

**Feasibility Study
of a Primary Health Care System for
Union of the Agrarian Reform
Cooperatives (UCRAPROBEX)
El Salvador**

February 1997

**The PROFIT Project
Promoting Financial Investments and Transfers
1925 North Lynn Street, Suite 601
Arlington, VA 22209
(703) 276-0220
Fax (703) 276-8213**

USAID Contract No. DPE-3056-C-00-1040-00



The PROFIT (Promoting Financial Investments and Transfers) Project seeks to mobilize the resources of the commercial sector to expand and improve the delivery of family planning services in selected developing countries. The PROFIT Project is a consortium of five firms, led by the international management consulting firm of Deloitte Touche Tohmatsu and including the Boston University Center for International Health, Multinational Strategies, Inc., Development Associates, Inc., and Family Health International.

This document has been prepared by PROFIT staff as part of its mandate to mobilize the private sector to expand and improve family planning services in developing countries. This document is being delivered to USAID/San Salvador/ PHN and USAID/Office of Population (USAID/G/PHN/POP).

While the information contained in this document is believed to be accurate, PROFIT makes no representations, expressed or implied, as to its accuracy or completeness. Further, while this document contains certain projections of future events and performance, PROFIT does not represent that actual events or results will conform to such projections.

PROFIT is supported by the Office of Population in the Center for Population, Health and Nutrition (G/PHN/POP) of the U.S. Agency for International Development (USAID), cooperative agreement number DPE-3056-C-00-1040-00.

A complete list and individual copies of PROFIT publications are available from:

The PROFIT Project
1925 North Lynn Street, Suite 601
Arlington, VA 22209
(703) 276-0220
Fax (703) 276-8213
E-mail profitproj@aol.com

PROFIT Requests Your Feedback

How have you or others in your organization used this report? How valuable were the contents?
Who else should be on PROFIT's mailing list?

Please phone, fax, or e-mail your comments on this report, your requests for other PROFIT publications, and your suggested additions to our mailing list.

We will use your comments and suggestions to improve our reporting and dissemination of the lessons and experiences of the PROFIT Project's work to involve the commercial sector in developing country family planning services.

ABSTRACT

This study outlines the proposed structure of a health care system that would be owned and operated by a union of coffee cooperatives in El Salvador—the Union of Agrarian Reform Cooperatives (UCRAPROBEX). The system would be private and self-sustaining and would offer primary health services to the cooperative members and their families for a fixed monthly fee.

The PROFIT (Promoting Financial Investments and Transfers) Project assessed the demand for and supply of health care within the 65 member cooperatives' population of approximately 50,000. There is an unmet need for primary health care, particularly family planning and maternal and child health services. PROFIT proposes a one-year pilot test of the system involving 2,000 families.

ACKNOWLEDGMENTS

PROFIT would like to acknowledge the support of USAID/San Salvador, the contributions of Dr. Javier Lorenzana, Mr. Mario Ganuza, and Mr. Rich Feeley, and the collaboration of UCRAPROBEX.

Catherine Connor wrote the report, Linda Griffin Kean edited the final version, and Carla Hamilton Briceno translated the report into Spanish.

While the information contained in this document is believed to be accurate, PROFIT makes no representations, expressed or implied, as to its accuracy or completeness. In addition, this document contains projections of future events and performance that may not occur as described.

CONTENTS

ABSTRACT	iii
ACKNOWLEDGMENTS	v
TABLES	ix
ACRONYMS	xi
EXECUTIVE SUMMARY	xiii
1. BACKGROUND	1
2. UCRAPROBEX	3
3. RESEARCH	5
3.1 Methodology	5
3.1.1 Market Study	5
3.1.2 Clinic Study	6
3.2 Findings	6
3.2.1 Socioeconomic Status	6
3.2.2 Demand for Health Care	7
3.2.3 Ability to Pay for Health Care	8
3.2.4 Satisfaction with Providers	8
3.2.5 Cooperative Clinics	9
3.2.6 Reproductive Health and Family Planning	9
4. THE PROPOSED HEALTH CARE SYSTEM	11
4.1 Overview	11
4.2 Staffing	13
4.2.1 Health Promoters and Cooperative Clinics	13
4.2.2 Circulating Physicians	14
4.2.3 Management	14
4.3 Services and Medicines	16
4.4 Marketing	17
4.5 Legal Structure	17
4.6 Implementation Plan	18

5.	FINANCIAL ANALYSIS AND PROJECTIONS	21
5.1	Enrollment	21
5.2	Revenues	23
5.3	Health Service Costs	23
5.4	Overhead Expenses	23
5.5	Net Income/Loss	24
5.6	Cash Flow and Funding	25
6.	OPPORTUNITIES FOR EXPANSION	27
6.1	Coverage of Secondary and Tertiary Services	27
6.1.1	Alternative Structures for Adding Secondary and Tertiary Services	27
6.1.2	Financial Analysis and Projections of a Comprehensive System	29
6.2	Centralized Purchasing of Medicines	31
6.3	Referral Center Clinics	31
	APPENDICES	33
Appendix 1.	Organizational Structure of UCRAPROBEX	35
Appendix 2.	UCRAPROBEX Balance Sheet Fiscal Year 1989–1993	39
Appendix 3.	List and Location of 65 UCRAPROBEX Cooperatives	43
Appendix 4.	Map of El Salvador showing UCRAPROBEX Cooperatives	49
Appendix 5.	Definition of Primary Health Care	53
Appendix 6.	Position Descriptions	57
	Health Promoter	59
	Circulating Physician	61
	Medical Director	63
Appendix 7.	Cooperative Clinics: Basic Requirements and Essential Medicines	65
Appendix 8.	Parameters Used to Estimate Workload of Health Promoter	71
Appendix 9.	Summary of Financial Projections: Scenario A: Primary Care Only (colons)	75
Appendix 10.	Summary of Financial Projections: Scenario B: Primary, Secondary and Tertiary Care (colons)	79

TABLES

Table 3.1	
Most Frequently Cited Reasons for Needing Medical Care	7
Table 3.2	
Method Mix of the UCRAPROBEX Population	10
Table 4.1	
Budget for Six-Month Pre-Operational Phase	19
Table 5.1	
Summary of Financial Projections	
Scenario A: Primary Care Only	22
Table 5.2	
Budget of Overhead Expenses (US dollars)	24
Table 6.1	
Alternative Structures for Adding Secondary and Tertiary Services	28
Table 6.2	
Summary of Financial Projections	
Scenario B: Primary, Secondary, and Tertiary Care	30

ACRONYMS

c\$	colones (exchange rate: c\$8.8 = US\$1.00)
CLUSA	Cooperative League of the USA
CPR	contraceptive prevalence rate
FESAL	National Family Health Survey (El Salvador)
FP	family planning
GDP	gross domestic product
HMO	health maintenance organization
IDB	Inter-American Development Bank
ISSS	Salvadorian Social Security Institute
IUD	interuterine device
MCH	maternal and child health
MOH	Ministry of Health
NGO	nongovernmental organization
ORT	oral rehydration therapy
OTC	over-the-counter
PAHO	Pan American Health Organization
PROFIT	Promoting Financial Investments and Transfers Project
STDs	sexually transmitted diseases
UCRAPROBEX	Union of the Agrarian Reform Cooperatives (El Salvador)
USAID	U.S. Agency for International Development
USAID/G/PHN/POP	U.S. Agency for International Development's Office of Population
WHO	World Health Organization
WRA	women of reproductive age (15–49 years)

EXECUTIVE SUMMARY

The Promoting Financial Investments and Transfers (PROFIT) Project is funded by the U.S. Agency for International Development's Office of Population (USAID/G/PHN/POP) to mobilize the for-profit commercial sector to expand and improve family planning services in developing countries. In 1995, USAID/San Salvador asked the PROFIT Project to identify opportunities in El Salvador to increase commercial sector involvement in the delivery of basic health and family planning services. A review of various opportunities led PROFIT to work with the Union of the Agrarian Reform Cooperatives (UCRAPROBEX), a private union of coffee cooperatives, to study the feasibility of establishing a self-sustaining health care system for the cooperative's members and their families.

UCRAPROBEX was founded in 1988 during the government's agrarian reform program and is one of the oldest and largest agricultural unions in El Salvador. Today it encompasses 65 cooperatives throughout the country, covering a total population of approximately 50,000. Each cooperative is a separate entity that voluntarily joins UCRAPROBEX to commercialize and export their coffee production. UCRAPROBEX also works to improve the economic and social conditions under which cooperative members live.

PROFIT conducted two studies—a market study and a clinic study—to assess the demand for and supply of health services within the UCRAPROBEX population. These indicated an unmet need for primary care services, notably family planning (FP) and maternal and child health (MCH) services. The population is low-income, but there is strong evidence that these people are willing and able to pay for medical services and that they value access—minimal travel time to a source of care. The individual cooperatives have been spending significant and unpredictable amounts on medical care, primarily for secondary and tertiary care services.

PROFIT proposes the establishment of a primary health care system for the UCRAPROBEX cooperatives that will offer improved access to quality primary health care and become financially self-sustaining. Under the system, trained health promoters supervised by circulating physicians would provide curative care, preventive care, health education services, medications, and referrals for specialized care. The system would be owned by UCRAPROBEX and managed by a central management team. Cooperatives would pay a fixed monthly fee of US\$7 per family, and patients would pay for medicines. The financial analysis indicates a need for US\$204,545 in external funding to cover start-up costs. The system is projected to become financially self-sustaining in three years after the entire UCRAPROBEX population is enrolled. PROFIT proposes a one-year pilot test of the primary care system that would involve 2,000 families.

After full enrollment is achieved, the system may be expanded and improved by adding coverage for secondary and tertiary services, centralizing the purchase of medicines, and establishing referral clinics at selected cooperatives.

BACKGROUND

1.

El Salvador is one of the most densely populated countries in the Western Hemisphere, with a population of approximately 6 million. Per capita gross domestic product (GDP) was US\$1,320 in 1993, which makes El Salvador a lower-middle income country.¹ The country is still recovering from a 12-year civil war which ended in 1992. This recovery includes ambitious economic reforms, including health sector reform.

Health services in El Salvador are provided primarily by two government agencies:

- # The Ministry of Health (MOH) offers free services to the general population and is financed by general tax revenues and international aid.
- # The Social Security Institute (ISSS) serves employees in the formal sector—approximately 13 percent of the population—and is financed by payroll taxes.

An assessment of the MOH concluded that it was inefficient and that a disproportionate share of MOH resources actually benefited the upper-income population. Access to ISSS facilities is proscribed by law and does not include children over age 2, workers in the informal sector, or those in rural areas. As a result, private providers, including nongovernmental organizations (NGOs) and commercial providers, are an important source of health care, accounting for 9 percent of inpatient visits and 45 percent of outpatient visits.²

Health sector reform has been slow due to the different agendas of the parties involved and resistance from public sector workers who feel threatened by calls for privatization and downsizing. MOH hospitals have begun cost recovery efforts, including creation of private rooms. Since 1991, the ISSS has partially privatized specialized ambulatory care by contracting with private physicians to treat ISSS beneficiaries.³ In June 1994, a health reform team was created within the MOH. As of 1996, there was

¹World Bank, *Trends in Developing Economies, 1995*. Washington: World Bank, 1995.

²ANSAL, *The Financing of the Health Sector: Final Report*. San Salvador: ANSAL (Health Sector Assessment Project of El Salvador), May 1994. ANSAL is funded by USAID, the Pan American Health Organization (PAHO)/World Health Organization (WHO), World Bank, and Inter-American Development Bank (IDB).

³John L. Fiedler, "The Privatization of Health Care in Three Latin American Social Security Systems," *Health Policy and Planning*, 11(4):406–417.

no consensus on objectives, although the process continues with the support of the World Bank, Inter-American Development Bank (IDB), and U.S. Agency for International Development (USAID).

To complement its support of the health sector reform process, in 1995 USAID/San Salvador asked PROFIT to identify opportunities to increase commercial sector involvement in the delivery of basic health and family planning services. After reviewing various opportunities, PROFIT focused on studying the feasibility of establishing a self-sustaining rural health system with a union of coffee cooperatives called the Union of the Agrarian Reform Cooperatives (UCRAPROBEX).

PROFIT decided to work with UCRAPROBEX for several reasons:

- # There is greater unmet need and demand for health care in rural areas because both private and public sector health resources are concentrated in urban areas, and UCRAPROBEX serves a mainly rural population.⁴
- # There is greater unmet need and demand for family planning in rural areas where contraceptive prevalence is lower and family size is larger than in urban areas.⁵
- # The cooperative structure facilitates an organized, community-based approach.
- # There is potential for self-sustainability given the cooperative members' greater income stability and purchasing power compared to that of the general rural population.
- # UCRAPROBEX's leadership demonstrated interest in working with PROFIT.

PROFIT's technical assistance has included:

- # primary research of the health needs and health-seeking behavior of the target market
- # an assessment of clinics operated by 19 of the 65 cooperatives
- # research of legal issues related to the commercial delivery of medical services
- # a visit to an existing rural HMO in Guatemala
- # ongoing discussions with UCRAPROBEX management and health systems experts.

The result of these efforts is the proposed health system presented in this feasibility study, which describes the UCRAPROBEX organization, discusses the relevant findings from the research, and presents the proposed health system, including an implementation plan and financial analysis.

⁴ANSAL. *The Financing of the Health Sector: Final Report*, pp. 411–15.

⁵FESAL (National Family Health Survey) 1993, pp. 33, 78.

UCRAPROBEX

2.

The Union of the Agrarian Reform Cooperatives, or UCRAPROBEX, is one of the oldest and largest agricultural unions in El Salvador. UCRAPROBEX was founded in September 1988 by 10 coffee cooperatives in the state of Santa Ana during the government's agrarian reform program. Today, it has 65 cooperatives and represents approximately 50,000 people (cooperative members and their dependents).

El Salvador's agricultural sector historically has been dominated by an oligarchy of land-owning families, which have employed landless farm workers. In 1980, at the beginning of the civil war, the government began a three-phase program to redistribute land. Phase I called for the transfer of large estates (more than 1,235 acres) to cooperatives. Phases II and III have targeted smaller properties. As of 1992, less than 20 percent of the country's agricultural lands was redistributed, benefiting 85,227 "campesinos," of whom 36,000 were members of cooperatives. Cooperative unions and federations have pursued organizational and technical improvements to achieve the economic viability of the cooperatives.⁶

Each of the UCRAPROBEX member cooperatives is a separate, legal entity composed of members who own a percentage of the cooperative land. The members—usually the male head of household—each have one vote to elect the leadership of the cooperative. Within UCRAPROBEX cooperatives, the number of members ranges from 25 to 700 (see Appendix 3). The membership of each cooperative in UCRAPROBEX is voluntary. The 65 cooperatives are located throughout the country (see map in Appendix 4).

UCRAPROBEX's mission is to improve the economic and social conditions of cooperative members. UCRAPROBEX's philosophy is based on the universal principles of cooperativism, which include the free and voluntary entry and exit of members, the concept of one vote per member regardless of how much capital he or she owns, proportional distribution of surpluses/losses, integration of the cooperatives, and an apolitical orientation.

UCRAPROBEX's principal function is to commercialize and export the coffee produced by the cooperatives. This entails marketing, coordinating export sales and financing, quality control, shipping, and collecting receivables. UCRAPROBEX provides the cooperatives with international coffee market prices on a daily basis so that they can make informed decisions regarding sales and pricing. Since 1989, the UCRAPROBEX cooperatives have consistently achieved sale prices that were higher than the national average. In 1992–1993, UCRAPROBEX exports represented 12 percent of the total volume of coffee exported by El Salvador. The primary markets are the United States, Europe, Canada, and Japan.

⁶Kevin Murray and Tom Barry, *Inside El Salvador*. Albuquerque, NM: Resource Center Press, 1995, pp. 96–101.

UCRAPROBEX also provides a group policy for harvest and life insurance and assists the cooperatives in improving their efficiency and product quality and diversifying into other agricultural products.

UCRAPROBEX is headquartered in San Salvador in a modest building that houses approximately 15 administrative and technical staff and a laboratory to analyze product quality. All coffee production is analyzed on a sample basis before shipment. UCRAPROBEX has a computerized accounting system and has professionalized its management with the support of USAID, Cooperative League of the USA (CLUSA), and others.

UCRAPROBEX is directed by a board composed of the elected leaders of seven cooperatives (see the Organizational Structure in Appendix 1). The board meets every two weeks to discuss strategic, financial, and administrative issues. Mr. Mario Monroy, the general manager and founding president, manages the day-to-day administration. PROFIT has met with the UCRAPROBEX board several times and has had ongoing contact with Mr. Monroy during the development of this proposal.

To cover its costs, UCRAPROBEX receives a percentage of the cooperatives' sales revenues. Any surplus at the end of the year is either reinvested or distributed to the cooperatives. The organization's balance sheets for 1989–1993 (presented in Appendix 2) show UCRAPROBEX to be solvent and to have a small reserve fund (US\$200,000).

PROFIT does not have extensive information on the financial status of the individual cooperatives. However, a study of the health clinics run by 19 of the cooperatives conducted by PROFIT included a review of financial data. It revealed that the quality of the cooperatives' accounting and financial controls varied but was generally poor and was incomplete in many cases. The PROFIT study also found that most of the cooperatives borrow heavily from agricultural banks to finance their coffee production and carry substantial debt. Despite these problems, all the cooperatives reported spending some of their general funds on health care for their members.

RESEARCH

3.

PROFIT conducted two studies to assess the need for and utilization of health services among the UCRAPROBEX population. A Market Study measured the population's demand for health services, including what services they currently used, where they got those services, and their levels of satisfaction with the services they received. A Clinic Study examined the supply of health care by studying 11 of the 19 clinics currently operated by the cooperatives.

3.1 Methodology

3.1.1 Market Study

The Market Study was conducted in June 1996, by a professional research firm based in El Salvador. In order to get a statistically representative sample of the UCRAPROBEX population, 450 households were randomly selected from a stratified sample of 18 of the 65 cooperatives, based on the type of cooperative (i.e., with or without clinic), geographical location (East, West, or Central), and number of members (small, medium, or large).

- The survey team used a structured questionnaire to collect data on the following six topics:
- # the socioeconomic characteristics of UCRAPROBEX members' households
 - # resources and services used to meet health needs and corresponding levels of satisfaction
 - # health status of the cooperative population
 - # family planning practices
 - # level of demand and unmet demand for medical services, including the reasons for unmet demand
 - # costs incurred by cooperative members to access medical services.

Due to the nature of the questions, female heads of households were selected as the most appropriate respondents. Each respondent provided information for all household members (a total of 2,670 people) and were asked to describe all cases that they believed merited medical attention during the preceding six months. For each case that merited medical attention, the respondent stated whether or not medical attention was attained. A sample of the cases for which medical attention was attained (n=774) was further analyzed regarding the actions taken, services received, costs, and level of satisfaction.

3.1.2 Clinic Study

Among the 65 cooperatives that are members of UCRAPROBEX, 19 operate health clinics. In July and August 1996, a two-person team visited 11 of the 19 cooperative clinics. Using structured instruments, the team gathered data on the clinics' facilities, services, staffing, patient flow, supplies, and costs. The team also met with managers and accountants of each of the 11 cooperatives to collect information on management and financial practices.

The objectives of the Clinic Study were to:

- # estimate the capital and operating costs of rural clinics
- # evaluate the operations and management of the clinics in order to determine the best structure for an expanded health care system
- # collect data from patient records on service utilization.

3.2 Findings

In summary, the research indicated that:

- # Although the population was low-income, there was strong evidence that the cooperative members were willing and able to pay for health care, especially curative care.
- # Primary care accounted for most (about 80 percent) of the population's demand for health care services, although secondary and tertiary care services accounted for most of the costs.
- # Cooperatives were spending significant and unpredictable amounts on medical care, mainly for secondary and tertiary care.
- # The population valued having ready access to health care, defined as minimal travel time.
- # The UCRAPROBEX population had an unmet need for family planning (FP) and maternal and child health (MCH) services and for other primary care services.

3.2.1 Socioeconomic Status

The Market Study indicated that the UCRAPROBEX population is composed of rural families with a relatively low standard of living. The average family size was 5.9, which is higher than the national average of 4.6. Data collected on living conditions showed that 59 percent of the population resides in overcrowded living conditions (defined as more than three persons per room), 38 percent had a dirt floor, 13 percent had neither a latrine nor a toilet, and 14 percent had no access to a protected water source. The population

3. RESEARCH

was young (39 percent under age 15) and was 51 percent female. In general, members of the larger cooperatives (with 200 or more members) were more likely to have a clinic and tended to have slightly better living conditions than members of smaller cooperatives (with 100 or less members).

3.2.2 Demand for Health Care

The interviewees for the Market Study recalled 1,693 cases during the preceding six months when some member of their household needed medical care. More than half (50.5 percent) of the total population covered by the survey reported no need for medical care. The most common need was for primary care, including curative, maternal and child health, and family planning (see *Table 3.1*). A local physician and expert in rural health who analyzed the demand data estimated that approximately 80 percent of the cases were for primary care and that the remaining 20 percent were for secondary and tertiary care services. This data was used to estimate utilization rates and to make financial projections (presented in Section 5).

Medical Care Category	Percent of Population *
Upper Respiratory Infections	8.1
Prenatal and Maternal and Child Health	6.6
Lower Respiratory Infections	6.4
Family Planning	4.9
Acute Gastroenteritis/Acute Diarrhea	2.6
Chronic Diarrhea/Intestinal Parasites	2.4
Malnutrition/Anemia	2.1
Traumas	1.8
Child Delivery—Normal and with Complications	0.8
Other Illnesses	26.2
No Medical Need Reported	50.5

* n = 2,670. Percentages add up to more than 100 because respondents reported multiple cases of medical needs.

The need for health services was not met in 28 percent of the 1,693 cases reported. A lack of economic resources was the primary cause in 59 percent of the cases, followed by not wanting to miss work (17 percent), preferring homemade remedies (11 percent), and the poor quality of attention given (10 percent).

Many of the most common reasons for needing medical care, such as diarrhea, intestinal parasites, and respiratory infections, may have been the result of unhealthy practices or environmental conditions, for example poor hygiene or accessing water from unprotected sources. This indicates a need for health education about how to prevent these illnesses.

3.2.3 Ability to Pay for Health Care

- # There were several indications that the population was willing and able to pay for health care: #
- # The population sought medical services from a variety of private and public sector providers, demonstrating an ability to pay for health care. Even services sourced from the public sector may entail costs, given that MOH reforms and reduced public spending on health have led many public health providers to charge a fee.
- # Respondents reported spending between US\$6.25 and US\$25.00 per illness for curative care.
- # The Clinic Study showed that five cooperative clinics charged fees for their services and two charged for medicines.
- # The Clinic Study also revealed that cooperatives spent between US\$13,793 and US\$252,874 per year, or between US\$287 and US\$390 per member, on health care, mostly for secondary and tertiary services. Cooperative managers expressed concern about these costs and their unpredictability. Inadequate accounting systems at many coops made it difficult to uncover the full scale of this problem.

3.2.4 Satisfaction with Providers

The majority of the population reported being “somewhat or very satisfied” with the health services provided by cooperative clinics and MOH health posts and promoters. Accessibility of health care, defined as travel time, was the most important factor influencing people’s level of satisfaction. Satisfaction rates were highest for injections, vaccinations, and medical consultations, which members could access locally. Satisfaction rates were lowest for care at public hospitals and emergency care, which required the greatest travel time. Those who live on cooperatives with clinics were more satisfied with their clinic’s services than with services outside the cooperative. A local expert on rural health systems suggested that some of their satisfaction was due to a lack of experience/exposure to higher-quality providers. In any case, any alternative provider will need to demonstrate value to the market to change health-seeking behavior.

3.2.5 Cooperative Clinics

Cooperative clinics offered ease of access and were an important source of care. However, these clinics are underutilized and offer only curative care. Among the problems observed were poorly trained/supervised staffs, poor control of medications, no community outreach or health education efforts, and, in some cases, inadequate facilities and supplies. These problems were attributable to a lack of professional management, which was understandable given that cooperative leaders are agricultural producers and not health care professionals.

3.2.6 Reproductive Health and Family Planning

The studies showed an unmet need for maternal and child health (MCH) services. Forty-four percent of pregnant women did not receive any prenatal care during the six-month period covered by the studies. Seventy-two percent of women of reproductive age (WRA) had never received a medical consultation related to reproductive health. Forty-six percent of children under age 1 and 57 percent of those aged 2–4 had not received check-ups during the six-month study period.

There was also an unmet demand for family planning services and products. Sexually active WRA account for 21 percent of the total population, or approximately 10,000 women. The contraceptive prevalence rate (CPR) of the population was 53 percent, compared with 53 percent for El Salvador as a whole and 43 percent for rural areas.⁷ However, 94 percent of sexually active WRA covered by the studies did not want another child for at least a year. This indicates a potential unmet need of up to 41 percent or among more than 4,000 WRA. The studies also indicated a need for family planning counseling to address reasons for non-use, among those who did not want another child for at least a year which included a concern that methods were bad for one's health (10 percent), religion (4 percent), lack of knowledge (3 percent), and lack of access (1 percent).

The method mix of the UCRAPROBEX population resembled that of the population of El Salvador as a whole (*see Table 3.2*).

⁷FESAL 1993, p. 78.

Method	UCRAPROBEX Population (percent) ¹	Population of El Salvador (percent) ²
Female sterilization	32.6	31.5
Oral contraceptives	9.6	8.7
Injectables	5.0	3.6
Other modern methods (e.g., IUD or condoms)	1.8	4.2
Traditional methods		
Rhythm (calendar)	3.4	3.0
Withdrawal	0.7	2.0

¹From PROFIT studies, 1995.
²FESAL 1993, p.74.

THE PROPOSED HEALTH CARE SYSTEM

4.

4.1 Overview

PROFIT has developed a plan for the design and initial implementation of a health care system for cooperatives in UCRAPROBEX, based on information gathered during the Clinic Study, the Market Study, a visit to a rural HMO in Guatemala, and discussions with UCRAPROBEX and health care experts.

The primary goals of the system are to:

- # offer improved access to quality primary health care
- # become financially self-sustaining.

Although primary health care is available to cooperative members, there is evidence of unmet need and that the quality of the care could be improved (see Appendix 5 for a definition of primary health care).

The proposed system would address the majority of care demanded while being less expensive and less complicated to implement than a system that would cover all levels of care. As discussed previously, the research indicated unmet need for primary care services, notably family planning and maternal and child health services. By offering a true “system,” developed and managed by competent staff and based at the cooperatives, UCRAPROBEX can directly impact access and quality.

Adding coverage for secondary and tertiary services should be considered only after the primary care system is well established. The data collected on the use and cost of secondary and tertiary services requires further analysis by an actuary so that cooperatives know the full cost of offering this benefit. Also, while there is evidence from the Clinic Study that the cooperatives now pay for these services for their members, this coverage is informal and inconsistent, and formal coverage may increase demand to a level that is unaffordable. PROFIT’s proposal includes efforts to negotiate provider discounts for these services and an analysis of the cost of including these services in a comprehensive system, but the initial system is focused on primary care.

Developing a new health service system in rural El Salvador will be a significant challenge. Thus, the first year will involve a pilot project involving up to 16 cooperatives or a total of 2,000 families. Assuming that the pilot is successfully implemented, the plan then will seek to recruit other cooperatives over a period of time.

The plan is structured around the provision of primary care in clinics at the cooperatives. The clinics will be staffed by one or more health promoters who, in most cases, will work full time to provide curative care, preventative care, and health education services. The promoters will be supported by primary care physicians who will regularly visit the clinics to see patients who are referred by the promoters. The plan assumes that one full-time health promoter can serve up to 200 families, and one full-time physician can serve 1,000 families. However, the number of families served by each health provider is likely to be lower in small cooperatives and during the early phases of the plan's implementation.

During the pilot phase (i.e., the first year of service provision), the system is intended to operate with two clusters of up to eight cooperatives that are geographically contiguous. The goal will be to have 1,000 families per cluster. Assuming that the initial clusters of clinics are successful, additional clusters are to be added after the pilot phase.

The system will be financed through fixed monthly payments by the cooperatives and payment of a small fixed fee by clients for each visit. Clients also will pay for medicines on a cost basis. The physicians will be paid fixed salaries. Promoters will be paid a fixed salary plus a small fee per patient visit.

A financial analysis of the proposed system and a review of the cooperatives' financial capacity indicate that external funding will be necessary for capital and start-up costs. The financial projections assume that UCRAPROBEX will secure the funding necessary to support the initial costs of the system.

The system will be centrally managed by a medical director and the current general manager of UCRAPROBEX. The central management will recruit cooperatives for the system, hire and train physicians and promoters, develop and supervise the management information system, and ensure quality control of services. The management team will be supported by a staff that will provide administrative and database services and, as the system expands, by regional administrators. To the extent possible, the management also will collect and analyze information on the use of and payment for secondary and tertiary health care services and will negotiate with providers to offer cooperatives volume discounts for those services.

The implementation schedule for the system includes a six-month planning period, a one-year pilot phase, and a two-year expansion phase during which the system will cover all cooperatives and will begin to operate on a financially sustainable basis. The system is projected to attain financial sustainability in year three, assuming that outside funding was used to support the start-up costs. The following sections outline a detailed plan, including cash flow projections.

4.2 Staffing

4.2.1 Health Promoters and Cooperative Clinics

Health promoters will be the frontline service providers in the proposed system. They will provide curative care, preventive care, health education services, and referrals for specialized care. The strategy of using health promoters, who are specially trained individuals from the community, has been successful in developing countries worldwide.⁸ In El Salvador, the Ministry of Health (MOH) and local nongovernmental organizations (NGOs) have used health promoters to reach rural communities. A rural HMO for farm workers in neighboring Guatemala, Guatesalud, is another example of the successful use of health promoters.

Since the target population is currently getting primary care services from a variety of private and public providers, the health promoters must be accessible and offer quality care in order to attract patients. Therefore, the promoters will be based at the cooperatives, will undergo specialized training, and will have ongoing supervision from a circulating physician. The promoters will document each encounter with patients, and these files will be reviewed by the physicians. In addition, health promoters will have 24-hour phone or radio access to a physician on-call for consultations. The health promoters' ability to quickly consult a physician will greatly enhance the quality of care and the range of cases he or she can treat at relatively minor cost. PROFIT's local medical expert recommends that the promoters be women in order to facilitate delivery of MCH and FP services. A draft job description for the health promoters is presented in Appendix 6.

Health promoters will work in simple cooperative clinics. Twenty of the cooperatives already have clinics of varying sophistication and quality. Cooperatives without clinics will be responsible for establishing adequate space to host the promoters' work. The health system will provide furniture and medical and office equipment, which will cost about c\$13,625 (US\$1,548) per clinic.⁹ Appendix 7 presents the basic structure of a simple clinic.

Health promoters will divide their time between the clinics and home visits. At the clinics, each health promoter can see four patients per hour. Fifteen minutes per patient is generous by international standards, but it is appropriate in this case because the health promoters will be working alone to deliver care, register and prepare the patients, and, when necessary, provide medications. Home visits will be used to encourage families to use the health system and to provide preventive care, health education, and some curative services.

⁸Phillips, David R., *Health and Health Care in the Third World*, London: Longman Group, 1990.

⁹c\$ refers to "colones," the local currency. The exchange rate used throughout this document is c\$8.8=US\$1.00.

Promoters can conduct an estimated 80 consultations per week (4,000 per year), and each family member would require an average of 3 consultations per year. As a result, each health promoter can serve up to 1,200 persons or 200 families (see Appendix 8 for these calculations). However, the majority of cooperatives have less than 200 families, and it may be impractical or undesirable for these cooperatives to share a promoter. The financial projections are based on the conservative assumption that each health promoter will serve only 125 families, or 750 people, who would require a total of approximately 45 consultations per week (2,250 per year).

Promoters working at small cooperatives will be expected to complement their workload by providing care for people who are not members but live in or near the cooperatives. Nonmembers would be charged for services. Serving nonmembers will help meet demand in the surrounding community, and, depending on the fee structure, could generate revenues for the system. To be conservative, the financial projections assume no revenues from nonmembers.

Compensation for the health promoters will comprise a fixed monthly salary of c\$2,200 (US\$250) plus a copayment of c\$5 (US\$0.56) for each consultation as an incentive to be productive. The copayments could potentially increase the promoters' incomes by c\$875 (US\$99), or 40 percent each month, assuming a copayment is collected for 175 consultations per month.

4.2.2 Circulating Physicians

The health promoters will be supervised by circulating physicians, ideally general practitioners. Each physician will serve up to 1,000 families and will supervise approximately five promoters. He or she will review the files of all patients seen by the promoter, provide curative care, make referrals for specialized care, and be on call for telephone/radio consultations on a rotating basis. The physicians will be expected to spend one day per week with each promoter. The physicians' days will be divided between seeing patients and training/supervising the promoters. Supervision will include review of patient records and review of diagnosis/treatment/referral protocols. In addition, the promoters may observe the physicians' patient visits.

The physicians will play a key role in managing the proposed primary care system. They should identify service and management problems, suggest solutions, and support the collection of data necessary to objectively evaluate performance of the system. Physicians will earn a monthly salary of c\$8,800 (US\$1,000) and will have all travel costs covered. A job description is presented in Appendix 6.

4.2.3 Management

The quality and commitment of the management team will likely be the most important factor to the system's success. Based on discussions with the UCRAPROBEX Board of Directors, the management of Guatesalud, and consultants, PROFIT has outlined the following management structure:

- # The system will be managed by a **central office**, initially housed within UCRAPROBEX headquarters.
- # The management team will be led by a **medical director**, and, during the pilot test, the current general manager of UCRAPROBEX. The medical director will focus on health care issues (see the job description in Appendix 6), and the UCRAPROBEX manager will focus on business and marketing. The monthly salary of the medical director will be c\$15,000 (US\$1,705).
- # Assuming the pilot test is successful and the system expands, the system would formally hire an **executive director** in year two to replace the general manager of UCRAPROBEX. The monthly salary of the executive director will be c\$20,000 (US\$2,273).
- # The team would be supported by a **general administrator** and other staff at the central office, and by **three regional administrators** based in the field as the system grows.

The central management team will be ultimately responsible for all aspects of the development and operation of the proposed system. Securing start-up funding and hiring a medical director will be the first steps in implementing the proposed system. The UCRAPROBEX general manager and medical director will hire and train staff, develop management systems, and market the system to cooperatives. Once the primary care system is operational, the central management will supervise the physicians and health promoters; ensure the effective operation of a management information system for both finances and operations; keep in contact with leaders of the cooperatives to learn of their needs and concerns; and report on the system's performance to UCRAPROBEX and any outside funders.

In addition to running the primary care system, the central management will pursue activities that lay the groundwork for potential expansion of the UCRAPROBEX health system in the future, with the assistance of a medical benefits expert.

First, management will seek to negotiate discounts for secondary and tertiary services with physicians, clinics, labs, and hospitals. Local providers frequently indicated to PROFIT that their prices were negotiable. Any decrease in medical costs will immediately benefit the patient and/or cooperative, depending on who pays. In addition, lower costs for secondary and tertiary services will facilitate their future inclusion as a benefit in an expanded system.

Second, management will develop an information system that gives UCRAPROBEX and the cooperatives more information on the use of and payment for secondary and tertiary health services. This

information will assist the cooperatives in making financial decisions about expanding coverage and in negotiating with insurers.

4.3 Services and Medicines

The proposed system will offer curative care, preventive care, health education services, and referrals for specialized care. Curative care includes diagnosis and treatment of diseases, including respiratory, gastrointestinal, urinary, and reproductive. Curative care would also include first aid and triage of trauma, like work or car accidents. The health promoters will be trained to use medical protocols to systematically examine, diagnose, and treat patients and to know when to refer cases to a physician. The circulating physicians will review the records on all patients seen by the health promoters during the preceding week.

An important component of curative care will be provision of medicines, which the market survey indicated are an important means of resolving primary health care needs. PROFIT believes that distribution of medications will improve quality and access. Health promoters will be supplied with a basic inventory of medicines, both over-the-counter (OTC) and prescription drugs, to be sold to patients at cost. The circulating physicians will supervise distribution of prescription drugs. Both promoters and physicians will educate users on compliance and side effects. Families currently pay retail pharmacy prices. In general, pharmacies in El Salvador do not rigidly enforce regulations requiring a physician's prescription, which leads to problems of self-diagnosis and misuse.

Central management will work with each cooperative to negotiate volume discounts with a pharmacy or distributor in the area and operate proper inventory control to avoid stock-outs and problems with expired inventory. Costs also could be lowered by use of generic drugs. PROFIT recommends that the system establish a policy to allow for subsidization or donation of medicines to patients in case of hardship.

Preventive care includes prenatal, well-baby, and family planning services. Births will continue to be assisted by midwives at local hospitals. The system will seek to work with local MOH facilities to have UCRAPROBEX health promoters assist with vaccination programs for cooperative members and for non-members as well. Women will have access to all family planning methods. Promoters will educate women about their options, distribute supply methods (pills, injectables, and condoms), and provide physician referrals for IUDs and sterilization.

Health education will address nutrition, personal hygiene to prevent the spread of upper respiratory infections, prevention and oral rehydration therapy (ORT) for diarrhea, prevention of work accidents, prevention of sexually transmitted diseases (STDs), and other problems.

Referrals for secondary and tertiary care will include clinical lab testing, surgery and hospital care, and consultations with specialists (e.g., pediatricians, OB/GYNs, cardiologists, urologists, dermatologists) for more complicated health problems. As mentioned, central management will seek to negotiate fee discounts from local providers. These services will be paid on a fee-for-service basis by either patients or the cooperatives.

4.4 Marketing

The 65 cooperatives that belong to UCRAPROBEX do so by choice. Likewise, the leaders of each cooperative will have a choice about whether to enroll in the proposed primary care system. Marketing the health system will be greatly facilitated by the fact that the cooperative structure allows marketing and enrollment to be conducted with the leaders instead of with individual families. Once a cooperative enrolls, it begins to pay the fixed monthly charge of c\$60 (US\$7) per family for all member families. The proposed price appears feasible given that cooperative families earn approximately c\$2,000 (US\$227) per month.

Central management will need to market the health system by clearly communicating its advantages, functions, and prices. PROFIT's discussions with UCRAPROBEX's management and board of directors and other research revealed several potential advantages for the cooperatives and their members:

- # Cooperatives and their families' spending on health care is significant and unpredictable.
- # The proposed system is a desirable alternative to joining the public social security system, which has courted UCRAPROBEX despite having little or no infrastructure in rural areas.
- # Satisfaction appears to be highly influenced by convenient access, which will be maximized under the proposed system.

A major issue the system will need to address in marketing is the limited financial resources of the households and cooperatives. While the system is designed to be as low-cost as possible and while outside funding will be used to cover start-up costs, long-term sustainability will depend on members' ability and willingness to pay. The cooperatives and their members will need to switch from the traditional approach of paying for curative care on a fee-for-service basis to paying a fixed amount for a mix of curative and preventive care. Other issues to be addressed may be identified during implementation.

4.5 Legal Structure

Based on consultations with a local lawyer and discussions with UCRAPROBEX's management and board of directors, PROFIT recommends that UCRAPROBEX establish a separate, nonprofit entity to operate the primary care system. This entity would be owned by UCRAPROBEX and would have

separate accounting. While the system will seek to operate with commercial efficiency and market responsiveness, its nonprofit status is appropriate given its social mission.

By law, any entity selling medical services must have a physician on staff. This requirement will likely be fulfilled by the medical director. PROFIT advises that UCRAPROBEX consult with an experienced local lawyer to draft the entity's charter. Legal expenses to set up the entity are estimated at c\$20,000 (US\$2,273).

4.6 Implementation Plan

PROFIT recommends that UCRAPROBEX begin with a full-year pilot test, involving two clusters of cooperatives which are geographically contiguous. Each cluster will have up to eight cooperatives representing a total of 1,000 families, eight health promoters, and one physician. Such a pilot test will validate assumptions and provide invaluable lessons to improve quality and efficiency. PROFIT believes one year is necessary to enroll the projected number of cooperatives, to allow sufficient time to see changes in health-seeking behavior, and to collect data on the use of and payment for secondary and tertiary services. PROFIT further recommends that two clusters be included in the pilot in order to minimize the biases that may be inherent in a single cluster (e.g., geographic factors, the quality of the physician).

The financial analysis indicates that, while the system is projected to become self-sustaining, external funding of c\$1,800,000 (US\$204,545) will be needed for start up. Since cooperatives do not have surplus cash reserves to allow them to finance the start up internally, the very first step for UCRAPROBEX will be to secure external funding, preferably on a grant basis. UCRAPROBEX management has already expressed interest in pursuing a grant and feels this feasibility study will contribute to its efforts.

Once financing is secured, UCRAPROBEX will enter a pre-operational phase, which is estimated to last six months. During this phase UCRAPROBEX will establish the separate legal entity and hire the medical director. The medical director and general manager of UCRAPROBEX will design communications/marketing materials, recruit two clusters of cooperatives to participate in the pilot test, hire and train the health promoters and physicians, develop management systems, and coordinate the establishment of cooperative clinics where needed. *Table 4.1* outlines a budget for the six-month pre-operational phase.

The start-up costs consist mainly of staff salaries and office and legal expenses. Funds are budgeted for the management team to visit Guatesalud, a rural HMO for farm workers in neighboring Guatemala which successfully uses health promoters. Finally, the system will purchase an initial stock of medicines for the health promoters, which should be restocked using payments collected from patients for medicines. Purchase of fixed assets includes office furniture and equipment, telephone lines, and a computer system for the central office (telephone lines in San Salvador can cost several thousand US dollars). Once the system is operational, the health system will purchase furniture and medical and office equipment for the

4. THE PROPOSED HEALTH CARE SYSTEM

cooperative clinics, which are estimated to cost c\$13,625 (US\$1,548) per clinic. The organizational expenditures will be amortized, and the fixed assets will be depreciated (see *Table 5.2* for an outline of Overhead Expenses).

When service delivery actually begins, deployment of the promoters will constitute the beginning of the operational phase. At this point, the cooperatives and patients will be charged to cover the costs of the system. The operational phase of the pilot test will last a year.

Table 4.1 Budget for Six-Month Pre-Operational Phase		
Item	c\$	US\$
ORGANIZATIONAL COSTS		
Medical Benefits Consultant c\$363/day x 66 days	24,000	2,727
Medical Director's Salary @ c\$15,000/month	90,000	10,227
Marketing @ c\$1,000/month	6,000	682
Communication costs @ c\$500/month	3,000	341
Office expenses @ c\$1,000/month	6,000	682
Observation trip to existing system at Guatesalud	10,000	1,136
Legal expenses to establish entity	20,000	2,273
Initial stock of medicines	30,000	3,409
SUBTOTAL ORGANIZATIONAL COSTS	189,000	21,477
PURCHASE OF FIXED ASSETS		
Office equipment and telephone lines	150,000	17,045
Computer system	60,000	6,818
SUBTOTAL FIXED ASSETS	210,000	23,864
TOTAL START-UP COSTS	399,000	45,341

FINANCIAL ANALYSIS AND PROJECTIONS

5.

One of the major goals of the proposed system will be financial sustainability, defined as generation of a cash surplus on an annual basis. PROFIT commissioned a financial model which projects the system's net income/loss and cashflow on a monthly basis for three years. The pilot test will operate for only 12 months, but the financial projections cover a three-year period in order to determine the point of financial sustainability and the cost of operating the health system for the entire population. Different scenarios can be tested by making various assumptions about the level of care covered by the system and the number of families enrolled.

To analyze the proposed primary health system, the model assumed that only primary health services would be covered. To be conservative, the model has assumed that only members of the cooperatives would be served and that no additional revenues would be earned from nonmembers. A summary of the financial projections for this scenario in colons is presented in Appendix 9 and summarized in dollars in *Table 5.1*.

The financial analysis indicates that the proposed primary health care system has the potential to become financially self-sustaining at the relatively low price of c\$60 (US\$7) per family per month, assuming patients pay for medicines and the entire UCRAPROBEX population (8,000 families) is enrolled. The system could be sustainable with fewer families enrolled at a higher price per family. The pilot test, with only 2,000 families, would not be very efficient and would require a much higher price per family to be self-sustaining.

Financial sustainability is projected to be achieved in year three when the system generates an estimated cash surplus of c\$834,915 (US\$94,877), not including external funding. The major factors influencing the system's financial success will be its ability to recruit cooperatives to join the system and pay the monthly fees in full and on time, and its ability to control health service costs and overhead expenses. The assumptions underlying projected performance are discussed below.

5.1 Enrollment

In the first year (the pilot test), the first cluster of eight cooperatives (1,000 families) will enroll in the first month as a result of marketing efforts during the preceding months. The second cluster of eight cooperatives will enter in the fourth month, for a total of 2,000 families enrolled. Enrollment will remain stable at 2,000 families for the rest of the year-long pilot test. In years two and three, enrollment will rise gradually, reaching 8,104, or 100 percent of the total UCRAPROBEX population, by month 25.

(US\$)	Year 1	Year 2	Year 3	Total
Number of Families Enrolled	2,000	7,792	8,104	8,104
Revenues:				
Cooperative Payments (a)	\$143,182	\$427,160	\$663,055	\$1,233,396
Medicine Sales	83,095	216,914	288,602	588,611
Total Revenues (b)	226,277	644,074	951,656	1,822,007
Health Service Costs:				
Medicine Costs	83,095	216,914	288,602	588,611
Indirect Costs	121,750	330,295	439,909	891,955
Total Costs	204,845	547,209	728,511	1,480,565
Gross Margin	21,432	96,865	223,145	341,442
Overhead Expenses:				
Administration	46,875	113,756	127,915	288,545
Depreciation	9,108	17,675	23,352	50,135
Amortization	4,295	4,295	4,295	12,886
Total Expenses	60,278	135,726	155,562	351,567
Net Income/(Loss)	(38,847)	(38,862)	67,583	(10,125)
Cash Flow:				
add back non-cash expenses	13,403	21,971	27,648	63,022
add Coop Enrollment Fee	11,364	32,911	1,771	46,045
less Organizational setup	(21,477)	0	0	(21,477)
less Fixed Assets	(48,636)	(68,125)	0	(116,761)
less Working Capital ©	(13,636)	(39,493)	(2,125)	(55,255)
Cash Surplus/(Deficit)	(97,830)	(91,598)	94,877	(94,551)
Donation	113,636	90,909	0	204,545
End Cash Balance	15,807	(689)	94,877	109,994
Accumulated Cash Balance	\$15,807	\$15,118	\$109,994	
a) assumes each family pays US\$7 per month b) assumes no revenue from nonmembers c) working capital = accrued revenue less cash revenue d) Exchange rate: c\$8.8 = US\$1				

5.2 Revenues

Operational revenues will be collected from participating cooperatives as a fixed monthly charge of c\$60 (US\$7) per family. The proposed pricing appears feasible given that cooperative families earn approximately c\$2,000 (US\$227) per month. Patients will also pay for medicines which will cover the cost of medicines.

5.3 Health Service Costs

Health service costs—those directly related to the delivery of health services and medicines—generally increase as the number of families enrolled increases. In year three, when the entire population is enrolled, health service costs will represent 82 percent of the system’s total costs.

For the primary care system, the health service costs comprise the cost of medicines and indirect costs. The cost of medicines are completely offset by the revenues collected from patients for medicines distributed. For an expanded system that covers secondary and tertiary care, costs would also include fees for lab tests, specialist visits, hospital care, and other services. Indirect costs include the salaries of health promoters, circulating physicians, and regional administrators; travel expenses for physicians; and office expenses of the regional administrator. The contribution margin equals total revenues less the health service costs.

5.4 Overhead Expenses

Overhead expenses are composed of central office administration, contingency, depreciation, and amortization. These expenses will support service delivery in the cooperatives. A budget for overhead expenses is presented in *Table 5.2*.

Overhead expenses are lower during the first-year pilot test because UCRAPROBEX will subsidize the costs of the executive director and office rent. In Year Two, assuming the system expands, overhead expenses will double. Fixed assets purchased during start up and during the operational phase to furnish and equip the cooperative clinics are depreciated using the straight-line method over five years. Similarly, legal and other costs associated with setting up the system’s organization are amortized over a five-year period (see *Table 4.1*). In Year Three, when the entire population is enrolled, overhead expenses are projected to represent 18 percent of the total costs of the proposed system.

	Year One	Year Two	Year Three
ADMINISTRATION			
Executive Director	0	27,273	27,273
General Administrator	0	20,455	20,455
Medical Director	20,455	20,455	20,455
Accountant	6,136	8,182	8,182
Data Processor	3,682	4,909	4,909
Secretary	2,455	4,909	4,909
Marketing/Promotion	1,364	1,364	1,364
Medical Benefits Consultant	1,364	1,364	1,364
Communications	852	1,364	2,045
Office Rent and Supplies	1,364	5,455	12,273
Uncollectible Accounts	2,386	7,119	11,051
Contingency	6,818	10,909	13,636
TOTAL ADMINISTRATION	46,875	113,756	127,915
DEPRECIATION	9,108	17,675	23,352
AMORTIZATION	4,295	4,295	4,295
TOTAL OVERHEAD	60,278	135,726	155,562
Exchange Rate: 1 c\$8.8 = US\$1.00; see Appendix 9 for budget in c\$.			

5.5 Net Income/Loss

The system is projected to generate net losses in Years One and Two—c\$341,850 (US\$38,847) and c\$341,983 (US\$38,862), respectively—and to break even in Year Three, with revenues exceeding costs by c\$594,732 (US\$67,583).

5.6 Cash Flow and Funding

The cash flow is comprised of the cash inflows (net income plus the non-cash expenses of depreciation and amortization) minus the cash outflows (start-up costs, purchase of fixed assets, and cash needed for working capital). Working capital is defined as the difference between accrued revenue and actual cash revenue collected. It is assumed that the operational revenue due from the cooperatives will be paid one month after it is due.

There will be large cash deficits in years one and two—c\$860,900 (US\$97,830) and c\$806,064 (US\$91,598), respectively—due to start up costs and the lack of operating income. This deficit is to be covered primarily by external funding of c\$1,800,000 (US\$204,545). The system is projected to achieve financial sustainability in year three, when it will generate an estimated cash surplus of c\$834,915 (US\$94,877). Any surpluses generated by UCRAPROBEX or the individual cooperatives, will either be reinvested in the system or distributed equitably among the cooperatives. As discussed in the preceding legal section, the system will be a nonprofit entity.

OPPORTUNITIES FOR EXPANSION

6.

PROFIT has discussed with UCRA PROBEX three opportunities for expanding and improving the health care system:

- # coverage of secondary and tertiary services
- # centralized purchase of medicines
- # establishing referral clinics at selected cooperatives.

6.1 Coverage of Secondary and Tertiary Services

PROFIT recommends that UCRA PROBEX decide whether to expand its health system to include secondary and tertiary care services after the following information is collected during the pilot test:

- # The degree to which the cooperatives are already paying for their members' secondary and tertiary care services: If cooperatives already cover these services, then their inclusion as a benefit would not represent an increase in costs and may represent an opportunity to control costs.
- # The degree to which the population uses public sector providers and the degree to which these services are free: If there is extensive use of free, public sector resources, then adding secondary and tertiary services may significantly increase utilization and costs.
- # The level of utilization and cost of these services: This information will allow the financial impact of including these services to be anticipated and will support negotiations with insurance companies.
- # The level of success in negotiating fee discounts with local providers.
- # The performance of the medical director and his or her staff members and their ability to successfully manage a comprehensive health care system.

6.1.1 Alternative Structures for Adding Secondary and Tertiary Services

There are several ways to structure the addition of secondary and tertiary services: a network of preferred providers paid on a fee-for-service basis, self-funded insurance, and commercial insurance. In all cases, the objective would be for the cooperatives rather than the patients to pay for secondary and tertiary services so that healthy members subsidize members who need medical care. These alternatives are described and compared in *Table 6.1*.

Table 6.1
Alternative Structures for Adding Secondary and Tertiary Services

	Preferred Provider Network	Self-Funded Insurance	Commercial Insurance
Concept	Cooperatives would pay for services rendered by preferred providers with whom they had negotiated discount prices on a fee-for-service basis.	Cooperatives would pay a fixed premium per person into a central fund. Providers would send bills to the central office for processing and payment.	Cooperatives would pay a fixed premium per person to a commercial insurance company. Providers send bills to the insurance company.
Administrative Impact	Administration at the cooperative level may require one part- or full-time person to process medical bills.	Central administration would have to add staff to process bills for 50,000 enrollees.	Almost none. The insurance company would be responsible for administration.
Variations	<ul style="list-style-type: none"> ∩ Cooperatives pay providers directly versus reimbursing patients ∩ Services are free for patients versus small copayment ∩ No coverage for use of a non-preferred provider versus limited coverage 	<ul style="list-style-type: none"> ∩ Patients are free to choose any provider versus required to use preferred providers ∩ Services are free for patients versus involving small copayment ∩ A commercial re-insurance policy is used to cap the fund's liability versus no re-insurance 	<ul style="list-style-type: none"> ∩ Patients are free to choose any provider versus required to use preferred providers ∩ Services are free for patients versus involving small copayment ∩ A commercial re-insurance policy is used to cap the fund's liability versus no re-insurance
Advantages	Decentralized system may be more responsive	<ul style="list-style-type: none"> ∩ Risks and costs are pooled across the entire group of 50,000 enrollees ∩ Cooperatives have a predictable expense 	<ul style="list-style-type: none"> ∩ Risks and costs are pooled across the entire group of 50,000 enrollees ∩ Cooperatives have a predictable expense ∩ This is the simplest to implement and operate
Disadvantages	<ul style="list-style-type: none"> ∩ Requires duplicate administration at all cooperatives ∩ Pooling of risks and costs is limited to single cooperative ∩ Costs continue to be variable and unpredictable 	∩ Overhead costs at the central office will be high	∩ May be the most expensive option because premiums will have to cover the insurance company's overhead and profit margin

The financial analysis shows that the financial impact of adding secondary and tertiary services would be significant. Due to the financial risk and complexity of the issues involved in this decision, PROFIT recommends that UCRAPROBEX work with an expert on medical benefits to determine the feasibility of adding coverage for secondary and tertiary services.

6.1.2 Financial Analysis and Projections of a Comprehensive System

In order to have some notion of the financial feasibility of including secondary and tertiary services, PROFIT commissioned three-year financial projections for a comprehensive system that covers all three levels of care. The projections made the following major assumptions:

- # There would be a pilot test in year one, with enrollment limited to 2,000 families.
- # There would be no limits on the types of secondary and tertiary care services to be covered.
- # All secondary and tertiary care services would be provided by private providers.
- # The system would be able to negotiate discounts on private provider fees of 20 percent in year one, 10 percent year two, and 10 percent in year three. (The expected discounts on private provider fees may appear optimistic, but in collecting cost data in the field for this study, PROFIT frequently heard from providers that their prices were negotiable.)

A summary of the financial projections for this scenario in colons is presented in Appendix 10 and summarized in dollars in *Table 6.2*. The financial analysis indicates that a comprehensive health care system based on the assumptions listed above would require significantly higher monthly payments and external funding of c\$6,900,000 (US\$784,091) to achieve financial sustainability. Sustainability would occur in year three, when the system would generate an estimated cash surplus of c\$1,018,610 (US\$115,751). However, the monthly charge per family to cooperatives would be c\$340 (US\$38.64). This pricing level is probably not feasible given that cooperative families earn approximately c\$2,000 (US\$227) per month, and the cooperative with the highest health care costs in the Clinic Study spent an average of US\$33 per family per month.

UCRAPROBEX would have several options to make the expansion of coverage affordable, including:

- # providing no coverage for very expensive services or services that can be provided by public hospitals
- # limiting the number of hospital days and doctor visits per person or per family
- # limiting the monetary costs per person or per family
- # establishing referral center clinics at selected cooperatives to deliver secondary services.

In summary, expanding coverage to include more sophisticated and expensive levels of care represents an administrative and financial challenge for UCRAPROBEX which must be carefully considered.

6. OPPORTUNITIES FOR EXPANSION

Table 6.2 Summary of Financial Projections Scenario B: Primary, Secondary, and Tertiary Care				
(US\$)	Year 1	Year 2	Year 3	Total
Number of Families Enrolled	2,000	7,792	8,104	8,104
Revenues:				
Cooperative Payments (a)	\$119,318	\$2,420,574	\$3,757,309	\$6,297,201
Medicine Sales	83,095	216,914	288,602	588,611
Total Revenues (b)	202,413	2,637,488	4,045,911	6,885,812
Health Service Costs:				
Medicine Costs	83,095	2,501,331	3,327,996	5,912,422
Indirect Costs ©	121,750	352,795	463,977	938,523
Total Costs	204,845	2,854,126	3,791,974	6,850,945
Gross Margin	(2,432)	(216,638)	253,937	34,867
Overhead Expenses:				
Administration	40,080	102,847	114,278	257,204
Contingency	6,818	10,909	13,636	31,364
Depreciation	10,222	18,789	24,466	53,476
Amortization	4,295	4,295	4,295	12,886
Total Expenses	61,415	136,840	156,676	354,931
Net Income/(Loss)	(63,847)	(353,478)	97,261	(320,063)
Cash Flow:				
add back non-cash expenses	14,517	23,084	28,761	66,363
add Coop Enrollment Fee	11,364	32,911	1,771	46,045
less Organizational setup	(21,477)	0	0	(21,477)
less Fixed Assets	(54,205)	(68,125)	0	(122,330)
less Working Capital (d)	(11,364)	(289,703)	(12,043)	(313,109)
Cash Surplus/(Deficit)	(125,011)	(655,311)	115,751	(664,571)
External Funding	136,364	647,727	0	784,091
End Cash Balance	11,352	(7,583)	115,751	119,520
Accumulated Cash Balance	\$11,352	\$3,769	\$119,520	

a) assumes each family pays US\$38.64 per month

b) assumes no revenue from nonmembers

c) Indirect Costs include medicines and fees for secondary and tertiary services

6.2 Centralized Purchasing of Medicines

Having the UCRAPROBEX central office purchase medicines directly from manufacturers and wholesalers could mean greatly reduced prices. These savings would have to be weighed against the costs and effectiveness of an inhouse inventory and distribution system. Centralized purchasing requires good inventory and logistics management to avoid spoilage and stock-outs.

In 1996, UCRAPROBEX had to create such a centralized inventory and logistics management system for its “cesta básica” program, which involves central purchase of household staples such as rice, beans, oil, and paper products which are sold at cost to cooperative families. UCRAPROBEX’s ability to manage the logistics of this program should be critically evaluated in order to determine the costs/benefits of central purchase of medicines.

6.3 Referral Center Clinics

PROFIT’s Clinic Study revealed that three cooperative clinics were relatively sophisticated in terms of facilities, equipment, supplies, staffing, and management. While these clinics would still benefit greatly from professional management, they appeared to have the potential to offer some secondary care services. With the objective of making inclusion of these services more affordable, UCRAPROBEX could explore working with selected cooperatives to upgrade their clinics and to establish them as referral centers for secondary care services for their own members and for members of other cooperatives nearby. The goals of this strategy would be to create a source of secondary care that is less expensive than using current external providers and to keep the cooperative clinic financially self-sustaining. The clinic would be owned by the cooperative and would compete with other providers in the area.

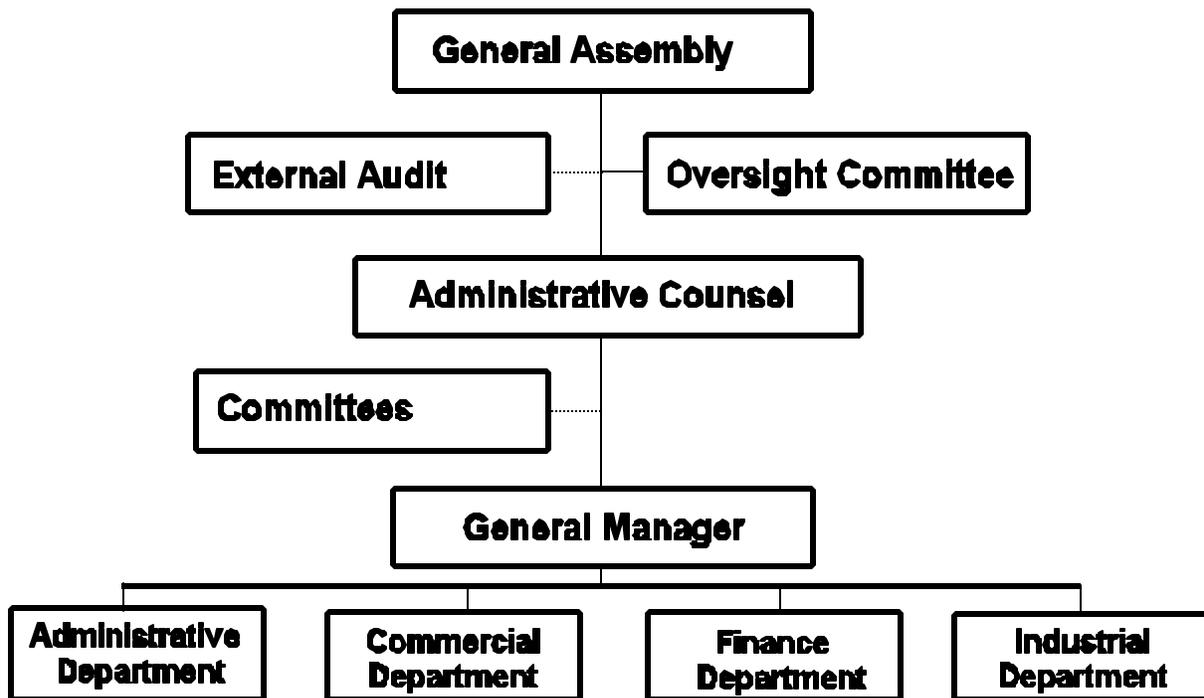
The Clinic Study estimated that such a referral clinic would incur operating costs of US\$1,400 per month and could serve up to 1,480 patients per month. In addition to operating costs, such a clinic would require start-up expenditures for renovating an appropriate facility and to buying equipment. Prior to investing in a referral center clinic, a feasibility analysis should be done to assess:

- # accessibility—defined as travel time—of potential clinic locations compared to other external providers
- # potential to offer secondary care (such as lab services, normal deliveries, outpatient surgery, and visiting/rotating specialists in pediatrics, gynecology, obstetrics, dermatology, and dentistry)
- # pricing alternatives, including fee-for-service or a fixed amount per member charged to the cooperatives whose members are using the clinic.

APPENDICES

APPENDIX 1
ORGANIZATIONAL STRUCTURE OF
UCRAPROBEX

Appendix 1 Organizational Structure of UCRAPROBEX



APPENDIX 2
UCRAPROBEX BALANCE SHEET
FISCAL YEAR 1989–1993

Appendix 2					
UCRAPROBEX Balance Sheet in US\$					
	Years				
	1989	1990	1991	1992	1993
Cash	17,140	2,513,052	365,847	194,279	215,757
Accounts Receivable	122,836	183,170	2,697,283	2,339,557	2,598,204
Other Current Assets	342,070	318,652	3,371	78,743	87,448
Fixed Assets	11,554	55,060	112,503	195,611	217,236
Other Assets	8,730	573,794	76,711	95,369	105,911
Total Assets	502,330	3,643,728	3,255,715	2,903,558	3,224,556
Accounts Payable	168,202	457,092	2,400,498	2,126,473	1,894,725
Other Liabilities	0	2,404,318	326,822	193,496	214,888
Total Liabilities	168,202	2,861,410	2,727,320	2,319,969	2,109,614
Capital Stock	334,126	777,080	524,660	550,812	687,648
Reserves	0	5,236	3,733	32,775	243,021
Donated Surplus	0	0	0	0	184,198
Total Capital	334,126	782,316	528,394	583,588	1,114,867
Total Liabilities and Capital	502,328	3,643,726	3,255,714	2,903,557	3,224,481
Exchange Rate c\$/US\$1	5.00	5.00	8.03	9.17	8.67
Source: UCRAPROBEX Management					

APPENDIX 3
LIST AND LOCATION OF
65 UCRAPROBEX COOPERATIVES

Appendix 3
UCRAPROBEX Cooperatives

No.	Cooperative	Region	State	Municipality	No. of Families	Clinic
1	Acra La Labor DE R.L.	West	Ahuachapan	Ahuachapan	411	1
2	San Alfonso Miramar DE R.L.	West	Ahuachapan	Sn. Fco. Menendez	60	1
3	Acra El Salto DE R.L.	West	Ahuachapan	Jujutla	146	0
4	Acra La Colinas DE R.L.	West	Ahuachapan	Tacuba	113	0
5	Concepcion Miramar DE R.L.	West	Ahuachapan	San Pedro Puxtla	84	0
6	Acra San Raymundo DE R.L.	West	Ahuachapan	Ahuachapan	73	0
7	Acra Entre Rios DE R.L.	West	Ahuachapan	Tacuba	54	0
8	Acra El Progreso DE R.L.	West	Ahuachapan	Tacuba	53	0
9	Acra El Paraiso DE R.L.	West	Ahuachapan	Tacuba	30	0
10	Acra El Zacamil DE R.L.	West	Ahuachapan	Ahuachapan	26	0
11	Acra Agua Fria DE R.L.	Central	La Libertad	Colon	326	1
12	Acra Florencia DE R.L.	Central	La Libertad	Nvo. Cuscatlan	269	1
13	Acra Santa Adelaida DE R.L.	Central	La Libertad	Comasagua	263	1
14	Acra El Espino DE R.L.	Central	La Libertad	Ant. Cuscatlan	183	1
15	Acra El Refugio DE R.L.	Central	La Libertad	Sn. Juan Opico	180	1
16	Acra Pasatiempo DE R.L.	Central	La Libertad	Colon	163	1
17	Acra El Jabali DE R.L.	Central	La Libertad	Sn. Juan Opico	144	1
18	Acra Las Quebradas DE R.L.	Central	La Libertad	Talnique	97	1
19	Acra El Chaguite DE R.L.	Central	La Libertad	Jayaque	90	1

Appendix 3
UCRAPROBEX Cooperatives

No.	Cooperative	Region	State	Municipality	No. of Families	Clinic
20	Acra Aruba DE R.L.	Central	La Libertad	Jayaque	34	1
21	Acra Chanmico DE R.L.	Central	La Libertad	San Juan Opico	700	0
22	La Nueva Esperanza DE R.L.	Central	La Libertad	San Juan Opico	170	0
23	Acra El Bosque DE R.L.	Central	La Libertad	Nva. San Salvador	150	0
24	Acra San Antonio DE R.L.	Central	La Libertad	Comasagua	88	0
25	Acra El Fara DE R.L.	Central	La Libertad	Comasagua	85	0
26	Acra Santa Fe DE R.L.	Central	La Libertad	San Juan Opico	70	0
27	Acra Espiritu Santo DE R.L.	Central	La Libertad	San Jose Villanueva	66	0
28	Acra La Florida DE R.L.	Central	La Libertad	Nva. San Salvador	60	0
29	Acra 14 De Marzo DE R.L.	Central	La Libertad	Quezaltepeque	59	0
30	Acra Nazaret DE R.L.	Central	La Libertad	Huizucar	45	0
31	Acra El Pinal DE R.L.	Central	La Libertad	Jayaque	43	0
32	Acra Hacienda Nueva DE R.L.	Central	La Libertad	Colon	39	0
33	Acra Nuevo Porvenir DE R.L.	Central	La Libertad	Teotepeque	35	0
34	Acra La Concordia DE R.L.	Central	La Libertad	Nva. San Salvador	25	0
35	Acra San Simon DE R.L.	East	La Paz	San Juan Nonualco	45	0
36	Nuevo San Rafael	East	La Paz	San Juan Nonualco	30	0
37	Acra La Maranonera DE R.L.	East	San Miguel	Chirilagua	250	0
38	Acra Rio Grande DE R.L.	East	San Miguel	Moncagua	56	0

Appendix 3
UCRAPROBEX Cooperatives

No.	Cooperative	Region	State	Municipality	No. of Families	Clinic
39	Acra El Progreso DE R.L.	East	San Miguel	Moncagua	28	0
40	Samaria Las Mercedes DE R.L.	Central	San Salvador	Apopa	71	0
41	Acra El Guaje DE R.L.	Central	San Salvador	Apopa	64	0
42	Acra Santa Teresa DE R.L.	Central	San Salvador	San Martin	45	0
43	Acra Saigon DE R.L.	Central	San Salvador	Nejapa	35	0
44	Acra San Gabriel DE R.L.	Central	San Salvador	Apopa	26	0
45	Acra La Magdalena	West	Santa Ana	Chalchuapa	460	1
46	Acra Los Pinos DE R.L.	West	Santa Ana	El Congo	106	1
47	Acra Las Cruces DE R.L.	West	Santa Ana	Chalchuapa	61	1
48	Rancho Montevista DE R.L.	West	Santa Ana	El Congo	160	0
49	San Antonio Zacamil DE R.L.	West	Santa Ana	Cand. De La Frontera	75	0
50	Acra El Potosi DE R.L.	West	Santa Ana	Coatepeque	46	0
51	Tierra Fertil DE R.L.	West	Santa Ana	Coatepeque	30	0
52	Acra Ataisi DE R.L.	West	Sonsonate	Izalco	660	1
53	Acra Las Lajazs DE R.L.	West	Sonsonate	Izalco	457	1
54	Acra Los Lagartos DE R.L.	West	Sonsonate	San Julian	379	1
55	Acra La Fortuna DE R.L.	West	Sonsonate	San Julian	28	1
56	Santa Marta Las Trincheras	West	Sonsonate	Izalco	121	0
57	Acra El Balsamar DE R.L.	West	Sonsonate	Cuisnahuat	112	0

Appendix 3
UCRAPROBEX Cooperatives

No.	Cooperative	Region	State	Municipality	No. of Families	Clinic
58	Acra Las Victorias DE R.L.	West	Sonsonate	Caluco	60	0
59	San Jose Miramar	West	Sonsonate	Nahuizalco	60	0
60	Acra El Carmen DE R.L.	West	Sonsonate	Caluco	50	0
61	Acra San Rafael DE R.L.	West	Sonsonate	Juayua	49	0
62	Santa Magdalena DE R.L.	West	Sonsonate	Izalco	28	0
63	Acra San Mauricio DE R.L.	East	Usulután	Tecapan	63	0
64	Acra El Milagro DE R.L.	East	Usulután	Tecapan	40	0
65	Acra La Violeta DE R.L.	East	Usulután	Tecapan	26	0

APPENDIX 4
MAP OF EL SALVADOR SHOWING
UCRAPROBEX COOPERATIVES

APPENDIX 5
DEFINITION OF PRIMARY HEALTH CARE

Appendix 5.

Definition of Primary Health Care

International health policymakers and practitioners at Alma Ata, a major international health conference held in 1978, developed a framework for primary health care with the following components:¹⁰

- # education about diseases, health problems, and their control
- # safe water and basic sanitation
- # maternal and child health and family planning
- # Immunization against infectious diseases
- # appropriate treatment of common diseases and injuries
- # provision of essential drugs

The proposed primary health system for UCRAPROBEX will address these components through provision of the following services:

Preventive Health Education

- P** in the community: facilitate the formation of neighborhood committees to identify and eliminate or address environmental health risks
- P** in the household: visit homes to educate families about family health, early identification of illnesses, and family planning
- P** in the workplace: visit places of employment to educate employees about avoiding accidents

Consultations to Prevent Illnesses

- P** maternal health: pre- and post-natal care; strict follow-up for high-risk pregnancies; training and supervision of midwives in the community
- P** child health: vaccinations, growth monitoring, well-baby care

¹⁰Phillips, D., *Health and Health Care in the Third World*. London: Longman, 1990.

- P family planning: distribution or sale of birth control methods to space or prevent pregnancies and sexually transmitted diseases
- P annual check-ups: free check-ups for all cooperative members

Consultations for Illnesses

- P curative care: diagnosis and treatment for common illnesses and injuries in the community, according to procedures established by general medical doctors; referral of serious cases and those with complications
- P medicines: distribution or sale of medicines for common illnesses
- P emergencies: triage, first aid, and referral when necessary

APPENDIX 6

POSITION DESCRIPTIONS

HEALTH PROMOTER

CIRCULATING PHYSICIAN

MEDICAL DIRECTOR

Appendix 6.

Position Descriptions

POSITION DESCRIPTION:

HEALTH PROMOTER

The Health Promoter will provide primary health care to approximately 200 families living within an individual cooperative that is part of UCRA PROBEX. The promoter will be based at the cooperative and will undergo specialized training and ongoing supervision/orientation from a circulating physician.

QUALIFICATIONS

Previous training and/or experience in community or primary health care is desirable. Interest in community development. Area resident. Willingness to do outreach and group presentations.

RESPONSIBILITIES

The Health Promoter will report directly to the Circulating Physician and ultimately to the System's Medical Director. The Health Promoter will be responsible for providing primary health care to cooperative members and nonmembers. The duties will include:

- # Manage a small cooperative clinic, including maintaining an inventory of medicines and supplies, patient records, and accounting records.
- # Provide basic primary health care services at the clinic (50 percent of time) and through home visits (50 percent of time), including:
 - P curative services, including distribution of medications and referrals for specialized services
 - P preventive services, including maternal and child health, family planning services, and vaccinations
 - P education for members and families about diseases, health problems, and their control
- # Make health education presentations to groups in the community on topics such as accident prevention, family planning, and prevention of environmental and contagious diseases.
- # Market the system while making home visits to both cooperative and noncooperative members

COMPENSATION

Monthly salary of c\$2,200 (US\$250), plus c\$5 (US\$0.57) per patient visit.

POSITION DESCRIPTION:

CIRCULATING PHYSICIAN

The Circulating Physician will play an integral role in the creation of a new and innovative health system serving members of coffee cooperatives that are part of UCRAPROBEX. The system will focus on primary health care and will be community-based. The Circulating Physician will supervise up to five health promoters and will provide medical services to approximately 1,000 families living within a UCRAPROBEX cooperative at a clinic located in the cooperative.

QUALIFICATIONS

Experience in community or public health is desirable. Certified Medical Doctor, preferably a General Practitioner, Pediatrician, Internist, or OB/GYN. Area resident preferred.

RESPONSIBILITIES

The Circulating Physician will report directly to the Medical Director of the UCRAPROBEX Primary Health System. The Circulating Physician will be responsible for providing primary health care to members, supervising and training five health promoters, and ensuring efficient administration of the cooperative clinics. Specifically, the Circulating Physician will spend one day a week with each promoter, dividing his/her time between:

- # Medical consultation to members, including:
 - P Curative care
 - P Referrals for specialized care
 - P Prescription of medications
 - P On-call emergency care
- # Supervision of up to five health promoters, including:
 - P Weekly review of patient records for all patients seen by the Health Promoter
 - P Weekly review of diagnosis/treatment/referral protocols
- # Work with Medical Director to evaluate the system, identify and solve management problems, and negotiate discounts with providers of secondary and tertiary services.

COMPENSATION

Base salary of c\$8,800 (US\$1,000) per month and coverage of all travel costs.

POSITION DESCRIPTION:

MEDICAL DIRECTOR

As the Medical Director of the primary health care system, this position offers the opportunity to play a lead role in the creation of a new and innovative health system in rural El Salvador. The system will focus on primary health care, will be community-based, and will aim to become financially self-sustaining. The Medical Director will be responsible for aspects of the development and operation of the health care system. He/she will directly supervise Circulating Physicians and a small central staff.

QUALIFICATIONS

Medical Doctor with experience in community or public health, strong management skills, and an entrepreneurial attitude.

RESPONSIBILITIES

The Medical Director will report directly to the UCRAPROBEX Board of Directors and will work closely with the UCRAPROBEX Management. The Medical Director will be responsible for the overall implementation and administration of the primary health care system, including the following:

Development and Start-Up

P Hire and train staff

P Develop management information systems to track costs and charges at the health promoter, cooperative, and system levels; control medicine and medical supply inventories; collect data on the use and costs of secondary and tertiary services

P Market the system to cooperatives

Operations

P Supervise Circulating Physicians and Health Promoters

P Ensure the effective operation of the management information system for both financial and operational needs

P Maintain contact with leaders/managers of the cooperatives to stay informed of their needs and concerns

P Report on the system's performance to UCRAPROBEX and any outside funding institutions

P Seek to negotiate discounts for secondary and tertiary care services with physicians, clinics, labs and hospitals, and develop an system to collect data on the use of and cost of these services

COMPENSATION

Base salary of c\$15,000 (US\$1,705) per month.

APPENDIX 7
COOPERATIVE CLINICS
BASIC REQUIREMENTS AND ESSENTIAL MEDICINES

Appendix 7. Cooperative Clinics: Basic Requirements and Essential Medicines

Facilities

The clinic should operate in two rooms that are appropriate for the provision of medical consultations and treatments. There should be enough space to house a pharmacy and store files. The facilities should be comfortable and afford both staff and patients the privacy they require.

Personnel

One promoter would be in charge of the clinic and works eight hours a day, Monday through Friday. The promoter should dedicate a minimum of 20 hours a week to attend to the most common medical needs of the patients, including family planning. The promoter could see four patients per hour. The rest of the promoter's time should be dedicated to providing preventative health education, assisting the doctor with consultations, and to administrative needs of the clinic. The promoter could refer patients for additional services and would be on call 24 hours a day to refer patients and attend minor emergencies.

A doctor would provide medical consultation to sick patients four hours a week (5 patients per hour), evaluating cases and referring them for specialized care or hospitalization if necessary. The doctor would also provide family planning consultations, preventative health check-ups for children and adults, and supervise the work of the promoter. The doctor would also be on call 24 hours a day to refer patients and handle emergency cases.

Medical Services Provided

The clinic should offer the following types of services: medical consultation for illnesses, prenatal check-ups, family planning and reproductive health services, preventative health education, and vaccinations.

Supplies

The clinic should be stocked with basic medications and medical supplies necessary to treat the most common illnesses. Generic medications should be purchased in bulk at hospital prices. Stocks should be controlled using an up-to-date “card” system (**an inventory control system**). These medications should be well organized, allowing staff to respond quickly to patient needs and a “first purchased - first sold” system should be put into place so that expired medications are not distributed.

Equipment and furnishings

The clinic should have the basic equipment and furnishings necessary to meet patient needs (for consultations, distribution of medications, and for the waiting room). The following equipment should always be available: thermometers, tongue depressors, examination lamp, stethoscope, blood pressure cuff, examination table, measuring tape, eye/ear examination device, and measuring cups for liquids. The clinic should also have the necessary furniture for staff and patient needs, including the following: desks, chairs, files for medical records, and shelving for medications, etc. All of these supplies and equipment should be in good condition and be available for the exclusive use of the clinic.

Documentation

All consultations should be registered and the following information should be collected for each patient: name, sex, age, diagnosis and treatment prescribed or provided. Up-to-date accounts should also be kept for all income and expenses.

Essential Pharmaceutical Products for UCRAPROBEX Cooperative Clinics	
A. If attended by a non-medical health worker	
<p>Anthelmintics Mebendazole, tablets, 100mg Mebendazole, suspension, 100mg/5cc</p> <p>Antibiotics/Sulfonamides Amoxicillin, tablets/capsules, 250mg Amoxicillin, liquid, 125mg/5cc Trimethoprim/Sulfamethoxazole, tablets, 80/4000 Trimethoprim/Sulfamethoxazole, liquid, 40/200/5cc</p> <p>Dermatology preparations Calamine lotion Benzyl benzoate, liquid 20 percent</p> <p>Vitamins/Minerals Multivitamins/Minerals, tablets Multivitamins/Minerals, syrup Ferrous Sulfate, tablets, 300mg Ferrous Mixture, 60mg/cc Folic Acid, tablets, 5mg Vitamin A, capsules, 200 000UI</p> <p>Analgesics Acetaminophen, tablets, 500mg Acetaminophen, syrup, 120mg/5cc Aspirin, tablets 500mg</p>	<p>Antacids Aluminum Hydroxide, tablets, 250mg</p> <p>Ophthalmic preparations Tetracycline/Chloramphenicol, ointment 1 percent</p> <p>Antiallergic agents Chlorpheniramine, tablets, 4mg</p> <p>Contraceptives Oral Contraceptives Injectable Contraceptives Vaginal Jellies/Creams Condoms</p> <p>Antiseptics Chlorhexidine, liquid, 5 percent Iodine, liquid, 2.5</p> <p>Other Items Dressings Cotton Tongue Depressors Cotton Swabs</p> <p>Electrolyte Solutions Oral Rehydration Salts, packs</p>
B. If attended by a medical doctor, add	
<p>Antiprozoal Metronidazole, tablets, 250mg Metronidazole, liquid, 125mg/5cc</p> <p>Antibiotics Procaine Penicillin, 4 000 000UI Benzyl Penicillin, 1 000 000UI Tetracycline, capsules, 250mg Chloramphenicol, capsules, 250mg</p> <p>Ophthalmic preparations Hydrocortisone ointments, 1.5 percent</p>	<p>Dermatology Preparations Clotrimazole, ointment, 1 percent Hydrocortisone, cream, 1 percent Tolnaftate, liquid, 1 percent</p> <p>Analgesics Phenazopyridine, tablets, 200mg</p> <p>Antacids/Antiulcers Cimetidine, tablets, 300mg Belladonna/Phenobarbital, liquid</p>

APPENDIX 8

DEFINITION OF PARAMETERS USED TO ESTIMATE

WORKLOAD OF HEALTH PROMOTERS

Appendix 8.

Parameters Used to Estimate Workload of Health Promoter

Appendix 8		
Definition of Parameters Used to Estimate Workload of Health Promoter		
Demand data from the Market Survey (6-month period):		
1	Sample total	2,670.00
2	Total cases that merited medical attention	1,693.00
3	Cases per person (six months)	0.634
Expected consultations per person due to:		
4	Increased availability, access and marketing of services ¹	0.095
5	Number of illnesses (six months) (3)+(4)	0.729
6	Number of expected consultations per illness ²	1.5
7	Total consultations expected per illness (5)x(6)	1.094
8	Annual check-up	.50
9	Expected demand for consultation per person (six months)=(7)+(8)	1.594
10	Expected demand for consultation per person (one year)=(9)x(2)	3.187 (3.2)
Number of families per promoter:		
11	Promoter's annual workload ³ (80 consultations per week x 50 weeks)	4,000
12	Number of individuals per promoter (11)/(10)	1,255 (1,250)
13	Number of families per promoter (12)/6 ⁴	209 (200-210)
<p>¹ Expected increase in demand due to increased access, improved services, increased promoter capabilities. This does not imply that there will be more illnesses, but that illnesses will be detected earlier and interest in services will increase.</p> <p>² It is estimated that each illness will require two promoter consultations for treatment.</p> <p>³ The standard established in the Clinic Study, which assumes that the promoter will work five days a week and will take two weeks vacation per year, was used. It is hoped that the preventive health education will increase the number of preventive health consultations, which will cause the promoter to dedicate less time to training and more time to providing consultations.</p> <p>⁴ The Market Study determined that the average cooperative household has 5.933 members.</p>		

APPENDIX 9

SUMMARY OF FINANCIAL PROJECTIONS OF

SCENARIO A: PRIMARY CARE ONLY (colons)

Appendix 9
Summary of Financial Projections
Scenario A: Primary Care Only (colons)

(colons)	Year 1	Year 2	Year 3	Total
Number of Families Enrolled	2,000	7,792	8,104	8,104
Revenues:				
Cooperative Payments (a)	1,260,000	3,759,009	5,834,880	10,853,889
Medicine Sales	731,238	1,908,842	2,539,696	5,179,776
Total Revenues (b)	1,991,238	5,667,851	8,374,576	16,033,665
Health Service Costs:				
Medicine Costs	731,238	1,908,842	2,539,696	5,179,776
Indirect Costs	1,071,400	2,906,600	3,871,200	7,849,200
Total Costs	1,802,638	4,815,442	6,410,896	13,028,976
Gross Margin	188,600	852,409	1,963,680	3,004,689
Overhead Expenses:				
Administration	412,500	1,001,050	1,125,648	2,539,198
Depreciation	80,150	155,542	205,500	441,192
Amortization	37,800	37,800	37,800	113,400
Total Expenses	530,450	1,194,392	1,368,948	3,093,790
Net Income/(Loss)	(341,850)	(341,983)	594,732	(89,101)
Cash Flow:				
add back non-cash expenses	117,950	193,342	243,300	554,592
add Coop Enrollment Fee	100,000	289,615	15,585	405,200
less Organizational Set-Up	(189,000)	0	0	(189,000)
less Fixed Assets	(428,000)	(599,500)	0	(1,027,500)
less Working Capital (c)	(120,000)	(347,538)	(18,702)	(486,240)
Cash Surplus/(Deficit)	(860,900)	(806,064)	834,915	(832,049)
Donation	1,000,000	800,000	0	1,800,000
End Cash Balance	139,100	(6,064)	834,915	967,951
Accumulated Cash Balance	139,100	133,036	967,951	

- a) assumes each family pays c\$60 per month
b) assumes no revenue from nonmembers
c) working capital = accrued revenue less cash revenue

APPENDIX 10
SUMMARY OF FINANCIAL PROJECTIONS
SCENARIO B: PRIMARY, SECONDARY,
AND TERTIARY CARE (colons)

Appendix 10
Summary of Financial Projections
Scenario B: Primary, Secondary, and Tertiary Care (colons)

(colons)	Year 1	Year 2	Year 3	Total
Number of Families Enrolled	2,000	7,792	8,104	8,104
Revenues:				
Cooperative Payments (a)	1,050,000	21,301,052	33,064,320	55,415,372
Medicine Sales	731,238	1,908,842	2,539,696	5,179,776
Total Revenues (b)	1,781,238	23,209,894	35,604,016	60,595,148
Health Service Costs:				
Direct Costs (c)	731,238	22,011,709	29,286,368	52,029,315
Indirect Costs	1,071,400	3,104,600	4,083,000	8,259,000
Total Costs	1,802,638	25,116,309	33,369,368	60,288,315
Gross Margin	(21,400)	(1,906,415)	2,234,648	306,833
Overhead Expenses:				
Administration	352,700	905,050	1,005,648	2,263,398
Contingency	60,000	96,000	120,000	276,000
Depreciation	89,950	165,342	215,300	470,592
Amortization	37,800	37,800	37,800	113,400
Total Expenses	540,450	1,204,192	1,378,748	3,123,390
Net Income/(Loss)	(561,850)	(3,110,607)	855,900	(2,816,557)
Cash Flow:				
add back non-cash expenses	127,750	203,142	253,100	583,992
add Coop Enrollment Fee	100,000	289,615	15,585	405,200
less Organizational Set-Up	(189,000)	0	0	(189,000)
less Fixed Assets	(477,000)	(599,500)	0	(1,076,500)
less Working Capital (d)	(100,000)	(2,549,384)	(105,975)	(2,755,359)
Cash Surplus/(Deficit)	(1,100,100)	(5,766,734)	1,018,610	(5,848,224)
External Funding	1,200,000	5,700,000		6,900,000
End Cash Balance	99,900	(66,734)	1,018,610	1,051,776
Accumulated Cash Balance	99,900	33,166	1,051,776	

- a) assumes each family pays c\$340 per month
- b) assumes no revenue from nonmembers
- c) Direct Costs include medicines and fees for secondary and tertiary services
- d) working capital = accrued revenue less cash revenue