required early on in project implementation to facilitate project studies, assist in joint collaborative activities with the Nor Oriental del Marañon regional authorities, and to help supervise and coordinate common activities for both the North and South components of the project.

### **B. A.I.D. Project Management/Monitoring**

The Project Officer will be the Chief of the Health, Population, and Nutrition Division. S/he will be assisted by two PSCs, one for the South and one for the North. Management involvement by USAID/Peru under the CARE Cooperative Agreement and the T/TA Contract will center around key issues which are critical to the overall achievement of project objectives. The significant involvement of USAID/Peru will be only to the extent required for effective project monitoring. The following is an illustrative list of these actions:

- 1) review and approval of yearly work plans;**
- 2) approval of project criteria for financing project proposals in the South (note: once the selection criteria and mechanism has been approved by USAID/Peru, CARE will have full responsibility for the selection and approval of sub-grantees and/or contracted services for the project's PHC providers);**
- 3) review and approval of key long-term personnel in the Northern and Southern Components, and contractual arrangements for long and short-term personnel; and**
- 4) review and approval of any agreements developed with regional government authorities for the provision of PHC counterpart support (both in-kind and financial) which may be leveraged by the project.**

Project PSCs will be responsible for reporting to the Mission on all project activities. Quarterly project reports will be issued, which will serve as the basis for semi-annual reports to be reviewed in A.I.D./W. In addition to regular reporting and monitoring and facilitating the

Mission approval process, the role of the project PSCs will include supervisory assistance in the procurement of pharmaceuticals and other imported medical supplies. Although CARE will have full responsibility for the procurement of all project-wide pharmaceuticals at least the first project year or two, it is envisioned that the PSCs will help assist and monitor the pharmaceutical distribution process in the Ports of Paita (MAXSALUD) and Matarani (MAXSERV). This function will include planning and coordinating the waivers and procurement documents required, the receipt of pharmaceuticals and the timely delivery of these commodities to project site locations. Responsibility for this supervisory function will be shared with staff of CARE.

A waiver is provided for the 25% counterpart contribution for CARE under the cooperative agreement, as well as for the justification for non-competitive award. These are provided for in the annexes. It is anticipated that other waivers may be required for the implementation of certain project activities. Primary among these are a waiver for the procurement of international pharmaceuticals at discounted prices, which may be conducted by CARE through the Public International Organization UNICEF/UNIPAC. Waivers will be handled on a case by case basis by the USAID PSCs in accordance with the requirements of Sections 4C3d and 5B4 of A.I.D. Handbook 1B, and Chapter 6F of Handbook 15.

### **C. Implementation Schedule**

#### **1. Northern Component**

For the Northern Component (MAXSALUD), the following priority activities are expected:

- \* completion of the preliminary studies (legal, PHC center location, pharmaceuticals revolving funds and procurement options).
- \* agreements reached and signed (such as letters of understanding) with RENOM for ceding of health centers and local counterpart contribution.

Immediately following reaching these agreements with RENOM, a selection for an International T/TA Contractor familiar with sustainable PHC projects will start, by means of USAID Direct Competitive Negotiation. These activities are expected to be completed within twelve months of the SHIP start.

#### **2. Southern Component**

MAXSERV, the Southern Component to be managed and operated by CARE, will have the following priority activities:

- \* carry out some of the special studies, including the PHC baseline data and the pharmaceuticals revolving funds and procurement options.
- \* hire the Southern component long-term director, the area directors for the Puno and Arequipa region, and the specialist PHC advisor.
- \* establish the physical offices in Arequipa and Puno.

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- \* set-up the training and grants implementation mechanisms, structure, recording and reporting systems to be used by grantees, the regional, component offices for reporting to Lima CARE headquarters, and reporting to the USAID/Peru Mission.

These activities are expected to take place in the first six-nine months of the project implementation, particularly due to the early agreement that will be executed with CARE.

### 3. USAID/Peru

One of the first activities expected to be undertaken by USAID/Peru will be to hire the two Personal Services Contractors (PSCs) for the SHIP. As experienced AID-project managers, they will be very helpful to monitor and carry out the staffing, studies, and procurement activities needed for the Southern and Northern components of the SHIP, and over-arching project activities.

The PSCs will be expected to be resident in Lima and to travel to the project regions roughly 30% of their time. The MAXSERV and MAXSALUD PSCs will be provided office and secretarial support from a SHIP office in the Health, Population, and Nutrition Division.

As USAID project monitors for the SHIP components, the PSCs will fulfill essentially administrative and project management functions. Through CARE the MAXSERV PSC will support the development of subgrant criteria and mechanisms, prepare specifications and required USAID waivers for procurement, review technical assistance requirements, and clearance for the administrative approval of USAID vouchers. The MAXSERV PSC will also serve a liaison function for policy dialogue with regional governments, once current sanctions to the Government of Peru are lifted.

The MAXSALUD PSC will coordinate with the Controller's Officer the requisite pre-award survey of the institutional contractor for the T/TA contract prior to contract award and obligation. S/he will serve as a contract monitor to the principal T/TA contractor selected for the implementation of the northern component. That PSC will review and provide clearance for approval of USAID documentation, review specifications and required USAID waivers for procurement as needed, review and support the provision of technical assistance, and serve a liaison function for policy dialogue and counterpart contributions with regional governments.

Quarterly reports on the progress of the project will be submitted by the T/TA contractor; CARE, and the PSCs to USAID. Before the start of each calendar year, CARE, the T/TA Contractor and each PSC will submit for USAID approval an annual Work Plan detailing the objectives and activities for the upcoming year.

It is envisioned that the Mission will have substantial involvement as described above in Section B. The Mission will have some involvement, largely through the PSC and the T/TA contractor responsible for the Northern Component, for the establishment of the new PVO that will manage the PHO.

#### **4. Collaboration with Other Donors and NGOs**

- \* In the North, the corresponding T/TA contractor will seek the collaboration of the members of the Lambayeque community including the University, the RENOM, the MOH and private medical sector, including the existing NGOs that are active in particular activities such as family planning and Maternal and Child Health.
  - RENOM and its health management units, and the MOH will:
    - receive monthly information on the project intervention activities and evaluate MAXSALUD health activities compared to those of the MOH national plan and those of the Region and the Sub-Region II.
    - coordinate with MAXSALUD to carry out vaccination activities and campaigns, and other national MOH-directed health interventions (such as cholera).
  - MAXSALUD will work closely with the communities in the selected areas of intervention in the Districts of Chiclayo, Leonardo Ortiz, La Victoria and Lambayeque in:
    - mobilizing community support and participation in project/institutional activities.
    - working together on expanding and building health centers at locations where the community can contribute and participate.
    - motivating the community to take an active role in the establishment and participation in the local boards and using the community rooms in the health centers for their activities.
    - obtaining community feedback on the quality and demand for services at each health center.
  
- \* In the South, CARE will:
  - seek out and develop a familiarity with existing and NGOs and individuals, interested in participating in the PHC services provision models development and operations research activities.
  - start to develop contacts and information exchanges with the regional coordinating organizations, private and public, of PHC and related health services for the Puno and Arequipa regions.
  
- \* USAID will:
  - selectively supervise and monitor project activities, by judicious involvement and activities of the PSCs and the CA.
  - provide important linkages to other USAID projects (such as the: central projects with Mission Buy-Ins, Food for Development, Non-Project Assistance).
  - provide linkages critical to the establishment and widening of the PHC network with such agencies as IBRD, IDB and so forth.
  - seek to maximize impact in the pharmaceutical procurement, assisting in joint review and purchasing by both regional project components.

## 5. Illustrative Implementation Schedule

The following is an illustrative implementation plan for the five-year project.

### YEAR 1

#### Months 1 to 4

- \* CARE signs the Cooperative Agreement with USAID/Peru.
- \* AID identifies and contracts the 2 PSCs.
- \* AID makes baseline data collection/longitudinal surveillance systems contract.
- \* Pharmaceutical survey and options reviewed and presented for decision-making on the North and Southern components.
- \* CARE workplan completed.
- \* RFP for T/TA Contractor for the Northern component drafted by AID.

#### Months 5 to 8

##### \*In the Southern component:

- the long-term director, the area directors for the Arequipa and Puno regions, and the PHC Technical Advisor are hired.
- the physical offices in Arequipa and Puno are established.
- grants criteria have been approved by USAID/Peru.
- for the Southern component, training and grants implementation mechanisms, structure, recording and reporting systems to be used by grantees, the regional, component offices for reporting to Lima CARE headquarters, and reporting to the USAID/Peru Mission are set-up.

##### \*In the Northern Component (MAXSALUD):

- RFP for T/TA Contractor for the Northern component issued.
- the preliminary studies (legal, PHC center location, pharmaceuticals revolving funds and procurement options) are completed.
- agreements have been reached and signed (such as letters of understanding) with RENOM for ceding of specific health centers and local counterpart contribution, corresponding to the timetable of renovation/construction (see Figures 18 and 19).

#### Months 9 to 12

- \* Contract Award made by RCO for MAXSALUD component.
- \* In the Southern component
  - Pharmaceuticals procurement process started and invitation to bids let out.
  - NGO, PVO and other sector institutional survey completed, preliminary grant marketing completed and first grants signed in Puno and Arequipa.
  - training has started in PHC and management of health activities, including grants management.
- \* In the Northern component,
  - legal incorporation process for the PVO and search for the MSU team and first set of PHC personnel started.
  - management systems and other infrastructure TA contracted.
  - legal incorporation process for the PVO completed.
  - first procurement process for PHC centers and MSU started.
  - MSU team and first set of PHC personnel hired and trained by PROSALUD.
  - renovation/ construction completed of first set of PHC centers and Year 2 clinics equipped, ready for opening, local boards constituted.
  - management infrastructure and systems in final trials.

FIGURE 18  
NORTH COMPONENT

INVESTMENT INTO HEALTH CENTERS  
NETWORK (US\$)

	Y E A R S					TOTAL
	1	2	3	4	5	
<b><u>DISTRICT LEONARDO ORTIZ</u></b>						
C.S. L. Ortiz	95,250					95,250
C.S. Atusparias		171,250				171,250
C.S. San Lorenzo (new)*	<u>196,250</u>		—	—	—	<u>196,250</u>
Sub-Total	291,500	<u>171,250</u>				462,750
<b><u>DISTRICT CHICLAYO</u></b>						
C.S. Las Mercedes*	196,250					196,250
C.S. Jose Quiñones		158,250				158,250
C.S. Jose Olaya		107,250				107,250
C.S. Cerropon			<u>158,250</u>			<u>158,250</u>
Sub-Total	<u>196,250</u>	<u>265,500</u>	<u>158,250</u>			620,000
<b><u>DISTRICT LA VICTORIA</u></b>						
C.S. La Victoria I*	120,250					120,250
C.S. La Victoria II	146,250					146,250
C.S. El Bosque		<u>158,250</u>				<u>158,250</u>
Sub-Total	<u>266,500</u>	<u>158,250</u>				424,750
C.S. San Martin*		171,250				171,250
<b>T O T A L</b>	<b>754,250</b>	<b>766,250</b>	<b>158,250</b>			<b>1,678,750</b>

(\*) Ambulances and laboratory equipment

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FIGURE 19  
NORTH COMPONENT

INVESTMENT INTO HEALTH CENTERS  
(US\$)

YR.	CONSTRUCTION	RENOVATION	ORIGINAL EQUIPMENT	ADDITIONAL EQUIPMENT	AMBULANCE
<b><u>DISTRICT LEONARDO ORTIZ</u></b>					
C.S. L. Ortiz		61,250	24,000	10,000	-
C.S. Atusparias		137,250	24,000	10,000	-
C.S. San Lorenzo (new)	1	<u>137,250</u>	<u>24,000</u>	<u>10,000</u>	<u>25,000</u>
Sub-Total		137,250	72,000	30,000	25,000
<b><u>DISTRICT CHICLAYO</u></b>					
C.S. Las Mercedes (new)	1	137,250	24,000	10,000	25,000
C.S. Jose Quiñones	2		112,250	36,000	10,000
C.S. Jose Olaya	2		61,250	36,000	10,000
C.S. Cerropon	3		112,250	36,000	10,000
Sub-Total		<u>137,250</u>	285,750	132,000	40,000
<b><u>DISTRICT LA VICTORIA</u></b>					
C.S. La Victoria I	1		61,250	24,000	10,000
C.S. La Victoria II	1		112,250	24,000	10,000
C.S. El Bosque	2		112,250	36,000	10,000
Sub-Total			<u>285,750</u>	84,000	40,000
C.S. San Martín	2		112,250	24,000	10,000
TOTAL		274,500	882,250	312,000	120,000
GRAND TOTAL		1,682,750			

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**FIGURE 20**  
**NORTH COMPONENT**  
**COST OF CLINIC EQUIPMENT AND SUPPLIES**  
**(US\$)**

- Medications	1,025
- Medical equipment	700
- Medical instruments	800
- Fungibles (disposable medical supplies)	350
- Medical clothing	350
- Laboratory equipment	4,100
- Laboratory supplies	610
- Disposable supplies	425
- Printed materials	210
- Clinic furniture	<u>3,500</u>
	<b>12,070</b>

## **YEAR 2**

- \* Initial pharmaceuticals procurement process completed, training and set-up of rotating drug funds started in North and South.
- \* In the Southern component,
  - Grants activities in Puno and Arequipa fully operational, including review of grantee activities, recording and reporting by the regional offices.
  - training in PHC and management of health activities is on-going.
  - resource center established.
- \* In the Northern component,
  - Board of Directors named and had first session.
  - PHC centers for Year 2 are fully operational.
  - hiring and training of community health workers and mid-wives completed.
  - procurement process for PHC centers year 2 completed.
  - MSU team and first set of PHC personnel fully operational.
  - renovation/ construction completed of second set of PHC centers and Year 3 clinics equipped, ready for opening, local boards constituted.
  - management infrastructure and systems fully operational.
  - hiring and training of community health workers and mid-wives completed.
- \* project audit of Year 1 completed.

## **YEAR 3**

- \* project audit of Year 2 completed.
- \* Mid-term evaluation completed, and assessment/recommendation for covering the MSU deficits at the PHO in the North after PACD.
- \* Pharmaceuticals procurement continuous process well-established, covering training and replenishment of rotating drug funds in North and South.
- \* In the Southern component,
  - Grants activities in Puno and Arequipa fully operational, including review of grantee activities, recording and reporting by the regional offices. First field audits of grants completed.
  - training in PHC and management of health activities is on-going.
  - resource center in full use.
  - initial linkages of private/public sector coordination in PHC are established.
- \* In the Northern component,
  - Board of Directors fully operational.
  - PHC centers of Year 3 are fully operational.
  - procurement process for PHC centers year 3 completed.
  - MSU team and second group of PHC personnel fully operational.
  - renovation/ construction completed by period end of second set of PHC centers and Year 4 clinics equipped, ready for opening, local boards constituted by year end.
  - management infrastructure and systems in process of improvement for quality of services.
  - hiring and training of community health workers and mid-wives fully operational.
- \* Certain international long-term advisors complete contracts.

## **YEAR 4**

- \* project audit of Year 3 completed.
- \* Pharmaceuticals procurement continuous process well-established, covering training and replenishment of rotating drug funds in North and South is in process of institutionalization.

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- \* In the Southern component,
  - Grants activities in Puno and Arequipa fully operational, including review of grantee activities, recording and reporting by the regional offices. Field audits of grants routine. Preliminary experiments for selection of best models of PHC delivery start.
  - training in PHC and management of health activities is on-going.
  - resource center in full use.
  - initial linkages of private/public sector coordination in PHC are well-established and start to work together.
- \* In the Northern component,
  - Board of Directors fully operational.
  - PHC centers of Year 4 are fully operational.
  - procurement process for PHC centers year 4 completed.
  - MSU team and second of PHC personnel fully operational.
  - Special Projects Director hired.
  - initial experiments started for covering the MSU costs at the PHO in the North after PACD.
  - renovation/ construction completed of second set of PHC centers and Year 3 clinics equipped, ready for opening, local boards constituted by year end.
  - management infrastructure and systems in process of improvement and start to be used to "fine-tune" PHO performance in quality services and cost-recovery.
  - hiring and training of community health workers and mid-wives fully operational.

#### YEAR 5

- \* project audit of Year 4 completed.
- \* Pharmaceuticals procurement continuous process well-established, covering training and replenishment of rotating drug funds in North and South is well-established and institutionalized.
- \* In the Southern component,
  - Grants activities in Puno and Arequipa fully operational, including review of grantee activities, recording and reporting by the regional offices. Field audits of grants routine. Final experiments for selection of best models of PHC delivery start.
  - training in PHC and management of health activities is on-going.
  - resource center in full use and renewed in materials.
  - linkages of private/public sector coordination in PHC are well-established and work together to improve coverage of PHC.
- \* In the Northern component,
  - Board of Directors fully operational and takes over complete management of PHO.
  - All PHC centers are fully operational.
  - potential donors of additional PHC centers identified and in sign-up process.
  - all MSU team and PHC personnel fully operational.
  - Special Projects Director starts to secure projects to help cover the MSU costs at the PHO in the North.
  - renovation/ construction/new equipment in process preparing for EOP.
  - management infrastructure and systems in process of improvement and fully used to "fine-tune" PHO performance in quality services and cost-recovery.
  - hiring and training of community health workers and mid-wives fully operational.
- \* International conference on system replication for Latin American region.
- \* International and national long-term advisors complete contracts.
- \* Final project audit completed.
- \* End-of-project evaluation.
- \* Other city/region selected for replication, if warranted.

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## **D. Procurement Plan**

### **1. Pharmaceuticals**

#### **a. Commodities**

The project will purchase approximately \$500,000 worth of pharmaceuticals for use by both components in the first year based on a common short list of drugs for the north and south. This initial bulk purchase will cover funding of revolving loans for populations served of 150,000 based on calculations of about \$3.00-per person per year. The precise numbers will be refined during project implementation. Depending on project implementation requirements, a second purchase could be planned for later in the first year. The bidding process will be planned to buy twice per year reducing the warehousing problems as delivery to the Port of Paita and the Port of Matarani, for MAXSALUD and MAXSERV respectively, can be divided into two or three shipments according to project needs.

Pharmaceutical needs for a population of nearly 500,000 people will cost not less than \$750,000 on the basis of optimal purchasing, minimal wastage and rational use. Because international prices are generally well below two-thirds of the U.S. price, purchasing from non-U.S. sources would likely be desirable. A waiver would be needed in that case, justified on the basis of price. Commodity procurement will be conducted by CARE under Formal Competitive Bidding procedures, following Handbook 11, Chapter 3 rules. Short term technical assistance by a pharmaceuticals expert will be coordinated by the USAID PSCs to provide for pre-qualification of pharmaceutical suppliers.

International sources for pharmaceuticals can lower costs significantly compared to U.S. procurement. Experience with this mechanism in a number of countries has realized reductions in the cost of up to 60-80 percent of total pharmaceutical cost. Realization of these cost savings is crucial to the implementation of the rotating drug fund's operation especially in the component in the south. Income levels will not allow replacement of rotating drug funds if costs are not significantly lower than retail market values. Coverage levels are related to pharmaceutical availability and access.

It is noted that 20-30 pharmaceutical items will consume 65-75 percent of the drug budget. Emphasis should be placed on these items as high priority in all procurement and provision activities. The technical specifications for the pharmaceuticals needed are included in Annex 3. The short term pharmaceuticals technical assistance will provide TA to the PSCs, component managers and others to define the specific drug list, adapted from the attached annexes of pharmaceuticals. These include the following sections of Annex 3:

- 3.1. Therapeutic groups and sub-groups,**
- 3.2. Essential drugs for primary health care with information for the appropriate level of use in PHC system, and**
- 3.3. Essential drugs for primary health care consumption data.**

**Annex 3.3 provides the information on the therapeutic group, drug presentations and amounts to be ordered for population groups of 100,000 for use in primary health care.**

**b. Management**

**The USAID PSC under MAXSERV will be responsible to manage the procurement for both components and prepare the appropriate documentation for the CARE procurement. Program directors for each component will provide information to the PSC for his/her development of procurement documentation. The program directors are responsible for the management of pharmaceuticals in each of their respective components. Pharmaceutical logistics international and local TA will assist program directors and staff establish necessary systems, inventory controls and rotation practices. Further information regarding the responsibilities of the TA logistics advisor is included in the SOW.**

**Systems for inventory control, pharmaceutical management and accounting will be developed and strengthened. Grantee and other NGO personnel will be trained and will work closely with the TA advisors during the first year to manage the needed systems. The grantee will be primarily responsible for the pharmaceutical systems inputs directly at least for the first year. Other NGOs will participate in component wide training and pharmaceutical systems development and will be prepared to assume some responsibility for the pharmaceutical management in the second and following years.**

**The MAXSERV component will support the supply of community level "botiquines populares" with basic drugs, provide private practitioners with second level PHC supplies and clinics and tertiary care facilities with an even more ample supply for advanced PHC. TA will be provided to NGOs on costing structures to allow cost recovery and replenishment of the fund. Funds will be managed by the grantee and returned to a central location for the second and subsequent bulk purchases handled by CARE during the following years of the project. With bulk purchases being used by two very different project components, a high level of cooperation will be needed. Additional funds for expanded populations will be added during the first year as coverage and corresponding pharmaceutical supply is expanded.**

**c. Material Resources**

**Some minimum project funds will be required for procurement of manuals, materials and other related literature resources as technical resources for the development of pharmaceutical systems and management personnel. These resources will be studied and adapted to the specific needs of the project population. The international pharmaceutical TA advisor and local counterparts will identify literature and resources needed and provide a list to the PSC for purchase.**

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## **2. Fixed Assets and Supplies**

### **a. North**

**For MAXSALUD, the project component in the North of Peru, procurement includes (see Chart A):**

- **4 ambulances at a unit cost of US\$25,000 each, to be stationed at the health centers: San Lorenzo, Las Mercedes and La Victoria I in the city of Chiclayo and one at the health center San Martin in the city of Lambayeque.**
- **Health center equipment, which includes medical and laboratory equipment and supplies, clinic furniture, telephone equipment and rights, furniture for consultations offices at start-up for the general practitioner (a health center medical director), for pediatric offices and supplementary dental equipment. The dental care chair and drill equipment will be provided by the dentist.**

**The budget per health center is US\$24,000. A partial budget for the cost of clinic equipment and supplies of US\$12,070, is described in Figure 20.**

**The budget for additional equipment, which refers to furniture for the communal room at the center (for Mother's Clubs meeting and so forth), furniture and medical equipment and supplies, as the volume of the health center grows, is estimated at US\$10,000 for each health center.**

**Three 4x4 vehicles for the Management Support Unit (MSU) use, to be dedicated to field supervision of health promoters, visits and training at the health centers, transportation of medical supplies and pharmaceuticals to and from the health centers, and so forth. These vehicles are also to be used to transport personnel of the Contracting Agency located on site in Chiclayo.**

**Each vehicle is budgeted at US\$17,000. Two of these vehicles are expected to be purchased in Year 1 and one in Year 2.**

- **MSU and local Contracting Agency office equipment and furniture, electronic data processing equipment, communications rights and installations, back-up electrical equipment and security installations are budgeted at a total during LOP for US\$150,000. In year 1 US\$80,000 will be needed for set-up and settling in and US\$70,000 is expected to be required in Year 2.**

**b. South**

In the MAXSERV, the project component in the South, procurement includes:

- Two 4X4 vehicles are budgeted at US\$17,000, to be located at the Puno and Arequipa Offices respectively.
- Office furniture and equipment, electronic data processing equipment and communications facilities for the offices in Arequipa and Puno. The CARE facilities in Puno may support some of these requirements. Total budgeted amount is US\$30,000 in Year 1.

**c. Summary**

In summary, total other procurement is:

**MAXSALUD:**

- 4 ambulance	\$100,000
- health center equipment	220,000
- 3 4x4 vehicles	51,000
- Office equipment and furniture	<u>150,000</u>
	\$521,000

**MAXSERV**

- 2 4x4 vehicles	\$34,000
- Office equipment and furniture	30,000
	<u>\$64,000</u>
<b>TOTAL</b>	<b>\$585,000</b>

**E. Training Plan**

**1. North**

**a. Persons to Receive Training**

The project training program will focus on three primary groups: 1) executive and management staff of the MAXSALUD, including the Board of Directors, Executive Director, and MSU staff; 2) technical staff in the health center network; 3) community members (including [should sanctions permit] RENOM government officials, MOH officials, faculty at local universities, representatives from the Colegio Medico and the private sector, and project community-based workers such as local boards and promoters).

## **b. General Training Objectives**

The fundamental activities of the project's training activities are:

- To orient MSU and health center staff to the PHO self-financing model including: organizational philosophy and structure; rules and regulations; operating procedures and systems; personnel policies and guidelines.
- To improve and upgrade technical, managerial and supervisory skills, knowledge base, and attitudes of MSU and health center staff.
- To improve team building, communication skills, and conflict resolution.
- To select, develop and train a cadre of effective community-based health workers who will link the health center network with the community and carry out key health interventions designed to reduce maternal and infant mortality in project areas.
- To develop a collection of effective training materials, manuals, and training guides which can be used in continuing education programs to improve the knowledge, attitudes and skills of all PHO staff.

An MSU staff member qualified and experienced in training will be named as Director of the Human Resources Development Division. This person will be responsible for identifying, developing, coordinating, implementing and evaluating all training and educational programs. Anticipated training needs are identified below; other needs will be identified during project implementation.

## **c. Participant Training - Out-of-Country**

### **1) Observation Trips**

The concept of a self-financing PHC system is new to Lambayeque province. Observation and training visits to PROSALUD in Santa Cruz and the new project in La Paz/El Alto will be useful to educate people about the potential of a PHO network of health centers; provide training opportunities for key staff; and to motivate participants to be enthusiastic promoters of this concept. Two week visits of different groups of people throughout Year 1 of this project would achieve these ends.

### **a) Prior to Component Start-Up**

Those to receive training before component start-up include: key individuals from the MOH, including central and regional offices, especially at least two individuals from Sub-Region II of Lambayeque; key individuals from the medical community, within Lambayeque, including representatives from the Colegio Medico; faculty from the two universities in the Region (Universidad Nacional Pedro Ruiz Gallo and the Universidad Particular de Chiclayo); and the IPSS of Lambayeque province. (This presumes that sanctions have been lifted.)

Approximately 12 people - 6 from Lambayeque and 6 from other areas of Peru - would form a medical group that would share common experiences and help change policies within their institutions in support of this project.

**b) Within Three Months after Component Start-Up**

This will include members of the Board of Directors of MAXSALUD and the Regional government, staff of the MSU, and long-term technical advisors (approximately 12 people). In addition to educational and motivational aspects of the trip, it would also serve as a team-building exercise. These people will be responsible for the successful execution of the project and they could identify some common themes for implementation upon return to Chiclayo.

**c) In the First Year**

This will include key individuals from the initial health center staff, including medical directors, nurses, midwives, and administrative staff. This would be considered an important part of their orientation and initial training. This would also be approximately 12 people. After the network is up and running, there would be no further need for travel to Bolivia for orientation, since it could occur within the existing MAXSALUD centers for staff of new centers.

**2) Short Technical Courses - 4-6 Weeks**

This project is introducing new concepts into the region, which will require a reorientation of management staff hired by the project for the MSU. Short courses outside of the country will be important for this group in order to: provide them with additional knowledge, attitudes, and skills applicable to self-financing of primary health care (PHC); provide current reference manuals and training materials; and help staff develop in-service training programs for other PHO staff upon return to Peru. The short nature of the training will insure that staff will not be gone for long periods of time during the early critical years of the project. Short courses would be useful in the following areas:

**a) Financing of PHC services**

Focus on economic analysis of health services, including indicators of cost-efficiency and cost-effectiveness; emphasis on self-financing including price structures, cost recovery mechanisms, accounting, and management of rotating funds.

**b) MIS development for PHC**

Focus on selection of key indicators to follow in PHC services and financial/management services; selection of equipment and software; training programs for users; focus on cost-effectiveness and productivity analyses, reporting formats, and training of information users.

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**c) Logistics of essential medications**

Development of formulary; procurement mechanisms; storage facilities; inventory and quality control systems; distribution network; training of patients in effectiveness of medicines, and computerization of logistic systems.

**d) Marketing and promotion of PHC services**

Focus on market analysis including research techniques for baseline data; feasibility studies; site analysis; product identification; customer service; community promotion techniques; mass media (radio and television) and print media dissemination; evaluation and adjustment of market plans. The participants would include the individual hired for the MSU in that position, plus the Executive Director and/or the President of the Board of Directors for selected courses. It obviously will not be possible for the last two individuals to attend all 4 courses, so they would need to choose areas of need. This would mean an average two persons attending each course in the first year of project activities.

A number of prestigious institutions in the U.S. offer short, intensive courses like these including Management Sciences for Health, which was the grantee responsible for establishing and providing technical assistance to PROSALUD/Bolivia. Courses like these would help insure that the training will be oriented towards the needs of the participants, and MSH does provide these courses in Spanish.

**3) Seminars and Conferences**

As part of the dissemination component and to promote international exchange of information and experience, travel to seminars and conferences throughout the life of project should be considered an essential part of the training plan. Four weeks a year should be set aside for various individuals of the PHO to participate in these educational activities.

**d. In-Country Training**

Most of the training for this project will occur in-country, with technical assistance provided by the grantee and/or through sub-contracts with national organizations. The programs outlined below are only suggested by this initial analysis. Other opportunities will arise during implementation that cannot be anticipated here. Thus, flexibility will be needed in the training component. A major objective for the MSU will be to develop the Human Resources Division into a proactive, effective, and efficient training unit capable of design, implementation, and evaluation of a variety of courses for MAXSALUD staff as the need arises.

An important activity initially will be a "start-up" workshop that would bring together key individuals from USAID, MOH, Regional Government, UNICEF, and IPSS to discuss project goals and objectives, promote inter-institutional cooperation, and develop initial work plans. This could be done in 2-3 days very early in project year 1.

### **1) PHO Management**

Four key areas of MAXSALUD management were identified above and described in detail. These are: financial management, social marketing and promotion, MIS, and logistics and essential medicines. All PHO staff will need to know something about each of these in order to achieve self-sustainability. Each of the MSU staff attending a short intensive course out-of-country will have the responsibility to develop a shorter 2-3 day course in each technical area to be given in the first year to other MSU staff and to the first group of providers hired to staff the initial health centers. This training should occur while the centers are being remodeled and minimal services will be provided. The remodeling process should take 6 months. Given the importance of financial management and marketing with active community promotion to everything the PHO does, priority attention should be given to these technical areas in the first year. The other two can be added as time and circumstances permit.

With experience, these four courses can be shortened into one day apiece and included as part of the orientation training for newly hired staff. All PHO staff need to be oriented towards the twin objectives of efficient management to decrease costs and improve financial sustainability and promotion of services within the community to improve utilization.

### **2) PHC Service Delivery**

Although all the technical staff (doctors, nurses, auxiliaries, and technicians) will have some background and experience in delivery of PHC services, the technical design of this project will require a reorientation of staff. Services not traditionally offered in health centers and others which have changed since the formative training of many health workers, like diarrheal disease control, will be stressed within the PHO network. These include deliveries; working with alternative types of health providers such as mid-wives and community promoters; home visits; identification of high risks; and educational services to community groups. Providers will need to be trained in these to ensure a consistent quality of services throughout the network of health centers. Perceptions of quality services by the population served will be the major factor promoting continuous utilization and willingness to pay.

Short-term technical consultants are included in this project to assist the Executive Director and the Health Services Director in the design and implementation of these courses. These courses could run from several hours to several days (e.g., safe birthing practices). Given the priority assigned to the courses outlined above in PHO management, these would begin at the end of the first year and carry through into the second and third years.

### **3) Community Organization and Training**

Involvement of the community in many ways will be an essential factor in a successful marketing strategy. The community "maps" developed as a special study during phase I will be important here. Staff needs to be trained how to use the "map" to engage community groups actively in their health centers. This will include the development of a viable and involved community

board of directors for each health center; development of liaisons with women's groups, clubes de madres, church groups, and civic action groups that share similar objectives to the PHO; and identification of key individuals willing to work with the health center on a volunteer basis to promote health services.

A key component here will be the selection and training of health promoters. These would be volunteers from the groups identified above willing to spend some hours or days each week as outreach personnel within the community. Traditional Birth Attendants will also be offered the opportunity to participate. They would help identify high risk families, pregnant women, sick children, or other stressed families, and motivate them to come in for services. Promoters would also trigger home visits by nursery and auxiliary staff in cases where it would be difficult, or the patient refuses, to come in. Promoters will also serve as change agents within their respective barrios or groups providing educational services to promote behavioral change to more appropriate health practices. The efforts of the promoters will be reinforced by the mass media campaign on radio and television that will be a component of the marketing strategy. Once behaviors change to healthier patterns, utilization of health services should improve, and morbidity and mortality will decrease.

Since this activity has equal importance to health service delivery and management systems, a series of short one-day workshops will be provided to PHO staff throughout the life of project. Initial training activities will also focus on that six month period of health center remodeling to insure that community organization activities are incorporated at the start of health center development. Short-term technical assistance will be available to help with this component.

#### 4) Training of Trainers

Given the overall importance of continuing education to PHO staff, a short hands-on training-of-trainers workshop for key PHO staff should occur in the first year of the project. This would be a one-week intensive workshop with a hands-on approach to assist them in development of some of the training programs outlined above. Short-term technical assistance will also be available to help with this. The objective will be to train MSU staff in the learning by objectives methodology, including identification of desired knowledge, attitudes, and practices, development of objectives, curricula, learning materials, training guides, and evaluation. Continuing short term technical assistance to the Human Resources Division will develop this unit into an effective training unit capable of continuing these types of programs throughout the life of project.

Training-of-trainers workshops could be given at intervals throughout the project, e.g., in year 2, and again in year 4, involving a wider range of PHO staff at the health centers. This will help them develop educational and training programs for community groups.

## **5) Operations Research and Evaluation**

**This project is in reality a large operations research project. The hypothesis is that cross-subsidized PHC services can be self-sustainable. This approach dictates a strategy of continuous project monitoring through the MIS and rapid assessment through community based studies on impact of a project activities, such as the marketing plan, health services, community training programs, etc. Thus PHO staff, both managerial and technical, will need to develop techniques of rapid assessment that will allow changes in program activities to maximize impact. It would be undesirable and impractical to wait until an end-of-project evaluation to learn that some activity should have been adjusted in year 2 but was not.**

**The first year of the project will be spent in organizing the network of health centers, developing the PHO and the training activities outlined above. In the second year, once services are being offered, attention will shift to evaluating their impact. This should also include developing indicators of cost-efficiency and cost-effectiveness to help evaluate which services should continue, which need changes and what should be added. Therefore, in year 2 a series of workshops on operations research and rapid assessment techniques will be offered. Short-term technical assistance will be available to assist the health Services Director and MSU staff develop this training module, and to train them as trainers. Then, 1-2 workshops will be held for health center staff and the local community boards to train them in rapid assessment techniques.**

**This will be part of a strategy of "total quality commitment" to "customer" service, i.e, assessing what community members feel about the services offered, what impact they have had, and what adjustments need to be made to meet their needs better. If "customer" needs are met satisfactorily, and this is assessed on a periodic basis, the project stands a better chance of being self-financing. This mental and technical approach will then become part of the orientation training of all new health center staff as the project expands. Fortunately, AID-funded operations project has regional offices in Lima, and some technical assistance can be requested from that source.**

### **2. South**

#### **a. Planning and Program Development Training**

**Project training in the start-up year of MAXSERV will consist of technical assistance provided to the Program director and Sub-Directors in operational aspects of an NGO grants program. Observational visits within Peru will be made by Project and Area Directors to, for example: other operating NGO consortium projects, other successful maternal and child health and nutrition demonstration projects, family planning projects, and once established, to MAXSALUD in the north.**

### **b. Training Needs Assessment**

A training needs assessment will be conducted for the NGOs participating in the grants program, for their administrative and technical staff, and for community health promoters working with and for the NGO. Technical areas in which training needs assessment will be conducted include DDC, ARI, Immunizations, FP, Maternal Health, and Nutrition. Also, training needs will be assessed in the areas of community promotion and education, health/management information systems, epidemiological surveillance reporting, planning and evaluation, and others. Administrative personnel will be assessed for training needs in planning, budgeting, accounting, and other administrative areas. This needs assessment will serve the basis for the development of a Training of Trainers plan for a component wide training program. The TOT will build NGO personnel's institutional capability to train NGO personnel, and community promoters in the identified content areas. In addition to the technical content, the TOT will also provide them with skills for training and managing personnel and community members.

Training will most likely be needed in the following areas:

- 1) Community promotion of MCH and child survival interventions,
- 2) ARI prevention, identification and referral,
- 3) Diarrheal prevention, identification, treatment and referral,
- 4) Identification of high risk maternal conditions, including pregnancies, promotion of community level nutritional and health interventions, and referral mechanisms,
- 5) Community nutrition and health promotion activities and referral indicators and mechanisms,
- 6) Community health and nutrition monitoring techniques, systems and basic reporting systems
- 7) Planning, monitoring and evaluation techniques and systems,
- 8) Information systems, development and management,
- 9) Training technique and program and personnel management.

Since the PP team's initial assessment found relatively good promotion and supervision skills among these NGO personnel, the balance within the TOT course skills/information on technical aspects of child survival, MCH, Nutrition, etc and overall management and training skills will need to be further refined during the training needs assessment process.

### **c. Training of Trainers**

The Training of Trainers will include technical information included above as well as a strong component to improve their training, supervision and management skills.

The first year training will be carried out in two short courses of two weeks each for approximately 20 persons each in Puno and Arequipa. Technical assistance will be provided in the development of the TOT needs assessment, development of training materials and curricula, actual training and evaluation and follow-up. It is anticipated that this TOT will strengthen institutional capability of NGOs and other institutions to later carry out training courses.

Follow-up TOT training will be carried out in short courses of three days each twice yearly in the following years.

Short term Peruvian TA will be used to strengthen training capacity. The Nurses' Association (Colegio de Enfermeria) in Puno, as well as the technical unit within the University of Arequipa are two potential resources for training TA in both the technical and management aspects of PHC. It is planned that some additional TA will be contracted from other regions taking advantage of already established ties with the MOH School of Public Health, the national family planning association and other health institutions. Whenever TA is brought in from outside Puno or Arequipa, local institution TA should be paired to strengthen institutional capabilities within each region. Costs for TA provided by these local institutions are estimated to be modest.

#### **d. Health Personnel Training**

Physicians, nurses, professional midwives, nutritionists, social workers, and non-professional personnel such as auxiliary nurses and sanitary technicians will be offered courses in the six child survival and maternal health areas in order to increase their capacity to deliver priority health care services of high quality. When sanctions are lifted, MOH personnel will be able to attend these training courses in areas where PVO activities are primarily promotional. Health personnel training will include theory as well as clinical practice.

#### **e. Promoter Training**

It is anticipated that year one and two of the project will focus on strengthening of the promotion, health education, referral and other skills and knowledge of the promoters working in the NGOs receiving grants. Years three, four and five will build upon this experience and train a group of new promoters for expanded NGO programs.

Four short (three day) training courses will be scheduled for each promoter during each of the first two years of the project. During the last three years, each promoter will be trained twice in each additional year of the project to update/upgrade their skills. Additional technical assistance from Puno and Arequipa institutions such as the Colegio de Enfermeria, etc. The initial training courses and to the extent possible, most training courses will join a number of NGOs in joint training efforts. This will promote economies of scale, encourage interaction and exchange of information and experiences and promote consistent approaches of NGOs within the communities. Training courses will include some twenty promoters for each three day course.

It is expected that budgets for initial training at least for the first year, will be included in the overall component training budget and that training courses for the later years will be financed through NGOs sub-grant budgets.

#### **f. Pharmaceutical Training**

Training will be required for the pharmaceutical component. TA advisors will first assess the current pharmaceutical system and provide assistance in the development of the pharmaceutical system for this component. During these extended TA visits they will be providing hands on training of NGO management personnel working jointly with them. Site visits to appropriate systems for observation would also be appropriate.

Based on initial pharmaceutical systems design, the training needs of pharmaceutical logistics/management and clinical personnel will be established. The first training will be carried out for pharmaceutical management personnel and be managed by the USAID PSCs.

Short training courses and more advanced pharmaceutical management seminars will be funded to prepare and strengthen local NGO, private sector and other personnel to manage and utilize the project's pharmaceutical inputs. Training will also prepare CARE and NGO personnel to develop their systems to manage broader and future pharmaceutical inputs. Within the training, norms for rational use will also be discussed. Training in the first project will focus on training NGO pharmaceutical management personnel who will manage and later train operational personnel. Before the estimated arrival of project pharmaceuticals, training of clinical personnel focusing on dispensing and rational use will be done.

Training will also be developed for the clinical personnel in rational drug prescription and use. This will require the training by the clinical TA pharmaceutical advisor. It is anticipated that this training will be given in 2 courses for the first year and 2 courses for each following year for operational personnel in clinics. The pharmaceutical procurement plan provides further information on the areas to be covered.

More advanced training of clinical personnel, in pharmaceutical use is planned to upgrade knowledge and skills in rational drug use. Clinical training seminars with physicians, nurses, and others clinical personnel will be programmed in the second project year, or earlier if project pharmaceutical begin to arrive in component sites. Training will be carried out by trained experienced clinical pharmaceutical, medical and logistical specialists with experience in training. These experts will collaborate with local experts in these fields. Additional TA to incorporate the skills of training specialists will assist clinical specialists in the development of seminar and training curricula, training methodologies, materials and in developing evaluation techniques.

Training in basic pharmaceutical "logistics management" and basic "rational use" for community members responsible for the botiquines populares will be developed. Simple, short, practical training sessions will be given with ample time for feed-back and practice. This training will be done by local technical trainers with adequate pharmaceutical experience. Local NGO Training/management personnel with the assistance of Puno and Arequipa local pharmaceutical and clinical nursing personnel should develop the training content and training exercises.

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The number of one day courses for Botiquines populares promoters is calculated at approximately 12. This would include training of promoters in groups of 12-15 four times per year to ensure that the information presented in training continues to be practiced daily. Improved supervision will also contribute to improved practice of these botiquines promoters.

**g. Observation Visits**

Annual short observation visits for key project management personnel will be provided to allow interchange of ideas and models with similar projects. Interchange with other LAC NGO programs, particularly Bolivia, will be encouraged. Although the project's components are significantly different, interchange of experiences through observation visits between them will also be included as part of the training program.

**F. Technical Assistance Plan**

**1. North**

**a. Long Term**

Long term technical assistance for the northern PHO will be provided by a Senior Health Management Advisor (5 years), a Social Marketing Advisor (2 years), and a Logistics and Basic Medicines Advisor (2 years).

**1) Senior Health Management Advisor**

The Senior Health Management Advisor will function as "Chief of Party" to supervise and integrate all other long-term and short-term T.A. envisioned under this project. The scope of work of this key position includes the following:

- Work with key community leaders, Regional government of Nor Oriental de Marañon, MOH, IPSS, and university faculty to develop the PHO organization, including: establishment of Board of Directors;
- Incorporation and legalization of the PHO as a non-profit entity; development of by laws and regulations to govern the organization; development of agreements with cooperating institutions; establishment of copyrighted name.
- Assist in development of the Management Support Unit within the PHO, including: development of scopes of work and personnel qualifications for key positions; recruitment, interviewing and hiring of personnel; establishment and equipping of office for PSC, hire support staff; provide for initial orientation and on-the-job training of staff; assist in developing terms of reference for further staff training.

- Assist in development of systems in the following areas: strategic planning and budgeting; finance and accounting; personnel management and training; logistics and supply; marketing plan; community organization and promotion; medical services.
- Work with MSU staff to develop health center sites, including: location of sites and feasibility studies; design, remodeling and/or construction of health centers; management of sub-contracts; marketing and promotion plan; community involvement/establishment of local boards; recruitment, hiring and training of health center staff; development of health services.
- Assist in development of information and evaluation systems to allow continuous monitoring and adjustment of project activities consistent with the operations research focus.
- Assist in identifying needs for short-term and (possibly) additional long-term technical assistance, including scopes of work, qualification of personnel, and identification of potential consultants.
- Submit quarterly and annual progress reports to PHO Board of Directors and USAID.
- Work with MSU staff to develop and implement community organization strategies including collaboration with community groups, training of local boards, identification and training of community promoters and other community personnel.

## **2) Social Marketing Advisor**

Given the critical importance of orienting all project activities towards appropriate marketing strategies to attain financial self-sufficiency, the services of a long-term Social Marketing Advisor will be required during the first two years of this project to carry out the following scope of work:

- Train MSU staff and assist in the development of Marketing Surveys to identify potential sites, demand for services and cost structures.
- Assist in the process of community identification, including working with community groups, key individuals, public sector groups, and promotional groups.
- Assist in establishing the PHO as a "brand name" in Lambayeque province, one that is recognized as providing affordable, high quality health services. This will include involvement in developing the service mix as well as promotional strategies through print media, radio, television and direct contact education.
- Design systems to improve utilization rates; in addition to promotional activities, this would include design of "call-back" systems, establishment of Mother's Clubs and support groups, and utilization of community promoters.
- Assist in financial analyses to evaluate cost structures in relation to demand and/or expansion to new services or sites to improve demand.
- Establish effective monitoring and evaluation mechanisms relative to marketing strategies to allow rapid assessment and adjustments to rapidly changing market conditions.
- Ensure marketing activities continue through the MSU after departure of long-term adviser.

### **3) Logistics and Basic Medicines Advisor**

**A continuous stock of high quality medications and supplies is essential to perceptions of the population regarding "quality" of care. Stock outs are a constant source of frustration to both staff and patients and will decrease morale and utilization. The sale of medications through the health center will also be a revenue generator. Given the importance of all these points, a long-term advisor in this area is considered essential during the first two years of operation. The scope of work includes the following:**

- Develop the Basic Medication List and formulary with specifications for each.**
- Work with administrative personnel of the Management Support Unit (MSU) of the PHO to develop a comprehensive logistics system including the following:**
  - central warehouse established**
  - improved/upgraded pharmacies and stock rooms in health centers**
  - inventory central system**
  - quality control system**
  - security**
  - distribution**
  - effective utilization**
  - procurement procedures, with specifications and bid processes.**
- Assist in design and implementation of a computerized management information system to assist in the above.**
- Design and implementation of training programs for MSU and health center staff in Logistics and pharmaceutical distribution procedures.**
- Develop a logistics manual.**
- Assist in establishing pricing of medications sufficient to generate revenues.**
- Assist in development of promotional and health education materials to the community regarding appropriate use of medications.**
- Assist in procurement of office equipment, medical and surgical equipment, vehicles and supplies for the MSU and health centers.**
- Develop a preventive maintenance program for essential equipment.**
- Assist NGO project in Arequipa/Puno develop similar logistics system through joint technical assistance and training efforts.**

#### **b. Short Term**

**This project will require 50 person months of short-term technical assistance over a five year period. At this time we cannot anticipate the exact distribution of these person-months among the various technical areas of need, but we can determine needs in areas described below. Contractors responding to the Request for Proposal could be required to submit a plan for utilization of the short term TA over life of project. This would stimulate creative approaches and allow the Mission to better evaluate the technical merits of each proposal. Potential contractors will also be required to report a set-aside plan for sub-contracting to 8(a) firms.**

All short-term technical experts will have at least a Master's degree in their field of expertise, or a bachelor's degree with equivalent experience; minimum 5 years experience in their field (10 years in these with a bachelor's degree); minimum 2 years experience in LDCs, preferably Latin America. All consultants should have FS-3 Spanish language capability. The short-term T.A. will be included as part of the long-term T.A. contract, although sub-contracts to organizations specializing in one or more of these areas may be desirable to add technical depth and stimulate creative collaborative efforts.

#### **1) Primary Health Care Service Delivery**

This will include experts in Child Survival technologies (ORT, ARI, growth monitoring, etc.), maternal-child health, midwife and TBA training, reproductive and woman's health, safe birth technologies, and referral system development. Consultants in these areas will assist in the design, implementation, and evaluation of the health services component.

#### **2) Management Information Systems (MIS)**

The development of an automated MIS is essential to monitor project activities, do financial analyses, and complete rapid assessments of outputs. Assistance will be required in the development, installation, operation, and maintenance of the MIS, including selection of equipment, "user-friendly" software and networking system, training of personnel, security, and utilization of information generated by management. Significant work has already been done in these areas with PROSALUD, Bolivia; the contractor in MIS should be familiar with the PROSALUD MIS in order to make more efficient use of the resources available, as well as the HIS/MIS developed for the MOH/Peru. The system used must be compatible with the MOH HIS/MIS.

#### **3) Information, Education, and Communication (IEC)**

Consultants will be needed to assist the marketing plan in the development and dissemination of culturally appropriate educational and promotional materials through both print and mass media (radio and television) to educate the target population about their health problems, promote appropriate health behaviors, and improve utilization of the health services available through this project.

#### **4) Operations Research and Epidemiological Analysis**

Experts will be required in design, implementation, and analysis of operations research studies using rapid assessment technologies and in longitudinal follow-up of changes in maternal and infant morbidity and mortality. These will include baseline data collection; special studies (e.g., differences in outcome of patients attended by a midwife versus those attended by a TBA); and a continuous surveillance system using reported morbidity and mortality data. End-of-project evaluation of changes in baseline indicators will be an important measure of project success. This project will serve a population of approximately 300,000 people and a sampling frame

should be established initially that will allow re-sampling at regular intervals. This will require development of survey instruments; training of interviewers and supervisors; installation of user friendly research software such as "Epi Info" or "Survey Mate"; and training of personnel in utilization of software and analysis of results.

#### **5) Community Organization and Training**

Project success will depend on establishing linkages with community groups, development of active community boards, and identification and training of community promoters. These will all be volunteers willing to work with the project as part of its outreach component. Strategies will need to be developed for engagement of these groups, motivation and incentives for personnel involved, training, and evaluation.

#### **6) Human Resource Development**

This project includes a large number of training activities directed towards MSU and Health Center staff, community groups, and volunteers. Technical assistance will be needed in the design, implementation and evaluation of some of these training programs. This should include experts in "learning by objectives" methodology to assist in the identification of the required knowledge, attitudes, and skills of the participants; design of training materials and manuals appropriate for each level; development of teaching guides and training-of-trainers programs; evaluation of performance objectives and adjustment of training programs based on these results. Most of this assistance will be required in the first two years of the project, since a major objective will be to develop a training unit within the MSU capable of sustaining these activities on their own.

#### **7) Financial Management**

Financial Management technical assistance will examine the different aspects related to the generation of surplus per health center (e.g.: per PHC service and products), the potential for additional surplus generation through complementary services such as laboratories, so as to help improve the surplus generation of the PHC network as a whole. In addition, it will develop, install and supervise the installation and usage of a complete financial and health services management information system (in two currencies) that will produce monthly total health center and per service cost information at each center, budget control and cash management, personnel management, and financial information per MSU department and as whole institution.

### **2. South**

#### **a. Long Term**

Long term technical assistance for the Expansion of PHC Services in the South will be provided by the PHC Technical Advisor, the program director, the Arequipa Area Director, and the Puno Area Director.

**These long term advisors will initiate, administer, manage, and provide administrative, managerial and technical/content oriented technical assistance to NGOs and other institutions involved. The project and Area directors will deal more with administrative and management functions, and the PHC Technical Advisor more with health care technologies and support services.**

**b. Short Term**

**Short term technical assistance will provide periodic specialized TA identified as needed by the long term advisors and monitors. The areas of specialized TA defined are: training, materials development, pharmaceutical rational use and pharmaceutical logistics development.**

**1) Pharmaceutical**

**This includes six months of short term international TA in clinical and logistics management aspects of pharmaceutical systems development and rational use. For specifying drug purchase lists, training personnel in rational prescribing and other clinically related issues, a physician with pharmaceutical experience is needed; for the logistical, storage and transport systems development and training, a logistics specialist with drug management experience will be utilized. Project provided TA will also guide development of systems for inventory control, training of personnel, bulk purchase, development of therapeutic norms and quality control resulting in reduced wastage and improve availability to the population.**

**Ten person-months of local TA from the universities or other organizations to increase national capacity to provide this assistance in the future will be included in a partnership arrangement with international TA. Counterpart personnel in the NGOs and other institutions will be assigned to work with short term TA advisors to build local capacity for ongoing pharmaceutical management.**

**In addition, the long term pharmaceutical advisor in the other project component will have as part of his scope of work short term assistance to the CARE program. An overall Scope of Work for the pharmaceutical TA advisor has been developed and is included as Annex 4.**

**2) Training**

**Technical assistance in training will be provided to strengthen training techniques, content, and curricula. Short term national technical assistance will be provided to assist the program team for a period of 18 person months during the life of the project. The Colegio de Enfermeria and the universities can provide local TA. Technical assistance at national level or international level for advanced assistance in content, techniques and overall review from TA advisors from the school of Public Health or international firm for a period of three person months is included. Local NGO staff will be counterparts to increase institutional capabilities throughout the project.**

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### **3) Operations Research**

**As this project component deals with delivery of primary health care services by a variety of models and means, with one objective being to determine how well they work in Peru, there will be a strong need for technical assistance on operations research. The feasibility and applicability of the various project models will be studied, analyzed and documented during the component's implementation. Local research institutions will be contracted to provide technical assistance to the component and will be responsible for the needed baseline studies, operations research and periodic assessments of appropriateness of technical, institutional and sociological approaches. Twelve person months of technical assistance is programmed.**

**In addition to the local institutions, three months of (national level) Peruvian or international technical assistance has been defined as needed for conceptualization and overall definition and review of these studies during the life of the project.**

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## VII. SUMMARIES OF ANALYSES

### A. Technical Analysis

#### 1. North

Chiclayo is a city of approximately 600,000 people located on the north coast of Lima. Although it is located essentially in desert terrain, it is the largest market city north of Lima, and services a huge area known as the Region of Nor-Oriental de Marañon. This Region is composed of the Departments of Lambayeque, Cajamarca, and Amazonas. Chiclayo is a major transit point for fresh produce and other products from all of these departments. In 1990, Chiclayo was the third highest generator of tax revenues for the government of Peru after Lima and Arequipa. The province is highly urbanized with 73% of the population living in urban areas and only 17% in rural areas. There is a high dependency ratio with 42% of the population less than 15. The annual growth rate from 1985 to 1990 was 2.85, which is one of the highest in Peru. Because it is a large market city, the median income is slightly above average, and it is highly urbanized. Chiclayo was selected as a project site for this analysis after development of the SHIP PID, and clearly it has the greatest prospects for successful testing of the model of any of the areas outside of Lima.

##### a. Health Status

Available data on vital events in the Department of Lambayeque suggest that there is a significant under-registration of births and deaths (see Figure 21). Reported infant mortality is quite low and is not consistent with conditions observed, for example, in the Hospital Las Mercedes of Chiclayo. The infant mortality was estimated at 67.6 per 1000 live births in 1981 for the Lambayeque department. The current report of 29 deaths per 1000 live births is likely to be greatly underestimated. Both the birth rate and the fertility rate are fairly high, reflecting the fact that the growth rate in Lambayeque is one of the highest in Peru. Maternal mortality is also fairly significant, but undoubtedly is under-reported as well. The most common causes of maternal mortality are due to complications of pregnancy, abortions, and hemorrhage. One of the major reasons for the high rate of maternal mortality is the fact that a very high percentage of women have their deliveries at home. It is estimated that three-fourths of women in Chiclayo have their babies delivered at home using traditional birth attendants (TBA). The National Nutrition and Health Survey of 1984 showed that 70% of women delivered their baby at home.

The ENNSA also showed that, in terms of ambulatory consultations, 31% of the population went to hospitals, 27% to private clinics, 19.7% to health posts, and only 6.5% to health centers. This is the second lowest percentage of utilization of health centers in regions studied in Peru, and reflects the poor state of affairs in the health centers. Clearly, women prefer either to stay at home or go directly to a hospital, and utilization of health centers is markedly deficient.

Data from 1989 shown in Figure 22 below shows that the predominant causes of mortality in infants and young children are infectious diseases or perinatal causes. Major causes of morbidity

for the department of Lambayeque in 1990, shown in Figure 23, were infectious diseases and trauma. Figure 24 shows the coverage of MOH health services for the department of Lambayeque in 1990, indicating that coverage is very low for prenatal care (1.5 visits per pregnant woman), growth monitoring (1.2 visits per child in one year), immunizations of 1-4 year olds (10-12% of children 1-4), diarrheal diseases (10% of cases attended), acute respiratory infections (18.5% of possible ARI cases needing treatment), and family planning services (3.8% of women aged 15-49). These are problems that could be readily addressed through a strengthened network of health centers providing new primary health care and outreach.

#### **b. Government Health Services**

The Ministry of Health is responsible for 90% of the population in Chiclayo. The Instituto Peruano de Seguridad Social (IPSS) covers only 5% of the population in Lambayeque province. It is estimated that the private physicians cover approximately 3%, and the military another 2%. Therefore, the provider of health services for the vast majority of the population are Ministry of Health facilities. There is a 235 bed hospital in Chiclayo called Las Mercedes. The hospital is housed in ancient buildings that dates back to Colonial times. However the buildings have been well maintained and are clean, and the staff appeared highly motivated to care for the patients. The hospital has the four major specialties of medicine, surgery, obstetrics/gynecology and pediatrics. In addition it has a number of sub-specialties, including cardiology, orthopedics, urology, neurology, and a few others. The hospital did have an active oral rehydration unit, and only the children who needed intravenous hydration were admitted. A number of other children were there for acute respiratory infections including bronchitis and pneumonia were treated fairly aggressively with oxygen and intravenous antibiotics. Pathology is consistent with the major causes of mortality and morbidity we discussed below.

The majority of the population is served by a network of health centers which are scattered around Chiclayo at various points, usually focused on major population centers. Each health center serves a varying amount of population ranging from 10,000 in the smaller ones up to 80,000 in some of the larger ones. Visits to these health centers show that they were virtually non-functional. Although a health center may serve as many as 80,000 people, at the time we visited they were seeing less than ten patients a day for ambulatory consultations, plus another ten to fifteen child visits per day.

FIGURE 21

HEALTH INDICATORS, DEPARTMENT OF LAMBAYEQUE, 1989 <sup>1</sup>

	<u>Chiclayo (213,000)</u>	<u>Leonardo Ortiz (119,000)</u>	<u>La Victoria (84,000)</u>	<u>Lambayeque (43,000)</u>
General Mortality (Deaths/1000 pop.)	6.6	2.4	1.0	5.1
Infant Mortality (Infant Deaths/1000 live births)	29.4	27.6	17.3	18.1
Birth Rate (Births/1000 pop.)	35.9	15.0	10.4	38.4
Pregnancy Rate (No. of pregnancies/1000 women 15-49)	140.7	58.5	40.6	150.5
Maternal Mortality (No. of deaths of pregnant women/10,000 live births)	16.4	—	—	12.2
Maternal Morbidity (Complication of pregnancy/ 10,000 women age 15-49)	62.2	12.2	20.0	37.2

Taken from MOH data on registered births and deaths. There appears to be significant underregistration of both especially in Leonardo Ortiz and La Victoria, which are low income areas. Infant mortality in the 1981 census was 67.6 for Lambayeque Department.

FIGURE 22

Causes of Death - 1989

Chiclayo

<u>General</u>	<u>- 1 year</u>	<u>1 - 4 years</u>
1. Circulatory Diseases	Perinatal Causes (b)	Respiratory (c)
2. Tumors	Immaturity	Diarrhea (d)
3. Gastroenteritis/Digestive (a)	Diarrhea	Malnutrition
4. Respiratory Diseases (c)	Respiratory (c)	Trauma
5. Trauma	Congenital anomalies	Metabolic Diseases (e)

- a. This combines diarrheal disease with a code for digestive tract diseases.
- b. Presumably includes neonatal tetanus, since no other code exists for this.
- c. Pneumonia is the major cause of death in this category.
- d. There is no separate code for digestive tract diseases in this age group.
- e. There is no clear definition of what belongs in this group, and probably represents failure to thrive. This could be secondary to any of the previous causes of death, or other undetermined factors.

FIGURE 23

MORBIDITY, LAMBAYEQUE PROVINCE, 1990

MOST COMMON DISEASES SEEN AT MOH FACILITIES

<u>Diagnosis</u>	<u>% of Total Visits</u>
1. Respiratory Tract Infections	30.6
2. Genito-Urinary Tract Infection	11.6
3. Skin and Sub Cutaneous Diseases	10.6
4. Diarrhea and Gastroenteritis	9.1
5. Trauma	9.2
6. Digestive Tract Diseases	5.3
7. Nervous System Diseases	3.9
8. Other Infections and Parasites	3.2
9. Osteo Muscular Diseases	3.1
10. Circulatory Diseases	<u>2.3</u>
	86.7

12/1/90

FIGURE 24

MOH COVERAGE OF SERVICES - 1990\*

Pre-Natal Care

9,247 pregnancies attended at MOH facilities  
35,000 births expected for 1990  
26% of pregnancies attended at MOH facilities  
1.5 prenatal visits per woman (average) attended  
23% of women covered by tetanus toxoid.

Growth Monitoring

70% of children < 1 registered in growth monitoring program  
1.2 visits/child recorded in one year.

<u>Immunizations</u>	<u>&lt; 1 year</u>
OPV 3	80%
DPT 3	76%
Meases	60%
BCG	80%

Diarrheal Disease Control

	<u>&lt; 1 year</u>	<u>1 - 4 years</u>
No. of cases attended (ORT)	8,866	33,750
% estimated cases attended (average 3 cases/year/child)	10.5%	10.3%

Acute Respiratory Infection

50,000 treatments for ARI recorded for children 0-4 years, represents 18.5% of possible ARI cases needing treatment (average of 2 cases/year/child).

Family Planning Services

3.8% of women aged 15-49 received family planning services through MOH facilities, excluding those expected to be pregnant.

\* Data exist only for the entire Province of Lambayeque. They are not broken down by District.

At the time of this analysis (July 1991), a nursing strike had been in progress within the Ministry of Health at a national level for almost four months. The physicians interviewed universally blamed the nursing strike for the poor conditions of the health centers and their lack of productivity. However, most staff seemed disinterested in their work and did not put forth much effort to meet the obvious unfulfilled needs of the patients. The major exception to this were the "Serumistas". These are doctors and nurses recently graduated from their university, who were spending their one year of obligatory rural and peri-urban service. These people were universally enthusiastic, and even under difficult conditions with resource constraints they were able to be very productive. One small health center visited called Cerropon had only 71 square meters but was seeing 15 to 20 patients a day with one SERUM doctor and one SERUM nurse. Another health center visited with almost 400 square meters of space and places for three doctors was seeing less than ten patients a day. In the words of the Director of Health for Subregion 2, "The health centers have been abandoned by the government; new life needs to be breathed into these health centers and they need to be revitalized to extend any primary health care to people in need."

### c. Human Resources

#### 1) Instituto Peruano de Seguro Social

The IPSS is the best staffed and equipped health program in Peru. The physicians there have a pay scale approximately 50% higher than the Ministry of Health. Nurses and other technical staff are likewise much better paid. They also are better trained and their hospitals and health centers tend to offer a wider variety of services. However, by contrast they cover only people insured with IPSS, except for specified national programs such as cholera. Meetings with IPSS personnel within Chiclayo indicated that they probably would not play a role in the new project, because of their restrictions of their charter of organization, but they were very supportive of this project. During the cholera epidemic, IPSS hospitals and health centers attended most of the insured load of patients, since as noted above, the MOH services are severely limited. All the IPSS physicians that we talked to also, in addition, had private practices that they worked at in the evening.

#### 2) Ministry of Health

The MOH health centers were not well staffed at all. As described above, the nursing strike had taken nurses and other technical personnel out of the health centers. In addition, a number of the positions for physicians were not filled. One of the larger health centers we visited had positions for three physicians while only one was filled. One physician had died in the previous month and another position was vacant. Obviously, there is a large gap between the need for services and the human resources available through the Ministry of Health to serve them.

### **3) Universities**

There are two universities in Lambayeque that could reinforce and complement the objectives of this project. The Universidad Nacional Pedro Ruiz Gallo in the town of Lambayeque, which is approximately 20 kilometers outside of Chiclayo has training programs for both nurses and physicians. The entire curriculum for these two carriers is oriented towards primary health care. Their stated objective is to graduate physicians and nurses whose primary goal is to serve the needs of the population through primary health care services delivery. The Dean of the Medical School was very enthusiastic about this project and showed us a proposal that he and his staff had developed to set up another health center in Lambayeque. They offered to provide faculty and student gratis to work in the health center to provide training to the students as well as services to the people. The proposal was well developed and the faculty members we talked to were very sincere about their desires to participate in such a manner.

The prospect of working in this manner with the National University is very exciting since it would also serve other project objectives regarding the dissemination of information and the application of results. Students trained in a model health center in Lambayeque will then be able to carry that model to other areas of Peru once they graduate and spread out. In addition, operations research studies with faculty members and project staff would help disseminate the results at various scientific congresses and seminars throughout Peru. In fact, the federal university was hosting a national conference on teachers of primary health care in August in Lambayeque. This would be an ideal forum for presentation of project program and results.

The Universidad Particular de Chiclayo is a private university in Chiclayo that has three major health-oriented curricula - Obstetrix or midwives; nutritionists; and laboratory technician. Interviews with both the Dean and the Head of the Midwife Training Program indicated they too would like to have model health centers available in which to train students, and would provide faculty at no charge. The university graduates approximately 20 people a year in each curriculum, and freely admitted that there was not enough employment around to keep these people fully active after graduation. It does appear a pool of trained midwives available in Chiclayo for this project which would provide a well trained but relatively inexpensive professional for safe delivery practices in women's health programs. The university also indicated that there are quite a number of laboratory technicians and nutritionists who could be available to work in the project.

### **4) The Private Sector**

As mentioned above, anybody who works in either IPSS or the Ministry of Health, usually has their own private clinic or works in the largest one in the area, Clínica Chiclayo. These physicians are well organized through the Colegio Medico, and could be a potential source of opposition to the project if it is perceived that the self-financing primary health organization is competing for the same patients that they serve. Discussions with the President of the Colegio Medico and with a number of private physicians who have a history of community service indicated that they too would support the objectives of this project as long as the project is

oriented to serve those people in need that the Ministry of Health is obviously not serving at this time. There is a large problem of unemployed physicians both in Peru and in Chiclayo. The Colegio Medico indicated that there should be no problem recruiting well trained and motivated physicians for the new project. Discussions with nurses in the area indicate as well that since 1988 there had been not enough employment posts for graduating nurses from the National University, so that there is a large pool of unemployed nurses available for the project as well.

In summary, it appears that the human resources both in terms of the professional staff of the doctor, midwife and nurse level, as well as the technical staff, is very well developed in Lambayeque, and could be readily available at reasonable salary levels for this project.

## 2. South

The demographic and health situation in the areas of Puno and Arequipa are reflective of the general demographic and health statistics of Peru (see Section II. Background and Setting). In Peru as a whole, rates of population growth and disease prevalence are much higher for rural versus urban areas due to increased poverty, lack of public service systems for water and sanitation, and lack of access to health care. This situation is extending rapidly to urban areas, as rural inhabitants migrate in ever larger numbers to marginal urban areas, where housing, water supply, sanitation are often sub-adequate and employment is never assured. This migrant population is exposed to increased risk of water borne infections and respiratory diseases. In recent years, the city of Arequipa has been a major focus of migration in the south of Peru, as severe droughts in Puno and terrorist activities in the countryside have driven people out of the mountains, swelling the population of Arequipa City by 50% between 1981 and 1990. In Puno, too, there has been growth in the peri-urban slum population in recent years due to this migration.

### a. Puno

The region of Puno has a total estimated population of 997,400 and is approximately 70% rural. The infant mortality rate in the region is estimated at 115 per 1,000 live births, as compared to the national figure of 81 per 1,000. Maternal mortality rates are also estimated to be much higher than the national rate of 30 deaths per 100,000 population, although precise data are not available. Coverage of maternal health services in Puno is the lowest in Peru. Although 40% of mothers interviewed for the 1984 ENNSA survey had at least one prenatal visit in their last pregnancy, less than 10% of all deliveries were attended outside of the home in Puno. Vaccination coverage of children for DPT/polio was 76-87 percent in 1990. Data are not available for 1991 since Puno did not participate in the national campaign days but estimates for 1991 coverage are on the order of 2-3 percent.

Use of curative services in the Puno region is similarly as low as preventive services. According to the ENNSA, 34% of the population reported having symptoms of illness in the two weeks prior to the survey (similar to the national average), but only 11.3% of those sought care for that illness, as compared to 24% on a national level and 32.8% in Lima.

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In Puno, poor health indicators and poor coverage of health services are associated with the scarcity of public health service facilities and personnel. While at the national level there are 16.6 beds per thousand population, Puno has 7.7. While nationally Peru has 4.6 physicians per thousand population, Puno has 1.8. Dentists are present at a rate of 0.6 per thousand nationally while Puno has 0.2. Nurses are somewhat more evenly distributed with 3.9 per thousand nationally and 3.1 in Puno.

Health facilities in the region include 12 hospitals, 44 health centers, and 218 health posts. The total number of hospital beds are 584 with 514 of them in the public sector: data are not available on occupancy rates or length of stay. The Puno health facilities do not currently provide sufficient PHC services, health promotion and medicines to cover priority health needs. Combined with project inputs of NGO health promotion, referral and follow-up services, medicines, and training targeted to children 0-5 and women of child-bearing age should help to close the gap in needed PHC services.

#### **b. Arequipa**

In the region of Arequipa, with 965,000 inhabitants in 1990 (Peru en Numeros, 1990, Cuanto, S.A), the population is 85% urban. Due to the high level of urbanization, health indicators and health service utilization patterns are at least as good as the national averages, and are distinctly better than in predominantly rural highlands regions. Levels of access to modern sanitary systems and safe water supplies and availability of health services are better than that found in the Puno area.

Infant mortality in Arequipa is estimated at 73 per 1,000 live births, lower than the national average of 81 per 1,000. Forty-four percent of infant deaths result from perinatal causes, and another 41 percent is attributed to respiratory infections (24%) and acute diarrheal diseases (17%). Approximately half of all child deaths in the Arequipa region between one and four years of age result from dysentery and gastroenteritis, respiratory illnesses (not including tuberculosis), and nutritional deficiencies.

According to the 1984 ENNSA survey, 17 percent of the population interviewed in the Arequipa region reported illness symptoms in the previous two week period, of whom 32 percent sought care for their illness. This is above the national average of 24 percent seeking care. However, since 1984, the region and city of Arequipa have been the site of a large influx of migrants from the altiplano area, creating extensive low-income periurban slums with high levels of health needs and low coverage of health services.

Hospital discharge data from 1989 shows that over half of all MOH hospital system discharges in Arequipa are for obstetrics and maternity-related care. About 37 percent of admissions were for deliveries and an additional 17 percent were for maternity-related conditions.

Health facilities in the Arequipa region include: 4 hospitals with a total of 1,164 beds, 41 health centers with 37 beds, and 134 health posts. One bed is available for every 829 inhabitants,

whereas the national average is much lower at one bed per 2,500 inhabitants. Due in part to the national health program's emphasis on the delivery of primary health care services, a capital expenditure program expanded the number of primary health facilities (centers and posts) throughout Peru. The 41 health centers in the Arequipa region represent a 30 percent increase over the number existing in 1987; each health center is designed to serve an average of 23,500 inhabitants, approximately the national norm. Arequipa region health posts serve an average of 6,800 inhabitants, more than the national average of 5,000 per health post. There is a concentration of public facilities in metropolitan Arequipa, where forty-nine percent of health centers and 39 percent of health posts are concentrated.

Human resources are concentrated in hospitals in the Arequipa region, with 73 percent of all personnel in the region. The remaining 27 percent are assigned to health centers and health posts where the bulk of primary health care is provided. Seventy-one percent of all outpatient visits are to health centers and health posts. A typical health center is staffed with one or two general physicians, one nurse, one or two midwives, and two to four nursing auxiliaries. Typical health posts have only one sanitary technician, and only occasionally a nurse or midwife.

## **B. Institutional Analysis**

### **1. North**

Under the regionalization laws recently enacted in this country, the Health Directorate in each department reports directly to the regional government. In this case, the Director of the Ministry of Health in Subregion 2 including all of the extension of Lambayeque Department, headquartered in Chiclayo, reports to the Regional government of RENOM in Bagua. The President of the regional government of RENOM names the directors of health for the subregions. Those two individuals are the ones responsible for implementing health programs in each department. They are also the people with whom any agreement can be negotiated and they have the legal authority to do so. Interviews with President of RENOM and the Director of Health for Subregion 2 in Chiclayo, indicate enthusiastic support for this project and a willingness to develop agreements that would transfer health facilities to a private non-profit Primary Health Organization (PHO).

The Primary health resources in the Department of Lambayeque are composed of the public sector (MOH/RENOM and IPSS) and the organized private sector (NGO) and private doctor's offices, pharmacies and traditional medicine providers.

#### **a. Public Sector**

The public sector is undergoing a constant transformation due to the recent transferral of regional management responsibilities in health (and other matters) from national to regional management units. The MOH (national level) is moving to standard setting, supervision and vertical programs, supplies, and collaboration in primary health as principal activities, combined

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with management of its hospital units. The regional health management and operation (among other areas of activities) is increasingly being assumed by the newly established regional government units.

The Northern Region's regional government unit covering the departments of Lambayeque, Amazonas and Cajamarca is called Region Nor Oriental del Marañon (RENOM), and has different Secretariats in charge of several sectors of activity, one of which is health. In turn, the geographic coverage of the RENOM is subdivided into several regional units, of which Region II is in charge of the Department of Lambayeque and a few recently attached areas. The health Sub-Directorate of Region II is in charge of the PHC direct activities management and overall health supervision of the health activities (public and private) in three Unidades Territoriales (UTES): Chiclayo, Lambayeque and Ferrñafe.

Sub-Region II has the following 72 health facilities:

- 2 hospitals: one in Chiclayo (Las Mercedes with 239 beds) and one in Lambayeque (with 73 beds). Both were seriously understaffed due to strikes in 1990 and 1991.
- 40 health centers in the department of Lambayeque.
- 30 sanitary posts - 25 in the department of Lambayeque and 5 in the department of Cajamarca.

The Instituto Peruano de Seguridad Social (IPSS), a public health system parallel to that of the MOH/RENOM, is increasingly devoted to the provision of specialized hospital services to its affiliates and marginally serves walk-in traffic of non-affiliated people. Coverage in the large district of Leonardo Ortiz in the city of Chiclayo indicated that 1 out of 7 people are affiliated to the IPSS and 1 out of 4 affiliated get served annually, totalling a coverage of 3.5% of the total population. Cooperation between IPSS and MOH exists especially for epidemics, like cholera.

#### **b. Private Sector**

The principal 5 NGOs providing some health services are:

- dedicated to family planning: INNPARES and Instituto Marcelino
- oriented to rural activities, largely in water, sanitation and agriculture: Solidaridad and CICAP.
- dedicated to rural income and employment generation, food distribution and community health: ADRA-OFASA.

There are some private sector hospitals belonging to agricultural cooperatives, such as the one from Cooperativa Agricola Tuman, with 120 beds.

Also, there is the private for profit sector with doctor's offices, clinics and pharmacies. Traditional medicine and *parteras empiricas* are very well accepted in peri-urban and rural communities.

### **c. MAXSALUD/PHO relationship to the MOH and RENOM**

The PHO will maintain the following relationships with regional government:

- receive and manage the health centers ceded to the PHO by the MOH/RENOM-Region II (nine centers) in the Department of Lambayeque (8 in Chiclayo and 1 in Lambayeque cities). This includes obtaining collaboration (in funds and/or in-kind) for renovation of these centers.
- build and manage 2 health centers on land ceded by the MOH/RENOM-Region II, and obtain collaboration from RENOM for their construction where possible (in funds and/or in-kind).
- continuously report (monthly and yearly) to the Region II Sub-Directorate of Health on all preventive and curative activities the PHO carries out in its network, in the form and content required by the MIS of Region II. These reports will also satisfy the MOH national and regional reporting requirements, as interpreted by the Region II health office.
- maintain an active collaborative relationship with Region II Health Sub-Directorate, for all preventive health activities including vaccination campaigns and the like.
- obtain from Region II, the UTES and the UDES of the MOH the necessary supplies and medicines to maintain on-going vaccination activities at the PHO health center network, as part of its day-to-day preventive health activities. This included tetanus toxoid, TB treatments, ORS, well-child; and so forth.
- share with Region II personnel knowledge and technology acquired in better quality of PHC provision, including inviting their personnel to conferences, sharing printed material and so forth.

## **2. South**

### **a. CARE**

#### **1) Care International**

CARE was founded in 1945 as the Cooperative for American Remittances to Europe, with the objective of sending food packages to Europeans suffering the aftermath of World War II. Over the course of the last 45 years CARE has provided technical assistance and resources in primary health and food, community development, agriculture and natural resources, small enterprise development and emergency relief programs to more than 100 countries in Africa, Asia and Latin America. CARE International came into existence in the late 1970's with the purpose of expanding support and providing greater resources to development efforts throughout the world. CARE International is comprised of 11 member countries: CARE-Great Britain, CARE-France, CARE-Italy, CARE-Denmark, CARE-Austria, CARE-Germany, CARE-Japan, CARE-Australia, CARE-USA, CARE-Norway, and CARE-Canada. The mission of CARE International is to tap financial and technical resources available in each of the member countries. In addition, CARE-USA provides on-going technical assistance and administrative back-stopping, as needed.

## **2) CARE-Peru**

CARE began its operations in Peru immediately after the 1970 earthquake in the department of Ancash with disaster relief activities. Over the past 20 years CARE has worked in rural communities in the departments of Puno, Qosco, Ayacucho, Lima, Ancash, La Libertad, Cajamarca and Piura, and in marginal-urban communities in Puno, Lima, Callao, Chimbote, Cajamarca, Trujillo, Piura and Tumbes. Additionally, CARE is involved in reforestation activities in Junin, Apurimac and Huancavelica. Currently, CARE has six coordinating zonal offices located in the peri-urban areas of Lima, Piura and Qosco, and five regional offices in Puno, Cajamarca, Huaraz, Trujillo and Iquitos. CARE is contemplating increasing activities and presence beyond the scope of SHIP over the next year in Qosco, Chiclayo and Piura.

CARE focuses its efforts on four sectors in Peru: 1) Primary Health Care, including potable water systems, nutrition education and training, and food distribution; 2) Small Economic Activity Development, with activities in financial planning and management, technical training, credit to small business owners, and a variety of income generating projects with women and youth; 3) Agriculture and Natural Resources, where emphasis is placed on promoting environmental protection and sustainable agricultural practices; and 4) Emergency Assistance. This year, it is anticipated that 600,000 men, women and children will benefit directly from CARE-Peru's activities in Lima and five major Peruvian cities, as well as in the rural areas of ten departments throughout the country.

CARE is able to provide a significant amount of technical assistance as needed to different types of development projects through national and ex-patriate staff in Peru, as well as through CARE-USA technical expertise based in New York and throughout the Latin America region.

## **3) CARE-Peru, Puno Office**

CARE-Peru has an office in the city of Puno, which is the organization's largest regional operation, with a staff of 66 technical and administrative personnel. Eleven of the 54 technical positions are in health and nutrition, with the majority of the remaining positions devoted to agricultural activities.

The Puno office of CARE-Peru currently manages eight projects in both rural and urban areas: PRODIA (community kitchens), WAWA WASI (a child nutrition project which includes feeding, growth monitoring and training activities), Integrated Agricultural Development, ARCA (an agro-forestry and soil conservation project), Hand Pumps and Greenhouses, Women's Income-generating project, WARU WARU (agricultural development in high altitudes), and COPEME (a consortium for NGOs involved in small business development).

Given CARE's extensive and very active involvement in Puno, the organization has on-going relations and agreements with the Regional Government of Puno, regional offices of the Ministries of Health and Education, ONAA (National Office for Food Support), DGFF (National

Flora and Fauna Directorate), local and international NGO's, and community-based women's groups.

**b. NGO Programs in Puno**

There are eight major NGOs providing health-related activities in the sub-region of Puno. These include CARE, CARITAS, MSF, PLAFAMI, World Vision, ADRA/OFASA, UNCA, and the Colegio de Enfermeria. NGO programs include health/nutrition education and promotion; child and community feeding programs; child survival promotion; and provision of medications and water and sanitation activities. There are also a number of small NGOs which provide community-level organization and support on a small scale.

Medicos sin Fronteras (MSF) has provided medical care for several small areas to the north of the city of Puno, while PLAFAMI manages one Family Planning clinic in this same area. The other NGOs are considered to have the necessary base on which to build PHC services. NGOs currently do not provide clinical services.

Some of the current NGO health services consist of child feeding and health promotion programs, including the work of women in mothers clubs and community kitchens. NGOs do not have a referral system to the MOH health posts and centers. Effective referral services could help assure that children 0-6 receive PHC services (e.g. immunizations, treatment for ARI and diarrhea), including the treatment of women with prenatal and postnatal needs, and family planning needs. The NGOs generally do not provide follow-up assistance for women and children. Follow-up is necessary to ensure that treatment regimes are implemented and medications are taken when they return from health facilities.

CARE, CARITAS and others provide feeding centers for children 3-6 years of age which usually include a balanced mid-day meal and nutrition education for parents. The activities of these centers are coordinated to some extent with the work of nearby MOH health centers for vaccinations and growth monitoring.

Reported coverage of NGO health-related programs varies; in Puno it is estimated to be about 10% of children 0 to 6 years of age and approximately 20% of women in mothers clubs (for training activities). Services are provided on a sporadic basis to the communities, with some communities covered by Nutrition Centers and CS promotion, while others receive assistance in water supply and sanitation services. Following are descriptions of the NGO's most likely to receive assistance through SHIP sub-grants:

**Medicos Sin Fronteras (MSF)** - This French organization provides medical care for several small areas to the north of the city of Puno, providing direct clinical services working through MOH health facilities. MSF provides medicines on a limited basis through subsidizing community *botiquines*. For MSF and a few other NGOs providing medicines, the commodities are not purchased in bulk nor are there available lists of basic drugs. This method does not allow for significant cost recovery given the income levels of participants.

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**PLAFAMI** - This PVO manages a successful clinic in the northern part of the city of Puno which is funded under the USAID/Peru PVO Family Planning Project for provision of family planning services. The project covers 30% of a target population of 7,600 women of fertile age. Approximately 20 women are attended each day at the clinic, paying between S/0.05 and 0.50 for each service. Staff includes one physician, one nurse, one midwife, one auxiliary nurse, an administrator and an accountant. PLAFAMI coordinates activities with the MOH, and has collaborated with other public and private institutions. Operational plans for PLAFAMI are done in Puno, but monitoring and evaluation of their activities are conducted by personnel from Lima.

**CARE/Peru** - Activities of the CARE office in Puno include programs for supplementary feeding, basic sanitation, and health prevention/ promotion. Approximately 625 community kitchens serve as feeding centers for children 0 to 6 years of age which provide a balanced mid-day meal and nutrition education for parents. The activities of these centers are coordinated to some extent with the work of nearby MOH health centers for vaccinations and growth monitoring. CARE's 100 nutrition centers cover 3,130 children 0 to 6 years old under the WAWA WASI program. CARE's *comedores* program covers 300 communities -- with approximately 30 mother's club members each providing assistance to ten communities (PRODIA program). The training, management and monitoring function of personnel under CARE supplementary feeding programs is strong. CARE has a relatively new Child Stimulation/Survival program for children 0 to 3 years of age, which use community volunteer health animators to visit households and provide health education and child stimulation. The CS program covers approximately 3,000 children ages 0 to 3 years. In addition to USAID, CARE in Puno receives financial support from Britain, Germany, and CARE/International.

**CARITAS** - Similar to CARE, CARITAS sponsors feeding centers for children 3 to 6 years of age which are also coordinated to some extent with the work of the MOH in regards to immunizations and growth monitoring. For example, CARITAS mothers' club activities include child weighing. CARITAS states coverage of more than 900 nutrition centers in 25 parishes. CARITAS has recently started a Child Survival program covering 1,667 children under age three years. Their Food for Work programs, designed to cover 48 communities, include health promotion activities. CARITAS also has several small posts in parishes, and does some work to develop and support small pharmacies and community *botiquines*.

For both CARE and CARITAS, some of the CS programs are connected to the Nutrition Centers. They have also begun to connect the feeding centers to other programs, for example, providing water and sanitation inputs to the centers for a more integrated package of services. CARE plans to support the construction of wells that will benefit 4,200 families in the Puno area, including the provision of tools, spare parts, and training in maintenance for the wells.

**Union Campesina Aymara (UNCA)** - This organization is a federation of 250 campesino communities in the southern half of the Puno region. UNCA has organized 200 women's clubs in Aymara-speaking communities of approximately 200 families each. Primary objectives of these clubs are promotion of production and provision of social services. UNCA has established

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community *botiquines* with UNICEF-provided iron and vitamins, as well as medicines provided by Caritas. At the present, UNCA is unable to provide clinical services with available resources. However, they have a written proposal to establish a primary health care system that would provide basic preventive and curative services to the maternal and child population within their purview, and are clearly interested in the implementation arrangements of MAXSERV.

The Nursing Council (Colegio de Enfermeria) - This is a professional organization for nurses which has provided assistance to NGOs with baseline data collection for program development. The Council is a non-profit association with members skilled in program design, administration, training and evaluation for small PHC projects. However, the physical plant and equipment of the Council are limited.

### c. NGO Programs in Arequipa

Population coverage by NGOs, with a mix of health promotion and health related activities such as water and sanitation, is estimated to be 70,000 people: 28 percent of children under age five, and 35 percent of women in the 15-45 age group. Health information systems are not sufficient to report on the actual numbers, or the types and quality of services. NGOs work mainly in marginal peri-urban areas surrounding the city of Arequipa. NGO activities in rural areas are smaller and less coordinated than those in the urban area. UNICEF has developed an NGO activities/services map which is a first step to reallocation of NGO programs for more coordinated coverage. Management and administration systems of the NGOs are generally good. NGOs recognize that growth and increased complexity of programs will require strengthening of their administrative systems. The Arequipa regional government's Secretariat of Social Affairs is in the first phase of establishing a Regional Health Council as an umbrella organization for private and public sector cooperation in multisectoral efforts (production, environmental improvements, sanitation, health service delivery and social services) for improved health. Following are descriptions of selected NGOs which could receive sub-grants under the SHIP:

Servicios Medicos Asociados - This is a private association founded in 1988 by 20 independent physicians who have plans to build and operate a private (for profit) health services facility which will provide low cost health services. The clinic will function by means of payment for services with a progressive fee structure in addition to reimbursement from private insurance companies. It is hoped that internationally-funded clinical research projects will complement financing of the facility. Each association member has made an initial cash investment to buy land, contract an architect, and do a feasibility study, but the project is stalled due to the economic crisis. Association members hope to use the facility to provide preventive-promotional services to low-income families in urban and rural areas of Arequipa with the assistance of newly-graduated physicians. Most of the 20 members are currently employed by the Ministry of Health and are faculty at the National University of San Agustín in Arequipa.

Health Center "Jean Frechet" - Located in Bellapampa to the immediate southwest of Arequipa, this privately-owned health center is financed by the Franco-Peruvian Association which has its headquarters in Grenoble, France, and an office in Arequipa city.

The health center is a new facility serving a population of about 2000 which began providing services on a part-time basis in July of 1990 and on a full-time basis in Jan. of 1991. While the French provide financing for monthly salaries, equipment and medicines, operational costs are covered by fee-for-services (I/m .15 per consult). Use of preventive services are stimulated by providing free-of-charge all well-baby, well-child, and prenatal care visits. Approximately 17-18 patients are attended per day by a staff which includes one physician, three nurses, one professional midwife, one pharmacist, and one cleaning person, in addition to the director, Dr. Hugo Torres Carrion. The director is an extremely dynamic person who has a wealth of experience in the public sector. For a number of years he was assistant director of the Health Region of Arequipa. He is also a faculty member of the San Agustin School of Medicine, and gives classes to medical students in the small auditorium of the "Jean Frechet" Health Center.

INPPARES - This is the only NGO which actively offers family planning services in Arequipa. Other services offered include general gynecological services, prenatal care, general medicine services, and recently pediatric services. They are dependent on Lima for salaries, equipment, and materials, but are now self-sufficient for all other operational costs through fee-for-service, which runs about I/m 1.5 for a copper-T insertion or a PAP test. The central clinic, established in 1980, is staffed by two physicians, one nurse, and three auxiliary nurses. As community extension, two additional INPPARES physicians staff 20 health posts in marginal urban areas, each post attending patients one day every two weeks. Eighty-two promoters and eight supervisors conduct community-based distribution and referral. Patient volume is 20 patients per day per physician, which more than covers the 17,000 women of fertile age at reproductive risk programmed for services this year. The Arequipa office has collaborated with the UDES on developing norms and procedures for family planning, and has provided training for MOH personnel on IE&C in family planning, family planning skills for professional midwives, and AIDS. They also maintain a reference library which is open to the public. INPPARES has also provided technical assistance to local NGO's such as CEDER (Centro de Estudio para el Desarrollo Regional), OFASA, and the National University of San Agustin. INPPARES Director, Dra. Eliana Medina de Cervantes is a dynamic leader who last year attended a USAID-sponsored course in Strategic Management for NGOs at the SIT in Vermont.

Health Post - San Jose de Tiabaya - This private sector health post appears to be extremely well organized and effective in the community it serves. There are 10,000 patient medical records on file. The post is financed and operated by the parish church, and received 90% of its funding from the Arequipa Catholic Archdiocese which allows the post to provide a wide range of services and distribute medicine at virtually no cost to patients. A very dynamic local priest, Padre Carlos Echaverry Oscar, is director of the health post, assisted by a religious sister who is a nurse, trained in Spain, who works full time at the post. Other staff is contracted on a part-time basis, including two physicians, one dentist, one auxiliary nurse, and medical students from the National University of San Agustin in Arequipa. Their range of preventive-promotional services is impressive. The Padre has organized three community kitchens serving approximately 1000 adults per day charging only I/m .04 per meal, and a child feeding center that feeds 400 children per day at I/m .01 per meal. A day care center takes care of 120

children under age six per day at a cost to mothers of I/m .12 per week. Trimestral programs are developed to detect and treat malnourished children and to detect tuberculosis. Sister Maria Luisa supervises 32 health promoters (male and female teams) to make home visits. Each month at the time of distributing CARITAS-donated foods, mothers are given an educational talk on topics such as cholera, home hygiene, ARI, DDC, pregnancy, malnutrition, and tetanus. A health center of the Ministry of Health (Centro de Salud de Tiabaya) is located only 2-3 kilometers from this post, but there is no real collaboration between the two with the exception of participation in immunization campaigns. People too poor to pay the Ministry of Health fee-for-service came to her health post for free care. Approximately 30 patients per day are attended at the facility. Dental services are provided three times per week.

Centro Multidisciplinario de Proyeccion Social (CEMPOS) - The private university, Universidad Catolica de Santa Maria, has established this administratively independent organization with the multiple purpose of providing service to the community, providing a field site for practical learning experiences in community health for students in the schools of nursing, midwifery, dentistry, pharmacy, law, accounting, and economics. CEMPOS works mainly in marginal urban areas of the northern cone of Arequipa (Ciudad de Dios) and in Hunter. Faculty and students provide clinical services in these areas using, in most cases, the physical facilities of the Ministry of Health and IPSS (health posts and health centers).

Working in Ministry facilities alongside Ministry personnel has some limitations vis a vis crowding and competition for who gets to attend the patient. The University owns one health center used exclusively as a teaching site which is not affiliated with the Ministry of Health. In this facility, CEMPOS is most able to carry out services in a multi-disciplinary manner. They would like to expand the number of clinical field sites, but have no financing to build more of their own. Current program costs are covered by funding from the University (from tuition fees), and a small amount of recuperated funds from charging patients a fee-for-service equivalent to that charged by Ministry of Health facilities. They would like to expand health activities to include promotion of family and community gardens, animal husbandry, and artisan activities for income generation.

Personnel involved in CEMPOS include a director and six faculty members, each of whom supervises an average of nine students. CEMPOS claims to have very good relations with the Ministry of Health (UDES) since they are helping to expand service coverage in underserved areas, and hope to link in the future with the Regional Secretariat of Social Affairs. The Catholic University School of Midwifery has collaborated with the Ministry of Health by, for example, providing several courses to Ministry of Health professional personnel in family planning, pregnancy, and neonatology.

AMAUTA - This NGO works in mainly urban communities in the areas of health, income generation training for women, and legal assistance to mining workers. They have been working in health activities for four years, with principal sources of funding from Sweden, Holland, France, Germany, and Canada. Major activities in health involve training of community motivators for preventive and promotional activities, and a curative health component in their

maternal-child health program, which is financed by the sale of medicines. They have five physicians who provide services, plus 78 mobilizers and 8 promoters who have been trained by AMAUTA. AMAUTA is now signing an agreement with the Ministry of Health (UDES) with which it enjoys good relations. Their activities complement MOH vaccination and MCH promotion, water and sanitation activities. AMAUTA also helps fund MOH/NGO joint conferences and meetings for technical and coordinating purposes. The organization also collaborates with UNICEF, ASDE (Accion Social y Desarrollo), local municipalities, universities, and the Ministry of Industry.

Centro de Estudios Cristianos y Capacitacion Popular (CECYCAP)- This is a relatively small organization which has a feeding program, provides training and supervision for 18 health promoters, and provides some curative services with a staff of one physician, one nurse, and one social worker. Population coverage for their health program is 2700 persons. Their community kitchen serves 90 persons. Some funding is received from Holland and Belgium, and services are provided free of charge. The communities in which they work has some overlap with the activities of AMAUTA. This organization was a member of the AID/Peru-sponsored Puentes de Salud project from 1986-88.

AUPA - This NGO is a large community development organization working in approximate 360 urban slum areas and covers some 200,000 people. Programs include work with adolescent development and small business, urban sanitation, water protection and housing. AUPA is capable of leveraging funds for their urban projects, and have plans for expansion into rural areas.

### C. Economic Analysis

#### 1. Objectives and Methods for the Economic Analysis of SHIP

The objectives for this economic analysis are to:

- Identify and describe the costs and benefits of the design of the Strengthening Health Institutions Project (SHIP)
- Analyze the cost-effectiveness of the project's components
- Estimate SHIP's recurrent costs and impact on the Government of Peru's (GOP) health budget
- Analyze whether the proposed costs of the health services provided are affordable by the target population

Cost-benefit analysis (CBA) is only partially applicable to social sector projects, such as SHIP. Many project benefits, such as morbidity and mortality averted, cannot be quantified in monetary terms. Thus, one cannot compare the complete monetary value of benefits to costs to determine whether the project earns more than it costs, nor can one calculate an internal rate of return. The decision whether to pursue the project on CBA grounds therefore must be done on a subjective appreciation of the value of benefits relative to costs. Hence, this analysis will identify and describe the benefits of the project.

Cost-effectiveness analysis (CEA), on the other hand, is applicable to social sector projects. CEA allows the comparison of various methods of achieving given objectives to determine which method does so at the lowest cost. This analysis uses CEA to analyze the overall design of the project, its components, and the primary health care (PHC) services it will offer.

This analysis examines the affordability and sustainability of the project from three perspectives. The first perspective is to estimate the impact of the project on the budget of the Ministry of Health (MOH). Next, the analysis explores the conditions under which the self-financing approach proposed by the project appears to be successful, including the strategy of cross subsidization. Lastly, the analysis studies the affordability of the services provided and charged for by the target populations.

The analysis concludes by summarizing its results and recommending the types of analyses that should be performed as a part of the project to ensure that it realizes its aims. A summary is presented in this section; the complete economic analysis may be found in Annex 5.

## **2. Cost-Effectiveness Analysis**

### **a. Project versus Alternative Designs**

Five alternatives were considered before choosing the present design (SHIP). Two were rejected on the basis of cost, one on the basis of diffuse impact, and the remaining two on the basis of high risk of failure.

The alternatives considered were:

- Direct Operational Program Grants (OPGs) to PVOs (DOP)
- National PVO Secretariat (NPS)
- Information-Based Quality Management (IBQM)
- Support to IPSS Regionalization (SIR)
- Model Hospital and PHC System for Pueblos Jovenes in Lima (MHPS)

DOP and NPS were found to be more costly to achieve similar outcomes to SHIP's Component 2. DOP would involve providing grants directly from AID to PVOs to develop and operate PHC delivery systems. NPS would involve setting up a national secretariat for granting support to PVOs for the same purpose, following the lines of the PROCOSI Project in Bolivia. Based on rough estimates of relative costs, the mechanism chosen was found to be less costly. SHIP will employ CARE to manage the overall project, including the studies component and the awarding of sub-grants to PVOs in the South. An RFP will be issued for a contract to conduct the Component 1 activities in the North. CARE is experienced at project management and at awarding sub-grants and would have no learning curve to climb concerning this aspect of the project, as would either direct USAID management or a newly-created secretariat.

The IBQM design was based on the positive experience with the CYMOS project in Peru. However, the management improvements expected to result from such a design only would have

indirect impact on the project goal of improving health status of the Peruvian population, as compared to the SHIP design. SHIP directly supports implementation of new and improved service delivery. In addition, IBQM would have required working directly with the MOH. This is not permitted at present because of USG debt-related sanctions. It would have been problematic to work with the MOH in any case, given its current chaotic state.

The SIR and MHPS designs were found to be too risky to pursue. SIR would have supported at a regional level the resuscitation of the collapsed 1985-86 initiative to integrate IPSS and MOH services. In this initiative the IPSS would have specialized in hospitals and the MOH would have managed all other services. Moreover, IPSS has been significantly weakened in recent times by strikes and large unpaid contributions (particularly by the GOP). The regionalization policy is relatively new and the IPSS-MOH integration policy is unsettled. This combination of factors made the SIR design too risky to pursue.

The MHPS design would have created a model hospital and PHC referral and counter-referral system in the lower- to middle-income areas of the *pueblos jóvenes* of Lima. The model would have been intended to demonstrate the viability and success of such an approach. Security problems in these areas, the high political profile such an activity would have in Lima, and the similarity of the approach to one being pursued by JICA (Japanese International Cooperation Agency), made the MHPS design too risky, as well.

The SHIP design was chosen as the lowest cost of the approaches with acceptable levels of risk. It was chosen over the IBQM because of its direct link to improving health status.

b. Component 1 (North)

Component 1 involves the creation of a private network of PHC facilities (PHO). The cost-effectiveness of this component may be examined by comparing its expected costs of delivering services with costs of existing public and private delivery systems. The annual operating cost of services from the PHO is estimated to be US\$12.64 per capita (see the Financial Analysis for more details on PHO costs). The package of services offered includes preventive and promotive services in addition to curative. This package exceeds those primary-care services offered by either the private or public sectors, especially in terms of preventive and promotive services. Thus, if the cost of PHO services is equal to or lower than those of private or public providers, PHO would be judged more cost-effective.

In 1984 the MOH spent US\$200 million to cover the health services of five million people, or US\$40 per capita (Zschock, D. 1984). In 1990, MOH spending had fallen to approximately US\$154 million to serve about 26 percent of the population or 5.7 million people (Development Group Inc., 1991). This amounts to per capita spending of US\$27. This spending covers

primary, secondary, and tertiary care. However, there currently is no break-out of overall spending that isolates spending on primary care<sup>1</sup>.

The lower per capita spending in 1990 has been achieved at a cost in terms of the quality of health services offered, especially at the primary level and in the availability of pharmaceuticals and medical supplies. A study conducted in Arequipa (Coburn, 1991) found that many patients using MOH and IPSS (Peruvian Social Security Institute) facilities have to buy for themselves drugs and supplies required for their treatment. Hence, the comparison of costs of providing services through the PHO would appear more appropriate with 1984 per capita spending. The projected cost of PHO services is equal to 30 percent of 1984 MOH per capita spending.

In the case of the IPSS, its cost of providing primary, secondary, and tertiary services per capita was estimated to be US\$69 in 1984 (Zschock, 1984) and US\$67 for the period 1984-1988 (Consultoria Internacional de Beneficios, S.A., "La Seguridad Social en el Peru: Realidad y Propuesta", Lima, Julio 1990). IPSS services are generally believed to be of somewhat higher quality than MOH services. However, the study conducted in Arequipa (Coburn, 1991) found consumer satisfaction lowest for IPSS services compared to MOH and private providers. Thus, the same cost effectiveness conclusion may be drawn for PHO versus IPSS as for MOH.

In 1984 the expenditure per capita of private insurance for health services was estimated to be US\$50 (Zschock, 1984). No more-recent estimates of the cost of private services are available. Private insurance allows the insured to use private-sector providers of both hospital and primary services. Once again, these providers rarely provide preventive and promotive services. Hence, PHO appears to compare well against private costs.

One additional question that may be asked about the cost-effectiveness of the PHO model is why the private sector does not already provide a similar package of services at a similar price. The answer would seem to be that the package, including its cross-subsidies to ensure financial sustainability, is not well understood by the private sector. A possible outcome of the PHO model may be imitation by the private sector. This would be a positive outcome from the project, indicating contribution to the sub-goal of contributing to the dialogue in Peru regarding options for health care financing.

On this basis, PHO provision of a high-quality complete PHC package for US\$12.64 per capita would appear to compare favorably with all alternatives.

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<sup>1</sup>A team from the Health and Nutrition Sustainability Project was working on this kind of break-out simultaneously with the SHIP Project Paper team.

**c. Component 2 (South)**

Component 2 involves development and testing of PHC provision and promotion through grants to PVOs, local institutions, and community groups in the regions of Arequipa and Puno. PVOs will be employed to deliver and promote PHC with the expectation that they will do so more effectively and efficiently than public-sector providers. The demonstration that this is so could pave the way for greater public-private sector collaboration and improved public-sector performance in the project areas and nationwide. Thus an important aspect of the testing part of this component is the examination of the cost-effectiveness of the various approaches. The implementation of Component 2, through an overall grant to CARE, from which sub-grants will be made, is considered to be a low-cost method (as discussed above in the analysis of the overall design).

The sub-grantees' activities will improve access to PHC services and their utilization. The criteria for award of sub-grants include plans for sustainability and low-cost operation. Once awards of sub-grants have been made, the approaches used will be monitored and evaluated to determine their effectiveness, costs, and sustainability. These kinds of data are essential to ensure that there is learning from this Component. Cost and effectiveness data will be combined to compare approaches. Sustainability data will be used to examine to what degree long-term financing for the approaches is assured. Technical assistance will be made available to assist the grantees in finding low-cost ways to provide services and to recover costs and secure other sources of funding to sustain activities, including support from regional governments. CARE has particular skill and experience in the latter. Component 3 will assist in the sharing of lessons learned among overall project activities. This will assist the grantees in being able to apply low-cost, sustainable approaches.

The method of implementation of Component 2, a grant to CARE, is a low-cost mode. The activities of the sub-grantees are intended to be cost-effective and sustainable and will be monitored and evaluated to measure and learn from their experience, in these regards. This appears to be a cost-effective approach.

**c. Component 3 (Studies)**

This component is to conduct the studies of the effectiveness, costs, and sustainability of the initiatives taken in Components 1 and 2 and disseminate the results. Therefore, it is critical to the cost-effectiveness of the project as a whole. The impact of the project will be multiplied by the use of lessons learned from its initiatives to inform other entities supported by the project, the public and private sectors within the project areas, and policy makers and providers of health services on a national scale. Operations research studies are planned to examine the effectiveness of the various approaches to deliver, promote, manage, and finance PHC services. Component 3 will generate and disseminate information from baseline and follow-up data collection efforts and regularly-generated monitoring data, as well.

#### **d. Component 4 (Project Monitoring)**

The monitoring of the project will be handled by two personal services contractors (PSCs) based in Lima. One PSC will be responsible for each of the components. This is considered to be the lowest cost method for monitoring a project of this type.

### **3. Recurrent Costs and Budgetary Impact**

#### **a. Impact on MOH Budget**

This section examines the impact of project activities on the Ministry of Health budget to estimate to what extent SHIP will contribute to relief of the GOP fiscal problem. It concludes that there will be significant theoretical savings to the MOH in both operating and capital spending. The savings are considered theoretical because the MOH's spending in the project areas has been limited. Thus, the MOH spending actually replaced will be less than the spending by the project or by project beneficiaries through payment of user fees. The actual savings for the MOH that result will provide the opportunity for reallocations to improve the effectiveness and coverage of MOH services. The source of detailed cost information used in this section is the Financial Analysis of this Project Paper.

#### **Investment and Operational Budget Savings**

The MOH's budget has been shrinking in real terms during Peru's period of economic crisis. Nonetheless its share of the total government budget has been rising, demonstrating some commitment by the GOP to health. The 1990 total MOH budget of US\$154 million was only 77 percent of the real value of the 1984 health budget. On a per capita basis, the real MOH budget in 1990 had fallen to about 68 percent of its 1984 level. The shrinking budget has been accommodated by the MOH by cutting non-personnel spending. This has hampered the effectiveness and efficiency of health personnel because they lack drugs and supplies, while equipment and facilities are ill-maintained.

Hence, the provision of services by the PHO in Chiclayo-Lambayeque and the sub-grantees in Arequipa and Puno will relieve some pressure on the MOH budget. PHO will operate nine MOH facilities, directly reducing the necessity for MOH support of operating costs. Given the low current availability of drugs and supplies in the facilities, the actual savings to the MOH may be less than the costs of PHO, but PHO costs represent the costs of providing a complete package of primary health care services. Also, PHO is expected to receive supplies of vaccines and contraceptives from the MOH. Thus, the estimated operating costs of PHO only are a rough upper estimate of MOH recurrent savings.

The operating expenditures by PHO (Component 1) over the life of the project are expected to be US\$6.3 million. By year 5, they will amount to US\$2.34 million annually. Over the life of the project PHO is estimated to provide 462,000 person years of coverage for PHC services, and

to continue to cover the PHC needs of 165,000 people each year, beginning with year 5 of the project.

Under Component 2, approximately US\$2.3 million will be spent by the PVO grantees on primary service delivery over the life of the project (US\$450,000 on pharmaceuticals, US\$236,000 on short-term training, and approximately 70 percent of the sub-grant funds, or US\$1,575,000). Given the weak, but existing MOH coverage in the areas of Component 2 (11 percent in Puno and 32 percent in Arequipa) and the experimental nature of the programs to be pursued by the sub-grantees, it is reasonable to assume that population coverage attained will be less than by PHO. Therefore, if the sub-grantees reach 50 percent of the population not covered by the MOH, they would cover about 22,000 people in Puno and 68,000 in Arequipa by the end of the project.

Thus, MOH budgetary savings may be evaluated against MOH national operating and capital expenditures. The MOH will have theoretical savings of the cost of providing primary care services:

- During the project to an average of 92,400 people per year in Chiclayo-Lambayeque at a cost of US\$12.64 per capita (PHO cost per person served) or US\$1.17 million per year plus an average of \$315,000 per year in service delivery in Puno and Arequipa. This amounts to 1.0 percent of the 1990 MOH budget.
- Following the project to 165,000 people in Chiclayo-Lambayeque, 22,000 in Puno, and 68,000 in Arequipa per year or a savings of US\$3.2 million per year (using PHO cost). This amounts to 2.1 percent of the 1990 MOH budget.

### **Reallocation Possibilities**

The possibilities for reallocation of MOH spending to improve efficiency and coverage (equity of access) as a result of SHIP activities are great. The saved operating expenditures may be used to purchase drugs and supplies to make existing facilities and staff more effective. The saved capital expenditures may be used for renovation or replacement of broken down equipment for existing facilities or for construction of new facilities to provide access to currently un-served populations.

#### **b. Self-Financing Approach**

The self-financing approach taken in both Components 1 and 2 is expected to enhance the probability of sustainability of project benefits through ensured financing after PACD. Self-financing is a specific aim of the PHO system to be used in Component 1 (See Financial Analysis for a complete explanation). Plans for financial sustainability of activities are one of the criteria for awarding sub-grants under Component 2. Further, technical assistance in self-financing and fund raising will be made available to sub-grantees under Component 2. The studies conducted as a part of Component 3 will include examination of cost-recovery

performance, costs of providing services, and cost-effectiveness of promotion activities. The Component 3 dissemination activities will ensure widespread information about the lessons learned about how to attain maximum financial self-sufficiency.

### **c. Cross Subsidies**

An extensive set of cross subsidies is planned for the PHO system of Component 1. These cross subsidies are designed to:

- Ensure system-wide financial sustainability, while permitting delivery of services to all income groups in the population
- Promote the use of preventive services, especially by women and children
- Provide services to low-income and sparsely populated areas

This multiple cross-subsidy approach has been successful in the PROSALUD project in Santa Cruz, Bolivia. The financial feasibility analyses (see Financial Analysis section) shows that it has a good chance of success in the Chiclayo-Lambayeque area of Component 1. Thus, a model for such cross-subsidization is expected to result from SHIP that may be replicable within the MOH or IPSS systems or by the private sector.

The expected fee levels come from the Financial Analysis section of this Project Paper. Although the fees were estimated to cover the costs and cross subsidies of the PHO system of Component 1, they serve as a proxy for the fees that might be charged by the sub-grantees offering PHC services in Component 2 areas.

The household income, expenditure, and utilization of services data come from a rapid survey of 100 households in each of the SHIP areas, Chiclayo-Lambayeque, Puno, and Arequipa. The survey was conducted in four days, simultaneously in all three areas, by the Peruvian research firm, Cuanto, S.A. Households were selected at random from urban and peri-urban neighborhoods in three strata, 20 percent in higher-income areas, 40 percent in middle-income areas, and 40 percent in lower-income areas. This distribution of incomes is expected to parallel the income groups served by the activities supported by SHIP. Information was gathered on general household characteristics, number of adult and child members, and income from all sources and utilization and spending on health services for the month of July 1991.

The prices proposed for the PHO system of SHIP would lead to lower household spending on primary health services than at present. However, current spending on primary care that exceeds 5 percent of income would seem to be difficult to sustain. Thus, it may be necessary to cross subsidize much of the lower quartile of the income distribution in Puno and Lambayeque, even given that the prices proposed are lower than what is currently spent. The data presented clearly indicate that people in the SHIP areas are willing to pay for health services, particularly drugs. It is expected that SHIP will offer better quality and more comprehensive services than what is now available to these populations. Thus, it would appear reasonable to expect that user-fee revenues could support much, if not all of costs.

Two caveats should be kept in mind:

- The ability to pay results depend, in part, on the accuracy of the estimated costs of the PHO model. To the extent that they are higher than estimated, requiring higher prices to be charged to be sustainable, the ability to pay by the target population may be compromised.
- Generally, survey respondents understate their incomes. Hence, the data presented above may understate the ability of the target populations to pay.

#### **4. Project Benefits**

As stated in the introduction to the Economic Analysis, many of the benefits from a social sector project are not quantifiable in monetary terms. This section describes many of the benefits from the SHIP so that subjective evaluation of their worth may be compared to the cost of the project to decide its merits in benefit-cost terms.

##### **Value of Averted Morbidity and Mortality**

The ultimate aim of delivery of health services is reduction in morbidity and mortality. SHIP will contribute to reductions in both (see logical framework for details) during the LOP and after PACD. Health indicators in the areas where project activities will occur are not good (see Technical Analysis section) and the package of services offered is effective. However, the value in monetary terms of extended lives and avoided morbidity is not quantifiable.

##### **Contribution to Decentralization Policy**

SHIP will contribute toward the development of the regional decentralization policy of the GOP. It will do so by cooperating and collaborating with regional health authorities in its three regions of activity. The PHO will operate nine facilities ceded to it by Lambayeque regional authorities and will be supplied with vaccines and contraceptives through the MOH. Eventually, RENOM (Region of Nor-Oriental de Marañon) may contribute to some of the costs of the PHO or replicate the model in its health facilities. In Arequipa and Puno, CARE will cooperate with regional authorities, including them on the advisory boards that will review proposals from potential sub-grantees and seeking their financial support. In all three areas the regional authorities will be able to take ownership of the SHIP activities as the Region's. Component 3 will disseminate information about the lessons learned by the project to regional and national health authorities.

##### **Development and Evaluation of Private-Sector Models of Service Delivery**

The development and evaluation of the private-sector models by SHIP will contribute to the knowledge of the effectiveness, costs, and sustainability of alternative approaches to service delivery and promotion of PHC in Peru. The lessons learned will allow replication of strong models and avoidance of weak ones. In particular, Component 1 will test the applicability to Peru of the successful PROSALUD model from Bolivia. Component 2 will tap the imagination

of the PVO community to develop alternative models and allow them to demonstrate their capabilities to the public sector.

#### **Testing and Demonstration of Cross Subsidies for Preventive Services**

Specifically in Component 1 SHIP will test the practical applicability of cross subsidies from curative and laboratory services to preventive services. It is expected that many of the sub-grantees in Component 2 will test similar approaches. The findings will be of use to both public and private providers in the future.

#### **Development and Demonstration of Financially Self-Sustaining Models**

The PHO model of Component 1 is expected to be financially self-sustaining. Many of the Component 2 sub-grantees are expected to achieve significant degrees of self-financing. To the extent that success is achieved, the concept may be replicated.

#### **Development of Community Participation and Support**

In both Components 1 and 2 community participation and support are important elements of the initiatives. Greater community support will help ensure use and sustainability of services. Again, the importance of this approach will be demonstrated through SHIP.

#### **Maintaining Links to MOH**

Although SHIP is aimed at private-sector organizations, the providers and promoters involved will maintain many links to the MOH. These links will include cooperation in immunization campaigns and vaccine supplies, observance of health service delivery standards set by the MOH, provision of data to MOH information systems, and contribution to the MOH's information base about alternative methods of delivering and promoting services.

### **5. Conclusions and Recommendations**

The choice of overall design for SHIP, its components, and the PHC package that will form the basis of the services delivered appear to be cost-effective approaches. The majority of recurrent costs of the delivery and promotion of services will be paid for by beneficiaries. The rest may be covered by fund-raising activities of the PVOs or through contributions by regional governments.

The prices proposed for the PHO system appear to be within the reach of the majority of the population of Chiclayo-Lambayeque, but some cross subsidization will be needed to ensure financial access for the lowest-income populations. The costs estimated for PHO are used as a basis for analyzing the possibilities for self-financing for Puno and Arequipa. This analysis shows that the majority of the population would be able to pay for PHC services, but that some cross subsidization would be needed.

The project design is recommended as economically sound. The benefits would appear to be greater than costs. The approaches taken are cost-effective.

Some aspects of SHIP merit before and after evaluation to determine impact. Some aspects merit on-going monitoring, so that results can be used to adjust and improve performance during the life of the project. All of the studies performed should be included in the dissemination activities of the project, so that they achieve maximum impact on policy and practices in the project areas, throughout Peru, and elsewhere.

Two aspects that merit before and after evaluation are health impacts and utilization of services, including the market shares held by various providers. Studies of health impacts will permit some appreciation of the effectiveness of the package of PHC interventions and the models used to deliver and promote them. However, it is recognized that it is difficult to attribute particular changes in health status to project activities alone.

Utilization studies will determine how the use of health services changes as a result of the project's interventions. It is presumed that overall use of services will rise, particularly use of preventive and promotive services. It is also presumed that target groups, viz., women, children, and lower-income groups will increase their use of services.

During the project the following should be monitored for all activities so that needs may be identified and adjustments made to ensure the success and sustainability of the PHC initiatives:

- Average costs of the package and individual services
- Cross-subsidization needs
- Market size and market share
- Performance of fee forgiveness systems

Further, the types of technical assistance needed to develop and support the initiatives should be monitored, so that the capacity of local individuals and institutions to provide such assistance may be developed.

At the end of the project, some aspects that may merit evaluation include:

- Market size and share changes
- Changes in the behavior of public and private providers in the project areas in response to the SHIP-supported initiatives
- Average costs of the package and individual services delivered and financial sustainability prospects
- Effectiveness of Component 3 in influencing policy on
  - MOH/PVO cooperation
  - Service delivery models
  - Cross-subsidization of preventive services and lower-income and other target populations

#### **D. Financial Analysis**

The following section summarizes the SHIP Project Paper Financial Analysis. A fuller discussion can be found in Annex 6. The budget figures utilized in the financial analysis represent an earlier version prior to finalization of the contingencies and the review of the CARE proposal for the Cooperative Agreement, and should be viewed as illustrative. The most up-to-date figures are those employed in Section V. Financial Plan, sub-sections A-E.

The SHIP budget is composed of four components, acting in concert and individually to achieve the project purpose: to evaluate and identify models of private primary health care services delivery which improve access, coverage, efficiency, and sustainability of services in two areas of Peru. The four project budget elements are:

1. A Self-financing Primary Health Care Network in the Northern Region of Peru.
2. Expansion of Primary Health Care Services in the South of the country.
3. A component of Special Studies, Policy Dialogue and Dissemination, Audits and Evaluations.
4. A Project management component.

All amounts in the following analyses are in US\$Dollars.

##### **1. A Self-financing Primary Health Network in the North**

The first component, a Self-financing PHC Network in the Nor-Oriental de Marañon Region of the country, will establish a network of health centers in the Department of Lambayeque, covering by 1996 up to 55% of the population of about 300,000 inhabitants in the 3 districts of Leonardo Ortiz, Chiclayo and La Victoria in the city of Chiclayo, and part of the population in the city of Lambayeque. Approximately 165,000 people in the urban and peri-urban areas of Chiclayo and Lambayeque will be served annually by 1996 with a wide "menu" of preventive and curative primary health services, combined with 24-hour maternity and emergency services, complemented by laboratory services, pharmaceutical sales and health promotion in the communities of the health center catchment areas.

Over LOP, USAID will fund US\$9.1 million, composed of:

* Technical assistance:	2,946,000
* Commodities:	
- equipment	664,000
- pharmaceuticals	400,000
* Operating costs of the Health Network	
- health centers	368,978
- Management Support Unit	
o personnel	1,986,000
o administrative costs	955,666
o vehicle operation	100,000
o facilities renovation	200,000
o social marketing	130,000
* Short-term training	200,958
* Primary Health Centers renovation/construction	<u>1,156,750</u>
	\$9,108,352

In addition, there will be audits and evaluations for this component (US\$205,000) and special studies. Management supervision by USAID will be facilitated by using a PSC located initially in Lima, whose total cost during the project is US\$0.7 million. These costs are budgeted in those components.

One-time expenditures during LOP include technical assistance, equipment purchases, MSU facilities renovation, social marketing for the new services and the new institution, and renovation and construction of the health centers. These components total 55% of total project costs for this component. The remaining 45% are essentially recurring costs.

#### Physical Infrastructure

A total of 11 health centers will be physically planned and organized. During the first three years, investments of US\$1.7 million will be used to set-up two new health centers which will generate surplus revenues for the cross-subsidies, renovate the ones ceded by the MOH, and equip them. The other 9 PHC centers will be located on land and in buildings contributed by RENOM (currently estimated to be worth US\$0.9 million). Thereafter, the health centers will provide their own resources for the maintenance and renovation of the center's equipment and physical plant. One of the first tasks of the project will be to secure that dedication of facilities and funds to these 11 sites in the Northern component for renovation and construction, and establish the contractual relationships, based on a legal study to be undertaken.

#### PHC Network Surplus Profile

The PHC services are to be provided in the context of a strong community animation and social marketing of a high-quality primary health care "franchise", for the middle and low income population of Chiclayo and Lambayeque. These combined efforts are also oriented to increase

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the proportion of the populace using the health centers or "the market share" to approximately 60% in the fifth year of their respective operation. In order for the 3 surplus-generating health centers to contribute a significant amount to the whole, they will start earliest in the project.

The sustainability of the PHC network is possible with: a well-balanced combination of surplus and deficit generating clinics, precise staffing patterns, opening potential surplus-producing centers first, cross-subsidies, preventive primary health services provided at zero price complemented by government vaccine provision and commercially available Oral Rehydration Salts, application of a global price strategy to attract and treat children and women, prices targeted in-between the poor-quality public services and the high-priced private services, pharmaceutical provision at low prices.

Operating revenues for services over LOP will total US\$6.1 million and not cover costs of US\$6.3 million, producing a cumulative deficit of US\$0.2 million during the five years of the project. However, the PHC health center network (without MSU) in year 5 will generate operating revenues of US\$2.0 million and surplus will be 2.9% of revenues. If there was no fee-forgiveness in Year 5 (US\$208,000), the network surplus would increase to US\$266,000 and the positive cash flow to US\$368,000 annually. In later years after LOP, the surplus is expected to grow to about US\$117,000, forgiving an additional US\$278,000 per year (about 9% of total revenues). A reserve fund of US\$170,000 is provided during LOP to cover funding for delays in revenue generation during the LOP. If not required, these funds will be used to strengthen and increase services.

#### The MSU

The Management Support Unit is key to the establishment and maintenance of the "MAXSALUD PHC franchise" of PHC centers network and services. The MSU will cost approximately US\$3.8 over the LOP and US\$650,000 annually as of Year 5. By EOP there will be only a partial coverage (i.e. slightly less than 10%) of the MSU operating costs from operating revenues. The mid-term evaluation will address in greater detail the issue of sustaining the MSU operations after the PACD, based on actual experience.

#### PHC Prices per Service

Over LOP the PHC network will have provided approximately 2.1 million services, of which approximately 760,000 are preventive services provided at no charge to the population, 8,500 are deliveries and 160,000 are curative services provided free of charge or the equivalent for people who cannot pay. The average unit price per curative service (excluding deliveries) will be US\$3.32 for the 1.2 million activities paid for by patients.

During Year 5, the PHC network will provide approximately 808,000 services to 165,000 people, averaging about 4.8 services per person. Of these, 37% are preventive activities equivalent to 1.8 activities per person per year and 62% are curative PHC activities, equivalent to 3 activities per person annually. The remainder 1% are deliveries.

During Year 5, net revenues to the PHC network will be US\$1,97 million (including deliveries), paid for by 92% of total patients, at an average price of 2.66 per service per person.

## 2. A Set of NGO Health Providers in the South

The second component in the Southern region of the country will make a series of grants to NGOs to provide PHC services, seeking to provide services to populations of about 50,000 people in Puno and about 150,000 in Arequipa.

Over LOP, USAID will fund U\$4.3 million, composed of:

* Technical assistance:	593,000
* Commodities:	
o pharmaceuticals	450,000
o equipment	65,000
* Long-term staff	636,000
* Grants	2,240,000
* Short-term training	236,000
* Overhead	<u>105,000</u>
	\$4,324,250

Management supervision by USAID will be performed by a second project-funded PSC located in Lima, whose total cost during the project is U\$0.7 million. In addition, there will be audits and evaluations for this component (U\$90,000) and special studies. These are budgeted in project management and special studies components, respectively.

One-time expenditures during LOP include all parts of this component, except for pharmaceuticals which are expected to be sold on a revolving fund basis, equivalent to 10% of this component's total budget. Testing during LOP is to produce a selection of PHC services delivery models, increasing coverage of PHC in Puno and Arequipa in a effective and efficient manner. Cost-recovery is not expected to occur in significant degree during LOP.

### Physical Infrastructure

Small offices will be set up in Arequipa and Puno. The Arequipa office will provide a base of operations for the Arequipa Area Director, his/her secretary and accountant, and the long-term technical advisor. The Puno office will be for that area director and his/her secretary and accountant. Logistical and administrative support will be forthcoming from CARE/Lima and Puno offices for the Arequipa and Puno sub-components and for the overall Southern Component. The office and administrative support budget is US\$150,000 during LOP.

Pharmaceutical supplies provided from Lima for the Southern component will be stored under the supervision of each area director. Pharmaceuticals for US\$450,000 will be purchased, synchronized with MAXSALUD purchases in the North to obtain price advantages.

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### Cost-Recovery of PHC Services

At the same time that per capita income has dropped to very low levels, lowest in Puno and middling to high in Arequipa, costs of living in the country in general remain high, due to the persistent inflation and over-valued exchange rate to the US dollar. There is a substantive difference between the economic profile of Arequipa and Puno, where in Arequipa average income per capita is approximately three times that of the Puno population. Consequently there will be a need to design these components according to each individual situation for the provision of PHC services and their cost-recovery strategy. Testing of alternative models will be critical. Nevertheless, preliminary indications are that cost-recovery will be difficult to achieve during LOP in any significant amounts.

Grants will be extended to a wide variety of models for PHC services delivery, for a total sum of US\$2.2 million, with few grants for US\$100,000 and more numerous for US\$5,000, seeking wider experimentation in models of PHC services and institutional alternatives. Pharmaceuticals' physical flow would take into account, but not restricted by, the flow of grants to provide combined PHC services and drugs.

#### 3. Special Studies and Evaluation Component

Special studies will be conducted for both components with an assigned budget of US\$205,000. The component contract audits and project evaluations totalling a budget of US\$295,000 will also be managed by USAID/Lima. Evaluations will be mid-term and at EOP.

#### 4. Project Management and Support budget element

This component consists of two full-time 5-year Personal Services Contractors (PSCs), stationed in Lima for a total cost of US\$1.4 million during LOP. Personnel costs for each are estimated at US\$600,000 during LOP combined with US\$100,000 each for office support and travel during the same 5-year period. This office support includes the consideration of temporary pharmaceutical warehousing of imports until shipment to each project site.

### Contingency and Inflation

Conservative assumptions have been made in the cost items, such as the need for the delayed revenues fund in the MAXSALUD component and technical assistance in the MAXSERV component. These assumptions provide a cushion for unexpected cost increases of the project.

### E. Social Soundness Analysis

The Strengthening Health Institutions Project is an experimental activity that was designed to implement and test different models in the context of providing basic preventive and curative health services to populations of limited resources. This section concerns the social soundness

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of the project, taking into consideration the socio-cultural characteristics of the population and an evaluation of the population's needs and desires for health care. This analysis is based on a rapid ethnographic assessment which was conducted in the proposed project areas: Chiclayo, Puno, and Arequipa. Key informants and a random sample of mothers with young children were interviewed in each site to obtain their perceptions about health and health care needs, health care use, and attitudes toward paying for health services. A more complete SHIP PP Social Soundness Analysis can be found in Annex 7. Additionally, an institutional social analysis is presented for the southern component, since the interrelationships between the various NGOs participating in the component will have a direct effect on the success of that project component.

### **1. Social Analysis - Beneficiary Populations**

In general, discrepancies do not exist between the health needs expressed by the population and epidemiologic data on disease prevalence, either in the case of childhood or maternal illnesses. In all study sites, the types of health services desired by mothers coincided with the maternal and child health services to be provided by the SHIP.

With respect to child health care, mothers consider as first priority treatment of respiratory illness, and in second place, diarrheal illness. Mothers feel they have less information about respiratory illnesses and that these require more care. Among preventive activities, nutrition was of prime concern, especially for low-income mothers, in terms of whether or not their children were getting enough to eat due to scarce household resources. Vaccinations and growth monitoring were also mentioned by mothers as important preventive activities, but to a lesser extent.

In regards to their own health, mothers in the three study areas referred to family planning as a primary need. Notable interest was expressed in general nutrition, prenatal nutrition and prenatal and intranatal care, "women's diseases", and "kidney problems" (urinary tract infections). Interestingly, mothers in the three study areas referred not only to physical illnesses but also to psychosomatic-like illnesses ("nervios"), headaches and fatigue.

The majority of mothers in the three study areas sought care from formal medical practitioners for their children when ill. Preference was expressed for the private physician option, which had considerable weight in all of the sites. Opinions concerning available medical care are highly varied in the different departments of Peru. In regard to the public sector, hospitals are considered better equipped than health centers/posts, but have longer waits and are less accessible distance and cost-wise. Constant strikes are the biggest drawback to public sector facilities. IPSS facilities, which are used by people with employer-insurance, are considered of good quality even though the waits are long. The private sector is the most prestigious source of care, but the cost is prohibitive for the lower classes at 5 to 10 new soles per visit. It can be stated that the majority of people seem to be at least partially satisfied with the attention received and that the complaints about the attention do not present themselves in an explicit way. It can therefore be assumed that the deficiencies may not be necessarily perceived or that the people "get used to" or "resign themselves to what they have."

## 2. Social Analysis - Institutions in Southern Component

Project component activities will depend heavily on institutional interaction among NGOs. The component will encourage interaction through component-wide training, technical assistance, pharmaceuticals, studies, and broad training sessions. NGOs are generally small with budgets and systems of less than \$50,000 annually although they often can leverage additional resources. MOH and NGOs are already cooperating creatively to increase coverage of MCH, immunizations, carry out conferences, and other activities. Universities do not generally provide technical assistance or services in cooperation with NGOs.

Although not yet a major force, the Secretariat of Social Affairs in Arequipa has signaled a recognized need for coordination among all sectors to maximize budgets and avoid duplication, through the establishment of a Regional Health Council.

The potential for the NGO's increased cooperation is good in Arequipa. Awareness and mutual respect generally exists among them and between NGOs and public sector agencies and universities. The proposed actions to be taken to promote active project oriented cooperation guided by a group not yet institutionally present in Arequipa can be done with sensitivity. The atmosphere is collaborative and not negative toward additional expansion and assistance.

In Puno, there are many NGOs, but relatively few of size and capability to be included in a project such as this. Although NGOs are aware of each other no unifying force has yet caused them to cooperate greatly with each other in health and nutrition-related activities. Several NGOs work in collaboration with the MOH and other public sector agencies. With regard to the SHIP, MOH officials indicate an interest in NGO coordination to maximize the potential of resources, staff and to avoid duplication in coverage.

## 3. Social Feasibility

This project is socially feasible for the following reasons:

- 1) People recognize quality in health care and look for it.
- 2) A considerable number of people in the study areas consider that their health needs are not well met and that the health services should be improved.
- 3) People want better health services and they make great efforts to build health posts and to implement community medicine dispensaries (*botiquines*).
- 4) Traditional medicine is not found to compete with modern medicine; in some cases they have separate dominions and in others they are not mutually exclusive; people visit one or the other or both. Both function side-by-side peacefully and without conflict.
- 5) Alternative health programs have and still exist which have been successful even though they have not been able to augment their coverage or limit themselves only to preventive activities and training due to the lack of an adequate infrastructure and/or financing.

However, other specific aspects for project implementation for MAXSALUD and MAXSERV should be considered.

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### **a. MAXSALUD**

Regarding the desire to pay for health services, it should be mentioned that a great majority reported to have paid for these services during the last illness of their child. Additionally, in Chiclayo the majority of the people thought that this payment was acceptable; they are used to paying for modern as well as traditional health services and this payment is even considered as a guarantee of quality. People in Chiclayo reported being disposed to pay for high quality services while in the two southern sites there was more resistance.

Chiclayo is mainly a commercial city and many people dedicate themselves to business and other services. Because of its central location, it is a meeting point for travelers from other parts of the coast, sierra and the jungle and for migrants. Since Chiclayo is not dependent on agriculture, it has been better able than other northern coastal cities to defend itself against the natural disasters of the last few years and the low profits in the agricultural sector. The larger population size and its better economic situation make it a more appropriate place for the project than other potential project sites in the north.

The church in Chiclayo has orthodox sectors that may oppose artificial family planning methods; but it should not be forgotten that the Church is performing important health work through Church-affiliated physicians' offices, promotion, and training, which could help to promote the PHO. The NGO, SOLIDARIDAD, could be considered a possible project liaison to secure the participation of the community in the management, coverage and diffusion of project activities in conjunction with the important and well-organized feminist group (MUJER), with whom they maintain good relations. MUJER could train women in the neighborhood leadership and with this institution the pertinent actions to secure the participation of members of the feminine sex in decision making could be coordinated. Another organization that could collaborate with MAXSALUD is the University Pedro Ruiz Gallo that develops professionals in different careers related to community promotion.

### **b. MAXSERV**

#### **1) Arequipa**

In Arequipa, the private organizations which provide health care services are mainly the Church parishes, CEMPOS (Centro Multidisciplinario de Proyeccion Social) of the University Católica, AMAUTA, and INPARRES. There are also institutions which distribute food supplements, such as ADRA-OFASA and CARITAS, and NGOs such as CECYCAP, CEDER, and CIED, that principally carry out health promoter training and health promotion. Members of the various NGOs are known to each other and seem to maintain good relations. However, coordinated work does not seem to exist. They have separated geographic areas and they carry out distinct types of work. For this reason it has not been indispensable that they coordinate their activities.

People have a good opinion of the parochial health services; they think that the cost is not too high and that they give good service. However, they say that they only provide basic services. Another favorable aspect is the low price of the medicines and the free emergency assistance. People also have a good impression of the work of CEMPOS of the Catholic University and are familiar with their training services. They like the fact that the people from the "Cempos" come to look for the mothers in their homes since no one else provides services in this way. Caritas and Ofasa also are recognized since they distribute food to the population. They report that while Caritas donates the food, Ofasa gives them food in exchange for work and the cost of transportation. The population does not identify directly with the NGOs and we did not have the opportunity to talk with the promoters and other personnel trained by them.

## **2) Puno**

The principal institutions which offer health services are INNPARES, Pro-Familia and CARITAS. Other NGOs offer health promotion and training, but not health care services. None of the people interviewed in the community survey mentioned having heard of a private NGO. They more commonly refer to specific institutions such as CARITAS or CARE, whose presence is strongly felt.

In Puno, an important organization tied to health activities is the Catholic Church, which works through its parishes. The Church offers training to neighborhood delegates who then give talks to community groups on health-related topics such as nutrition and respiratory illnesses.

Intervention through private NGOs in urban Puno has some limitations in that the policies and working programs of most of these institutions refer mainly to agricultural production projects located in rural areas (peasant communities).

Puno is one of the poorest departments in Peru with a larger percentage of illiteracy and high infant and maternal mortality rates due to nutritional deficiencies and the infrastructure of health services and basic health status. The people are of Quechua and Aymara origin and these languages are used by 90% of the population of the department. Many persons in Puno have migrated to Arequipa, Moquegua and Tacna in the last 10 years because of their extreme poverty and because it is one of the departments most affected by terrorism in Peru, particularly in its northern reaches.

Added to these difficulties is the special political situation of the department. Some provinces have been declared emergency zones due to the military confrontation with subversive groups, which have attacked and destroyed property, threatened and even taken the lives of personnel of the NGOs.

For all of the above mentioned reasons, Puno seems to be a much less appropriate zone for implementation of an experimental project, and offers better potential through efforts channeled within established and committed community and NGO groups.

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#### **F. Women in Development Review**

Peruvians with lower incomes in general will be beneficiaries of the project. As with most health and family planning projects, women however will enjoy the greatest benefits. Most of the purchases and decisions related to primary health care are made by women. In the MAXSERV component to be implemented via a cooperative agreement with CARE, the project will concentrate the channelling of resources through sub-grants and sub-projects that will be reviewed by committees and community groups largely made up of women. Training and Technical Assistance will seek to focus that support by promoting as a fundamental criteria of sub-grant approval the increase in participation by women in the proposed activities.

#### **G. Initial Environmental Examination**

The Initial Environmental Examination (IEE) recommends a categorical exclusion from the requirement to carry out an environmental assessment. This determination was made based on the absence of any activities in the Project that would have a direct impact on the environment. The IEE makes reference to Section 216.2, Paragraphs c(2)(i) and (viii) which allow a waiver of the requirement for further environmental review for projects that do not have an impact on the natural or physical environment, and for programs involving nutrition, health care and population and family planning services -- to the extent that they do not include activities like construction of water supply systems, waste water treatment facilities, etc. The IEE recommendation was made by the Mission Environmental Officer and the Regional Environmental Officer on September 25, 1991. A fax was sent by Mr. James Hester, LAC/DR/E, confirming the concurrence to the recommendation. The IEE recommendation is included as Annex 9.

*Health, Population, and Nutrition Division  
Office of Human Resources  
USAID/Peru*

SHIP PROJECT - LOG FRAME

Narrative	Objectively Verifiable Indicators	Means of Verification	Assumptions
<b><u>GOAL:</u></b>			
To improve the health status of the population in project areas	<ul style="list-style-type: none"> <li>-Reduce infant mortality rate by 25% by 1996</li> <li>-Reduce neonatal deaths by 10%</li> <li>-Reduce maternal mortality rate by 50% by 1996</li>   <li>-Reduce incidence of vaccine preventable diseases among children under 5 years by 50% by 1996.</li>   <li>-Reduce acute malnutrition rate by 33% by 1996</li> <li>-Reduce chronic malnutrition rate by 15% by 1996</li> <li>-Reduce % of births occurring to high risk women by 25%</li> </ul>	<ul style="list-style-type: none"> <li>HIS, DHS</li> <li>HIS, DHS</li> <li>HIS, DHS</li>   <li>HIS, DHS</li>   <li>HIS, FRISMA</li> <li>HIS, FRISMA</li> <li>MIS, DHS</li> </ul>	<ul style="list-style-type: none"> <li>No major new causes of mortality or morbidity</li> <li>Social and economic stability maintained</li> </ul>
<b><u>SUB-GOAL</u></b>			
Contribute to health policy dialog in Peru regarding options for health care financing and health care delivery	<ul style="list-style-type: none"> <li>-Participation by Regional and National MOH, IPSS, and private leaders in health in final project conference</li>   <li>-Service delivery mechanisms recommended are adopted by other private health service providers in Peru</li>   <li>-Public health services utilize information developed by the project to increase access, service coverage, efficiency, and sustainability of public health services delivery</li> </ul>	<ul style="list-style-type: none"> <li>Conference attendance lists and minutes</li>   <li>Project evaluation</li>   <li>Project evaluation</li> </ul>	<ul style="list-style-type: none"> <li>Health establishment remains philosophically open to mixed private/public system</li>   <li>MOH regional officials and health centers are receptive to private sector approach and assist in defining new role within the national health care system</li> </ul>

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Narrative	Objectively Verifiable Indicators	Means of Verification	Assumptions
<b><u>PROJECT PURPOSE</u></b>			
To evaluate and identify models of private primary health care services delivery which improve access, coverage, efficiency, and sustainability of services in two areas of Peru	<ol style="list-style-type: none"> <li>1. Models identified improve access: increased % of population within 5 km of a primary health care center use it</li> <li>2. Models identified improve coverage of basic health services:               <ol style="list-style-type: none"> <li>a. % children &lt; 1 receiving DPT3, OPV3, BCG, and measles</li> <li>b. % of childhood diarrheas appropriately treated with home fluids, ORS, continued feeding or breastfeeding</li> <li>c. % of children less than 4 months old exclusively breastfed</li> <li>d. % of MRA using modern contraception (include scientific NFP and LAM)</li> <li>e. % of children w/ARI treated per MOH norms</li> <li>f. % pregnant women receiving at least 2 prenatal visits</li> <li>g. % pregnant women receiving 2 doses TT</li> <li>h. % deliveries attended by trained personnel</li> <li>i. % women delivering who obtain a post partum checkup within 2 months</li> </ol> </li> <li>3. Models identified have lower costs per service delivered than others tested</li> <li>4. Models identified require less subsidy than others tested.</li> </ol>	<ol style="list-style-type: none"> <li>1. Baseline surveys, project records</li> <li>2.a. Service statistics, population estimates, and DHS</li> <li>b. Clinic records, DHS, baseline survey</li> <li>c. Clinic records, DHS</li> <li>d. Baseline surveys, DHS</li> <li>e. Clinic records</li> <li>f. Baseline survey, Vital Statistics, Clinic records, DHS</li> <li>g. Same as (e)</li> <li>h. Baseline surveys, DHS</li> <li>i. Clinic records, DHS Vital Statistics</li> <li>3. Project records</li> <li>4. Project records</li> </ol>	<ol style="list-style-type: none"> <li>1. No substantial migration to/from project areas</li> </ol>

Narrative	Objectively Verifiable Indicators	Means of Verification	Assumptions
<b><u>OUTPUTS</u></b>			
<b><u>A. NORTHERN COMPONENT</u></b>			
One self-finance regional primary health care delivery system established and functioning in the macro-north region.	<ol style="list-style-type: none"> <li>1. Non-profit health care system in Chiclayo area is 80% self-sustaining by 1997 in terms of coverage of network operational expenses; Revenue generations in project area sufficient to allow for cross subsidies.</li> <li>2. A non-profit Primary Health Organization (PHO) established with charter, Board of Directors and by-laws in year 1.</li> <li>3. PHC organization consists of one central office for administrative and management and at least 12 health centers and corresponding health posts by the end of year 2.               <ol style="list-style-type: none"> <li>a. Central office has following functions established and operating:                   <ul style="list-style-type: none"> <li>-financial management and controls</li> <li>-logistics, supply and inventory of drugs and supplies</li> <li>-standards of quality, procedures, job descriptions, etc. established for all clinics</li> <li>-personnel system established with wage scales, training, supervision, etc</li> <li>-operations research conducted on systematic basis on key issues</li> <li>-monitoring system for management, financial and quality control established</li> <li>-standard approach established for market analysis, clinic location, pricing of services and drugs</li> </ul> </li> <li>b. Health clinics established and providing high quality health care. 150,000 persons served annually by 1996.</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. PHO records</li> <li>2. PHO records</li> <li>3. Project records               <ol style="list-style-type: none"> <li>a. Project reports</li> <li>b. PHO reports</li> </ol> </li> </ol>	Clinics achieve desired market share. IPSS will adjust payments to third party care providers so that costs are fully covered.

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Narrative	Objectively Verifiable Indicators	Means of Verification	Assumptions
	<p>c. Clinics perform the following functions:</p> <ul style="list-style-type: none"> <li>-provision of preventative services to community consistent with quality standards</li> <li>-provision of curative services on a fee for service basis for priority primary health care problems</li> <li>-sale of essential medicines to clients</li> </ul>		
	<p>4. Community boards of directors or advisors established for each clinic.</p>	<p>4. FHO records</p>	
		<p>5. Project evaluation or OR Studies</p>	
<p><b>B. <u>SOUTHERN COMPONENT</u></b></p>			
<p>1. Grants for FHC made</p>	<p>1. 30 Grants for FHC made.</p>	<p>1. Project reports</p>	
<p>2. Grants for FHC support or promotion made</p>	<p>2. 5 Grants for FHC support/promotion made</p>	<p>2. Project reports</p>	
<p>3. NGO cooperation fostered</p>	<p>3. TA systems established and functioning</p>	<p>3. Project reports</p>	
<p>4. Regional MOH authorities collaborate actively with grantees</p>	<p>4. System established and functioning for joint procurement of basic medicines</p>	<p>4. Project records</p>	
	<p>5. Local councils of grantees functioning well: meeting regularly, sharing ideas</p>	<p>5. Project reports, minutes of meetings</p>	
	<p>6. MOH participates actively in TAG and FRC and local dissemination activities</p>	<p>6. Project records</p>	

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Narrative	Objectively Verifiable Indicators	Means of Verification	Assumptions
<b>C. <u>STUDIES/DISSEMINATION/ POLICY DIALOG</u></b>			
<b>1. Studies conducted</b>	<p><b>1.a. In the North, the following studies are conducted:</b></p> <ul style="list-style-type: none"> <li>-Legal</li> <li>-DHS regionally valid samples</li> <li>-location of Centers</li> <li>-Marketing</li> <li>-Feasibility</li> <li>-Monitoring, Evaluation, and Readjustment</li> </ul> <p><b>b. In the South, the following studies are conducted: (illustrative list)</b></p> <ul style="list-style-type: none"> <li>-use of non-physician clinicians</li> <li>-pharmaceutical provision</li> <li>-family planning service delivery</li> <li>-information and monitoring systems</li> <li>-referral sources to MOH clinics</li> <li>-regional health care models</li> <li>-NGO agreements with regional governments</li> </ul>	<p><b>1.a. Project records, copies of study results</b></p> <p><b>b. Project records, copies of study results</b></p>	
<b>2. Results of all studies and evaluations of component activities disseminated through workshops, seminars and publications</b>	<p><b>2. Newsletters, conferences, and workshops conducted with broad participation from health care providers in Peru</b></p> <ul style="list-style-type: none"> <li>-quarterly newsletter published and distributed</li> <li>-annual dissemination meetings in each macro-region after years 2, 3 and 4</li> <li>-publication of results as warranted in national or international journals</li> <li>-presentation of results at national and/or international meetings.</li> </ul>	<b>2. Project records, copies of publications</b>	
<b>3. Health policy seminar conducted with participation from all segments of health care providers.</b>	<b>3. National health financing conference held at end of project.</b>	<b>3. Project records, seminar proceedings</b>	

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