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Health Care Financing in Latin America and the Caribbean **Research Report No. 7**

Private Sector Health Care Alternatives for Agricultural Workers on the South Coast of Guatemala

Editor
Gretchen Gwynne

FOREWORD

This is the seventh in a series of technical reports on Health Care Financing in Latin America and the Caribbean (HCF/LAC), produced at SUNY/Stony Brook under contract with the United States Agency for International Development. The field research on which the report is based was conducted under a sub-contract with International Resources Group, Ltd., of Setauket, New York.

Following an exploratory trip to Guatemala in July, 1987, by Dr. Alfredo Solari, a medical doctor and expert in public health, the design for the study was prepared by Dr. Solari in close cooperation with HCF/LAC key staff. Field research, coordinated by Dr. Solari, was carried out between September and November, 1987, by a team that included Lic. Ramiro Bolanos, at that time an advisor in institutional development to the Guatemalan Ministry of Public Health and Social Services; Dr. John F. Fiedler, an economist with previous field research experience in Guatemala; Dr. Michael Richards, a US anthropologist resident in Guatemala and a frequent advisor to USAID; and Lic. Marina Sagastume, a consultant to the health sector unit of the General Secretariat of the Guatemalan National Economic Planning Council (SEGEPLAN). USAID/Guatemala staff members Ms. Liliana Ayalde and Mr. John Massey guided and assisted the team. Dr. Fiedler prepared a field draft of the report, which was edited by Dr. Gretchen Gwynne, Research Associate to the HCF/LAC project staff in Stony Brook. Mr. Chandra Shrestha of the Department of Economics, SUNY/Stony Brook, prepared the tables.

The resulting preliminary draft of the report was subjected to detailed review at the third annual HCF/LAC Project Workshop, held in Antigua, Guatemala, in March, 1988. Participants in the Guatemala Country Study Working Group at the workshop included Ms. Sagastume as chairperson; Dr. Solari, Lic. Bolanos, Dr. Fiedler, and Dr. Richards of the study team; Dr. Marco Vinicio Donis M., representing the Guatemalan Ministry of Public Health and Social Services; Dr. Carlos Estrada Sandoval, representing the Guatemalan National Council of Economic Planning; and Mr. Massey, representing USAID/Guatemala.

Based on the Working Group's observations and recommendations, the final report was edited in Stony Brook by Dr. Gwynne, with assistance from Drs. Fiedler and Richards.

Dieter K. Zschock
Director, HCF/LAC

EXECUTIVE SUMMARY

OBJECTIVES

The purpose of this study is to assess the feasibility of extending primary health services via the private sector to currently underserved agro-export workers and their families in the South Coast region of Guatemala.

The South Coast, where large plantations produce export crops such as coffee, sugarcane, and cotton, was targeted for the study for several reasons, which taken together place the region high on the list of areas the National Bipartisan Commission on Central America considers important.

1. The South Coast contains a sizeable proportion of Guatemala's large, low-income population: an estimated 1.5 to 2 million agro-export workers and family members, at the peak of the agricultural year. Many of these people are economically-marginalized migrants; others are permanent residents of the area, but are nonetheless landless and seasonally underemployed.

2. South Coast farm workers and their families are among those Guatemalans most in need of health services, as reflected by their low overall standard of living and health status (most notably, their high infant mortality rates). At the same time, they are among the least able -- geographically, culturally, or monetarily -- to obtain needed health services.

3. The area's economic base is strong, accounting for one-fourth of GDP. This suggests that the possibility of implementing increased private sector financing of health care delivery arrangements exists, and that the prognosis for the long-term economic independence and viability of such arrangements is good.

4. Finally, the Guatemalan Social Security Institute (IGSS), which presently covers agro-export workers only for accidental injury, has recently announced that it may extend health care on the South Coast by mandating participation in two more programs, maternal/child health and general sickness. It has not been decided whether the proposed extension of care would be offered through public or private sector facilities. These plans make the present study

particularly timely, for two reasons. First, in view of the small number and the sizes of currently existing IGSS facilities on the South Coast, the private sector option is a strong possibility. If IGSS should choose to extend health care through the private sector, private providers are likely to respond positively to the opportunity to participate in an IGSS extension of care program, and to work together to develop organizational structures that would facilitate the program's administration. Second, any IGSS plan to extend health care on the South Coast, no matter which mechanism is chosen, is likely to spur plantation owners, who feel they are not getting their money's worth out of their present mandatory contributions to the IGSS accident program, to try to exempt themselves from further mandatory contributions to IGSS by organizing their own health services -- probably through their regional or local production and trade organizations.

The study analyzes the organization, coverage, and (where possible) the costs of currently-existing South Coast private sector health care arrangements -- both organizationally-based, multiple-site arrangements and individual or single-site practices or programs. The entities analyzed are those that, in the opinion of the study team, have the greatest potential for extending primary health services in the region. The important issues of the implementation and sustainability of extended health services are also considered.

EXISTING PRIVATE HEALTH SERVICES

To gauge the capacity of existing arrangements for extending health care to agro-export workers and their families, the study team first developed an inventory of private South Coast health care resources. The most common existing health care arrangement for agro-export workers is the ad hoc provision of primary care by local private physicians and pharmacists. In some cases, these providers see patients in offices located in villages or towns near plantations; in others, they are contracted by farm owners for regular visits to plantations. There are also a few hospitals or clinics owned or managed by individuals. In each case, the orientation is primarily curative.

The next most common pattern is for plantations, especially the largest ones, to provide their own health services. A typical plantation health post is staffed by a physician or a health promotor and one or more nurses or auxiliary nurses, and is organized, controlled and financed

by the plantation owner. Again, services are generally curative in nature.

In addition to these individual efforts, there are two other types of private sector health care delivery arrangements available to some of the target population, both organizationally-based: arrangements consisting (like the individual provider arrangements) of single health care provision sites, and arrangements characterized by multiple sites. Four categories of organizationally-based, single-site efforts were identified: clinics sponsored by Catholic parishes, other religious congregations, local Lions Clubs, and local Rotary Clubs. Seven organizations operating multiple health care delivery sites on the South Coast were identified: the Social Action Program of ANACAFE (the national coffee growers' association), the agricultural health services organization AGROSALUD, the Christian Children's Fund, Vision Mundial, Project HOPE, Caritas, and the Red Cross.

METHODOLOGY

Because the absolute number of private entities providing health services to the target population is relatively small, statistical methods based on representative sampling could not be used for the study team's purposes. Instead, a case study approach was employed. The arrangements to be included as cases were chosen on the basis of a ranking scheme in which the relative rank of each arrangement was determined by a point system. The attributes believed to enhance the likelihood that a given arrangement would become an effective vehicle for extending care to the target population were defined, and the various arrangements were assigned points for possession of these attributes.

The scoring system for organizationally-based, multi-site providers included the following criteria: (1) willingness to continue to serve the target population; (2) willingness to expand services to the target population; (3) managerial capability; (4) acceptability to farm owners (with "acceptability" defined as comprising two considerations, control and cost); and (5) long-term economic sustainability. Each of these criteria received equal weight.

For reasons of possible bias, the study team felt it was inappropriate to apply two of these criteria -- "willingness to expand" and "managerial capacity" -- to individual

providers or organizationally-based single-site efforts. Consequently, a second set of criteria was developed for selecting representatives of these two categories of providers for case study. This alternate set consisted of three of the same criteria applied to organizations (numbers 1, 4, and 5), plus a new criterion: the probability that a given individual provider or single-site effort would be able to develop an "umbrella" organization capable of administering the health care delivery efforts of several such arrangements. This criterion was considered so important that it was assigned a weight equal to that of the other three criteria combined.

CONTEXTUAL CONSIDERATIONS

Guatemala has many attributes of an oligarchy, in which a relatively small, closed group of individuals wield great economic and political power. Because of significant inequities in the distribution of land, income, political power, and opportunities for upward mobility, 75 percent of the population, including almost all of the country's Indians, have a very low standard of living. Almost a quarter of all households have incomes that are insufficient for minimally adequate nutrition, and malnutrition is widespread. The economy is heavily agricultural, and 64 percent of Guatemalans live in rural areas, where access to health services is uneven at best. The fraction of GDP that is accounted for by health care -- 2.2 percent -- is only half that of other developing countries with comparable health systems and per capita income.

Against this socioeconomic backdrop, several parameters significantly affect the future design and implementation of a private sector extension of health care effort. One, of course, is the financial and other commitments that private sector actors -- in particular, plantation owners -- might be willing to provide in support of an extension of health care on the South Coast.

Another important parameter is the size and diversity of the target population, which is comprised of three main sociocultural groups: 70,000 colonos (permanently resident workers, some with a little land and some without), 305,000 cuadrilleros (seasonally-contracted migrant workers), and at least 125,000 voluntarios (local day-workers without contracts). Together these groups, family members included, represent nearly one fourth of Guatemala's total population. Simply in terms of the size of the target population and its compositional complexity, various alternative strategies for

extending health care should be considered.

A third parameter in the current South Coast socioeconomic dynamic is the recent change that has taken place in the agricultural sector. Since the 1940s, the total amount of land harvested in Guatemala has grown by 40 percent, and cultivation of farmland has become more intensive thanks to increases in modern agricultural inputs. But both agricultural labor requirements and international prices for agricultural products are cyclical; moreover, the production of cotton -- one of the most important and labor-intensive of Guatemalan agro-export crops -- has steadily decreased (it may or may not be on the upswing now). Despite the overall good health of the agricultural sector, then, South Coast agricultural laborers face disastrous seasonal underemployment. Coupled with already inadequate incomes, this underemployment has fueled social tensions in the area.

A fourth parameter to consider is the health status of Guatemalans, which is among the poorest in the Western hemisphere. Deaths from preventable ailments such as diarrheal, respiratory, infectious, and parasitic diseases have resulted in infant, child, and maternal mortality rates that are among the highest of all Latin American countries. Malnutrition has increased as the level of production of food crops, relative to export-bound cash crops, has decreased. The health status of Guatemalans varies considerably by ethnicity and place of residence; the overall health of economically-marginalized Indians is markedly worse than that of non-Indian ladinos, and rural dwellers are substantially worse off than urbanites.

A final factor to consider is the organization of public health services in Guatemala. The Ministry of Health (MSPYAS) is responsible for providing health services to all Guatemalans who are too poor to have access to private or Social Security services (an estimated two-thirds of the country's eight million people), but only half of this constituency is receiving health care from Ministry providers. By implication, the other half (about a third of all Guatemalans) lack regular access to health care. Ministry resources (both human and physical) and expenditures are concentrated in Guatemala City. Access to IGSS health services is restricted to IGSS participants and their dependent beneficiaries, and the service orientation and infrastructure of IGSS on the South Coast seem ill-suited to extended health care coverage. Perhaps not surprisingly, the last three years have seen an upward trend in the utilization of private sector health services.

CASE STUDIES

The three top-ranking organizationally-based, multi-site, private sector health care arrangements on the South Coast are the Social Action Program of ANACAFE (the national coffee growers' association), which funds a number of regional or local health centers as well as a program of itinerant health care providers; AGROSALUD, an organization dedicated to providing health care to permanent farm workers and their families via the establishment of health posts, staffed by health promoters, on member plantations; and the Christian Children's Fund, an international, non-denominational religious organization whose many individual donors support a variety of community and family development projects emphasizing health, nutrition, and education.

The report contains case studies of each of these entities, describing in detail the philosophy, historical development, organization, coverage, and (where data were available) costs of each. It then evaluates them on the basis of their strengths and shortcomings, and makes specific recommendations for improved performance. Several individual efforts and organizationally-based, single-site efforts are also examined: private physicians providing health services to plantations, plantations maintaining their own health services, a private hospital, and a food-processing plant with a health center and health posts on each of its affiliated plantations. Finally, a company offering private health insurance, representative of the dozen or so insurance companies in Guatemala that offer such insurance, is profiled.

OBSERVATIONS AND RECOMMENDATIONS

Among the study team's observations and recommendations about the feasibility of designing and implementing a strategy to extend health services to South Coast agricultural workers via the private sector are the following:

1. The scope of work for this study did not include a comparative analysis of all three major alternatives for extending health care to South Coast agro-export workers -- IGSS, MSPYAS, and the private sector. Nor did the study determine the impact of the traditional, non-Western ethos on the health-care-seeking behavior of the target population. Studies in both these areas are recommended as

important adjuncts to any future plans for the extension of modern health care in the region.

2. Each of the three top-ranking, organizationally-based, multi-site private sector health care delivery arrangements presented as case studies -- ANACAFE, AGROSALUD, and CCF -- is currently delivering health services to some part of the target population with some degree of effectiveness and efficiency. Each model contains elements that would be valuable in any future effort to extend health services to agro-export workers on the South Coast, and these strengths are itemized in the report. All three models, however, also incorporate elements that the study team believes would be drawbacks to the future extension of care. Similarly, among the individual providers and single-site efforts analyzed, the study team encountered both strong points and weaknesses. The team therefore feels that no single entity analyzed represents a model appropriate for all the different population segments to be served, or so superior as to warrant supporting its further development exclusively at the expense of the others. Thus, the team recommends that any extension of care effort be pursued through a pluralistic approach, drawing on several existing providers and delivery mechanisms rather than on a single existing entity.

3. In the event that an international organization provides seed capital for the development of a program to extend health care through the private sector on the South Coast of Guatemala, a single, independent, probably newly-created umbrella organization should be designated to implement and monitor the efforts of the various entities involved, and to coordinate these entities with each other and with public sector organizations. In this way, duplication of effort can be avoided, and cross-fertilization fostered by the exchange of ideas and information on costs, service mix, utilization, etc. The umbrella organization should be composed of both public and private sector representatives, including, as a minimum, representatives of MSPYAS, IGSS, and the private organizations identified in this report. Among its functions should be announcing the availability of funds, drawing up guidelines for applications, developing criteria by which to judge requests, awarding grants and/or revolving fund loans, monitoring the program's performance, and providing technical assistance to improve the quality and coverage of services at affordably low costs. The umbrella organization should guide the program to self-sufficiency within five years.

4. Patient demand for highly-visible curative care is

often stronger than demand for environmental health and other preventive activities. Nevertheless, enacting preventive measures can obviate the need for much curative care in the long run. The study team recommends that any effort to extend health care to South Coast agro-export workers through the private sector adopt a broad-spectrum approach incorporating, e.g., nutrition education, family planning, mental health, immunization programs, and environmental sanitation as well as curative services. Of the three major private organizations analyzed for this report, two -- the Christian Children's Fund and AGROSALUD -- already include a range of activities, as do the Ascoli and Ingenio Pantaleon individual-effort models.

5. Because of increasing social awareness in Guatemala in the last few years, the study team believes that now would be an appropriate time for the Government to encourage the development of competition among private sector organizations based on the fulfillment of social responsibilities. Such competition would be far more likely to develop if the Government were to consider putting into place some structure of incentives -- particularly monetary incentives, such as partial tax write-offs for monies spent on health care -- to encourage organizations to act on their new perceptions of social obligation.

6. Of the three different groups of agricultural workers present on South Coast farms, colonos, many of whom already have access to finca-based health services, are probably the best served by health care delivery organizations at present. In view of this, and also in view of the fact that colonos are fewer in number than either cuadrilleros or voluntarios, the study team recommends that the latter two groups (and their dependents) be the initial focus of an extension of care effort in the region. Discrimination against cuadrilleros and voluntarios should be expressly forbidden in projects participating in such an effort.

7. The study team believes that working through agricultural organizations is the best way to reach the greatest numbers of cuadrilleros, voluntarios, and their dependents. When actual implementation of an extension of care program begins, it is recommended that its sponsors work as closely as possible with the Guatemalan Agricultural Association (AGA), with ANACAFE and its regional affiliates, and with other national agricultural producer associations (sugarcane, cotton, etc.).

8. Since the need for labor for agro-export products is not only seasonal but also cyclical (in response to fluctuations in prices on the world market), a flexible

approach to health services delivery on the South Coast will be required. Health services facilities must be able to expand and contract their levels of service provision, in order to accommodate the heavy influx of migrant workers at certain times of the agricultural year and to serve unemployed workers during the off-season or when demand for labor is cyclically depressed.

9. The responsible and effective participation of the users of health services -- through the payment of reasonable user fees and/or through other active forms of contribution, such as community participation in the organization, management and other support of health services projects -- should be required of any future extension of health care program. This requirement would encourage users' self-reliance as well as their efficient use of services. The poverty of much of the target population, however, severely restricts the amount of funding that can be generated from user fees. The study team therefore considers a combination of user fees and financial support from finqueros to be the most sustainable long-term financing arrangement for health services. Finqueros should be advised of the positive return that such an undertaking -- whether organized through their trade associations or through philanthropic organizations they may be encouraged to develop -- is likely to earn.

10. Since there is evidence that private sector health services are expanding on the South Coast even as public sector services are decreasing in accessibility and effectiveness, the study team recommends that IGSS, as it pursues its intention to expand its MCH and general sickness programs to agricultural workers on the South Coast, consider an indirect rather than a direct services delivery model. In addition to multi-site health services associated with large organizations, some of the individual or other single-site efforts described in the report could be brought into such a program, under the umbrella organization suggested earlier. This approach might help to allay finqueros' concerns that their mandatory contributions to IGSS exceed the value of the services provided to their workers through IGSS facilities.

11. The study team recommends that all fincas employing more than 500 laborers at peak times of the agricultural year provide on-site health services, and that smaller fincas develop consortiums through which health services could be provided for their workers. Although the finca-based health services model undoubtedly helps to alleviate the problem of workers' lack of access to services, it leaves an access problem for the dependents of

those workers who do not reside on fincas, as well as for non-resident workers while they are away from the workplace. The study team recommends that any future support for the development of finca-based health services be made conditional upon the inclusion of care for dependents of employed workers, whether they reside on or off the finca. Specific arrangements by which non-resident beneficiaries could be transported to and from finca-based health services delivery centers should also be incorporated in plans for such services.

12. Based on current need for expanded health services as reflected in the numbers of persons per health care provider and on the number of sick persons attended per 1,000 inhabitants, the study team feels that, of the departments targeted for this study, San Marcos is the most urgently in need of expanded health services, followed by Suchitepequez. Escuintla and Retalhuleu are virtually tied for third neediest department, and are followed by Santa Rosa and Quetzaltenango.

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GLOSSARY OF ACRONYMS

ACOGUA	Asociacion de Cafecultores del Oriente de Guatemala (Eastern Guatemalan Coffee Growers' Association)
ACU	Asociacion de Cafecultores Unidas (Association of United Coffee Growers)
AEC	Asociacion Experimental de Cafecultores (Experimental Association of Coffee Growers)
AGA	Asociacion Guatemalteca de Agropecuaria (Guatemalan Agricultural Association)
AGROSALUD	(Not an acronym) "Agro-health" (Guatemalan organization dedicated to providing health care to agricultural workers)
AID	see USAID
ALOS	Average length of (hospital) stay
ANACAFE	Asociacion Nacional del Cafe (Guatemalan National Coffee Association)
APROFAM	Asociacion Pro Familia (Guatemalan National Family Planning Organization)
ARECCO	Asociacion Regional de Cafecultores de Colomba (Regional Association of Coffee Growers of Colomba, Guatemala)
ASECSA	Asociacion de Servicios Comunitarios de Salud (Guatemalan Association of Community Health Services)
BANVI	Banco Nacional de la Vivienda (Guatemalan National Housing Bank)
CACIF	Comite Coordinador de Asociaciones Agricola, Comerciales, Industriales y Financieras (Chamber of Agriculture, Commerce, Industry and Finance)
CCF	Christian Children's Fund
CMR	Child Mortality Rate

DIGESA	Direccion General de Servicios Agricolas (Guatemalan Agricultural Services Agency)
FAO	(United Nations) Food and Agriculture Organization
FUNDESA	Fundacion para el Desarrollo (Guatemalan Foundation for Development)
GDP	Gross domestic product
HCF/LAC	Health Care Financing in Latin America and the Caribbean (AID contract under which this study was carried out)
IADS	International Agricultural Development Service
IDB	Inter-American Development Bank
IGSS	Instituto Guatemalteco de Seguridad Social (Guatemalan Social Security Institute)
IMR	Infant Mortality Rate
INCAP	Instituto de Nutricion de Centro America y Panama (Institute of Nutrition of Central America and Panama)
MCH	Maternal and child health
MSPYAS	Ministerio de Salud Publica y Asistencia Social (Guatemalan Ministry of Public Health and Social Assistance)
ORT	Oral rehydration therapy
PHC	Primary health care
SEGEPLAN	Secretaria General del Consejo Nacional de Planificacion Economica (General Secretariat of the Guatemalan National Council of Economic Planning)
SUNY	State University of New York
TSR	Tecnico en Salud Rural (rural health technician)

URTI Upper respiratory tract infection
USAID United States Agency for International Development
WB World Bank

CHAPTER ONE: INTRODUCTION

I. OVERVIEW: HEALTH CARE ON GUATEMALA'S SOUTH COAST

One-fourth of all Guatemalans are agricultural laborers and their dependents who work and live, either temporarily or year-round, on the country's South Coast (1). The area's economic base is strong, with large plantations producing coffee, sugarcane, cotton, and cardamom (primarily for export); however, the overall health status of these farm workers and their families is poor. The Guatemalan Ministry of Health (MSPYAS), Social Security Institute (IGSS), and private sector organizations and individual practitioners all provide health services in the six South Coast departments, but many farm workers and their families have no access to these services.

Access to existing health services is generally restricted by physical, economic, and cultural factors. The locations of MSPYAS facilities, and these facilities' lack of outreach services, often make it difficult for agricultural workers to take advantage of MSPYAS health care. The facilities of IGSS -- mainly hospitals -- are located in the region's larger towns; moreover, agricultural workers covered by IGSS are currently entitled to benefits under only one program, the accidental injury and environmental health program. The region's agricultural employers deplore what they consider to be the high mandatory contributions they must make to this program. They claim that accidents to farm workers are relatively few, and that when treatment for accidental injury is needed, the nearest IGSS facility is likely to be distant or closed. IGSS has announced plans to extend health care coverage by mandating participation in its maternal and child health (MCH) and general sickness programs in the six target departments, but these plans have not yet come to fruition.

In the private sector, individual physicians -- often contracted by farm owners -- provide mainly curative rather than preventive care. Health services are also offered through national or regional private sector agricultural organizations and international private voluntary organizations, and some of these private organizations provide health care for agricultural workers. None, however, specifically targets the large proportion of agricultural

workers who are seasonal migrants to the South Coast, and whose health status and standard of living are among the poorest in the country.

II. STUDY OBJECTIVES AND DATABASE

In view of limited MSPYAS coverage and reportedly widespread disenchantment with IGSS on the South Coast, this study assesses the possibility of extending health care coverage to the region's agricultural workers and their families through the private sector. Short of providing definitive statements on the advisability or implementation of private sector alternatives, or comparing these with options offered by public institutions, the study's major goal is to provide profiles of the principal private health care delivery organizations already existing on or near South Coast agro-export farms, in order to evaluate whether or not these organizations could be expanded or replicated to provide health care to a larger number of plantation workers and their families.

This study focuses on the agricultural South Coast for several reasons. First, the region is the economic backbone of Guatemala. It is the heart of the country's agro-export industry, directly accounting for more than a fourth of the country's gross domestic product (GDP); indeed, directly and indirectly (through the processing of primary agricultural products), it generates more than half of Guatemala's GDP. Second, the South Coast is home to a sizeable share of those Guatemalans most in need of health services but least able to obtain them. Third, public health services do not currently serve the target population effectively. Fourth, the possibility that private health care providers might eventually achieve independent, long-term economic viability is relatively greater in this region than in regions with weaker economic bases. Finally, it is probable that agricultural employers will oppose the IGSS proposal to extend mandatory participation in its MCH and general sickness programs to the six target departments. They are much more likely to find a private sector alternative attractive, both politically and economically.

The analysis is based on detailed case studies of selected private sector health care entities, developed from interviews and study of organizational and financial documents. Three of the cases studied in depth are

organizationally-based private sector health care arrangements: the Social Action Program of the National Coffee Growers' Association (ANACAFE), the agricultural health services organization AGRÓSALUD, and the international Christian Children's Fund. The others are individual or single-site rather than organizationally-based efforts: physicians who provide services for the workers of certain farms, either in their own offices or (more commonly) on periodic visits to farms; a small private hospital; a food processing plant that provides health services for its workers; and a health insurance program for agricultural workers.

The cases were selected on the basis of their relative rankings using two different sets of scoring criteria, one for organizations and a second for individual efforts, developed for this study. The criteria reflect factors affecting the probability that a given health services entity would be an effective vehicle for extending private health care to the target population.

More specific objectives of the study include (a) defining the rationale for expanded private sector health care delivery alternatives on the South Coast; (b) identifying all currently-operational private sector health care providers in the area; (c) comparing private providers' delivery systems; and (d) testing the potential of the available alternatives for economic and sociopolitical viability (2).

III. BRIEF SUMMARY OF STUDY METHODOLOGY

A. Preliminary Work

1. Selection of a Case Study Approach. Because the number of private sector organizations and individuals providing health services to the target population is relatively small yet very diverse, it was not possible to assess them using statistical methods based on representative sampling procedures. For this reason, a case study approach was selected.

2. Development of Health Sector Inventory and Municipio Profiles. To acquaint the research team with the universe of the study, a statistical profile of the South Coast municipios (counties) was developed. In addition to

providing an understanding of the area and its dynamics, this also generated an inventory of health sector resources from which private health care providers could be selected for study (Guatemala Project 1987: Doc. A; see also FUNDESA 1986), and produced a database for private sector health care marketing studies -- an indispensable first step in identifying and ranking various areas in terms of their private sector health care potential (3).

3. Information Acquisition. Health care experts at the departmental level were asked to provide lists and subjective profiles of private sector arrangements operating in their respective targeted departments. In most cases, only the department-level office of MSPYAS was contacted. Telegrams were then sent to each department-level representative of Guatemala's General Secretariat of Planning (SEGEPLAN), requesting help in the form of liaison activities and data. These representatives were asked to contact the mayors of all municipios in their departments, requesting their assistance and input. With one exception, responses were timely and detailed.

Additional data sources used to corroborate this resource-specific information, and to supplement it with health status, MSPYAS utilization, and additional department-specific data, were: (a) the MSPYAS annually-prepared Plan Operativo, 1985 through 1987 editions (MSPYAS n.d.); (b) the Coordinadora Interinstitucional's annual publication Diagnostico Departamental (4); (c) unpublished internal department-specific MSPYAS documents -- in particular, a document containing facility-specific utilization records, compiled every five years; and (d) the 1981 Agricultural Census (DGE 1981b). The quality of these documents (especially the first two) varies substantially by department.

An attempt to identify all public and private health sector providers and facilities in the six departments was then made. According to the information supplied to the study team, MSPYAS operates 9 hospitals, 59 health centers, and 228 health posts in the six South Coast departments. IGSS has 13 hospitals, nine of which it operates directly (the other four are run on a contract basis), five doctors' offices or consultorios (one of which is a contract operation), and eight contracted health posts. There are 489 private physicians in the six departments (1986 figures; see Guatemala Project 1987, Doc. A, for a listing, by department, of private sector, MSPYAS, and IGSS providers and facilities. The listing of individual private practice

physicians was compiled from the Colegio Medico's Directorio).

B. Criteria for Selection of Cases for Study

With time and financial constraints in mind, the study team decided that, from the twenty-odd possible candidates it identified for case study (see Guatemala Project 1987, Doc. F), between two and five private sector health care organizations would be selected. To ensure that the organizations chosen would be those with the highest probability of expansion and/or replication, and thus with the greatest potential for becoming instrumental in the extension of health care coverage through the private sector, a set of selection criteria were developed. These are spelled out in detail in the Technical Note. Briefly, the selection criteria took into consideration each organization's willingness to serve the target population, willingness to grow, managerial capacity, acceptability to farm owners (finqueros), and long-term economic viability.

For purposes of scoring the various organizations, the criteria were assigned equal weights, since all were felt to be of equal importance to assess the likelihood that a particular health care arrangement would become a vehicle for extending care to agricultural workers on the South Coast. The scores assigned to specific private sector health care organizations are shown in the Technical Note.

It was felt that using the same criteria for organization-based, multi-site arrangements and individual health care delivery efforts would be inappropriate, since using "willingness to grow" and "managerial capacity" to score individual efforts would systematically bias selection in favor of organizations. In assessing the individual providers, the study team thus opted to delete "willingness to grow," as a criterion, and introduced in its place "the probability that an individual provider would develop an effective organizational structure."

"Managerial capacity" was also dropped from the individual efforts' selection criteria, since the managerial capability required of single-person or other small health care delivery establishments is very different from what is required of organization-based (and especially multi-site) efforts. Although managerial capacity is unquestionably relevant, it was felt that this consideration would be better addressed in two less biased ways. First, it would

be reflected in "the probability that an individual provider would develop an effective organizational structure." Second, managerial capacity could better be considered after the selection process. The case studies of individual efforts thus represent only an initial attempt to gauge track records.

IV. THE IGSS INTENT TO EXPAND MEDICAL CARE COVERAGE AND ITS EFFECT ON PRIVATE SECTOR PROVIDERS

If IGSS extends coverage under its MCH and general sickness programs to South Coast agro-export workers, this will have a significant impact on private sector providers no matter what delivery mechanism is chosen to implement the extension of health care. Several different mechanisms are possible. IGSS could provide services directly, it could provide them indirectly (through private providers or even through MSPYAS facilities and personnel), or it could provide them through ANACAFE, AGROSALUD, or other private sector organization(s). Whether in anticipation of this or after the fact, private health care providers are likely to respond positively to opportunities to form organizations that would help them to maintain their market share. The vigor with which providers might pursue such a course of action is likely to be a function of the specific mechanism(s) by which IGSS extends coverage -- or which mechanisms the general public and physicians anticipate that IGSS would adopt.

If IGSS implemented an extension of care program by providing services itself, its maternal/child health and general sickness programs would obviously channel the newly-covered population to IGSS providers. Those without IGSS coverage would have only three options: (a) they could forego health care for a variety of reasons, including lack of money to cover the medical charges, lack of transportation to a provider, lack of time to wait at the facility before seeing the provider, or some combination of these; (b) they could seek care at MSPYAS facilities; or (c) they could seek care from private providers. Thus it is reasonable to assume that at least some people who would be channeled into the proposed IGSS system would otherwise have been served by private physicians (who, it should be noted, are unlikely to provide preventive care). Given the number of agricultural workers in the South Coast region, it can further be assumed that the quantitative impact of this

alternative would be significant.

What effect is this scenario likely to have on private providers? This depends on the specific changes IGSS implements in the number, type, and location of its facilities and providers, and on the level of utilization of IGSS health care resources that may result from these changes. There might, for instance, be an increased demand for health care providers on the part of IGSS, so that some providers now in the private sector might find employment with IGSS. On the other hand, if IGSS does not increase its provider numbers by drawing from the private sector, there may be fewer patients per private sector provider, as an increased number of patients seeks care from IGSS providers. This in turn might prompt some private providers to emigrate from the South Coast. Others might cut fees in order to maintain or increase their clientele.

None of these possibilities would be particularly attractive to private providers, who are likely to prefer a system that would allow at least some private sector substitution for IGSS providers -- for example, a system of health maintenance organizations. If IGSS adopts a system offering private providers the opportunity to participate in its extension of care program on the condition that they develop organizations that would facilitate the program's administration, they would be likely to participate in such a program. There is an excess of physicians in Guatemala (out of a total of 6,000, 2,500 are either underemployed or not working as physicians, according to the president of the Guatemalan medical association). This suggests that a guaranteed pool of patients would be an attractive prospect, especially for young physicians.

The level of physician participation would, of course, be heavily influenced by the rate of IGSS reimbursement and its payment mechanism. If the degree of physician participation were deemed inadequate, it could be encouraged by advertising, by the implementation of other measures to improve physician recruitment from other areas of the country, and/or by raising the reimbursement rate.

Implementation of the IGSS proposal could have another, equally significant, effect on the private provision of health services on the South Coast. Given the scenario described above, it is likely that agro-export employers, who do not feel they are getting their money's worth out of the contributions they are already obliged to make to IGSS for accident insurance for their employees, would organize

and finance their own health service delivery systems for their agricultural workers, with the aim of exempting themselves from contributing to IGSS' MCH and general sickness programs. In doing so, they might work through their regional or national trade associations, so as to benefit from economies of scale in the conceptualization and development of alternative arrangements, as well as in the supervisory/managerial support and supplies and equipment purchasing activities involved.

Nor are economic considerations the only ones likely to play an important role in motivating South Coast agro-export employers to join together to provide health care delivery systems for their workers. In Guatemala, dominant economic groups enjoy great political influence (evidenced by the inequitable distribution of income and wealth, the intractability of that distribution, and by the quantitative and qualitative character of the existing, and very regressive, tax structure). Political considerations -- most notably the desire to maintain maximum control over both resources and people, but also the desire to improve their public image -- are likely to be important to employers as well.

V. RATIONALE FOR STUDY OF PRIVATE SECTOR ENTITIES

Both economic and political considerations, then, suggest the timeliness and potential fruitfulness of pursuing plans to extend health care coverage to South Coast agro-export workers through the private sector. Moreover, the South Coast region -- because of its combination of considerable economic importance and resources, on the one hand, and need (reflected by its large proportion of the most impoverished, least healthy Guatemalans) on the other -- provides a unique opportunity to pursue an important goal of US Central American policy, as established by the National Bipartisan Commission: spreading the benefits of economic growth. Achieving this via an extension of health care was recommended by the Commission as being among the preferred approaches:

No investment in Central America will be more productive over the long term than that made to improve the health, education, and social welfare of its people.... The goals of equality of opportunity and better income

distribution...(are) crucial for social and political progress. The pervasiveness and depth of rural poverty make improvement in rural incomes and living standards especially high priorities (Kissinger 1984:52).

In the next chapter, the socioeconomic background against which an extension of health care, once initiated, would be implemented is explored. In Chapter Three, a number of existing South Coast private sector health services delivery entities -- both multi-site, organizationally-based efforts and single-site efforts -- are described in depth, and their potential, either as vehicles or as models, for the future extension of care through the private sector is explored. A final chapter compares those entities which, in the opinion of the study team, have the greatest potential as future actors in an extension of care effort. The report concludes with a number of general recommendations for the design and implementation of a program to extend health care on the South Coast through the private sector.

CHAPTER TWO: CONTEXT

I. ECONOMIC AND SOCIAL CONSIDERATIONS

Guatemala has many of the attributes of an oligarchy, in which a relatively limited, relatively closed group of individuals wield great economic and political power (Fiedler 1985a). Because of significant inequities in the distribution of land, income, political power, and opportunities for upward mobility, the standard of living of poor Guatemalans -- who represent three-quarters of the country's population of nearly eight million people and who include most of the country's native Indians -- is low (World Bank 1978:12). Nearly a quarter of Guatemalan households' incomes, for example, are "inadequate to cover the costs of the minimum food basket" (World Bank 1986a:13).

The country is still predominantly agricultural, despite vigorous economic growth between the end of World War II and the late 1970s. Sixty percent of its GDP is generated in the agricultural sector, and rural agricultural workers make up a significant proportion of the workforce. For the 64 percent of Guatemalans who live in rural areas, the 1984 estimated median income per capita was US \$400 (World Bank 1986a:13), compared with a national average of US \$1,160 (World Bank 1986b:180; see also Hintermeister 1984).

The six departments that make up the primarily agricultural South Coast, the focus of this report, have a combined population of about 2.5 million people. About a third of them, or approximately 800,000 people, constitute the workforce in these departments, and somewhat over half of this group -- between 400,000 and half a million people -- are agricultural laborers, either permanent or seasonal residents of the region (their precise numbers are difficult to calculate because of continual migration into and out of the area). The dependents of these workers number another one million people or more. Thus between 1.5 and two million Guatemalans -- nearly a quarter of the country's total population -- are wholly or partially dependent upon South Coast agricultural work.

A. Land Distribution

The traditionally inequitable distribution of land in Guatemala became even more skewed throughout the first three

decades after World War II. By 1979, two percent of Guatemalan farms accounted for two-thirds of all cultivated land, while the percentage of rural families who were landless had grown to 36 percent (Hough et al. 1982), up markedly from 26.5 percent in 1970 (World Bank 1978:175). Of all farms in Guatemala, 88 percent were smaller than seven hectares, which most agricultural analysts of Guatemala regard as too little land on which to support a family (Hough et al. 1982: Table 2G). The large agro-export farms are primarily in the hands of a relatively small, closed group of people of Western European descent.

Land tenure is even more inequitable than these figures indicate. Since some individuals own more than one farm, the percentage of Guatemalans who own some land is smaller than what is suggested by the total number of farms. Furthermore, the practice of dividing huge family estates into separate farm units and designating family members as their "owners" distorts land ownership figures (Hough et al. 1982). Finally, most of the richest farmland in Guatemala is found in departments where the distribution of land is even more skewed than the national average.

In five of the six agriculturally-rich South Coast departments that constitute the geographical focus for this study, land became more and more concentrated between 1964 and 1979 (Hough et al. 1982, Table 1). The three departments in the country with the most inequitable concentrations of land in 1979 -- Suchitepequez, Escuintla, and Retalhuleu -- are all located in the South Coast region (ibid.).

B. Growth and Change in the Agricultural Sector

From the late 1940s through the late 1970s, there was a 40 percent increase in the total amount of land harvested in Guatemala, for several reasons. First, beginning in the late 1940s and continuing throughout the 1950s, large tracts of the southern coastal plain were opened up to commercial exploitation as malaria, endemic to the region, was slowly brought under control. Second, areas in the sparsely-settled northern part of the country (Izabal and El Peten) have recently been settled, resulting in the transformation of frontier lands into farmlands. Third, previously idle land has come under cultivation. Finally, the significant expansion of all-weather roads has provided impetus to agricultural modernization and commercialization. In addition to these increases in the area cultivated, Guatemalan croplands are being more intensively used, in order to offset internationally depressed prices for the country's main export crops.

Since the late 1940s, the Guatemalan economy has exemplified an agro-export growth model, in which demand is largely determined by factors outside the domestic economy. In order to maintain a certain level of income, agro-export farmers must be willing and able to vary output quantities inversely with price changes. Typically, however, they increase both acreage and output in response to cyclically high prices, only to be forced to increase acreage and output even further to offset the negative effect on their incomes of subsequent price drops.

At the beginning of the post-World War II period, propitious international economic conditions, including increased foreign demand and generally favorable international terms of trade, sparked the resurgence of the country's two traditional export products, coffee and bananas. In response, starting in the 1950s and gaining strength throughout the 1960s, the agro-export sector underwent significant modernization, diversification, and expansion. Sugarcane and cotton production increased significantly when world market prices temporarily rose (see Jimenez 1970). In the late 1960s, cattle-farming, too, expanded in response to increased demand as incomes surged in the more developed countries. Recently, cardamom has joined the list of important agro-export products. Table II.1 shows the growth in output of these agricultural export products.

While the output of most cash crops continues to rise, the boom in cotton production was short-lived (Table II.1). Between 1983-1987, cotton production fell by 62 percent from the 1976-1980 average total annual output. The falling international price of cotton was one factor in these decreases, but a squeeze on operating margins caused by a combination of falling yields and rising production costs was even more important (see, e.g., Banco de Guatemala 1986c: Tables 7, 8). A major component of cotton production costs in Guatemala since the late 1940s has been agro-chemicals (5), for which costs have increased steadily. Nearly all such products are imported, and, when the quetzal was devalued by 40 percent in 1985, their prices rose sharply.

These factors resulted in the economic failure of several of the country's largest cotton plantations. Some cotton producers, who had put their farms up as collateral for loans with which to purchase inputs, simply defaulted. Others changed crops. On the more than 100,000 manzanas (6) shifted out of cotton production between 1980 and 1987, no single crop replaced cotton. Instead, these lands

(two-thirds of the total planted in cotton in 1980) now yield a variety of crops, none of which, due in part to mechanization, has nearly the labor requirements of cotton production (approximately 83 workers per manzana, as opposed to only two or three for the replacement crops). The National Cotton Council estimates that the demand for agricultural labor for cotton production is down by nearly two-thirds.

It should be noted that the government's Dirección General de Servicios Agrícolas (DIGESA) recently reported, for the 1987/88 agricultural year, a 25 percent increase over the previous year in the acreage devoted to cotton (Prensa Libre, 4 April 1988, p. 28). If cotton makes a comeback, this will have important repercussions for health care delivery on the South Coast.

In general, the level of production of food crops, as opposed to (mainly export-bound) cash crops, has decreased in recent decades (7) (Table II.2). Between 1948 and 1952, 74 percent of Guatemala's agricultural land, on average, was planted in food crops, but by 1974-1976 this average had fallen to 56 percent. While some increase in the absolute amount of farmland planted in food crops was recorded as new areas were brought under cultivation, the relative amount of harvested area planted in cash crops grew at more than twice this rate. The total amount of harvested land had grown 40 percent between 1948-52 and 1974-76, but the share of food crops grew only 7 percent, versus a 233 percent increase in cash crops. As a result, the proportion of total acreage devoted to food crops fell by more than half (see Elbow et al. 1987).

C. The Agricultural Labor Supply

For most of the country's post-colonial history, agricultural labor in Guatemala has been squeezed between declining land ownership, farm size, and tenancy, on the one hand, and, on the other, the traditionally low wages paid to (predominantly) Indian workers.

Beginning in 1876, free or cheap labor for Guatemalan agro-export farms was provided through repartimiento (8), a system under which departmental governors were authorized to draft Indian laborers to work on agricultural estates for specified periods of time (typically 15-30 days). At the same time, a legal apparatus that encouraged the use of debt contracts between farm owners and laborers was established. Other Indians, who did not have enough money to pay an exemption fee, were forced to work without pay for the

government, in public works or military service. In short, between the 1870s and the mid-1940s, many of Guatemala's rural poor faced the choices of debt servitude to coffee plantations, forced labor on public works or in military service, or flight (Adams 1970:176-178; Woodward 1966, 1976:174; McCreery 1976:457; McCreery 1983:742-745).

The post-war growth and modernization of the agricultural sector has had a significant impact on agricultural workers in Guatemala. Increases in the total amount of cultivated land, in the cultivated area per farm, and in the total number of farms resulted in increased labor requirements. Substantial growth in the production of sugarcane and cotton, both labor-intensive crops, further increased labor demand. Increases in modern agricultural inputs, on the other hand, have had mixed effects. The use of fertilizers, insecticides, fungicides, herbicides, and yield-improving hybrid seeds has increased output, and thereby the need for labor. At the same time, however, increasing numbers of tractors, trucks, combines and other mechanical devices -- including crop-dusting airplanes -- have reduced the demand for labor, as has the general decline in cotton production.

The net effect has been that the demand for agricultural labor has declined, both nation-wide and on the South Coast (Table II.3). But the difference between small and large farms in this regard has been dramatic. For the smallest farms, there has been a 44 percent reduction in labor requirements, while for farms of 5-64 manzanas there has been a 35 percent increase (no comparable information is available for very large farms). With labor requirements increasing only on the larger farms, the owners of the smallest plots, facing a declining standard of living, began in many cases to augment their incomes by becoming part of the seasonal labor market on large fincas.

Today, in a modern permutation of the original repartimiento system, landless laborers as well as smallholders whose tiny plots cannot support their families constitute the poorly-remunerated labor supply -- a half million workers or more -- for Guatemala's agro-export plantations. Some of these workers reside permanently on the fincas (farms) where they work; some reside near but not on these fincas; some are seasonal migrants, mostly Indians, who leave their homes, insufficient farms, and often their families in the highlands to spend several months a year working on agro-export plantations (see Bataillon and Lebot 1976). Although debt peonage mechanisms are no longer legally sanctioned, they continue to exist de facto (see Schmid 1967; Richards 1987).

D. Health Status

The health status of Guatemalans is among the poorest in the western hemisphere. Infant, child, and maternal mortality rates have long been among the highest of all Latin American countries (PAHO 1961, 1964, 1970, 1974a, 1979, 1983, 1986). Over the past 35 years, half of all deaths occurring in Guatemala each year have been those of children under five years of age. Relative to other countries in the Americas, Guatemala throughout the 1970s had the highest age-adjusted death rate due to diarrheal diseases for all ages, as well as for children under five years of age (PAHO 1983:99, 216); the highest death rate from influenza and pneumonia for children under five (PAHO 1983:96); the highest age-adjusted death rate from infectious and parasitic diseases; one of the highest proportions of the population less than five years old -- 81 percent -- suffering some degree of malnutrition (MSPYAS 1980:227; see also Burki 1988; Teller *et al.* 1975, 1978); and the second highest infant mortality rate (PAHO 1983:340).

The three leading causes of death for all age groups in 1986, and their respective share of total deaths, were: diarrheal diseases, 17.8 percent; respiratory tract diseases (influenza and pneumonia), 15.6 percent; and nutritional deficiencies, 4.6 percent. In that same year, measles still ranked among the top 10 causes of mortality (MSPYAS 1987:61). Maternal and perinatal mortality rates are persistently high, and continue to rank among the leading causes of death. The preponderance and unchanging pattern of contagious diseases and diseases associated with poor hygiene and malnutrition, as leading causes of death, reflect the generally low health status of Guatemalans. Morbidity patterns have long closely paralleled mortality.

The wide margins by which Guatemala surpasses other countries in the cases of several of these illnesses is also cause for alarm. For example, Guatemala's age-adjusted death rate from diarrheal diseases is more than 170 percent above the second highest Latin American figure, that of El Salvador. Likewise, Guatemala's age-adjusted death rate from infectious and parasitic diseases is more than 150 percent above the level of the next highest country's rate, nearly four times the Latin American average, and two and one-half times the Central American average (computations based on PAHO 1983:214).

Health status varies considerably by ethnicity and place

of residence (see Table II.4). For all health indicators, the conditions of the socially, politically, and economically marginalized Indian population are markedly worse than those of non-Indian ladinos (see Burki 1988). On average, the health conditions of the 60 percent of Guatemalans who reside in rural areas are substantially below those of all urbanites, and the residents of Guatemala City enjoy much better health than do Guatemalans who reside in other urban areas.

The widespread poverty and hunger in Guatemala are direct results of traditional inequalities based on ethnicity, an annual average population growth rate of over three percent, processes of land fragmentation on the one hand and land concentration on the other (leading to generalized landlessness), a largely inadequate educational system (World Bank 1983:22, 59-61), and insufficient growth in the amount of land devoted to food crop production over a three-decade period. Poverty, in turn, has been an important cause of the civil strife which has plagued the country for decades, and which reached new levels of ferocity in the late 1970s (Wasserstrom 1975; Bulmer-Thomas 1983; Davis and Hodson 1983; Black 1984; Handy 1984; Weeks 1985; Williams 1986).

From 1971 onward, Guatemala was forced to import ever-growing quantities of basic grains (Davidson 1976:4). For example, by 1977-1979 the average import share of domestic cereal use was 15 percent. An already high rate of malnutrition was increasing at an alarming pace (Table II.5; see also IADS 1981): by 1980, the proportion of Guatemala's children under the age of five who were undernourished (*i.e.*, within the normal range according to the Gomez classification) was the second highest in the hemisphere, and the situation was worsening (IDB 1978:138-141; PAHO 1976:8, 34; MSPYAS 1980). The world recession of the early 1980s, in combination with economic dislocations caused by civil war (see Anderson 1984), reduced Guatemala's average per capita income to its early 1970s level.

E. Current Outlook

By 1987, the Guatemalan economy showed signs of having begun a slow but broad-based recovery from the recession. Perhaps even more importantly, the bleakness and desperation that had come to characterize all levels of Guatemalan society seemed to be abating. Today there are indications that Guatemala is willing to embrace some of the changes that will be necessary to enhance economic opportunity and

the social welfare of the poor. None of these indications provides proof of a major transformation, but their cumulative effect suggests that a window of opportunity now exists for major economic and social gains.

II. THE TARGET POPULATION: SOUTH COAST AGRICULTURAL WORKERS

Agricultural workers on the South Coast, roughly estimated by the study team to number up to half a million people in 1987, may be divided into three distinct categories of workers: some 70,000 permanently resident workers (colonos), more than 300,000 seasonally-contracted migrant workers (cuadrilleros), and at least 125,000 local day-workers without contracts (voluntarios).

A. Colonos

The institution of colonato, reminiscent of Western European feudalism, has existed in Guatemala since the Spanish Colonial era. Under this system, a landowner (patron) provides a dwelling, and sometimes a small plot of land, for a worker and his family, as in-kind payment for labor: the colono works in the patron's fields, and in return receives housing for himself and his family and in some cases a small garden in which to plant food crops. The terms of the agreement vary considerably. Typically the colono is considered a full-time employee of the patron, although in some cases he works for the patron for fewer days than a full work week. Traditionally, at least in Guatemala, many patrons also provide their colonos with supplementary food.

Because in-kind payment for labor is often made in the form of land, the institution of colonato is generally limited to larger farms. Tables II.6 and II.7 present agricultural census data on the number of colonos countrywide and in each of the six departments of the South Coast in 1964 and 1979. In 1979, 92 percent of the South Coast's nearly 70,000 colonos lived either on fincas medianas, containing at least one but fewer than 20 caballerias of land, or on fincas grandes, containing at least 20 caballerias (9).

In 1979, 57 percent of all Guatemalan colonos lived on the South Coast. The region's largest colono population was found in Suchitepequez, where nearly 15,000 colonos -- 21

percent of the estimated regional total -- resided. Another 13,500 (19 percent) lived in Escuintla, while San Marcos contained 12,500 (about 18 percent). Together these three departments accounted for well over half of the region's colono population. For the large farms (fincas grandes) on the South Coast that have colono populations, the average number of colonos per farm is 83. For smaller South Coast farms (fincas medianas), the average per farm is 21.

B. Cuadrilleros

Traditionally, the majority of agricultural workers in Guatemala's agro-export sector have come from the Highlands, especially from the overwhelmingly Indian departments of El Quiche and Huehuetenango (see Hill and Gollas 1968). A highly-organized system of seasonal agricultural labor contracting has evolved, in which representatives of plantation owners annually visit Highland communities to enter into formal agreements, primarily with Indians, to work on South Coast farms. Individuals so contracted are known as cuadrilleros. It is not possible to determine their precise numbers. The most recent estimate, made by SEGEPLAN in 1981, is 305,000, but does not include all coffee fincas.

As mentioned above, the problem of agricultural labor scarcity was addressed, in the past, by the passage of laws ensuring that laborers, primarily Indians, would be available to coffee plantations for stipulated periods of time annually. Since the labor requirements of plantations were seasonal, this system was an ideal arrangement for coffee producers, who were not obligated to maintain a large labor force during the slack nine or ten months of each year when little labor was needed.

The peak labor requirements of the new agro-export crops, cotton and sugarcane, did not sharply conflict with one another or with those of coffee. Theoretically, after planting his own plot of corn in the Highlands, a worker could migrate to the South Coast, pick cotton from September through November, cut sugarcane from October through December, and pick coffee in December, January and February.

As agricultural production in the South Coast grew and diversified, the need for labor increased. The legal changes of the 1930s and 1940s -- after cuadrilleros had been economically obligated for more than half a century, de jure or de facto, to migrate annually to the South Coast to pick coffee -- did not produce any real changes in the system. By then, population growth and the continued fissioning

(through inheritance) of landholdings in the Highlands -- most of them already below family subsistence size -- had greatly reduced the labor requirements of what land many Indians did own, and at the same time increased their need to earn supplemental income. Thus many continued to migrate regularly to the South Coast for periods of one to six months. Others, who knew from experience that work was available, simply moved there permanently. Still others moved to Guatemala City or to the Izabal or El Peten agricultural zones of northern Guatemala.

Large-scale seasonal migration from the Highlands to the South Coast continues to be a major annual event. An estimated one-quarter to one-third of the estimated 305,000 or more cuadrilleros who migrate annually to the south Coast are accompanied by their families, for an annual total of between 75,000 and 100,000 family groups. Family members probably account for at least 150,000 to 200,000 additional migrants. Thus an estimated 430,000 to 530,000 Guatemalans migrate seasonally to the South Coast -- between 5.3 and 6.6 percent of the country's total population. If cuadrilleros' families remaining in the Highlands are included, this translates into almost one million Guatemalans, well over 10 percent of the total population, who are economically dependent, wholly or in part, on cuadrillero labor on the South Coast.

C. Voluntarios

Historically, the South Coast has been lightly populated; as has been noted, the problem of ensuring an adequate supply of cheap labor is what primarily motivated the government, influenced by the plantation owners, to implement legal means by which to coerce Indians to work on plantations. But since World War II, the resident population of the South Coast (and hence its resident workforce) has grown, and population pressure and civil strife in the Highlands have together resulted in increased permanent migration to the Coast. As under- and unemployment have risen, South Coast fincas owners have been able to fill a growing proportion of their labor needs with non-contracted, wage-earning day laborers, called voluntarios, drawn largely from the surrounding area. Today, according to study team estimates, there are at least 125,000 voluntarios, many of them recent immigrants from the Highlands, living on the South Coast.

III. SOUTH COAST DYNAMICS

A. The Agricultural Workforce

Today, all three types of agricultural workers -- colonos, cuadrilleros, and voluntarios -- are important sources of labor for the labor-intensive agro-export sector of the South Coast.

It is widely believed that over the course of the last two or three decades the overall number of colonos in the country has fallen precipitously, and that their numbers have dwindled the most in the more modern, commercial agricultural areas of Guatemala -- especially the South Coast region (see, e.g., Williams 1986). But this perception is inaccurate (see below). Colonato continues to be an important form of social organization in the area, involving a minimum of 210,000 people, if family members are included.

Mass seasonal migration from the Highlands to the South Coast also continues, especially between September and December. Throughout the rest of the year, however, many locally-resident farm workers -- including tens of thousands of landless voluntarios who, unlike colonos, have no patrons to contribute to their welfare -- are significantly underemployed (see Table II.8). As has been pointed out, this seasonal underemployment is in part a result of the decline in the production of cotton, one of the most labor-intensive crops: the National Cotton Council estimates that the demand for agricultural labor for cotton production is down by nearly two-thirds. It is also due in part to the use of modern, labor-saving farm equipment. This high rate of underemployment, coupled with already inadequate incomes, has turned the South Coast into an area of growing social unrest.

B. Agricultural Trends

As one would expect, major agricultural trends of the past 30 years, including the growth and diversification of the agro-export sector, have been pronounced on Guatemala's South Coast, the country's agro-export heartland. Forty-three percent of the land brought under production in Guatemala during this period was on the South Coast, enabling the region to maintain its relative proportion of the country's cultivated land at about 40 percent (see Table

II.9). In 1979, South Coast coffee, cotton and sugarcane production represented over 20 percent of Guatemala's total agricultural labor requirements (SEGEPLAN 1984b: Table 16). Led by its largest fincas, the region continues to maintain its relative superior position in the introduction of modern agricultural inputs.

Of great potential significance is the recently-reported upturn in cotton production for the 1987/88 agricultural year. If this year's 25 percent increase, over 1986/87, in the acreage devoted to this labor-intensive crop represents the beginning of a trend, this may help to relieve some seasonal underemployment and put more cash into the hands of locally resident farm workers, which should have a positive effect on the health status of these workers and their dependents.

Also of great significance to the health status of South Coast agro-export workers is the consistent decrease, over the last several decades, in the relative proportion of total acreage devoted to food crops vis-a-vis cash crops. The problem is compounded, on the family level, by the necessity, on the part of those who do have some land on which to grow food crops, to sell part of their produce for needed cash -- usually the part with higher nutritional value (Burki 1988:16). If this trend and the present population growth rate both continue, the already poor nutritional status of agro-export workers may worsen.

C. Social Unrest

The high rates of seasonal unemployment of South Coast agricultural workers and their low wage levels, coupled with the recent influx into the region of an estimated 100,000 Indians, displaced by civil strife in the western Highlands and largely destitute, without permanent jobs, permanent homes, or close ties to their new locales, have fueled social tensions on the South Coast. Guerrilla factions have been active in the region since 1979, and although the intensity of the civil war has abated throughout much of the country over the last two years, the South Coast region continues to suffer from political conflagration.

D. Affect of Social Conditions on Health Care Efforts

The agricultural workforce on the South Coast consists predominantly of cuadrilleros and voluntarios; only an estimated 70,000 workers, out of an agricultural workforce of more than a half million, are colonos. Identifying and

counting the members of the often-mobile non-colono population, organizing and administering some system via which to include them in a health care program, informing them of new health care opportunities, and assessing and tracking their access and utilization to health services will be exceedingly difficult. Finding a way of financing an expanded health program for such a population will be equally difficult.

The South Coast has been geographically targeted by IGSS for extension of its maternal/child health and general sickness programs to agricultural workers. Participation in IGSS's accident program is already mandatory for the area's agricultural workers, but in interviews with the study team, finqueros, who are required to participate in the program, condemned the program's high costs and the inaccessibility of IGSS facilities. Required participation in the two additional programs would more than double the contribution required of landowners for their resident workers, and will undoubtedly meet with resistance.

The IGSS proposal may thus help to encourage finqueros' interest in and willingness to finance alternative private sector arrangements, particularly for colonos. Finqueros are apt to have more permanent, personal relationships with colonos than with temporary workers, and are more likely to view funding of health care for colonos as an investment from which they would ultimately reap a monetary return in the form of increased labor satisfaction and productivity. However, colonos represent only a small fraction of South Coast agro-export workers in need of expanded health care, and it seems unlikely that many finqueros would willingly fund health care coverage for cuadrilleros or voluntarios.

E. Living Standards on the South Coast

The living conditions and health status of farm workers on the South Coast have been well documented (Schmid 1967, 1986a, 1968b; Brown 1977; Ascoli 1977, 1978; Pansini 1980; Delgado et al. 1980; Valverde 1985; Deman and Mazariegos 1983; Saenz 1985; Richards 1987). Since the 1960s, the health of the average permanent resident of the South Coast has been deteriorating, compared with residents of other areas of the country.

Although the South Coast has traditionally had the highest proportion of wage-earning agricultural workers of any area in the country, this proportion, according to the 1950 and 1981 national censuses, has grown more rapidly than in the remainder of the country -- especially since the

early 1960s, when the agro-export sector expanded. This trend is most striking in Suchitepequez and Retalhuleu (Table II.10). Indeed, the proportion of the agricultural labor force that is wage-earning has grown at a faster pace than the entire labor force, due to intensified capitalization and modernization of the South Coast's agricultural sector. This suggests that workers are increasingly expected to pay for their health care needs themselves, unless they are provided by the public sector.

According to a recent study (SEGEPLAN 1983), the annual average income of a rural family on the South Coast was Q2,709, exceeding that of the Highlands (Q1,611) (10). Nevertheless, the average standard of living, as reflected in infant mortality rates, has not increased as rapidly on the South Coast as in the Highlands. Indeed, since the 1960s, the standard of living on the South Coast has decreased in absolute terms. A 1980 study, for example, found that on the South Coast only 35 percent of children under five years of age were within the normal range of weight for height, compared with 51 percent in the Highlands (INCAP/SEGEPLAN 1980).

The apparent inconsistency between relatively higher average South Coast family income and both higher infant mortality and lower nutritional status is the combined result of several factors. The first is that in the South Coast region peoples' access to land on which to grow food is decreasing, and a higher proportion of the family budget must thus be spent on food to maintain a constant nutritional status. Second, the average size of a plot of colono land has been falling over the last 15 years (Table II.6). This erosion of the subsistence land base has adversely affected the population's nutritional and health status. Finally, neither colonos nor workers who rent land tend to invest in home improvements, even if they can afford to, since they have no guarantee of remaining on their homesteads. As a result, housing conditions tend to be poorer on the South Coast than in the Highlands, where many people own small plots of land and homes (AID 1987:99). Poor housing and attendant unsanitary environmental conditions partially account for the high infant mortality rate on the South Coast.

Thus, while the South Coast has contributed significantly to economic growth in Guatemala over the past 30 years (and in especially the past 15 years), the benefits of that growth have generally not spread to the workers who account for much of the region's production.

IV. HEALTH SERVICES ORGANIZATION

In 1985, health care accounted for about 2.2 percent of GDP in Guatemala (Table II.11). Of total expenditures, the MYSPAS accounted for 33 percent, IGSS for 25 percent, and the private sector for 38 percent; the remaining four percent was spent by other public sector agencies. The fraction of GDP that health care represents in Guatemala is only half that of other developing countries with comparable health systems and per capita income.

A. The Public Health Subsector

1. The Ministry of Health. The Ministry of Health is responsible for providing personal health services to all Guatemalans who are too poor to have access to private or Social Security health services -- an estimated two-thirds of Guatemala's eight million people. In 1983, however, at most only half of this constituency was receiving care from MSPYAS providers. By implication, the other half of the Ministry's constituency -- or about one third of all Guatemalans -- lacked regular access to health care. The problem is particularly acute in rural areas, where MSPYAS-provided ambulatory consultations average 0.1 per capita annually, one-tenth their urban area level (World Bank 1986a).

Although the Government of Guatemala has long proclaimed its endorsement of the World Health Organization's goal of "Health for All by the Year 2000," it has been slow to implement structural reforms by which to accomplish this aim. Generally, the following traditional tendencies continue to prevail:

a. Both the concentration of physicians in Guatemala City and their shortage in rural areas continued to worsen throughout the 1970s (AID 1977:201). The urban physician/population ratio is more than three times the Central American regional ratio and about ten times greater than the Latin American regional ratio (PAHO 1968, 1974a; World Bank 1978). The department of Guatemala (in which Guatemala city is located), with 21 percent of the national population, has 36 percent of all MSPYAS physicians and nearly two-thirds of all private physicians (von Hoegen 1986:26).

b. Throughout the 1970s, approximately 40 percent of the operating costs of the Ministry were expended in the Department of Guatemala. Per capita MSPYAS expenditures in this department are more than three times those in the remainder of the country.

c. Throughout the 1970s, operating expenditures of the Ministry ran two to one in favor of curative, as opposed to preventive, health services (AID 1977). Moreover, in the last three five-year national health plans, the Ministry has consistently called for further raising the ratio of curative to preventive care expenditures.

d. Since 1979, the distribution of total annual Ministry expenditures has stabilized, with 83.5 percent allocated to hospital care and 16.5 percent to primary care (MSPYAS 1985b). In the last few years, hospital investment expenditures have represented between one-fourth and one-third of the total MSPYAS budgets (World Bank 1986a:v), which suggests that the trend toward a primarily urban/curative care orientation for health services provided through MSPYAS is continuing.

Still, some significant reforms have been implemented (Fiedler 1985b). Most notably, a regionalized medical care referral system, conceived, designed, and largely financed by USAID, was begun in 1970. The resulting development of primary health care facilities and health workers have been substantial, but their impact on the health status of Guatemalans has been far less than their potential (AID 1977; Bostrum 1987; World Bank 1986a:26-32). This has been largely the result of chronic underfinancing of recurrent PHC costs by MSPYAS, of which the most obvious manifestations are shortages of supplies (especially medicines) and deteriorating buildings and equipment. As the Ministry's physical infrastructure has expanded, an increasing proportion of its budget has been devoted to paying the salaries and fringe benefits of the growing number of personnel hired to staff these new facilities. Some 80 percent of the MSPYAS budget is now spent on personnel (Sazo Palma 1987:19).

As it does throughout Guatemala, the Ministry provides health care to the rural population of the South Coast via health posts and health centers. The latter are generally situated in county seats, while most health posts are located in rural areas. Although health posts are generally located closer than health centers to the plantations where colonos and cuadrilleros live and work, they are often difficult for agricultural workers to access (with the exception of voluntarios, who tend to locate in towns or

villages with health facilities). Moreover, health posts have traditionally limited their service provision to patients who come to them. The Ministry is currently implementing a program (called "canalizacion") to encourage outreach activities on the part of health centers and posts, but this effort is unlikely to have much effect on workers who reside on fincas, for finqueros will probably continue to restrict entry onto their plantations.

It is widely accepted, and was confirmed through the study team's interviews, that decreasing inventories of equipment, supplies, and medications in MSPYAS facilities have undermined the quality of care provided by Ministry personnel. If this pattern holds for MSPYAS services on the South Coast, it probably further reduces the desire of agricultural workers and others to seek care at MSPYAS facilities. The undermining of the public's confidence in the quality of services compromises the acceptability of services, thereby reducing both access to care and the utilization of services.

Tables II.12 and II.13 show that MSPYAS resources, both physical and human, are scarce on the South Coast, just as they are in most other regions of the country outside of Guatemala City; South Coast departments are above the national or departmental averages on some resource indicators, below on others. The most robust available measure of the accessibility of resources is probably the numbers of ill persons attended at MSPYAS facilities per 1,000 inhabitants (Table II.13). These numbers, while generally low, vary by South Coast department, from 8/1000 for San Marcos (partly a Highlands department) to 38/1000 for Quetzaltenango.

A relatively small number of people seen at MSPYAS facilities in any given department may be the result of a variety of factors: (a) the residents of one department may be healthier than those of another; (b) there may be relatively few MSPYAS services available in a given department; (c) MSPYAS providers may be inaccessible due to service hours, cost (not only the cost of user charges but also of transportation and foregone income), physical distance, or cultural barriers (such as language differences); (d) the quality of MSPYAS care may be viewed, rightly or wrongly, as inferior or inadequate. In a variety of ways, therefore, the numbers of ill persons attended per 1,000 inhabitants helps to identify those departments in relatively greater need of improvements in health care delivery. In the last column of Table II.13, this measure is used to suggest a potential priority ordering of South Coast departments in terms of their need for an extension of care

effort (11).

2. Guatemalan Institute of Social Security. Access to health services provided by IGSS is restricted to IGSS participants and their dependent beneficiaries. IGSS has three health-related programs: accidents, MCH, and general sickness. Through a payroll tax, both employers and employees make legally-specified financial contributions for their (mandatory) participation in these programs.

The only IGSS program presently operative on South Coast farms is the accident program, in which Guatemalan law requires that all businesses employing workers under accident-prone conditions participate. The program covers only workers, not members of their families. As we noted earlier, IGSS is considering expanding its MCH and general sickness programs into the South Coast region and mandating participation in them (IGSS 1987a, 1987b, 1987c). But IGSS' ability to extend care to agricultural workers effectively has been widely questioned on the basis of its ill-suited service orientation and infrastructure.

The lowest tiers of care in the IGSS system consist of health posts (puestos de primeros auxilios), each typically staffed by a single auxiliary nurse, and physicians' offices (consultorios), usually staffed by one or two nurses or auxiliaries and a physician. The bulk of IGSS health care resources are in hospitals, especially in Guatemala City, where four of the Institute's 22 hospitals, 56 percent of all its hospital beds, and 81 percent of all IGSS-employed physicians are located.

Currently, IGSS has eight puestos, five consultorios, and 13 small hospitals on the South Coast (see Guatemala Project 1987, Doc. A). Four of the five consultorios, all eight of the puestos, and four of the hospitals are housed in rented buildings. Of the 13 lowest-tier facilities (the puestos and consultorios), ten are described in IGSS reports as physically deteriorating, and a puesto in Retalhuleu and a consultorio in San Marcos have been closed since 1984. That IGSS puestos and consultorios are relatively few and decreasing in number in the target area, and are frequently located in deteriorating, rented buildings, suggests that IGSS is inappropriately organized to serve the target population effectively. Despite finqueros' opposition to the idea of extending the MCH and general sickness programs to the South Coast, IGSS officials claim to be committed to this plan, although they also claim to be studying alternate financing and delivery systems (e.g., through private providers).

B. The Private Health Subsector

There is little reliable information about the private health subsector in Guatemala. A recent financial assessment of the entire health sector (Herrick 1987) serves as the primary source of information on private health care, but it most probably overestimates the size of the private subsector and particularly its growth over time. Herrick's work may thus encourage overestimation of the willingness and ability of the private subsector to participate in any proposed extension of care program. Nevertheless, Herrick's general inference of a private subsector that is growing in response to the shrinking public subsector -- or, more specifically, to the shrinking MSPYAS component of the public subsector -- is probably accurate.

One source of information on the private health subsector is Guatemala's 1979-1981 National Survey of Family Income and Expenditures (MDE 1984). The survey was based on a stratified probability sample that segmented the country into three tiers: Guatemala City (the "Central Urban Area"), all remaining urban areas (including all county seats), and the rural area (12). At the time of the survey, there were 1,334,894 households in Guatemala: 15.3 percent in the Central Urban Area, 20.6 percent in other urban areas, and 64.1 percent in rural areas. Table II.14 presents data from this survey on total annual family income and expenditures for each of the three areas as well as for the whole country.

The general picture that emerges is hardly surprising for a developing country. Most monetary income is earned in urban areas: although only 15 percent of Guatemalans live in the Central Urban Area, they earn some 40 percent of total annual family income. On a per family basis, rural Guatemalans earn less than a quarter of the income earned by the average Guatemala City family, and total family expenditures in rural areas are less than a quarter of what they are in urban areas. It is clear that a large segment of the rural population subsists on very low levels of income. For purposes of analyzing health care utilization, this implies that a substantial proportion of Guatemalans, especially those living in rural areas, have very little money with which to purchase health services, an inference corroborated by the country's high incidence of malnutrition.

Table II.14 presents total and average family medical care expenditures for each of the three population concentrations, as well as the nation-wide figures. It also

disaggregates average family medical expenditures into three components: payments of professional fees, medications, and other medical services (13). In both absolute and relative terms, families living in urban areas, especially the capital, spend significantly more on medical care than those living in rural areas. A family in Guatemala City spends, on average, nearly three times what other urbanites spend and over six times what the average rural family spends. In rural areas, where incomes are inadequate for many families, it is likely that medical care expenditures have recently been even further reduced. Although updated figures on income and expenditures are not available, the recession of 1981-86 has no doubt increased the level of unmet need.

Over the last eight years, the distribution of health expenditures between the public and private subsectors has probably changed (Herrick 1987). There is no hard evidence of this, but data from other Latin American countries suggest that, as income increases, families spend a growing proportion of their incomes on private medical care, generally increasing their use of private relative to public services. On the other hand, when income falls, there is a tendency for people to forego their preferred but more expensive (and now less affordable) private care, and use less expensive public services. One would therefore anticipate a shift in demand and utilization from the private to the public subsector when incomes decline during a recession.

In Guatemala, as we have seen, there was a significant, long-term decline in per capita income between 1979 and 1987, which has only recently turned around. This suggests an increase in the use of MSPYAS health services and a reduction in private sector services. There does appear to have been some increase in MSPYAS service provision, but it occurred early in the 1979-87 period; recently, the trend has been reversed. Between 1985 and 1986, for example, ambulatory visits to MSPYAS facilities fell by 15 percent (MSPYAS 1986a, 1987).

Another indication of what has been going on in the private subsector is provided by Herrick's inference of steadily increasing expenditures since at least 1981. Expenditures are the product of prices paid for given quantities of services purchased. While some of the increase in expenditures for health care resulted from price increases, we can also assume that the quantity of private health services purchases increased. This suggests that, although Herrick's figures are probably overestimated, his finding of an upward trend in private sector health care service provision and expenditures -- at least since 1985,

when utilization of MSPYAS services fell -- is valid.

It is also likely, however, that the other trend identified by Herrick, a decrease in utilization of public health services, is accurate as well. Thus the tendency to shift from the private to the public subsector in times of falling incomes may have been more than offset by a reduction in utilization resulting from the (real or perceived) decline in the quality of MSPYAS health services relative to private services. While there are no data on the changing quality of care provided by MSPYAS, it is reasonable to assume that the ubiquitous problems facing the Ministry during most of the past decade have considerably eroded Guatemalans' faith in the quality of public health services.

There are several different types of arrangements by which private health services are provided to agro-export workers on the South Coast. These typically cover only colonos and their families, although some allow for treatment -- usually emergency treatment -- of cuadrilleros. In most cases, the migrants are treated as second-class citizens, or are charged more, for both consultations and medicines, than colonos.

For an inventory of all private health sector entities operating in the South Coast which were identified for this report, as well as a brief profile of the organizations not selected as case studies, see Guatemala Project 1987, Docs. A and F. The most common types of private sector arrangements encountered by the study team are:

1. Private physicians and pharmacists. Local health care professionals working in villages and towns often serve as primary health care providers for populations working and living, even temporarily, on fincas. In some cases, these providers are office-based, and patients are sent to them. These arrangements are characterized by their overwhelmingly curative orientation. In other cases, providers are contracted by finqueros to visit farms at regular intervals: weekly, bi-weekly, or monthly. These arrangements, too, are generally curative-care focused. Some of these providers are medical students fulfilling their national health service obligation before they become fully licensed.

2. Finca-based health services. Some farms, especially the largest, have health services of their own. Typically staffed with one physician and one or more nurses, they are organized, controlled and financed by the farm owner. Again, the services provided are generally curative in nature.

3. Health services offered through private organizations. Private organizations offering health care on the South Coast include national or regional agricultural organizations (such as growers' associations) and international private voluntary organizations. The health programs they offer vary widely; some of these organizations exist to provide health services, typically at clinics and health centers located on fincas or elsewhere, while for others health services represent only part of a broader social welfare mandate. The services offered by private organizations may be either curative or preventive, or both. Some are open to all, while others are restricted to members.

The health care delivery efforts of a number of these private sector entities, both individual and organizational, will be described in detail in the following "Case Studies" chapter.

TABLE II.1

AREA, PRODUCTION, PRODUCTIVITY, EXPORT QUANTITY AND PRICES OF MAJOR CASH CROPS IN GUATEMALA,
1977, 1980, 1983 AND 1986

Crop	Year (1)	Area culti- vated (2) (000 of Mz.)	Produc- tion (3) (000 qq.)	Produc- tivity (qq./Mz.)	Value of Harvest (000 Q.)	Export (4)		Price of export (5) (Q./qq)	
						Year	Quantity (000 qq.)		Value (000 Q.)
Coffee	1976/77	369.4	3,447.2	9.3	323,520	1976	2,589	242,952	93.85
	1979/80	365.5	3,758.5	10.3	523,709	1979	3,100	432,968	139.66
	1982/83	369.0	3,650.0	9.9	425,809	1982	3,076	358,826	116.66
	1985/86 (6)	368.0	3,948.5	10.7	441,166	1985	4,041	451,522	111.73
Sugar Cane	1976/77	109.6	11,045.0	100.8	147,561	1977	6,351	84,858	13.36
	1979/80	83.8	8,531.8	101.8	128,148	1980	4,610	69,258	15.02
	1982/83	100.1	11,544.3	115.3	128,834	1983	8,541	95,343	11.16
	1985/86 (7)	100.0	12,300.0	123.0	108,240	1986	6,500 (8)	57,200	8.80
Sorghum	1976/77	87.3	2,080.7	23.8		1976	-	-	-
	1979/80	58.7	1,548.5	26.4		1979	0	4	36.00
	1982/83	43.8	1,676.3	38.3		1982	-	-	-
	1985/86	95.2	2,200.3	23.1		1985	0 (9)	11	28.00
Cotton	1976/77	141.8	2,931.9	20.7	145,715	1977	3,118	154,958	49.70
	1979/80	184.8	3,300.0	17.9	186,780	1980	2,936	166,148	56.60
	1982/83	85.0	1,010.9	11.9	59,613	1983	1,214	71,616	58.97
	1985/86	96.3	1,385.8	14.4	66,519	1986	1,000 (8)	48,000	48.00
Bananas	1977	8.1	6,990.1	863.0		1977	6,219	21,116	3.40
	1980	10.6	8,850.0	834.9		1980	8,638	45,396	5.26
	1983	10.9	5,827.7	534.7		1983	5,828	55,100	9.45
	1986 (10)	11.7	9,360.0	800.0		1986	7,400	74,000	10.00
Cardamom	1977	26.9	80.7	3.0		1977	80	27,092	340.35
	1980	33.3	110.4	3.3		1980	109	55,596	510.99
	1983	42.9	170.5	4.0		1983	170	59,414	348.67
	1986	50.0	175.0	3.5		1986	155 (11)	62,000	400.00

Notes:

- 1 - Coffee: Comprises the period from October of one year to September of the following.
 Sugar Cane: Comprises the period from November of one year to October of the following.
 Sorghum, Cotton: Comprises the period from May of one year to April of the following.

- 2 - Sugar Cane: Estimated on the basis of a yield of 60 metric tons per manzana.
 Cardamom: Estimates by the Departamento de Investigaciones Agropecuarias e Industriales, Banco de Guatemala.

TABLE II.1 (contd.)

- 3 - Cardamom: Production of parchment cardamom.
- 4 - Coffee: NAUCA Group 11:09 01 01 02 (NAUCA 1: 071 01 03).
Sugar Cane: The exports of a calendar year comprise the production of two sugar-making seasons. For example, the production of the 1983-84 sugar-making season was exported starting in November of 1983 (approximately 25%); the rest was exported between January and October of 1984. NAUCA Group 11:17 01 00 00 (NAUCA 1:061 01 00).
Sorghum: NAUCA Group 11:10 07 80 00 (NAUCA 1:45 09 02).
Cotton: The exports of a calendar year comprise the production of two agricultural years. For example, the production of the 1983-84 season was exported starting in December of 1983 (approximately 25%); the rest was exported between January and September of 1984. NAUCA Group 11:55 01 00 00 (NAUCA 1:263 01 02).
Bananas: NAUCA Group 11:08 01 80 02 (NAUCA 1:051 01 00 01).
Cardamom: Exports of gold and parchment cardamom. NAUCA Group 11:09 08 01 01 (NAUCA 1:292 04 00 01).
- 5 - Sugar Cane: The export prices are average prices corresponding to sales in U.S. and world markets.
- 6 - Numbers estimated by ANACAFE.
- 7 - Estimated by the Direccion de Comercio del Ministerio de Economia.
- 8 - Estimated by the Departamento de Investigaciones Agropecuarias e Industriales, Banco de Guatemala.
- 9 - Departamento de Cambios, Banco de Guatemala.
- 10 - Estimated by the Departamento de Investigaciones Agropecuarias e Industriales, Banco de Guatemala.
- 11 - Estimated by the Seccion de Analisis de Mercados y Comercio Exterior, Banco de Guatemala.

Sources:

Asociacion Nacional del Cafe, Boletin Estadistico del Banco de Guatemala-MINIECONOMIA, Seccion de Analisis de Mercados y Comercio Exterior, Banco de Guatemala, Instituto Nacional de Estadistica, encuestas directas a productores en las zonas de cultivo, Departamento de Cambios, Banco de Guatemala, Asociacion Nacional de Azucareros, y Consejo Nacional del Algodon.

TABLE II.2

EVOLUTION OF THE COMPOSITION OF AGRICULTURAL PRODUCTION
BY AREA CULTIVATED, 1950-1979
(Percentages)

Product	1950	1964	1979
Total	100.0	100.0	100.0
Basic foods:	58.0	41.3	37.4
Corn	52.0	36.9	32.3
Beans	2.0	1.4	2.2
Wheat	2.9	2.0	1.4
Vegetables	0.1	0.2	0.4
Other	1.0	0.8	1.1
Cash crops:	15.7	21.6	27.4
Sorghum	1.0	0.9	1.4
Cotton	0.2	4.8	6.3
Coffee	12.1	12.4	12.0
Sugar cane	1.7	2.2	4.8
Cardamom	0.1	0.0	1.0
Other	0.6	1.3	1.9
Fruits (a)	4.3	1.4	2.4
Pasture	22.0	35.7	32.8

Note: a - Includes bananas, whose cultivation has expanded while cultivation of all other fruits has declined.

Source: SEGEPLAN (1981).

TABLE II.3
 CHANGE IN AGRICULTURAL LABOR REQUIREMENTS,
 1950 AND 1979
 (Person-days per cultivated manzana)

Area	1950	1979	Rate of growth
National Total	43	36	-0.61
South Coast Region	50	38	-0.95

Source: SEGEPLAN (1984b).

TABLE II.4

INFANT AND EARLY CHILDHOOD MORTALITY*
(0-2 years, per 1000 live births)

By region	Years	
	1968	1976
Guatemala City (Capital area)	99	87
Central (Escuintla*, Sacatepequez, Chimaltenango)	178	146
Southeast (Santa Rosa*, Jalapa, Jutiapa, El Progreso)	160	136
Highlands (Quetzaltenango*, San Marcos*, Totonicapan, Huehuetenango, El Quiche, Solola)	170	137
Coast (Retalhuleu*, Suchitepequez*)	166	130
North (Alta Verapaz, Baja Verapaz, El Peten)	154	117
East (Zacapa, Chiquimula, Izabal)	158	121
.....		
By urban/rural residence:		
Guatemala City	86	71
Other urban areas	137	107
Rural areas	156	123
.....		
By ethnicity:		
Indian	171	128
Ladino	128	101

Source: Delgado (1987b:19).

* Indicates a department in the South Coast study area.

TABLE II.5
MALNUTRITION IN GUATEMALAN CHILDREN 0-4 YEARS OF AGE

	1965	1975
Overweight	2.3	1.3
Normal	13.0	11.5
Grade I malnutrition	39.7	39.9
Grade II malnutrition	26.7	32.4
Grade III malnutrition		
Deaths	18.2	14.9
.....		
Percentage of children under 5 with weight for age more than two standard deviations below the World Health Organization norms:		
	1965-67	1978-82
Rural areas population only	36.5%	43.6%

Notes: Overweight: > or = 110% of weight for age norms.
 Normal: 90-109% of weight for age.
 Grade I: 75-89% of weight for age.
 Grades II and III: less than 75% of weight for age.

Sources: Teller et al. (1978: Figure 2); Delgado (1987b: Table 4).

TABLE II.6

THE COLONO POPULATION, 1979

Region or Department	Total colonos		Colonos with land				Colonos without land (a)	
			Number	Percent	Area (manzana)		Number	Percent
	Number	Percent			Total	Average		
Country:								
1964	102,829	100.0	64,386	62.6	161,714	2.51	38,443	37.4
1979	110,416	100.0	62,897	57.0	99,474	1.58	47,519	43.0
South Coast:								
1964	58,797	100.0	27,760	47.2	36,231	1.31	31,037	52.8
1979	68,831	100.0	32,427	47.1	30,494	0.94	36,404	52.9
Escuintla:								
1964	13,273	100.0	6,424	48.4	13,599	2.12	6,849	51.6
1979	15,136	100.0	7,487	49.5	7,199	0.96	7,649	50.5
Santa Rosa:								
1964	5,894	100.0	4,896	83.1	7,307	1.49	998	16.9
1979	7,711	100.0	5,215	67.6	6,242	1.20	2,496	32.4
Quetzaltenango:								
1964	10,147	100.0	2,823	27.8	2,283	0.81	7,324	72.2
1979	11,375	100.0	4,332	38.1	2,490	0.57	7,043	61.9
Suchitepequez:								
1964	14,063	100.0	6,587	46.8	6,453	0.98	7,476	53.2
1979	14,674	100.0	6,970	47.5	5,572	0.80	7,704	52.5
Retalhuleu:								
1964	5,256	100.0	2,751	52.3	3,011	1.09	2,505	47.7
1979	5,355	100.0	3,031	56.6	2,974	0.98	2,324	43.4
San Marcos:								
1964	10,164	100.0	4,279	42.1	3,578	0.84	5,885	57.9
1979	14,580	100.0	5,392	37.0	6,017	1.12	9,188	63.0

Source: DCE (1981b).

Note: a - "Colonos without land" are colonos who have been provided with a dwelling but no plot on which to grow food.

TABLE II.7

AVERAGE NUMBER OF COLONOS PER FARM ON THE SOUTH COAST, 1979 (1)

Department	Size of farm	Average number of Colonos per farm
Escuintla	Small	2.8
	Medium	12.7
	Large	69.4
	Weighted department average	15.8
Santa Rosa	Small	6.9
	Medium	20.0
	Large	42.7
	Weighted department average	8.6
Quetzaltenango	Small	5.8
	Medium	82.0
	Large	119.0
	Weighted department average	30.4
Suchitepequez	Small	4.4
	Medium	26.6
	Large	154.2
	Weighted department average	25.1
Retalhuleu	Small	3.0
	Medium	19.6
	Large	46.3
	Weighted department average	14.5
San Marcos	Small	8.3
	Medium	35.5
	Large	131.8
	Weighted department average	30.8
South Coast weighted average		20.9

(1) - In 1979, 3,866 farms in the region had colono workers.

Source: DGE (1981b).

TABLE II.8
 REQUIREMENTS, SUPPLY, AND RATE OF UNDEREMPLOYMENT
 OF RESIDENT WORKFORCE IN THE AGRICULTURAL SECTOR,
 SOUTH COAST, 1979 (a)

Months	Requirements persons/year(b)	Balance(c)	Rate of underemployment(c)
Annual average	277,893	12,833	4.4
January	270,328	20,398	7.0
February	163,925	126,801	43.6
March	138,080	52,646	52.5
April	210,046	80,680	27.6
May	184,717	106,009	36.5
June	216,074	74,652	25.7
July	276,045	14,681	5.1
August	235,723	55,003	8.9
September	304,960	-14,234	-4.9
October	408,418	-117,692	-40.5
November	423,424	-132,698	-45.6
December	453,472	-162,746	-56.0

Notes: a - The South Coast here includes the Departments of Escuintla, Suchitepequez and Retalhuleu, as well as the coastal areas of Santa Rosa, Quetzaltenango and San Marcos, and an insignificant part of Jutiapa.

b - The total labor supply in 1979 was estimated at 290,760 resident workers (cuadrilleros not included); data presented in Table II.6 (Colonos) and the study team's estimate of the number of voluntarios resident in the region in 1979, however, suggest that this figure may be an overestimation. Thus, rates of underemployment may be somewhat inflated.

c - A negative sign means that labor requirements exceed the total of the resident work force.

Source: SEGEPLAN (1984c).

TABLE II.9

THE GROWTH IN ARABLE LAND IN GUATEMALA:
THE SOUTH COAST AND NATIONWIDE, 1950 AND 1979
(MANZANAS)

Year	Country total	South Coast Region	
		Total	Percent of country total
1950	1,509,694	603,989	40.0
1979	3,180,441	1,324,736	41.7
Intercensal growth:			
Absolute	1,670,747	720,747	43.1
Proportionate	110.7	119.3	

Source: Computed from SEGEPLAN (1984a, 1984c).

TABLE II.10

AGRICULTURAL LABOR FORCE BY OCCUPATIONAL CATEGORY,
 REGION V: RETALHULEU Y SUCHITEPEQUEZ
 1950-1981
 (Percentages)

Occupational category	Retalhuleu		Suchitepequez	
	1950	1981	1950	1981
Total	100.0	100.0	100.0	100.0
Employer	1.6	1.1	1.2	0.9
Non-wage laborer	36.2	38.4	26.5	20.7
Wage-earner	50.3	52.5	62.5	73.1
Unpaid domestic	11.9	6.2	9.8	3.3
Not known	-	1.8	-	2.0

Source: DGE (1950, 1981a).

TABLE II.11

GUATEMALA: COMPOSITION OF HEALTH CARE EXPENDITURES AND GROSS DOMESTIC PRODUCT, 1979-1985
(Millions of Quetzales and percentages)

Year	MSPTAS		Social Security Institute		Other public sector agencies		Private sector		Total health expenditure		Gross domestic product (GDP)	Health expenditure as % of GDP
	Total (a)	Percent	Total (b)	Percent	Total	Percent	Total	Percent	Total	Percent		
1979	78.9	43.7	43.2	23.9	9.2 (c)	5.1	49.3	27.3	180.6	100.0	6,903	2.6
1980	114.7	47.9	53.2	22.2	12.6 (c)	5.3	59.0	24.6	239.5	100.0	7,879	3.0
1981	120.8	45.8	61.8	23.4	13.7 (c)	5.2	67.5	25.6	263.8	100.0	8,608	3.1
1982	91.0	38.2	68.0	28.5	13.9	5.8	65.6	27.5	238.5	100.0	8,728	2.7
1983	85.1	38.6	56.9	25.8	10.7	4.8	68.0	30.8	220.7	100.0	9,035	2.4
1984	92.1	39.4	58.3	24.9	9.5	4.1	73.9	31.6	233.8	100.0	9,397	2.5
1985	82.2 (a)	33.3	62.0	25.1	9.0	3.6	93.6	37.9	246.8	100.0	11,023	2.2

Notes: a - Current and capital expenditures actually made. Not to be confused with budgeted amounts, which are greater in each year.
 b - Health expenditures only. Excludes pensions and disability pay.
 c - Estimates.

Source: Ministry of Health, "Análisis Institucional," 1985; IGSS, Informe Anuales; Ministry of Health, unpublished study of private sector expenditures on health in 1981; International Financial Statistics. As presented in Herrick (1987).

TABLE II.12

INDICATORS OF THE SOUTH COAST'S SHARE
OF MSPYAS PHYSICAL RESOURCES

Jurisdiction	Population per health center	Population per health post	Population per hospital bed
National average	37,032	11,120	987
South Coast average	34,533	11,678	1,778
Escuintla	55,057	13,764	1,498
Santa Rosa	23,423	6,006	1,183
Quetzaltenango	45,975	11,788	731
Suchitepequez	33,281	13,023	1,055
Retalhuleu	32,376	12,950	899
San Marcos	44,357	10,484	3,495

Source: von Hoegen (1986).

TABLE II.13

INDICATORS OF THE SOUTH COAST'S SHARE
OF MSPYAS HUMAN RESOURCES

Jurisdiction	Number of persons in the population per:(a)				Sick persons attended per 1,000 inhabitants(a) (5)	Intervention priority ranking(b) (6)
	Physician (1)	Nurse (2)	Nurse Auxiliary (3)	Promoter (4)		
The Republic	11,569	8,775	1,571	1,561	27.5	
South Coast average	14,066	13,669	2,022	1,927	26.2	
Escuintla	11,904 (5)	13,764 (4)	2,058 (3)	3,670 (1)	31.5	(5) 3
Santa Rosa	18,017 (2)	7,808 (5)	1,446 (6)	1,095 (6)	29.0	(4) 5
Quetzaltenango	9,578 (6)	7,537 (6)	1,517 (5)	1,900 (3)	38.1	(6) 6
Suchitepequez	15,765 (3)	18,721 (2)	2,435 (2)	1,692 (4)	24.5	(3) 2
Retalhuleu	12,950 (4)	14,943 (3)	1,982 (4)	2,698 (2)	22.4	(2) 3
San Marcos	22,178 (1)	23,065 (1)	3,186 (1)	1,396 (5)	8.1	(1) 1

Source: Adapted from von Hoegen (1986).

Note: a - The figures in parentheses in each column indicate intervention priority rankings based on that particular column variable.

b - This overall intervention priority ranking was derived from the individual rankings of counms 1-4 by assigning equal weight to each type of health provider.

TABLE II.14

FAMILY MEDICAL CARE EXPENDITURES BY PLACE OF RESIDENCE AND MEDICAL CARE EXPENDITURE CATEGORY
1979-81
(Current Quetzales)

Place of residence		Total medical care expenditures	Professional fees	Medications	Other medical services
National	Total medical care expenditures	67,520,998	26,484,172	30,217,526	10,819,300
	Medical care as % of all expenditures	2.02			
	Percent of medical care total	100.0	39.2	44.8	16.0
	Average family expenditures	50.58			
Central Urban	Total medical care expenditures	30,839,639	15,133,011	8,672,249	7,034,379
	Medical care as % of all expenditures	2.66			
	Percent of medical care total	100.0	49.1	28.1	22.8
	Average family expenditures	150.80			
	Region's share of country total	45.7			
Other urban areas	Total medical care expenditures	15,813,387	5,810,427	8,069,757	1,933,203
	Medical care as % of all expenditures	2.06			
	Percent of medical care total	100.0	36.7	51.0	12.2
	Average family expenditures	57.58			
	Region's share of country total	23.4			
Rural areas	Total medical care expenditures	20,867,972	5,540,734	13,475,520	1,851,718
	Medical care as % of all expenditures	1.47			
	Percent of medical care total	100.0	26.6	64.6	8.9
	Average family expenditures	24.39			
	Region's share of country total	30.9			

Source: MDE (1984).

CHAPTER THREE: CASE STUDIES

This chapter presents case studies of a variety of private sector health care arrangements currently in operation on the South Coast of Guatemala. Most of them -- two national agricultural organizations, a non-profit international organization, several individual or group medical practices, a private hospital, and a food processing plant -- provide health services directly; one, an insurance company, provides care indirectly. All of these arrangements were identified by the study team as potentially capable of extending health care to more of the agro-export workers in the target area than currently have access to adequate services (14).

In case studies of national or international health services arrangements, which have several levels of organization, the study team judged it more important to focus on the central or national level than on the delivery level of the programs selected, for two reasons. First, any future extension of health care will require managerial capability starting at the central office level; and second, the arrangements chosen -- because of their distinct settings, lack of data, and time constraints -- were difficult to compare in terms of costs, degree of access, and patient and provider satisfaction.

I. ANACAFE

ANACAFE, the Asociacion Nacional del Cafe (National Coffee Growers Association), is a trade association of regional groups of coffee producers. It promotes coffee growers' interests in various ways, most importantly by managing Guatemala's participation in the International Coffee Agreement, the consortium of coffee-producing nations that controls exports in order to stabilize the international price of coffee. ANACAFE's responsibilities include (1) assigning production quotas to coffee growers; (2) providing growers with technical assistance; and (3) representing Guatemalan interests on the international coffee marketing board (15). Of secondary organizational and monetary significance to ANACAFE, but of primary interest here, is the association's Social Action Program.

A. The Social Action Program: Historical Development

The current ANACAFE Social Action Program, initiated in March of 1987, was preceded by a Social Action Committee, founded in 1969 to promote the social welfare -- including health needs -- of coffee workers. Because of the worldwide recession of the early 1980s, depressed coffee prices, and -- to a lesser extent -- the escalation of civil unrest in Guatemala, the effort was deemed too expensive, and was dropped by ANACAFE in 1983.

An important legacy of the earlier program was its support of several health services (two of them organized and implemented by regional coffee associations). The first, begun in 1971 by the Eastern Guatemalan Coffee Growers' Association (ACOGUA), runs two health clinics: ACOGUA I, located outside the town of Barberena in the department of Santa Rosa, and ACOGUA II, located in Barberena. The second, initiated in 1977 and sponsored by the Association of United Coffee Growers (ACU), supports a clinic in San Pablo, department of San Marcos. A third effort, also health-center based, is run by an individual physician, and is distinguished by its relatively greater emphasis on prevention (especially nutrition) and its work with traditional midwives. The fourth and oldest effort, operated directly by the Social Action Committee, is Jornadas Medicos y Odontologos, an itinerant health services delivery arrangement without a health facility.

The old Social Action Committee's health care program was relatively limited in scope, consisting of the Jornadas effort and a financial contribution of Q100 per month to each of the facility-based services. The Committee coordinated its activities with a number of other health institutions, including the University of San Carlos Medical School, the National School of Nursing, and CARE, but these organizational linkages were reportedly rather weak and informal. When the Social Action Committee was dropped by ANACAFE in 1983, all four sub-programs -- ACOGUA, ACU, the individual physician, and the Jornadas Medicos y Odontologos -- nevertheless continued to operate independently, funded by the regional associations and in part directly by their members.

B. The New Social Action Program: Philosophy and Structure

In 1986, the ANACAFE General Assembly voted once again to develop a health services delivery system to provide basic health care to coffee workers and their families, to be financed jointly by a new Social Action Program and regional coffee growers' associations. The program would, in effect, resurrect the old Social Action Committee, albeit more formally and with a more ambitious agenda and a significantly larger purse. The objectives of the program were to address health problems in coffee-producing areas through a system of primary health care with both preventive and curative care components; to support existing health centers run by regional coffee associations; to promote the development of new health centers; and, in the association's own words, "to improve the image of the coffee-growing community through a social action program, (to be) implement(ed)...jointly with an adequate and ongoing advertisement campaign" (ANACAFE 1987).

The implementation of this program reflects a growing concern on the part of many Guatemalans, including coffee growers, about widespread poverty and poor health in their country -- particularly among agricultural workers. ANACAFE's resolution to help ameliorate these conditions resulted partly from humanitarian concerns, partly from the positive impact such efforts might be expected to have on labor productivity, and partly from political considerations -- the last a principal reason why ANACAFE insists on retaining control of the program. Basically, ANACAFE seeks to change what it says is a negative public image resulting from the social conditions of agricultural workers on coffee plantations.

The ANACAFE health program is being implemented through two sub-programs with different organizational structures. Under the first (the Health Centers Support sub-program), regional or local coffee growers' associations provide health centers with financial support, supervision, and technical assistance. Under the second (the itinerant Jornadas sub-program), primary health care and dental services are delivered to isolated communities, in coffee-growing areas lacking health facilities, via one- or two-day visits.

C. Program Implementation and Geographic Considerations

ANACAFE's General Assembly has committed itself to support the Social Action Program by maintaining an administrative office called the Social Action Unit (presently consisting only of the program's director and a secretary) and funding 12 regional or local health centers/programs for five years. The level of support for each program is Q25,000 (about \$10,000 US) annually, which must be augmented by at least a third of that amount in local monies. The minimum local expenditure is thus Q8,333, for a combined annual health center/program budget of at least Q33,333.

In 1987, after chartering its Social Action Program, ANACAFE invited its regional associations to apply for funds. To qualify, an association must own or rent an acceptable building and possess some basic equipment. To provide an idea of the space and layout considered acceptable, ANACAFE makes available a blueprint of a prototypical, 130-square-meter building, based on the ACOGUA I facility. Construction costs for this building are estimated at between Q30,000-35,000, and the basic clinical equipment at an additional Q3,500. To date, 23 associations or cooperatives have applied to participate in the Health Centers Support sub-program (see Guatemala Project 1987, Doc. B); 12 of these had health clinics before applying for ANACAFE assistance.

As of November 1987, five of the 23 new applicants had received funding. In addition to the two-clinic ACOGUA and single-clinic ACU efforts, the recent recipients are the Guatemalan health services organization AGROSALUD (to be discussed in detail below), which has clinics on 21 fincas in Alta Verapaz and on the South Coast; ARECCO, which runs two clinics in Quetzaltenango; and a program supporting two recently-opened ANACAFE clinics, Centro de Salud Tumbador and Centro De Salud Tocache, in San Marcos. Of these five programs, three (ACOGUA, AGROSALUD, and ACU) were in operation before their receipt of ANACAFE funding. The other two programs -- the two ARECCO clinics and the two ANACAFE centers in San Marcos -- are new private efforts, apparently spawned in direct response to ANACAFE's program. Only some of the remaining 18 applicants can be funded under the current ANACAFE financial commitment to the Social Action Program.

As in the selection of sites for the Jornadas sub-program, need -- defined in terms of physical access to the nearest health facility -- is theoretically ANACAFE's main criterion for choosing among acceptable sites. There is

some question about whether this criterion has in fact been applied, since both of the new ARECCO facilities are located within 10 kilometers of two MSPYAS health centers and a national hospital. It should be noted, however, that even though 87 percent of the population of Colomba, the municipio where the ARECCO clinics are located, is rural, population density is a high 158 persons per square kilometer. Similarly, the population densities of the neighboring municipios, Coatepeque and Flores, are 142 and 362, respectively (see Guatemala Project 1987, Doc. G for municipio profiles). Thus, despite the fact that there are other facilities nearby, the large population dependent upon these other facilities may in effect render them relatively inaccessible.

It is difficult to imagine that an effort as large, visible, and expensive as this one could have gotten off the ground without intra-organizational political compromises on the geographic distribution of the facilities to be assisted -- a consideration to be taken into account in allocating funds for additional facilities. The Social Action Program's budget comes from contributions from all Guatemalan coffee growers, regardless of location. When fully operational, however, the Health Centers Support sub-program (according to current plans) will spend Q300,000 yearly -- not nearly enough to provide adequate care for all workers employed by its members -- to help support 12 health centers. Since the sub-program's success or failure will depend on whether or not those monies are perceived as benefitting some regional associations more than others, there may be some conflict over the allocation of resources. It is possible that the Jornadas sub-program is being supported by the national association, at least in part, to balance its resources allocations.

D. Sub-program Administration, Coverage, and Costs

1. Jornadas Médicos y Odontólogos Sub-program. Under the itinerant Jornadas sub-program (organized directly by the Social Action Unit), a number of health care personnel -- a Medical Director, three dentists, three physicians, plus agricultural extensionists (permanent, full-time employees from ANACAFE's regional offices), teachers, and volunteers -- make weekend visits to communities in coffee-growing areas (presumably communities not already served by an ANACAFE-sponsored health facility). The dentists and physicians are contracted for the sub-program on a per diem basis. Generally, there is one jornada visit each month, for a total of 12 such efforts per year. The schedule of visits, determined by the Medical Director several months in

advance, is sent to all ANACAFE regional offices. Apparently there is no provision for follow-up visits to previously-visited communities.

Although some curative care is provided via medical and dental consultations, the Jornadas sub-program focuses on vaccinations, deparasitizations, and dental education. Children are primarily (although not exclusively) targeted; most visits are held at local schools, where children are treated in groups to maximize coverage. Each receives deparasitization medicine, fluoride and instructions for self-administering it, a toothbrush, and toothpaste. In addition, health education seminars (charlas) are given on family health, food preparation, nutrition, and sanitation. ANACAFE estimates that an average of over a thousand people receive some health service during each jornada (see Guatemala Project 1987: Doc. B).

The expenses of the sub-program include a Q100 fee per day for each physician and dentist, plus payments for travel, food, and lodging. The direct cost of the sub-program to ANACAFE is greater than the ledgers of the Social Action Program suggest, because additional organization resources (the cost centers for which are not within the sub-program) are contributed in kind. These subsidies include agricultural technicians' time and the use of regional office motor vehicles.

Based on the budget for the 1986-1987 coffee year (Table III.1), the average cost per two-day Jornada was computed at Q3,992. The average expenditure per patient could be calculated at Q3.55, but this figure is probably too high since it is based only on the number of persons receiving curative care; it does not include the beneficiaries of preventive measures (deparasitization, flouride treatments, charlas, etc.)

2. The Health Centers Support Sub-program. This still-evolving sub-program of support for local clinics was designed to ensure that coffee growers, as a group, make a conscious, visible, and economically "adequate" effort to improve the plight of coffee workers. To achieve this aim, ANACAFE chose an arrangement that incorporates the necessary economic commitment, but also permits considerable local participation and maximum local control. This decentralized structure is evidenced by two facts: first, at the national level, the Social Action Unit (which administers the sub-program) consists of only two people; and second, 70 percent of the sub-program's budget is passed along to regional or local associations responsible for administration, personnel, supplies, etc.

It should not be assumed, because of this decentralization, that ANACAFE lacks influence over the local health programs that predate the Social Action Program. In fact, ANACAFE has standardized services and encourages the institutionalization of a basic service package by stipulating norms and by distributing clinical history/medical record forms for maternal, pediatric, and general medical consultations (see Guatemala Project 1987, Doc. B). The rights and duties of the medical chiefs of participating clinics, and the clinics' hours of operation, are also standardized. In addition, the ANACAFE General Accounting Office oversees the complete budgets and expenditures of participating clinics -- not just the ANACAFE components thereof. On a more basic level, ANACAFE has spurred interest in and sponsorship of local health clinics in regions previously unserved or underserved by other health care providers.

Table III.2 shows the estimated population coverage of each ANACAFE-supported clinic. The current annual ANACAFE contribution for the recurrent costs of these facilities is Q175,000. The only disaggregated cost data obtained on the individual regional associations' facilities are combined data from the two ACOGUA clinics and data on the just-opened ARECCO clinic on Finca Florencia, Colomba, Quetzaltenango (Tables III.3 and III.4).

ACOGUA will receive almost half of its anticipated operating costs for its two clinics from ANACAFE, and the regional association will contribute Q20,000. The stipulated minimum 1-to-3 matching contribution means that ACOGUA's minimum contribution is Q16,666. In fact, the regional association's contribution exceeds this by Q3,334, or approximately 20 percent. It is not known how the new ANACAFE program has affected the functioning of the ACOGUA clinics, the availability of supplies and equipment, staff morale, or the financial contribution of ACOGUA.

During site visits to the ACOGUA facilities, the study team learned that colonos and their dependents on ACOGUA-affiliated fincas pay 25 centavos per medical consultation, which includes the cost of medicines. All other persons pay 12 times this amount: Q3.00 per consultation. User fee revenues for ACOGUA I and II are shown in Tables III.5 and III.6.

The attending physicians reported that the clientele of the two ACOGUA clinics, taken together, was about equally divided between users from affiliated fincas and others.

However, the two clinics differ greatly in this respect -- hardly surprising since ACOGUA I is on a finca and ACOGUA II is in town. According to the ACOGUA II physician, 85 percent of the users of ACOGUA I (the finca-based facility) work for affiliated fincas, whereas at his ACOGUA II (municipio-based) clinic, the proportion is only 15 percent. Based on analysis of (incomplete) 1987 utilization data, however, the split between affiliated and non-affiliated users is quite different. At the municipio-based ACOGUA II, the ratio of affiliated to non-affiliated users was 49:51 (Table III.6), while at the finca-based ACOGUA I, it was 95:5 (Table III.5). More detailed review of these divergent information sources is needed to reconcile these conflicting data.

Comparing the budgets of the well-established ACOGUA program and the recently-opened ARECCO clinic on Finca Florencia in Colomba, similar proportions of both budgets are earmarked for personnel; about 41 percent for ACOGUA and 36 percent for ARECCO. Both organizations have allocated similar budget shares to medicines and other medical supplies: 48 and 46 percent, respectively. These shares, however, translate into very different quantities of available medical supplies per person. ACOGUA's combined population coverage is estimated at 60,000. Its medical supplies budget is Q48,000, for an average of 80 centavos per person. The ARECCO clinic, on the other hand, covers an estimated 10,000 people, and has Q15,236 for medical supplies, for an average of Q1.52 per person -- nearly twice that of ACOGUA. Similarly, the total program expenditure per person covered by the ARECCO clinic is nearly twice that of the ACOGUA clinics: $Q33,333/10,000 = Q3.33$ vs. $Q101,800/60,000 = Q1.70$.

These strikingly different proportions of monies available per person suggest that the various ANACAFE-supported clinics have quite different health care delivery potentials. The discrepancy that exists between these clinics can be attributed to the fact that ANACAFE's only guidelines for participating in its Social Action Program are monetary quantities, independent of the size of the population to be served. ANACAFE has no standards for a suggested or required minimum level of effort per targeted beneficiary. These are policy areas that merit closer attention.

The study team did not learn ACOGUA's average per capita medical supplies budget (or expenditure) or its total per capita budget (or expenditure) before ANACAFE funding began; neither could it determine what happened to the level of support for the two ACOGUA clinics after ANACAFE funding

began. Of particular interest here is the extent to which ANACAFE funds simply serve to substitute for other monies -- that is, how much change has occurred in total coffee association monies being allocated to health (regional and national association funds) as a result of the Social Action Program. If the net effect is small, then perhaps ANACAFE should consider altering its strategy in order to maintain or enhance local resources commitments. How best to do this, however, is unclear. To identify alternate strategies would require identifying minimally acceptable terms for trading off some of the multiple goals of the ANACAFE program: for example, improving the coverage of health services (a process measure); improving coffee workers' health status (an outcome or effectiveness measure); and assuring equity across regional coffee associations in financing the Social Action Program.

Judging from the size of the ARECCO clinic's budget and its input sources (ANACAFE and ARECCO), it may be inferred that the financing of the basic elements of this health care delivery service will be the responsibility of ANACAFE (see Table III.4 and its note). Already, the less precise and less essential expenditures have been identified as ARECCO's responsibility. If ARECCO develops a cash-flow or other financial problem, its contributions for medications, building maintenance, cleaning, and "incidental expenditures" will become those most easily postponed, which could bring on long-term adverse consequences.

If this division of financial responsibility, in which the more expendable contributions are the responsibility of the organization more likely to experience cash-flow problems, is a conscious strategy, it appears well grounded. But, by the same token, because the outlays of the lower-tiered associations are less visible, their reduction in the short run would not cause an apparent break in service delivery; as mentioned above, the detriment would come over the long run. A monitoring mechanism could ensure ANACAFE that regional association matching expenditures are being made, and in a timely manner.

At present, ANACAFE's central office accounting department reviews the total operating budget of each clinic participating in the Social Action Program. The team did not, however, learn the aim of the review, the frequency with which it is performed, or what happens, if anything, if irregularities are found.

A review of the combined ACOGUA I and II budget shows how this kind of review can help ensure the provision of quality services. The third and fourth line items under

"Income" in Table III.3 contain estimates of user fees to be generated by ACOGUA I and II during 1987-88. It is assumed that the clinics' combined average monthly number of consultations will be 400 each for program affiliates and non-affiliates. If we compare this assumption to the actual data for five months in 1987 for ACOGUA I (Table III.5) and six months for ACOGUA II (Table III.6), we see that the figures are inflated, presenting an overly optimistic picture. During this period, the monthly consultation averages for ACOGUA I were 256 affiliates and 15 non-affiliates; for ACOGUA II, they were 85 and 90. These add up to 341 affiliate and 105 non-affiliate consultations, for a total of 446 -- well below the estimated 800. Moreover, the mix of patients actually seen differs significantly from the 50-50 estimate cited by personnel interviewed: 76 percent affiliates and 24 percent non-affiliates. Given the different rates charged the two groups, this discrepancy has important implications for projected user fee revenues, which in turn will affect planned expenditures (shown in Table III.3).

If we assume that the average utilization rates recorded over these periods are sustained throughout the 1987-1988 coffee year, and that the new fee structure in the budget document (Q4 for non-affiliates and Q2 for affiliates) will remain unchanged, then the ACOGUA clinics should generate Q13,224 from user fees (Table III.7). This is less than half of the estimated user fee revenue, and will produce a shortfall of Q15,576. Assuming no increase in the contributions of ANACAFE or ACOGUA, this deficit will require a 25.8 percent reduction in the projected expenditure levels of all non-personnel outlays -- the sum of the "Medical Supplies" and "All Other Expenditures" categories.

It is important to note that these figures are based on a proposed fee schedule that differs markedly from the existing one. The study team could not determine whether ACOGUA was in fact planning to implement these changes. If the present fees (25 centavos for affiliates and Q3 for non-affiliates) are not going to be increased to the proposed Q2 and Q4 levels, respectively, then the shortfall in revenues will of course be substantially greater. In this scenario, the total revenues will amount to only Q4,803, and the resulting deficit will be Q23,997 -- almost a fourth of the entire budget! The recurrent cost problem would become a major crisis: 40 percent of all projected non-personnel expenditures would have to be eliminated.

These worst-case scenarios do not take into account seasonal variations likely to occur in the use of the

clinics. The average utilization rates used in the calculations are for non-harvest months. With more migrants and, to a lesser extent, voluntarios during the three main harvest months (November-January), the average numbers of consultations can be expected to increase. But even under the most optimistic assumptions -- that utilization rates will double during the harvest and that user fees will be increased to Q2 and Q4 -- only Q16,530, or 57 percent of the revenue from user fees forecast in Table III.3, would be generated. A significant shortfall would still exist.

For the ARECCO clinic, no user-fee revenue estimate exists since the facility opened so recently (October 1987). Estimates of the number of users and their willingness and ability to pay, therefore, are speculative. But the prices to be charged have already been set: 50 centavos (including medicines) per visit for workers on ARECCO-affiliated fincas, and Q1 (with no medicines provided or made available for purchase) for non-affiliates.

An estimate of the minimum expected revenues for the ARECCO clinic would be useful for planning a minimum petty cash fund that could (for example) augment drug supplies. In the eight days the clinic had been open when the team visited, 40 patients had been treated. Assuming that this low level of utilization represents the minimum, and that all users were workers on affiliated fincas, then the clinic would earn gross revenues of Q720/year. For planning purposes, it is safe to assume that this conservative estimate will be the minimum amount of user fee revenues generated in the next 12 months.

E. The Social Action Unit's First Full-Year Budget

The 1987-1988 budget of the Social Action Unit (which, like the coffee year, runs from October 1 to September 30) is Q575,000. Despite an apparent error (16) in the budget document (see Guatemala Project 1987, Doc. B), it is clear that most of the budget is earmarked to support regional association health-center-based programs. The Q400,000 allocated for "Contributions" is 70 percent of the total program budget of Q575,000. The Jornada sub-program constitutes only about 10.2 percent of the total.

F. ANACAFE Case Studies

The following case studies serve as an illustrative complement to the financial profile presented above.

1. ACOGUA I, Finca El Progreso, Santa Rosa. This clinic, serving 14 ACOGUA fincas plus several small towns, is staffed by a physician and a Peace Corps nurse who has been working in the community for a year. The fincas have a combined workforce of about 3,000 colonos and 3,000 migrant workers; potential clinic beneficiaries total 40,000-50,000, including area residents not directly connected with the fincas. Eleven of the fincas are less than an hour away by foot, while the remaining three are one to two hours distant. One of the towns in the catchment area is four hours away by foot.

The clinic is open nine hours a day on weekdays and four hours on Saturdays. The physician explained that supplies of medicines often run low or become exhausted. When this occurs, his caseload significantly declines (a phenomenon noted by the study team for all the clinics visited). Tables III.8 and III.9 present data on utilization and causes of morbidity to augment the data on user fee-generated income from Table III.6. They show that curative care is about equally divided between MCH and adult (general) care, and that morbidity varies seasonally.

The Peace Corps nurse explained that many local health problems stem from native notions of illness causation and curing -- particularly notions of food/illness relationships. For example, she says she encourages lactating mothers to increase their nutritional levels by eating more beans, which are high in protein, but since beans are locally regarded as a "cold" food that might make the mother's milk "cold," to the detriment of a nursing baby, lactating mothers often completely forego them. Diarrhea and dehydration are also a problem. Many local people believe these are caused by the evil eye, and therefore treat them with traditional cures instead of seeking modern care.

2. ACOGUA II, Barberena, Santa Rosa. This facility has a dozen ventilated, well-lit rooms, a full-time physician, a lab technician, and an auxiliary nurse. The building is relatively well-equipped and well maintained (although its one ambulance has fallen into disrepair). The physician lives upstairs and is available for extra hours and emergencies. He seems motivated and enthusiastic, and he and his staff apparently do a commendable job. Tables III.10 and III.11 present utilization data and causes of morbidity, showing the same balance between MCH and general visits, and the same seasonal variation among causes of illness, as at ACOGUA I.

Barberena is also the site of a MSPYAS health center,

but the physician estimates that ACOGUA II is the main source of care for 60 percent of the municipio, with the MSPYAS facility covering about 30 percent and IGSS perhaps 5 percent. The remaining five percent pay Q7 to Q10 per consultation (without medicines) to two local private physicians. Utilization data corroborate this pattern: 85 percent of ACOGUA II patients are urban residents not affiliated with the ACOGUA fincas. With nearly identical physical access to the MSPYAS center, they are willing to pay 12 times more for service at ACOGUA II.

3. ARECCO Clinic, Coloma, Quetzaltenango. This recently-opened, finca-based, ANACAFE-supervised clinic, serving 18 local fincas, is located at a busy crossroads near Coloma. It is staffed by a local doctor and nurse, both of whom have good ideas about future directions. They would like to implement an outreach effort that would channel those needing (primarily preventive) care to the center. They also plan to work with midwives, but in difficult cases they would perform the obstetric work. They hope to link up with APROFAM for family planning work, and, in preventive medicine, to supervise a planned health promotor program and to encourage hygiene through educational charlas. Referrals will be to the MSPYAS hospital at Coatepeque rather than to the small IGSS hospital in Coloma, although the clinic is situated halfway between the two. No environmental sanitation project is planned for this year -- "perhaps next year," according to the staff.

A patient who can demonstrate affiliation with a member finca (by providing a note from the finca administrator) pays 50 centavos per consultation; non-affiliates pay Q1. Moreover, affiliates receive free medicine; non-affiliates are given prescriptions. The clinic is open ten hours a day on weekdays and four on Saturdays. The doctor predicts that migrants will be the heaviest users because of their poorer health status. He anticipates some problems arising from cultural barriers, since many migrants come from the highlands (mostly Huehuetenango, Quiche, and Totonicapan) and employ folk treatments such as the heavy wrapping of children with high fevers and the withholding of liquids in cases of diarrhea. The clinic plans to maintain permanent records only on patients receiving follow-up services.

The clinic has a fair degree of autonomy, even though it reports directly to the ARECCO board. The doctor has discretionary control over petty cash expenditures. ARECCO/ANACAFE donates Q1200 monthly for medicines, but this is insufficient; the doctor stated that, when possible, he will use petty cash to purchase medicines to supplement the

inventory.

II. AGROSALUD (17)

A. Historical Development

AGROSALUD was founded in 1978, an outgrowth of a demonstration program sponsored by the Nutritional Institute of Central America and Panama (INCAP). Under INCAP's "Patulul Project" (see Delgado *et al.* 1980), eight fincas (four in the Patulul, Suchitepequez area and four in the region of Chicacao, Suchitepequez) participated in the program.

After INCAP's funding for the demonstration project was depleted, AGROSALUD was formed to continue the service and to underwrite the project. Another 12 fincas were added to the program, which retained its predominantly curative care orientation. It was the intent of AGROSALUD's founders to provide curative care to permanent workers and their families on member fincas; initially, alternate approaches to improving workers' health conditions were scarcely considered.

The initial model, however, proved to be expensive, and had little demonstrable impact on health status. The combination of substantial cost and meager impact prompted many finqueros to withdraw from the effort, particularly in 1980-81. The remaining 11 participating fincas -- about half the original number -- began to explore alternate schemes by which to achieve their aim. In 1981-82, AGROSALUD hired Dr. Carroll Berhorst, of the Berhorst Foundation of Chimaltenango, to advise them, and later appointed him to AGROSALUD's eight-person Board of Directors (the other seven are finqueros).

Dr. Berhorst recommended that the physician-centered, curative care approach be abandoned in favor of a community-based health promotor orientation focusing on prevention and public health. Beginning in 1982, AGROSALUD introduced these changes in personnel and orientation, and today they characterize AGROSALUD's approach. Membership has grown again, and now totals 21 fincas.

B. Location and Organization

AGROSALUD's three principal areas of activity are

education, environmental measures, and preventive medicine. Reflecting its antecedents in INCAP's Patulul Project, the organization's geographic focal point remains the northern piedmont region of Suchitepequez, with a second cluster of participating fincas in Alta Verapaz. These two departments contain 18 of 21 AGROSALUD fincas. All produce coffee, which for most is the principal source of revenue, but cardamom and (on at least one plantation) quinine are also important cash crops.

AGROSALUD fincas have large colono populations. Nine of the 14 from which data were obtained (see Table III.12) have over 500 permanently resident colono workers with family dependents; the finca average is 1,016 colonos.

AGROSALUD's health services delivery structure now rests heavily on health promoters. Each participating finca has at least one promotor, and fincas with more than 500 colono residents have two. Generally, the promotor is selected by the finquero from among the farm's colono community -- indeed, the first requirement for a promotor candidate is that the individual be from the finca, if possible. Upon selection by the finquero, promotors attend the Berhorst Foundation's Asociacion de Servicios Comunitarios de Salud (ASECSA) Program in Chimaltenango for six weeks, where they are trained in basic health and disease concepts, disease prevention technologies, diagnosis and therapy.

In addition to the finca-based promotors, there are five supervisors -- on average, one for every four fincas. Several supervisors are ex-promotors. Supervisory duties are assigned after considering the number of fincas involved, their location, and travel time. Supervisors' primary charge is to motivate the health promotors and support them with continuing on-the-job training and supervision.

A physician works for the organization on a part-time basis. Typically, he briefly visits two fincas a week, thus visiting each of the 21 AGROSALUD fincas about once every two to two-and-a-half months.

C. Operations

The functions of an AGROSALUD health promotor are delineated only in general terms (see Guatemala Project 1987, Doc. C); hence, a great deal of latitude is given to the finquero, the promotor, and the supervisor in determining the composition, nature, and direction of each finca's program. This flexibility is both a strength and a weakness of the program. Finquero involvement can be very

active. Not surprisingly, the programs of fincas whose owners take a personal interest in the health of their resident laborers seem to be the most effective, and they benefit from appreciable community participation. Where the finquero remains uninvolved, his administrator sometimes becomes active in the program. In the event that neither the finquero nor his administrator participates in program matters, these devolve to the promotor, in which case the program is likely to be largely a reflection of this individual's knowledge, commitment, energy, position in the finca community, and resources.

In the past, a detailed, sophisticated, and expensive needs assessment (diagnostico) was done for each new member finca. This has been discontinued, not only because of the expense involved but also because the diagnostico, reflecting AGROSALUD's INCAP origins, was too strongly oriented toward nutrition. In its stead, AGROSALUD now performs what is reportedly a simpler but more relevant needs assessment, consisting of taking a census of the population of each member finca. Members of each household are also queried as to what they want -- health education, latrines, potable water, etc. The study team could not pinpoint what this procedure entails or who carries it out, although it probably produces information similar to that obtained with the annual "Diagnostico Ambiental Familiar" (see Guatemala Project 1987, Doc. C, for this and other AGROSALUD forms). Given the reporting form's generality and the absence of guidelines on the types of responses or level of detail desired, it is doubtful that it is sufficiently useful for assessing needs or planning activities. Its value may be limited to simply teaching the promotor how to identify a family's needs and preferences.

Promotors and supervisors are required to submit monthly reports to the Guatemala City central office. Promotors maintain daily activity logs on forms provided by AGROSALUD, which include dates, times, patients' names, illnesses diagnosed, and actions taken. During the supervisor's visits to a finca, he (or she) and the promotor aggregate these data and record them (by sex, age, type of illness, and status -- colono or migrant) on a "Monthly Report of Consultations" form. This report also contains data on the last four weeks' house calls, health education seminars, potable water initiatives, family planning participants, ORT packets administered, latrines installed, trash disposal arrangements, etc. For each service measure, the form provides space for noting the previous month's levels, which helps to track progress and oversee the mix and direction of services.

Another AGROSALUD form includes an infant/child medical record, which plots weight by age from birth through age five and lists the four basic vaccinations and the required dosages of each. This record remains with a child's family as well as with the health center. The extent to which these records are used, either to monitor child growth and development or to seek and provide vaccinations, could not be determined by the study team.

A third form, for ordering drugs, is submitted monthly to the central office by each finca. This permits the centralized procurement of medications. As in the case of the ANACAFE-sponsored clinics, AGROSALUD local providers see an adequate and constantly replenished stock of medicines as critical to optimum utilization of services. While allowing for decentralized, need-based input, centralized procurement can result in considerable cost savings on most drugs. Determining the extent to which such economies of scale are realized, however, would require further analysis of the program's resources and procedures.

D. The ANACAFE-AGROSALUD Connection

AGROSALUD recently received a contribution of Q25,000 from ANACAFE's Social Action Program, and further ANACAFE contributions may result from negotiations underway to determine what ANACAFE's participation in AGROSALUD will be in each of the next four years.

The AGROSALUD model of health care stands in sharp contrast to ANACAFE's. The standard ANACAFE model (see ANACAFE case study above) is more resource-intensive, generally consisting of a single clinic with a minimum amount of equipment and a full-time nurse and physician. The AGROSALUD model has only one part-time physician, servicing 21 sites with a potential total clientele of nearly 20,000 persons. Current discussions between AGROSALUD and ANACAFE are addressing the differences that exist between the two models, in order to determine how they can be coordinated and what should be the amount of ANACAFE's contribution to AGROSALUD.

E. Health Services Delivery, Coverage, and Financing

The team obtained colono population figures for only 14 of the 21 AGROSALUD fincas (the missing data were unavailable at the central office). These 14 fincas included one of three located in Escuintla, six of nine located in Suchitepequez, and seven of nine in Alta Verapaz (see Table

III.12). Data on utilization of AGROSALUD facilities are limited to those collected by the study team at the three case study sites discussed below.

AGROSALUD has a two-tiered monthly contribution quota for associated fincas. Those with fewer than 500 colonos pay Q275 (US \$110) monthly; those with over 500 pay Q425 (US \$170). Why or when the 500-colono cutoff was established is not clear; it may be an outgrowth of INCAP's rule of thumb that one promotor can cover up to 500 individuals "adequately" (Delgado et al. 1980:5).

Most of the monthly quota is expended on the costs (wages, materials, and transportation) associated with the five supervisors, the part-time physician, and the central office staff. The central office purchases medicines and food supplements for all associated fincas once a month; some of the medicines are from the state-owned National Pharmacy, which sells generic drugs for about half what they usually cost in private pharmacies under their brand names. Each finca is responsible for picking up its monthly supplies of drugs and food supplements at the AGROSALUD central office. In addition to purchases made through the central office, each finca program annually spends approximately Q1,000 on medicines.

Table III.13 presents the study team's cost estimates for 14 AGROSALUD fincas. The first column identifies the type of health care intervention; columns two through five contain the corresponding average cost estimates. Columns two, three, and four present the average annual costs per finca for a particular intervention in 1987.

When the third column is subtracted from the second, this equals the fourth, "net cost to AGROSALUD/finca/year". The fifth column is column four multiplied by 14, the number of fincas. To determine the total costs of the program to the fincas, multiply the column two sum by 14, and add it to the column four sum. This yields Q148,957, or an annual average of Q10,640 per finca. Each finca pays about a third of this indirectly, since Q3,761 goes to AGROSALUD in the form of the monthly quota; the other two-thirds are paid directly. Given that the 14 fincas have a total of 14,224 colonos, or an average of 1,016 apiece (Table III.12), this comes to an average expenditure of Q10.47 per capita. (The average expenditure per beneficiary, however, is actually less, because migrant workers are also covered under the program.)

At the individual finca level the study team acquired actual reported cost data on only one operation, Finca

Panama, but these data can be used to corroborate Table III.13. The total cost to the owner of Finca Panama is Q10,437 -- very close to the Q10,639.48 finca average developed from Table III.13. Moreover, this finca's resident population is typical in size: the AGROSALUD average is 1,016, vs. 1,107 for Finca Panama. The per capita cost of coverage of the average AGROSALUD member (based on data from 14 fincas) is Q10.47; the Finca Panama per capita average is Q9.43 -- only slightly less.

Finca Panama, however, is somewhat atypical of AGROSALUD fincas in that its AGROSALUD monthly quota, 44 percent of its total health expenditures, constitutes a somewhat larger proportion of its total outlays than the average finca's AGROSALUD contribution of 35 percent. Unfortunately, these cost estimates cannot be refined because there are no data on the size of the migrant population or the average length of their finca employment. Nor can estimates of the actual cost of services provided be made, since not knowing the total number of services provided precludes computing an average cost per consultation or other health intervention.

AGROSALUD's central office provided some additional data, presented in Table III.14, but these refer only to the program budget itself, and are aggregated. Over the period represented by the table, it appears from the pattern of growth in income that two (or possibly three) new fincas may have joined AGROSALUD. Of interest also is the accumulated 13 percent unexpended balance. AGROSALUD personnel mention using some of these monies to implement a management information system using a recently-acquired microcomputer, although maintaining a positive balance would also reflect prudent management.

F. Management

The limitations of the AGROSALUD managerial structure are reflected in Tables III.12 and III.13, which, like other central office data, reflect only 14 of the 21 AGROSALUD fincas. It is true that four of the 21 fincas joined the association only within the last six months of 1987. Nevertheless, the paucity of data that the central office was able to supply is evidence of the limited central office database on AGROSALUD members. The limitations of AGROSALUD management may be partly due to finqueros' desire to retain considerable control over the programs on their own farms, while minimizing the central office role in their operations.

The tradeoff between central office responsibilities and

local, finca-level control has contributed to a loss of program focus, and is a major obstacle to improving AGROSALUD's managerial capabilities. Lacking an adequately integrated, institutionalized mechanism by which to raise and resolve issues of organizational-level interest, AGROSALUD has instead evolved incrementally over its lifespan (since 1982) into a loosely integrated and managed organization of mostly autonomous finca-level health programs.

G. AGROSALUD Case Studies

1. Finca El Zapote, Guadalupe, Escuintla. On this finca, which produces quinine and cardamom for export and also raises cattle, medical services were traditionally provided by the owner's grandmother, who diagnosed and treated patients from the finca and (if they came to her) from the surrounding area. The finca supplied medicines free.

Between 1952-1954, the finca transformed the character of its resident workforce in an attempt to avoid being targeted for expropriation under the Arbenz Government's land reform program. Most of its colonos were dismissed (today only three colono families are left on the finca), but were offered plots to purchase at low prices. This measure ensured the maintenance of a local labor force independent of the finca and outside of contractual work arrangements (and thereby the jurisdiction of the newly-changed law). The result was the town of Guadalupe, which now houses Finca El Zapote workers as well as workers on surrounding fincas (note that the number of colonos shown for Finca El Zapote in Table III.12 includes workers now living in town).

The finca joined AGROSALUD in 1986, when the grandmother discontinued treating local inhabitants due to her age. The finca management selected a health promotor and sent him to the Berhorst Foundation for training. It then rehabilitated a warehouse in which to set up a consultation room, an examination room, an equipment-sterilizing room, and a cabinet dispensary. The finca also provided capital for the initial inventory of medicines and food supplements.

The promotor, a man in his sixties who seems well respected in the community, works full-time attending workers from finca-affiliated households. His hours of consultation are ample, and he says that he frequently extends them to receive patients; occasionally, he makes home visits. In September of 1987, for example, he attended 199 cases. Consultations and medicines are free for workers

and their families. Other patients, not affiliated with the finca, are also seen free, although they are required to buy their own medicines.

MSPYAS and IGSS both maintain health care facilities in the area. The promotor works with the nearby MSPYAS health post in vaccination campaigns (the clinic possesses a refrigerator). In addition, several midwives, responsible to the MSPYAS health post, function in the area. Even though the finca is an IGSS affiliate, paying between Q20,000-30,000 yearly for accident coverage for its colonos, the owner -- like other finqueros interviewed -- thinks he derives no benefits from IGSS affiliation. Nevertheless, a few referrals have been sent to the IGSS hospital in Escuintla, with the finca providing transportation for the one-hour trip in one of its vehicles.

The promotor has at his disposal two basic manuals, one from ASECSA and one from the French-based international medical services organization Medicos sin Fronteras (18). At times, major medical problems are referred to the Berhorst Foundation clinic in Chimaltenango. The promotor does not know how to suture, which he laments since most accidents occurring on the finca involve cuts. He retains strong folk medical beliefs, particularly in hot/cold imbalances, and thus continues inappropriately to advise lactating mothers that eating beans makes their milk "cold."

Once a month, the AGROSALUD supervisor visits Finca El Zapote. He travels by motorcycle and has to visit several fincas in the area, so he does not spend the amount of time the El Zapote promotor considers adequate. In addition, once every two months the supervising doctor visits, mainly, it appears, to assess the promotor's recordkeeping system.

The promotor holds classes in preventive medicine in the local school, having established a cooperative arrangement with the school director. In addition, he educates finca workers and families on the importance of such health measures as boiling their drinking water. He has a keen eye for preventive measures, pointing out to the team a spring located downhill from a spot where workers on a neighboring finca defecate. Not surprisingly, gastrointestinal problems -- mostly amoebiasis and shigella -- represent a major proportion of the clinic's caseload -- in a typical month, 47 cases out of 199, or 24 percent. The houses of the finca's workers who live in the town apparently have latrines, but since they lie adjacent to those of non-finca families without latrines, fecal-borne disease is still a problem.

2. Finca Moca, Patulul, Suchitepequez. This large finca has been a carry-over member of the AGROSALUD program since the INCAP-Patulul project. The finca cultivates coffee, quinine, cardamom, and macadamia nuts, and raises cattle. It has 1668 resident colonos, 300 of whom are male heads of household, and at the time of the team's visit during the coffee harvest, also had 343 adult migrant workers, most of whom were accompanied by family members.

The finca's AGROSALUD clinic, housed in a refurbished building, has a reception room, an examination room with a bed, and a sterilizing/washing room. In addition, there is a small storage room containing medicines. Because of the size of the finca's population, there are two promotors. One, a woman in her 50s, has worked as a practical nurse on the finca for 19 years. The other, a young woman who grew up on the finca but had lived recently in Guatemala City, has worked at the clinic for only nine months. She has taken the six-week ASECSA promotor training course in Chimaltenenago and expects to return there once a year.

Among the services provided are malaria control, prenatal care, and health education. The finca had four cases of malaria last year; the promotors collect blood samples to test for the disease, but they complain that obtaining test results from Guatemala's Malaria Eradication Program takes a long time. Patients complaining of fever and chills are automatically given four cloroquine tablets, insufficient if not sustained over several weeks. Prenatal care is apparently good, with the practical nurse working closely with the midwives of the finca. There is an AGROSALUD latrine program, and latrines have been constructed for many of the colono houses, but there are no latrines in or near the migrants' dormitories. The promotors are involved in health education, especially through the school. Once a week, at least one of them visits the school to check dental hygiene, although no oral fluoride applications are done. Family planning is largely non-existent, since (according to one promotor) the church strongly opposes such efforts. The clinic scale is broken, so the promotors have not been weighing children. A cradle scale that could be used to weigh babies lies in disuse in a storage room because the promotors do not know how to use it.

The clinic is open for seven hours on weekdays plus Saturday mornings. A doctor from the Berhorst Foundation visits occasionally -- less than once every two months, according to the promotor -- but the supervisor visits weekly. Utilization is heavy, and was especially so, at the time of the team's visit, by cuadrilleros, who had been

frequent visitors since their arrival in September. Consultations are free for finca workers; visits by others living in the area are relatively rare. Medicines and food supplements are sold rather than provided free, with payments deducted from the patient's wages (as on Finca Panama; see below). According to the finca administrator, medicines were formerly provided free of charge, but workers placed little value on them, and consequently they now are sold. This policy at Finca Moca diverges from the situation at Finca El Zapote, reflecting a lack of consistency within AGROSALUD.

The Finca Moca promoters would like to see services expanded. In particular, they feel a day-care program for children is needed, since children are often abandoned while their parents are at work. In some cases, five-year-olds care for their infant siblings.

It should be pointed out that Finca Moca lies in a "conflict zone," in which the Guatemalan Army and guerrilla insurgents are involved in frequent skirmishes. There is a full company of soldiers encamped in and around the finca's main house. The army will not allow subsistence maize cultivation to take place because of its potential for supporting guerillas, and malnutrition, informally observed by the study team, appeared prevalent. The physician attached to the company of soldiers does not attend the civilian population.

3. Finca Panama, Patulul, Suchitepequez. At the time of the study team's visit, the area around Finca Panama was the scene of significant social unrest. Moreover, the finca was undergoing a period of transition, having recently been purchased by a member of one of Guatemala's long-established landed families, so conclusions drawn from this case study must be considered preliminary. The new owner reportedly is quite interested in improving conditions.

Smaller than Finca Moca, Finca Panama has 277 resident families plus migrant workers, many of whom appeared to the study team to be in poor health. However, its AGROSALUD clinic, based on September 1987 data, appears underutilized; many finca residents are said to prefer to visit the doctor in Patulul.

The clinic is staffed by two full-time female health promoters, who sometimes make house calls and keep extra hours. As in the case of Finca Moca, medicines are sold rather than provided free. One promoter, a native of the finca, speaks Quiche; the other does not, and admits difficulty in communicating with migrants, who use the

health services more heavily than colonos. Both promoters feel that overcoming traditional medical beliefs and practices is a problem, especially the reliance on native "evil eye" therapies.

The promoters offer little prenatal care and are not much involved in the work of the finca's midwives. They do not know first aid, and any case requiring medical attention is sent to the hospital in Tiquisate. In the past, they held educational charlas on pre- and post-natal care, but this activity has apparently ceased, for no specific reason.

The AGROSALUD supervisor comes every two weeks or so; the promoters would like to see more frequent visits to the clinic by a doctor. The daughter of the new owner of the finca has shown an interest in the clinic, and checks its records from time to time. The promoters say that in this way the finquero exercises considerable control over the clinic.

III. CHRISTIAN CHILDREN'S FUND

A. Historical Development and Funding

1988 marks the fiftieth year that the Christian Children's Fund, Inc. (CCF) has been "Assisting Children Around the World." The fund, one of a number of private voluntary organizations serving the Guatemalan community (FUNDESA 1986), is an inter-denominational organization with activities in 27 countries. Its headquarters are in Richmond, Virginia. CCF efforts in Guatemala have traditionally centered in the Western Highlands, especially in Huehuetenango, Solola, and Chimaltenango (Table III.15); only recently have CCF activities been extended to the South Coast. The study team visited South Coast CCF sites at El Asintal and San Felipe Retalhuleu in the department of Retalhuleu and at Coatepeque in Quetzaltenango.

Most CCF funds come from foreign, private, individual donations. According to CCF/Guatemala's Director of Programs, CCF prefers to rely on a broad-based network of individuals for most of its funding, to better assure autonomy and predictability. Although 70 percent of donors are in the United States, there are significant numbers in Canada, England, and West Germany as well. Most operating monies are generated by contributors who agree to sponsor a particular child and who donate US \$14 per month for the support of that child. Half of the amount goes for

administrative and general organizational support and overhead at both the world-wide and Guatemala City headquarters; the other half is given directly to the particular project with which the sponsored child is affiliated (19).

Both world-wide and in Guatemala (where it has been active for 16 years), CCF has an impressive growth record. The CCF/Guatemala budget has grown at an annual rate of 12 percent for most of the past decade, and in 1987 stood at Q15 million. According to its Director of Programs, CCF/Guatemala currently provides financial support and technical assistance to 62 projects in 15 departments (Table III.15). Country-wide, it is estimated that 30,000 children, belonging to a somewhat smaller (though unquantified) number of families, are official participants in the program. Table III.16 presents an organigram of CCF.

B. Organization, Philosophy, and Administration

The Guatemala City-based CCF central office reports receiving many more new project initiative requests than it can support. Requests may come from local groups needing financial, managerial, or administrative aid to bring projects to fruition, or they may be the result of efforts to address needs identified by central office personnel, or some combination of the two. The project selection criteria, which identify preferred geographic as well as programmatic areas, stipulate that community participation is required in the "planning, execution, operation, and evaluation of the project." Moreover, projects must adhere to the "philosophy, policies, and procedures of CCF," which are precisely detailed in the itemized, 36-point "Standards for Affiliated Projects" (Guatemala Project 1987, Doc. D). The official philosophy of the organization is outlined in "What is CCF?" (ibid.).

CCF-Guatemala views departures from its philosophy and operating procedures as very serious. At the time of the team's visit in late 1987, for example, the CCF project in Coatepeque, Quetzaltenango, had been notified that its participation in and funding from CCF would end that month. The Director of Programs explained that after repeated efforts to dissuade this project from its practice of preferential treatment for evangelicals, CCF determined that religious bias had become unacceptable. While the project seems to be performing well with regard to all other CCF criteria, it will no longer be allowed to be a CCF affiliate.

Once a project has been accepted by CCF, an initial community diagnosis is performed (additional diagnoses are carried out every two years). A five-year planning document and annual implementation plan are also required. Together these documents establish the broad parameters within which the project will function. So as to ensure the project's adherence to its plan, activities are tracked through a mandatory series of reports. Three times a year, projects are required to submit financial status and activities reports to the central office. In addition, a more aggregated, project-level financial report must be submitted to the central office semi-annually.

In general, the major program areas of interest are broad-based and oriented toward community and family development. The most common program priorities, in order of frequency, are health, nutrition, education, and economic independence of the family. Most of CCF's projects in Guatemala are involved in income-generating activities; over two-thirds of them involve running small shops, bakeries, or restaurants. Affiliates must demonstrate a strong commitment to eventual economic independence: CCF requires that each project become self-sufficient within 10 years.

Each project has a health component. At the CCF/Coatepeque project visited by the study team, this was a clinic staffed by a doctor. There is a strong emphasis on MCH; health services to other adults are provided only in emergencies.

To date, there are relatively few data on the sustainability of projects after CCF central office support has ceased. Of the five projects no longer receiving CCF support, two are completely autonomous, while the other three rely on a combination of self-financing and assistance from sources other than CCF. Hence the CCF requirement of "economic independence" is apparently being interpreted, at present, not as total economic independence but as independence from CCF funding.

C. Community Participation and the Coordination of Services

CCF is firmly committed to the concept of community participation, and actively encourages it in the organization and management of its projects. This allows communities to identify their needs and, to a large extent, design their own programmatic activities. This attractive feature of CCF projects is reinforced by the required commitment to financial independence from CCF within 10 years of a project's inception.

On the negative side, participation in CCF projects is limited to families whose children are affiliates, which may alienate some community members. Moreover, there is probably a disproportionate amount of participation by the permanent staff of each project, although this was not documented. A more serious problem is that CCF projects in the South Coast region seem to maintain an isolationist and, in some cases, even an adversarial posture vis-a-vis finca owners. This may be part of the reason why CCF is often regarded as a foreign organization, especially by upper-class Guatemalans, and why the organization's projects have been, at best, passively tolerated rather than actively supported by finqueros. The CCF sites visited by the team, located in rural areas surrounded by medium and large farms, have not actively sought to establish financial relationships with the owners of these farms, despite the fact that they provide health and other services to the farms' workers.

The lack of any relationship between CCF projects and finqueros is a drawback that is perhaps most evident in health care projects. CCF provision of health services to individuals employed or living on large farms may be viewed as a substitute for some of the social responsibility of finqueros, who, by implication, should assume at least part of the costs. Yet CCF has been reluctant even to seek, much less to obtain, support from finqueros. This may be a result of CCF's overall funding strategy, with its focus on Western Highlands communities consisting of self-employed farmers. On the South Coast, CCF's beneficiaries are more apt to be colonos or landless day workers, dependent on farm owners. The different and more complex South Coast social-organizational setting requires a different approach on the part of CCF -- one that seeks to incorporate finqueros.

CCF-Guatemala makes few efforts to coordinate its program with those of other agencies, perhaps because of its relatively narrow definition of "community." The central office does not inform project personnel about, or encourage them to use, resources of other private or public agencies -- not even resources that might help solve basic health problems in areas such as clean water, sanitation, and housing. Exceptions do exist: some of the stronger and more successful CCF projects are seeking and obtaining coordination and support along these lines. For the most part, however, local CCF projects seem rather weak in illness prevention/health promotion activities in general, and particularly those aimed at altering environmental conditions.

In any event, CCF's potential for fostering community

participation in more broadly-based community development efforts beyond health care is probably not great; the negative attitude among most finqueros towards community organization is likely to block such attempts from the start. But conditions are slowly changing in Guatemala. If CCF is to be a positive contributor to that change, it must be flexible both in philosophy and approach. Building bridges between workers and landowners in order to improve the living conditions of the former is a challenge that CCF has not yet adequately addressed on the South Coast.

D. User Fees and Economic Independence

Each of the three CCF South Coast health programs visited by the study team has a two-tiered fee schedule, with non-affiliates paying more than affiliates. None of the programs, however, enforces this schedule. Many of those served are exonerated from payment because they are judged too poor to pay. Apparently because this judgment is made so often, and perhaps also because of the difficulty of justifying free care for some to those who are asked to pay, free care for all has become the norm.

Several CCF projects are now reconsidering this de facto policy, having determined that it encourages the unnecessary use of services, sometimes results in the selling of medicines by patients who received them free, and is inconsistent with the CCF goal of economic self-sufficiency. However, the effort to resurrect and enforce the two-tiered fee schedule has been largely ineffective, for when user fees are re-introduced after health care services have been provided free of charge for some time, mistrust and resistance are generated among users. The process of reintroducing user fees will thus be a protracted and divisive one. The lesson for new projects is clear: user fees must be charged, and should be instituted as early in a health care program as possible -- preferably from its inception.

This should not be construed as a recommendation that all persons be charged fees regardless of ability to pay or the type of services received. A sliding fee schedule can be instituted, and some services -- particularly preventive ones -- can be either free or low-priced. If such a schedule is used, care must be taken to ensure that the determination of fees is subject to a properly administered means test.

E. Case Study: CCF/Coatepeque, Suchitepequez

Table III.17 presents the balance sheet of the CCF Coatepeque project, which began operating in 1974 and now encompasses 472 families of "adopted" children. In addition to the town of Coatepeque itself, three rural settlement areas, the farthest six kilometers (one hour's walk) away, are served. The project focuses on family welfare in the areas of health, nutrition, housing, small business management, "spiritual formation," and technical skills. In covering these families on a number of fronts (of which health care is only one), the program exemplifies the implicit CCF developmental model: forming a small cadre of families and helping them attain a level of self-sufficiency.

In the health services area, the program runs a clinic providing consultations, dentistry, ophthalmology, and preventive care. Medicines are procured directly from factories in Guatemala and the US. Lab work is done by a private laboratory offering a small (50 centavos) discount. There is some communication with the MSPYAS Hospital in Coatepeque: the doctor who serves the CCF clinic also works at the hospital, an arrangement that apparently helps expedite the treatment of clinic patients at the hospital.

In addition to the clinic's services, the program sells subsidized food baskets, containing cooking oil, food supplements, sugar, rice, and other foodstuffs, once a week. It also runs a retail shop and a small farm on which pigs and chickens are raised for sale. The net revenues of both are recycled into the program. The project's degree of self-financing is roughly 38 percent. The major limitation on its ability to expand is its apparent restriction to families with affiliated children.

IV. NON-ORGANIZATIONAL OR SINGLE-SITE EFFORTS

A. Private Physicians Providing Services to Fincas

1. The Ascoli Model. Since 1971, Werner Ascoli, a Guatemalan medical doctor and specialist in public health and preventive medicine, has dedicated himself to developing and maintaining preventive medical care programs in commercial, industrial, and agricultural enterprises in his country. In the agricultural sector, he has focused on the colonos of seven fincas in the South Coast departments of Retalhuleu and Suchitepequez (Ascoli 1977, 1978; Brown 1977). One of the conditions upon which Dr. Ascoli agrees to serve a finca is that it purchase latrines and water

systems.

An Ascoli program begins with a thorough health inventory of the occupants of each house on a targeted finca, and includes investigations of sanitary conditions and health-related behavior. Dr. Ascoli then proceeds with vector eradication and immunization programs. Thereafter, he typically spends 24 hours once a month on each finca (48 hours for fincas with large numbers of colonos), providing preventive care and education only; curative care cases are referred to other providers. His monthly routine consists of visiting most of a finca's households to observe behavior, assess the effects of his education program, elicit information about existing problems, and "continue an ongoing education program of personal hygiene, feces disposal, oral hygiene, infant care and feeding, prenatal care, and family planning" (Ascoli 1977:113). In what is apparently a relatively recent addition to the program, Dr. Ascoli also trains and supervises health promoters, especially on the largest fincas.

Dr. Ascoli has had many more requests from finqueros who want to be included in his program than he has been able to honor, and cites these requests as evidence of considerable unfulfilled demand. He feels that the supply of private sector health services on fincas could be significantly increased if it were coordinated with Government institutions and programs, and reports having tried to coordinate his efforts with MSPYAS and IGSS, primarily in managing cases requiring hospitalization.

Each finquero pays Dr. Ascoli Q150 (US \$60) per day for finca visits, and also pays for materials, including drugs. The only data available on the total cost of the program dates to 1977, when total program costs for a finca with 152 workers was US \$1,320, or about US \$8.80 per person; vaccines were provided free of charge by the MSPYAS (Ascoli 1977:115).

The Ascoli program has obvious strengths such as its low cost and emphases on education and prevention. But two major problems would impede its extension. First, there are probably too few Guatemalan physicians sufficiently interested in public health and willing to expend the travel time required to maintain the program's service orientation. Second, administering a corps of itinerant physicians would increase average program cost if it involves substantial investment in overhead and support services (20).

2. Other Private Practice Physicians Serving Fincas. If no other health services are available, finqueros direct

(and often transport) sick workers to particular physicians. Preventive care and health education are rare under these circumstances. The fees charged are paid in various ways: a worker may pay for both consultation and medicines himself; a finquero may advance the necessary payment to a worker, who then eventually repays the loan; or a finquero may provide a worker with a note which is given to the physician, who then bills the finquero. It was reported that agreements between finqueros and pharmacists also exist, under which a worker is charged half price for a prescription; the finquero pays the other half.

The next most common pattern is for a local physician to come to a fincas periodically. One physician reported servicing five fincas, each with approximately 75 colonos, in this manner; during the harvest season, he or a colleague visits twice a week. This physician observed that migrant workers, unlike colonos, are charged for consultations and are not given discounts for medicines. A second physician reported far less formal and regular arrangements; he made regularly-scheduled, once a week visits to only one of the 12 fincas he served, visiting the remainder only rarely and on request. More commonly, sick workers were brought to his clinic for (strictly) curative care.

This physician noted that the financing of services varies considerably among his fincas, and identified four different payment schemes. At about half the fincas he serves, the finquero paid all expenses. At the remaining fincas, a worker and finquero might split the charges, with the worker's share taken from his farm earnings; the finquero might pay for the consultation and the worker for the medicine; or the worker might borrow the money from the finquero. Since the minimum wage was increased in 1980, requiring workers to pay has apparently become more common.

This same physician commented that he generally did not have the time to provide preventive services on his outings to fincas. Moreover, he reported that most finqueros were uninterested in his undertaking prevention activities, primarily for financial reasons. Other than regular deparasitization efforts, this physician's prevention activities were limited to a single fincas where he focuses on latrine installation and personal hygiene.

B. Fincas-provided Services: Santa Isabel

This general disinterest in preventive care also prevails on fincas maintaining their own health services. At

Finca Santa Isabel, the finca administrator reported that colonos had resented the style and services of Dr. Ascoli, particularly his home inspections and his criticism of their unsanitary practices. While Dr. Ascoli's influence, according to the administrator, had been positive, the workers' resistance to change was great. After servicing Finca Santa Isabel for several years, Dr. Ascoli dropped it from his rounds two years ago when he decided that his age required him to curtail his activities.

The finca now contracts a physician who flies in once a month to provide curative care, primarily for colonos. According to the administrator, colonos' health-related behavior has regressed and their health has deteriorated. The finca owner would like the new physician to undertake more preventive activities, but the physician is not very motivated in this regard. Consultations are provided free of charge to all 15 colonos and their families. The 150 semi-permanent workers living nearby also receive free care, but their families do not. The voluntarios are charged for some of the medicines provided by the administrator (who is also in charge of the drug supply) and for drugs obtained from a nearby pharmacy.

In addition to the contract physician's visits, Santa Isabel is now visited every 15 days by a physician from the MSPYAS health center in Pueblo Nuevo Vinas, as part of the Ministry's new PAHO-inspired outreach program. These visits, however, focus almost entirely on preventive health services. It is not clear how receptive the finca's workers are to this recent initiative.

On another plantation, a few kilometers away, workers have ready access to a MSPYAS health post adjacent to the finca and staffed by an auxiliary nurse. The finquero donated the building and land for this facility. The townspeople of nearby La Joya had heard about and sought to participate in the ANACAFE grant program, for which a building is required (see above). The finca owner supplied the land and the building, but balked at the Q8,000 required to finance recurrent operating costs. The community then formed a local action committee and successfully petitioned the MSPYAS to staff, equip, and operate the facility.

C. Private Hospital Services: Hilario Galindo Hospital

This hospital is located on Finca San Cayatano, just outside San Felipe Retalhuleu, the county seat. Built in 1961 by a private benefactor who left it (along with the finca) to the municipality upon his death, this thriving

45-bed facility offers a wide variety of outpatient as well as inpatient services, including laboratory exams and major surgery. It is administered by a physician and staffed by three general practitioners, a medical student fulfilling his obligatory six-month national service, nurses, and auxiliary personnel.

In 1986, the hospital treated 7,548 ambulatory and 1,588 emergency cases, and provided a total of 8,526 inpatient days for 947 patients. The average length of stay (ALOS) was 9 days, which exceeded the 1985 ALOS of 6.7 days for the MSPYAS National Hospital in nearby Retalhuleu (World Bank 1986a:31; MSPYAS 1986a, Table 62). Its rate of occupancy has been a fairly constant 70 percent year-round, higher in recent years than the MSPYAS hospital's. Although differences in case mix are not considered, Hilario Galindo Hospital seems to be operating at least as efficiently as the MYSPAS hospital, despite its higher ALOS (see Guatemala Project 1987, Doc. F).

The hospital provides free health services to the finca's 20 colonos, but charges all other users. The operating budget is generated from a combination of user fees, the interest earned on a special fund established by the benefactor, and the sale of coffee grown on the finca. A sliding fee schedule is used to charge other area residents. The fee for an ambulatory visit and medicine runs between Q1.50 and Q10.00. "Competitive rates" are charged for private rooms; for a seven-day stay, the average charge was estimated to range between Q200.00 and Q250.00 for all goods and services. Several nearby fincas also direct their workers to the hospital.

D. The Ingenio Pantaleon Sugar Refinery

Ingenio Pantaleon, one of 18 sugar refineries in Guatemala, is located just outside Santa Lucia Cotzumalguapa, Escuintla. Itself a producer of sugarcane, it is linked with sugar-producing fincas that together employ some 2,500 workers at peak seasons (see Guatemala Project 1987, Doc. E).

Apparently motivated in part by a desire to increase the amount of preventive care available to its workers, Pantaleon management hired its own medical team nine years ago. The refinery now has a health center, and each affiliated finca has a 24-hour-a-day health post with a small dispensary, at least one bed (primarily intended for MCH cases), and a self-taught nurse auxiliary. Last year the Pantaleon health center and its affiliated fincas provided

11,874 consultations. In addition, Pantaleon has a contractual arrangement with Guatemala City's private Hospital Herrera, which used to provide all services to the refinery.

Health services are available to the 500 workers employed in the refinery, its 1,000 permanent agricultural workers, its 800 temporary harvest-time immigrants, as well as the families of all these workers -- an estimated 9,300 people (21). The migrants, who return every year to Pantaleon, receive the same health services as permanent residents, and are provided food and housing free of charge. Each permanent employee is given the opportunity to buy a house (at subsidized prices) in one of two planned developments owned by El Pantaleon and Potreros, S.A. Together these developments contain nearly 700 houses, the construction of which was financed by BANVI (the state-owned development bank). One of them, Vista Linda, is a showcase community, with stone-paved streets, electricity, and running water and sewerage for each house lot. The other, Las Palmas, has none of these services.

A social/community development program was held from July-September, 1987 (see "Plan General de Trabajo y Programa de Educacion Comunitaria en Vista Linda y Las Palmas," Guatemala Project 1987, Doc. E). The program consisted of seminars on a wide variety of social, physical and mental health themes, including personal hygiene, family budgeting, chicken coop construction, sports and recreation, and how to use community services. There are plans to repeat the program in 1988 and to include dental health (see Guatemala Project 1987, Doc. E for some of the materials to be used). El Pantaleon is also subsidizing the purchase of stoves and bicycles for its workers, and has a program to stimulate personal savings. Some of Pantaleon's services are provided through APROFAM and CARE.

The Pantaleon initiative has been heralded by the board of directors of the Sugar Producers' Association (Directiva de la Asociacion de Azucareros) as a model for future arrangements. Because of currently low international prices for sugar, however, replicating this model may not be feasible. It is not known whether consideration has been given to developing a financing arrangement similar to ANACAFE's to encourage the duplication of such efforts, or, if so, how serious that consideration might be. Under present economic circumstances in the sugar industry, there seems little reason for optimism about extending health care delivery to laborers and their families in this sector.

E. Private Health Insurance: La Seguridad, S.A.

At present there are some 12 insurance companies in Guatemala, eight of which offer health insurance. They have identical plans, with similar premiums, deductibles, and maximums. All require at least 10 people to form a group policy. One company, La Seguridad, S.A., has a total of 15 contracts with fincas in the departments of Escuintla, El Peten, and Izabal (22). On average, each one covers 50 male farmworkers and their families, for a total of about 250 persons per finca. Thus La Seguridad provides health insurance for about 3,750 people.

Most of these policies specify deductibles of between Q50 and Q75, after which La Seguridad pays between 80 and 100 percent, up to a maximum of Q10,000 to Q25,000. The most common colono plan has a Q50 deductible, after which 80 percent of (outpatient) doctors' fees and medicines are covered, up to a maximum of Q150 per illness. Typically, 100 percent of room and board are paid for hospitalization, up to a maximum of 70 days per illness and a total benefit of Q10,000. Premiums for such plans range from Q9 to Q12 per month for coverage for a single worker; between Q12 and Q18 per month for coverage of a worker and spouse; and from Q30 to Q40 per month for a worker and his family. Frequently, a comprehensive plan is also purchased. The finquero typically pays 75 percent and the worker 25 percent of the premium, but there is some variability; in some cases these proportions are reversed, while in others the finquero may pay the entire premium. The premiums are paid at various intervals: monthly, quarterly or annually. Only the finquero signs the contract.

An average plan purchased by the average-sized finca from La Seguridad covers 250 people (50 workers and their families). With the finquero paying 75 percent of the premium, the annual expense to the finquero would be Q15,750, and the annual outlay per colono family Q105. In most cases, this equals an affordable 2-3 percent of family income, unless there is unemployment or other hardship.

There is apparently little optimism about substantially increasing sales in rural areas, even though the health insurance business is thriving in urban areas and people are increasingly moving away from IGSS and MSPYAS and into private financing alternatives. The major deterrent for finca populations seeking health insurance is lack of access to care, due to poor roads and inadequate transportation. The bad roads also reduce sales efforts; in general, fincas are quite inaccessible from principal roads.

V. CONCLUSION

It should be evident from this discussion that the private sector arrangements presently providing health care to agricultural workers on the South Coast are remarkably varied. This is true of both the organized and the individual, isolated efforts.

The paucity of utilization and cost data for these arrangements, as well as the great differences in structure and process among programs and services, make drawing comparative conclusions difficult. In general, it can be said that the users of the health services described in this chapter seem grateful to be receiving care, and are generally satisfied with what they get. Providers, too, seem satisfied with their working arrangements. However, both recipients and providers of health care indicated to study team members that there is a need for expanded health services on the South Coast.

The study team concluded that both the organizationally-affiliated and the individual or single-site entities studied incorporate features that make them potentially attractive as models for the extension of health care on the South Coast. In the following chapter, the private sector entities described in this chapter are compared, to the extent that comparison among such disparate health care providers is possible. Their strengths and weaknesses as possible vehicles for extending health care on the South Coast are assessed, and various means by which the performance of each might be improved for the purpose of extending health care in the region are suggested.

TABLE III.1

JORNADAS PROGRAM BUDGET,
1986-87 Coffee Year (Oct. 1 - Sept. 30)

Budget Code	Budget Line Item	Allocation
034-0007	Domestically produced provisions	Q 7,500
034-0010	Technical and professional services	Q 8,000
034-0038	Food for people	Q 1,200
034-0066	Medical products for the pharmacy	Q 30,000
034-0006	Overtime	Q 1,200
	TOTAL	Q 47,900

Note: This budget is for a full year: 12 jornadas trips. The program in the first six months of the Social Action Program included 8 jornada efforts. Assuming that the program costs have not changed, and that on average program costs are relatively constant, we can obtain an approximation of the direct costs of the March through September, 1987, 8-event Jornadas Program at:

$$\{(8/12) \times (Q 47,900)\} = Q 31,933.33$$

or, an average cost of Q 3,991.67 per two-day event. If ANACAFE's estimate of the mean number of patients attended per site (1,124) is accurate, this means that ANACAFE'S average patient expenditure in the Jornada Program is Q 3.55, or about US\$ 1.42.

Source: ANACAFE.

TABLE III.2

POPULATION COVERAGE OF ANACAFE-SUPPORTED CLINICS

Facility	Estimated population covered
1 ACOGUA I (Finca El Progreso, Barberena, Santa Rosa)	20,000
ACOGUA II (Barberena, Santa Rosa)	40,000
2 AGROSALUD (This is based on only 14 of the 21 member fincas - 7 in Alta Verapaz and 7 in the South Coast region)	15,400
3 ARECCO Centro de Salud (Finca Florencia, Colomba, Quetzaltenango)	10,000
ARECCO Puesto de Salud de Chuva (Finca La Florida, Chuva, Quetzaltenango)	3,000
4 ACAT Centro de Salud Tumbador (Finca San Luis, El Tumbador, San Marcos)	n.a.
ADASP Centro de Salud Tocache (Aldea Tocache, San Pablo, San Marcos)	20,000
5 ACU Centro Asistencial San Juan (Finca Santa Teresa, San Pablo, San Marcos)	10,000
TOTAL	118,400

Source: ANACAFE.

TABLE III.3

THE ACOGUA HEALTH CLINICS' COMBINED 1987-1988
OPERATING BUDGET AND ANTICIPATED EXPENDITURES

Annual income or expenditure	Quetzales
Income:	
ANACAFE (2 x Q 25,000)	50,000
ACOGUA (2 x Q 10,000)	20,000
Income generated from user fees charged for medical services:	
Provided to persons not working for ACOGUA-affiliated fincas: Q 4.00 x 400/month x 12 months =	19,200
Provided to persons working for ACOGUA-affiliated fincas: Q 2.00 x 400/month x 12 months =	9,600
Total Budget/Income	98,800
Expenditures:	
2 Physicians (2 x Q 750/month x 13 months) =	19,500
3 Nurses (3 x Q 250/month x 13 months) =	9,750
2 Secretaries (3 x Q 200/month x 13 months) =	5,200
1 Lab. Technician (Q 200/month x 13 months) =	2,600
1 Driver (Q 150/month x 13 months) =	1,950
1 Accountant (Q 195 x 13 months) =	2,530
Total personnel costs	41,530
Medical supplies (Q4,000 x 12 months) =	48,000
All other expenditures (approximately Q 1,000/month x 12 months) =	12,270
Total expenditures	101,800

Source: Clinic records.

TABLE III.4

1987-1988 OPERATING BUDGET AND ANTICIPATED EXPENDITURES OF
THE ARECCO CLINIC ON FINCA FLORENCIA, COLOMBA, QUETZALTENANGO

Annual income or expenditure	Quetzales
Income:	
ANACAFE	25,000
ACOGUA	8,333

Total Budget/Income	33,333
Expenditures:	
1 Physicians (Q 650/month x 12 months) =	7,800
1 Nurse auxiliary (Q 150/month x 12 months) =	1,800
1 Social worker (Q 140/month x 12 months) =	1,680
IGSS quota (Q 49.50/month x 12 months) =	594

Total personnel costs	11,874
Medical supplies (Q 1269.66/month x 12 months) = *	15,236
Medical equipment	1,200
Gifts (Aguinaldos) (Q 82.50/month x 12 months) =	990
Indemnification (Q 82.50/month x 12 months) =	990
Office supplies (Q 78.85/month x 12 months) =	946
Building maintenance (Q 63.33/month x 12 months) = *	760
Cleaning services (Q 40/month x 12 months) = *	480
Incidental exp. (Q 71.45/month x 12 months) = *	857

Total expenditures	33,333

Note: * - These items are specifically designated expenses to be covered, at least in part, by ARECCO funds. All other budget items' funding is to be provided by ANACAFE's Social Action Program. Two of the budget items which are starred are to be split between the two organizations: Q 7,159.92 or 47 percent of the total anticipated expenditures for Medical Supplies is to be funded by ARECCO; Q 257.40 or 30 percent of the total anticipated expenditures for Incidental Expenditures is to be funded by ARECCO. The split in total expenditures between ARECCO and ANACAFE is Q 8,333 and Q 25,000.

Source: Clinic records.

TABLE III.5

REVENUES FROM USER FEES AT ACOGUA I,
MAY THROUGH SEPTEMBER 1987

Month	ACOGUA-Affiliates		Non-Affiliates		Total	
	Visits	Revenues	Visits	Revenues	Visits	Revenues
May	177	44.25	20	60.00	197	104.25
June	167	41.75	12	36.00	179	77.75
July	407	101.75	19	57.00	426	158.75
August	305	76.25	13	39.00	318	115.25
September	225	56.25	10	30.00	235	86.25
.....						
Totals	1,281	320.25	74	222.00	1,355	542.25
Percents	95	59	5	41	100	100
.....						
Monthly Average	256	64.05	15	44.40	271	108.45
.....						
Extrapolated Annual Totals	3,074	768.60	178	532.80	3,252	1,301.40

Source: Clinic records.

TABLE III.6

REVENUES FROM USER FEES AT ACOGUA II,
MAY THROUGH OCTOBER 1987

Month	ACOGUA-Affiliates		Non-Affiliates		Total	
	Visits	Revenues	Visits	Revenues	Visits	Revenues
May	86	21.50	117	351	203	390.50 *
June	56	14.00	82	246	138	275.00 *
July	74	18.50	100	300	174	318.50
August	108	27.00	89	267	197	294.00
September	89	22.25	99	297	188	319.00
October	97	24.25	54	162	151	186.25
.....						
Totals	510	127.50	541	1,623.00	1,051	1,783.25
Percents	49	7	51	93	100	100
.....						
Monthly Average	85	21.25	90	270.50	175	297.21
.....						
Extrapolated Annual Totals	1,020	255.00	1,082	3,246.00	2,102	3,566.50

Note: * - Center records indicate an additional Q 18.00 earned in May from 3 emergency visits and 3 laboratory services, and an additional Q 15 in June from 3 emergency visits and 2 laboratory services.

Source: Clinic records.

TABLE III.7

ACOGUA'S USER FEE-BASED, ANTICIPATED EXPENDITURE SHORTFALL
FOR 1987-1988

	Affiliate Consultations *				Non-affiliate consultations *				Estimated Total Revenue
	Per month	Per year	Fee	Revenue	Per month	Per year	Fee	Revenue	
ACOGUA I	256	3,072	2	6,144	15	180	4	720	6,864
ACOGUA II	85	1,020	2	2,040	90	1,080	4	4,320	6,360
				Q 8,184				Q 5,040	Q 13,224
.....									
Forecast of user fee revenue **				Q 28,800					
Actual user fee revenues				Q 13,224					
								
User fee collection shortfall				Q 15,576					

Notes: * - The number of consultations incorporated in this estimate are five and six month averages computed from clinic record data presented in Tables III.5 and III.6.
** - From Table III.3.

Source: Clinic records.

TABLE III.8

NUMBER AND TYPE OF CONSULTATIONS PROVIDED AT ACOGUA I,
MAY THROUGH SEPTEMBER 1987

Type of consultation	May	June	July	August	September	Totals
Maternity	17	12	27	21	16	93
Pediatric	120	89	209	197	126	741
General	121	113	227	201	150	812
.....						
Totals	258	214	463	419	292	1646
.....						

Monthly average number of total consultations: 329.2
 Extrapolated annual number of total consultations: 3,950

Source: Clinic records.

TABLE III.9

LEADING CAUSES OF MORBIDITY REPORTED AT ACOGUA I,
MAY THROUGH SEPTEMBER 1987

Type of illness	May	June	July	August	Sept. rank	Total	Rank
URTI	36	30	55	47	1	168	1
Diarrhea	23	27	25	nr	5	105	2
Parasites	9	10	25	18	4	52	3

Notes: nr = Not reported among the five leading causes of morbidity in that particular month.
For the month of September only rankings are available.

Source: Clinic records.

TABLE III.10

NUMBER AND TYPE OF CONSULTATIONS PROVIDED AT ACOGUA II,
MAY THROUGH OCTOBER 1987

Type of consultation	May	June	July	August	September	October	Totals
Maternity	15	18	16	14	13	9	85
Pediatric	86	59	55	78	75	51	404
General	102	61	103	105	100	91	562
.....							
Totals	203	138	174	197	188	151	1,051
.....							

Monthly average number of total consultations: 175.2

Extrapolated annual number of total consultations: 2,102

Source: Clinic records.

TABLE III.11

LEADING CAUSES OF MORBIDITY REPORTED AT ACOGUA II,
MAY THROUGH OCTOBER 1987

Type of illness	May	June	July	August	Sept.	Oct.	Total	Rank
Parasites	40	22	26	23	20	9	140	1
Tonsillitis	35	12	12	24	14	10	107	2
URTI	17	9	14	30	13	16	99	3
Anemia	18	10	15	18	16	19	96	4
Gastritis	14	12	22	16	11	11	86	5
Diarrhea	19	13	13	12	9	6	72	6

Source: Clinic records.

TABLE III.12

AGROSALUD FINCAS' COLONO POPULATIONS

Finca	Department	Colono Population
Argentina	Alta Verapaz	1,547
Cabanas	Alta Verapaz	917
Camelias	Suchitepequez	213
El Volcan	Alta Verapaz	1,145
El Zapote	Escuintla	262
La Constancia	Alta Verapaz	951
Los Alpes	Alta Verapaz	2,006
Los Andes	Suchitepequez	194
Luisiana	Suchitepequez	412
Moca	Suchitepequez	1,668
Mocca	Alta Verapaz	2,418
Panama	Suchitepequez	1,107
Sant Adelaida	Suchitepequez	478
Yaxbatz	Alta Verapaz	906
.....		
14	3	14,224
Average number of colonos per finca:		1,016

Source: AGROSALUD.

TABLE III.13
 AVERAGE COST OF AGROSALUD PROGRAM FOR 14 FINCAS, 1987
 (in quetzales)

Program (1)	Average cost per finca per year (2)	Less local share per finca per year (3)	Net cost to AGROSALUD /finca /year (4)	Total net cost to AGROSALUD for 14 fincas per year (5)
Anti-tuberculosis	195	12	183	2,562
Immunizations	901	268	633	8,862
Parasite eradication	230	36	194	2,716
Oral hygiene	290	23	267	3,738
MCH	470	168	302	4,228
Census	327	204	123	1,722
Curative medicines	2,311	1,411	900	12,600
Environmental sanitation	666	226	440	6,160
Family health education	1,154	434	720	10,080
Training	336	336	-	-
Total	6,880	3,118	3,762	52,668

Source: Study team field notes and estimates, based in part on AGROSALUD Central Office data.

TABLE III.14

AGROSALUD CENTRAL OFFICE INCOME AND EXPENDITURES,
 JULY THROUGH DECEMBER 1986
 (Quetzales)

Month	Income	Field expenditures	Office expenditures	Unexpended balance
July	6,575	2,862	2,572	1,141
August	6,850	2,862	2,830	1,158
September	7,000	3,477	2,840	683
October	7,275	3,601	2,840	834
November	7,275	3,477	2,840	958
December	7,275	3,477	2,840	958
6-Month Totals	42,250	19,756	16,762	5,732
Percentages	100.0	46.8	39.7	13.5

Source: AGROSALUD.

TABLE III.15

CHRISTIAN CHILDREN'S FUND (CCF) GUATEMALA PROJECT LOCATIONS (1)

Department	Location	Department	Location
Huehuetenango	Barillas	Guatemala	Zona 1
	Huehuetenango		Zona 6
	Chiantla		Zona 7
	Soloma		Zona 10
	Santa Eulalia		Zona 14
	San Idelfonso Ixtahuacan	Jalapa	El Chaguite
	Colotenango		Los Ixotes
	Malacatancito		
	Aguacatan	Zacapa	Teculután
	La Democracia		
Chacaj	Santa Rosa	Los Cerritos	
Quetzaltenango	Quetzaltenango	Izabal	Puerto Barrios
	San Juan Ostuncalco		El Estor
	San Francisco La Union		Guitarra
	Coatepeque		San Antonio Seja
	Cantel		Playitas
Totonicapan	Totonicapan	Alta Verapaz	Tucuru
San Marcos	Comitancillo		Teleman
Solola	Solola	Baja Verapaz	Rabinal
	San Lucas Tolimán		Salama
	Argueta		Cubulco
	Santa María Visitación		
	Santa Catarina Ixtahuacan		
Chimaltenango	Patzún		
	Comalapa		
	San Martín Jilotepeque		
	San José Poaquil		
	Zaculeu y Agua Escondida		
Retahuleu	Champerico		
	San Felipe Retahuleu		
	El Asintal		
Sacatepequez	Antigua		
	San Antonio Aguas Calientes		
	Santa María de Jesús		

Source: CCF.

Note: 1 - Since the number of CCF/Guatemala projects totals 62, there are apparently multiple projects in several of these locations.

TABLE III.17

BALANCE SHEET OF THE CCF/COATEPEQUE PROJECT

Budget line item	Quetzales	Percent of total
Revenues		
CCF Central Office (CO) basic subsidy	108,091.09	27.9
Temporary increase in CO subsidy	87,830.28	22.7
Self-financed activities' revenues	145,255.19	37.5
Non-CCF donations	46,000.00	11.9

Total revenue	387,176.56	100.0
Expenditures		
Administration	44,154.90	11.4
Education	28,842.96	7.4
Nutrition	65,161.00	16.8
Health	49,692.00	12.8
Small business	23,487.50	6.1
Family assistance & infrastructure	81,400.02	21.0
Self-financing businesses	95,438.13	24.6

Total expenditures	388,176.51	100.0

Source: Clinic records.

CHAPTER FOUR: COMPARATIVE EVALUATIONS AND RECOMMENDATIONS

This final chapter first evaluates and compares ANACAFE's Social Action Program, AGROSALUD, and the Christian Children's fund -- the three organizationally-based, multi-site private sector health services organizations profiled in this report -- in terms of their potential role in a strategy to implement an extension of health care to agro-export workers on Guatemala's South Coast. It then compares these to the most promising of the smaller, non-organizational, single-site health services arrangements studied. The strengths and shortcomings of each arrangement are identified, and specific recommendations for strengthening the potential of each as a participant in an extension of care strategy are proposed. These assessments are followed by the study team's general recommendations for designing and implementing extended health services on the South Coast through the private sector.

I. EVALUATIONS OF PRIVATE HEALTH CARE PROVIDERS

A. ANACAFE's Social Action Program

1. Strengths.

a. Two of the major raisons d'etre of the ANACAFE Social Action Program are concern for the health of Guatemalan coffee workers and the public image of coffee growers, both of which are unambiguously stated in the program's published objectives. ANACAFE's leadership and most of its local branches appear committed to both objectives, which are pursued through two ongoing sub-programs: the itinerant Jornadas Medicos y Odontologos effort and the multi-site Health Centers Support sub-program.

b. With its strong institutional/infrastructural base, ANACAFE is one of most economically and politically powerful organizations in Guatemala, and the Social Action Program is able to draw upon this strength. Its administrative office, for example, uses the ANACAFE accounting department to audit the financial operations of its local health organizations, and the Jornadas sub-program makes use of ANACAFE technical personnel to assist in program implementation. These arrangements help to keep the direct costs of the Social Action Program low, at the same time furthering ANACAFE's

positive public image as the sponsor of social welfare improvements.

c. Under its current leadership, the Social Action Program appears to have both the capacity and the willingness to grow. There are specific plans to develop and/or support a maximum of 12 health services delivery arrangements under the Health Centers Support sub-program, to have them operational by October 1988, and to continue supporting them at least through March 1992. It is possible that arrangements brought into the sub-program by the fall of 1988 will be financially supported beyond March 1992, and/or that additional arrangements will be added if the sub-program is extended beyond that date. If it is able to achieve sufficiently high visibility, the sub-program might also engender additional private sector support for health-related initiatives -- perhaps from within ANACAFE, from regional coffee growers' associations, or from other agricultural or industrial associations.

d. The Social Action Program's Jornadas and Health Center Support efforts are both cost-effective. ANACAFE estimates the Jornadas sub-program's average cost per person receiving medical care at Q3.55, or about \$1.42 U.S. (exclusive of the fixed cost of ANACAFE employees who participate in the sub-program: a two-person staff and technical personnel recruited on an ad hoc basis). The Health Center Support sub-program's cost per covered individual (not per person served), based on the six organizations for which we have adequate information, is a very low Q2.07, or about 83 cents US (23).

e. ANACAFE has identified a package of goods and services that establishes a basic standard of (curative) care for private sector initiatives. This package includes a blueprint for the physical structure of a model clinic, a set of regulations for the medical directors of participating clinics, and detailed clinical history forms, all of which imply that adequate clinical procedural standards for pediatric, maternal, and general consultations will be maintained and monitored.

2. Shortcomings.

a. Although ANACAFE has committed itself to funding its Social Action Program through March, 1992, the fact that the program was once dropped and then reinstated suggests that it cannot be considered permanent. Economic considerations or a change in the ANACAFE leadership, introducing a different philosophical approach, might result in its termination.

b. The official objective to "improve the image of

coffee growers" may make ANACAFE's commitment to the Social Action Program a relatively superficial one, in that the image factor (and ultimately economic considerations) may take precedence over more humanitarian goals.

c. The Health Centers Support sub-program is decentralized, and reporting requirements at the central office level are less than comprehensive. Within the sub-program's existing (although still evolving) administrative structure, there is no provision for monitoring or evaluating the efforts of individual clinic programs, or for verifying adherence to ANACAFE guidelines. In addition, a lack of technical expertise and personnel may limit the sub-program's potential growth, weaken its effectiveness as a role model for similar efforts, reduce its ability to exploit economies of scale (for example, in the bulk purchasing of drugs), and constrain its ability to institutionalize minimum standards for the content and quality of services required of member organizations (24).

d. Although the Health Centers Support sub-program has a written commitment to community participation, in many instances its clinics are operated by regional or local coffee growers' associations that are controlled by finqueros. To implement community participation, these health centers would have to develop committees on which their beneficiaries are represented, which might be logistically and politically difficult. To date, no such committees have been formed; community participation is limited to the payment of nominal user fees to help finance services.

e. The Social Action Program's objectives state that both "preventive and curative medicine" will be provided, but the Health Centers Support sub-program's services are generally oriented toward curative care.

f. The Jornadas sub-program's efforts, focused on preventive care, are one-time in nature; there is no provision for follow-up activities at service delivery sites. The sub-program can thus have only a relatively limited long-term impact on the health status of its beneficiaries.

g. Ultimately, the success of ANACAFE's Social Action Program will depend upon whether the funds that support it -- contributions from coffee growers all over Guatemala -- are perceived as benefiting some geographical areas and some regional coffee growers' associations at the expense of others, rather than being distributed broadly and equitably.

3. Recommendations.

a. In its previous incarnation as the old Social Action Committee, ANACAFE's social welfare efforts were coordinated, if informally, with those of other health institutions, both public and private. The current head of the program reports that he has begun to resurrect these relationships. The study team recommends that this effort be pursued, since coordination with other agencies will help the program to avoid duplicating others' efforts and thus stretch its resources and ultimately enhance its impact. Specifically, ANACAFE should consider inviting representatives of a broad spectrum of public and private health services delivery and charitable organizations (e.g., MSPYAS, IGSS, CARE), educational institutions (e.g., medical and nursing schools), financial institutions (e.g., BANVI, the National Housing Bank), and agencies concerned with environmental health (e.g., UNEPAR, the national water and sewage agency) to join with the Social Action Unit to form a Social Action Program policy committee.

b. The management of the Social Action Program should be strengthened at the central level by adding technical staff and by implementing standardized utilization and cost reporting requirements. Specifically, the study team recommends:

-- a formal, monthly, internal review of participating clinic program budgets, which would help to ensure that annual planning and budgeting are consistent and that matching monies are being provided and spent in a timely manner;

-- the development of an administrative code -- a formal set of rules explicitly delineating budget and planning review procedures and responsibilities (including the granting of authority to the Social Action Program to take specific corrective actions when necessary), with the requirement that participating clinics and their sponsoring regional associations accept this administrative code as a prerequisite to participation;

-- the development of minimum per capita budget allocation standards, which, coupled with the existing standardized service package recommendations, would help to ensure that program beneficiaries would be provided with adequate, sustained health care. These standards should discourage participant regional associations from reducing their share of support for the program.

c. More health centers should be run by associations of

small- or medium-sized coffee growers. The study team recommends that ANACAFE adopt a more flexible approach to its 2-to-1 matching fund policy to encourage this. For instance, ANACAFE might make 4-to-1 or 5-to-1 contributions for associations of small growers that are unable to raise the minimum amount that ANACAFE requires from the regional or local health programs it supports.

d. Community participation in ANACAFE-supported health care facilities' activities should be enhanced by involving users in the initial construction and subsequent maintenance and administration of local facilities.

e. A uniform schedule of user fees should be developed, bearing in mind users' capacity to pay, and should be applied in all ANACAFE-affiliated health centers (25). Setting user fees would encourage the efficient use of services, discourage the practice of beneficiaries' selling drugs, and discourage the existence of an aura of paternalism, which is apt to develop where services are provided free of charge.

f. For prevention programs to reach the largest possible number of beneficiaries, the study team recommends that health promoters be incorporated into the ANACAFE system. One possibility would be to provide health promoter training to the already-proven, technically oriented, and technically competent agricultural extensionists, now on the ANACAFE payroll in the Jornadas sub-program, in primary health care.

g. The Jornadas sub-program should be expanded, as much as possible, in areas in which no other health services are available. In addition, the sub-program should revisit the sites it serves several times a year, in order to ensure the immunization of new community members and ultimately to have a more permanent impact on the health status of its beneficiaries.

h. An on-going effort should be made to publicize the activities of the Social Action Program and participating regional associations, with the aim of encouraging constructive competition among regional coffee growers' associations in the provision of primary health care. Such competition might be encouraged by financial incentives, such as increasing the level of ANACAFE's contribution for every quetzal contributed, on the local level, above the minimum requirement. Articles should be placed in ANACAFE and other trade association publications, promoting the benefits to finqueros of sponsoring health services.

i. In the long run, any improvement in ANACAFE's public image as a result of the Social Action Program will depend on real improvements in the health status and living conditions of agro-export workers and their dependents. To achieve this end, the Social Action Program should strive for a better balance between curative and preventive services. PHC and health education should be emphasized more strongly. There is probably no single measure that would generate greater improvement in health status, and at the same time do more to enhance ANACAFE's public image, than the implementation of an MCH program with specific emphasis on child survival interventions. In addition to this effort, however, the program should also focus strongly on adult workers -- an orientation that would underpin ANACAFE's economic as well as its image-enhancing goals.

B. AGROSALUD

1. Strengths.

a. AGROSALUD's finca-based, promotor-centered, prevention-oriented health services model, and its commitment to serving the target population, appear strong. Evidence of this is provided by the organization's longevity (ten years); its concern not so much for the image of finqueros as for the health status of farm workers; and the financial commitment of finqueros, who pay for the entire program with the exception of curative medicines. Health education (with an emphasis on personal hygiene) and environmental measures constitute an important component of the AGROSALUD model.

b. AGROSALUD's desire to improve its effectiveness is evidenced by its recent hiring of an outside consultant for a management review; its (reported) current development of a service package that will identify the minimal service mix and level of effort required of AGROSALUD affiliates; and its recent purchase of a computer system to enhance the timeliness and accessibility of data on beneficiaries, activities, and costs.

c. In terms of resource requirements (including personnel skills), the AGROSALUD health services model is both economical and flexible. Its staffing and organizational structure are adaptable to changing needs and priorities; particular types of personnel can be increased or decreased in number, and their missions can be relatively easily altered with few modifications to the overall program. Since it is adaptable, the model is acceptable to a variety of finqueros with very different interests,

motivations, and levels of commitment (beyond their monthly quota costs).

d. The AGROSALUD program is structured in a way that makes it very personal for its beneficiaries. As part of the annual needs assessment of participating fincas, members of each household on participating fincas are interviewed. House calls for both curative care and health education activities (including personal hygiene and family planning) are common elements of each finca's program.

e. AGROSALUD health promoters are local people -- a particularly important feature on the troubled rural South Coast, where communities are more likely to accept locally-recruited health workers because they can be trusted. In addition, the effectiveness of health promoters is enhanced by their awareness of local inhabitants' problems, perceptions of illness, health care seeking behavior, values, and beliefs.

f. Centralized purchasing of certain health care inputs (e.g., medicines and food supplements) and the cost sharing of others (e.g., promotor supervisors; the supervisory physician) results in some cost savings for participating fincas.

g. At the three AGROSALUD fincas visited by the study team, the nearest alternate health care provider was relatively inaccessible -- more than an hour away by car. In each case, the AGROSALUD program had greatly improved access to health care.

2. Shortcomings.

a. In part because of the desire of finqueros to retain control over the AGROSALUD programs on their farms, AGROSALUD's managerial structure, currently under review by an external management consultant, is weak at the central office level. There is, for example, no institutional mechanism by which to identify and resolve organizational-level issues.

b. At present, the organization seems to lack clear-cut, long-term objectives. In the absence of any formal or commonly-understood policy of what mix of services is optimal or what minimal standards of service are acceptable (matters currently under consideration), member fincas generally "do their own thing." In August, 1987, it was decided that the minimal program should include curative medical care and an immunization program, but it is not clear what the former is meant to entail, or how, when, or

even whether this directive will be enforced.

c. The program presently lacks an adequate data-collecting system (a situation that its recent purchase of a computer may alleviate). At the moment there are few reporting requirements, and those reports that are required are limited to data on utilization and certain specific activities (such as latrine installation). There are no cost reporting requirements (although some fincas do report their expenditures to the central office). The data that do reach the central office are rarely used for analytic purposes, and the central office has very few aggregate statistics on the program. In the past, a detailed and sophisticated needs assessment was performed for every finca, but this was discontinued and replaced by a simpler assessment which seems too general to be very useful for planning activities.

d. Overall, there is relatively little community involvement in the program; several participating fincas have active health committees, but most do not. In general, the finquero selects his finca's health promotor, and largely determines what services will be provided and what the service priorities will be. Except for medicines, care is provided free of charge. At present there is great ambiguity within AGROSALUD about community participation in the form of health committees.

e. Medicines for AGROSALUD facilities are ordered monthly, by health promotors, from the AGROSALUD central office, using a standardized form. There is no provision for health promotors to purchase from local pharmacies (especially low-cost state pharmacies) in order to obtain medicines on an as-needed basis.

f. Since AGROSALUD is comprised mainly of finqueros of North American or European descent, it is something of a closed club, and expansion to date has generally been along lines reflecting certain shared affinities. Moreover, the organization is geographically restricted; 18 of the 21 AGROSALUD fincas are in just two departments. The organization espouses a commitment to grow, but has done so only slowly and selectively (26).

g. AGROSALUD's two-tiered monthly quota system, under which participating fincas (categorized as either "small" or "large," according to their colono populations) contribute different amounts for their participation, inadequately reflects the true costs of the program. Moreover, the system discriminates against smaller fincas by charging them proportionately more per worker, and hence discourages the participation of smaller fincas.

h. Intermediate-level health care providers -- auxiliary nurses and/or rural health technicians (tecnicos en salud rural, or TSRs) -- are missing from the AGROSALUD model. The potential problems this presents for continuity and adequacy of care are compounded by the lack of a formal health care referral network and the absence of a standard referral protocol.

i. The costs of the program are relatively high: the average cost per person covered (AGROSALUD's contribution plus the individual finquero's) is Q10.47 (27). Lacking data on the number of consultations provided, the study team had no basis on which to derive a crude efficiency measure of the program (the cost per person actually served). The AGROSALUD share of this cost is approximately Q3.66 (35 percent).

j. The AGROSALUD central office is short on space (part of the office presently doubles as a warehouse), personnel, and staff training.

3. Recommendations.

a. The study team recommends that the organizational structure and management of AGROSALUD be strengthened at both the central and local levels. At the managerial level, AGROSALUD should explicitly identify its organizational goals and priorities, implement some mechanism by which its health services delivery system is regularly evaluated, and spell out specific operating procedures and guidelines. At the local level, the duties and responsibilities of health promoters and the minimum benefits package should be more explicitly defined. Considering that AGROSALUD's health delivery system is highly decentralized, a stronger supervisory system, by which technical assistance is provided to promoters, is required.

b. AGROSALUD should establish formal referral networks and protocols to ensure beneficiaries timely access to quality health services that cannot be provided by its own delivery system (28). At the same time, it should consider adding auxiliary nurses and/or TSRs at local service delivery sites.

c. AGROSALUD health centers should purchase most basic medicines centrally from the state pharmacy, and finance them with a combination of individual clinics' user fee revenues and central monies (with the clinics contributing a substantially smaller proportion of the total funds; most funds for medicines should come from Central Purchasing in

order to take advantage of quantity discounts). Giving promoters the opportunity to manage some petty cash would give them leeway to purchase some pharmaceuticals locally for special needs or when centrally purchased supplies run out.

d. The AGROSALUD central office's physical facility and its number of staff should both be enlarged, and personnel should be given additional training. Basic training on the new computer that has been available for several months is needed immediately. Improvements to AGROSALUD's data collection system should follow.

e. Several important policy issues await decisions. Among them are whether and how AGROSALUD should foster greater community participation in its health centers, perhaps by encouraging the formation of more health committees; whether to reinstate the use of detailed, individualized finca health profiles, which yielded more information than the simpler needs assessment currently used; whether to revise the current two-tiered monthly quota system; and whether to incorporate auxiliary nurses and/or TSRs into the system.

C. Christian Children's Fund

1. Strengths.

a. The incorporation of health programs into semi-autonomous projects of integrated development, together with other programmatic components such as education and income-generating activities, make CCF/Guatemala a potentially very effective vehicle for long-term reduction of the principal causes of ill health in rural Guatemala: poverty and ignorance.

b. The vitality of CCF/Guatemala is evidenced by the number of local projects it supports (62) and the fact that its funding has grown at an annual rate of 12 percent throughout the past decade.

c. At all levels -- central office (Guatemala City) and local project offices -- CCF displays a strong management structure and a sound monitoring system. A long-term (five-year) planning document is supplemented by annual implementation plans that identify prospective program activities, revenues, and budgeted expenditures; quarterly activity reports and cost performance reports are routinely prepared and used for program management.

d. Community participation is an integral component of

the program. Each CCF/Guatemala project is the creation of a local committee comprised of members of the community who initiated, organized, and who now manage the effort. A commitment to financial independence from CCF within ten years is required, and local leadership is expected to continue the effort thereafter.

e. CCF/Guatemala's main funding source -- its international parent organization -- is financially sound and well-established.

2. Shortcomings.

a. Participation in CCF projects is currently limited to families whose children have been identified as individual beneficiaries. These families generally live in villages rather than on fincas. The focus of CCF health projects is mothers and children; services to other adults (including agro-export workers) are provided only in emergencies (29).

b. The level of financial participation in and support of CCF on the part of Guatemalans is low, except for local community participation in projects. The organization seeks and obtains some financial support from domestic sources (for partial funding of central office costs in Guatemala), but its funding comes overwhelmingly from foreign sources (30).

c. South Coast CCF projects are virtual socioeconomic enclaves within their local communities, isolated from finca owners. Despite the fact that they provide health services to farm workers, the support of finqueros has not been sought. CCF projects are not generally coordinated with those of other agencies, and project participants are only rarely informed about and encouraged to use resources available from other agencies.

d. The health services component of the CCF program lacks a clear focus. This may be in part the result of the delicate balance between the central office's goals, objectives, and orientation, and local projects' autonomy in determining the content of services (31).

e. By and large, CCF projects do not charge affiliated individuals user fees (even where fee schedules have been established), requiring payment only for medicines provided to non-affiliated users. Instead, CCF depends for the provision of health services on external funding or on cross-subsidies (i.e., internally-generated funds derived from a local project's income-generating activities).

3. Recommendations.

a. CCF should more clearly define its health services goals on the South Coast, an area characterized by many hard-to-reach migrant workers and finca dwellers who are presently beyond the range of CCF projects.

b. CCF should attempt to coordinate its health services efforts with those of other individuals or organizations. Especially in areas of middle-sized and large farms on the South Coast, a strategy by which CCF projects could establish working relationships with finqueros needs to be developed. Such networking could take place at the level of local projects and individual finqueros, as well as at the level of the CCF central office and local, regional or national growers' associations.

c. CCF should strive for the greater involvement of Guatemalans in its health services program. Specifically, it should encourage the contribution of funds from domestic sources, and charge user fees of both affiliated and non-affiliated users, perhaps using a sliding scale, for at least some personal health services (particularly curative services).

d. CCF should broaden its activities to include beneficiaries other than sponsored children and their families. While maintaining the current level of MCH activities, the CCF central office should actively encourage primary health (promotion and prevention) activities for other adult groups.

e. CCF should introduce and rely upon health promoters and auxiliaries, given that this strategy represents the most efficient way for communities to solve their major health problems.

D. Individual and Other Single-site Efforts

1. Strengths.

a. The overall acceptability, among finqueros, of the Ascoli model of health services delivery is evidenced by the fact that Dr. Ascoli has had many more requests from finqueros who want to be included in his program than he has been able to honor. Moreover, the Ascoli program (unlike other individual provider efforts) emphasizes health education and preventive care.

b. A potentially useful model for private sector health services delivery is provided by the successful, finca-based Hilario Galindo Hospital, which compares favorably with MSPYAS facilities in terms of occupancy rate and efficient delivery of services. Part of its operating budget is drawn from user fees and part from the sale of coffee grown on its finca.

c. The larger-scale Ingenio Pantaleon (sugar refinery) health services model, consisting of a health center at the refinery and health posts on each of its affiliated fincas, is also a potentially useful one. Its approach is holistic; not only curative care but also health education, housing, and economic development are incorporated in the Pantaleon program, which also has a contractual referral arrangement with a private hospital in Guatemala City.

2. Shortcomings.

a. Despite the excess of physicians in Guatemala, there are probably relatively few physicians interested -- like Dr. Ascoli -- in public health, and willing either to live in remote areas or to travel long distances to serve the target population.

b. Hilario Galindo Hospital owes its success, in part, to a private benefactor, who donated the building and land and left a bequest from which part of the operating budget is drawn. The number of such benefactors is no doubt limited.

c. The success of health services delivery arrangements such as that of Ingenio Pantaleon, a food-processing operation, is to a large extent dependent upon fluctuations in the international prices of the commodities processed.

d. In general, the orientation of individual and single site private providers is curative rather than preventive. Health education is often completely neglected.

e. Some individual or single-site arrangements target colonos and discriminate against migrant laborers, either by charging the latter for services or medicines that colonos receive free or by treating migrants only after colonos have been cared for.

3. Recommendations.

a. Individual or other single-site health care efforts could make more use of health promoters and auxiliary

nurses. The health posts associated with the Ingenio Pantaleon sugar refinery, for example, are staffed by auxiliary nurses, providing a potentially useful model.

b. Individual efforts should be coordinated, perhaps under some umbrella organization, with each other and with Government institutions and programs. Indeed, reliance on individual or single-site efforts for an extension of care program should be seriously considered only if such coordination is achieved.

II. COST COMPARISONS OF ORGANIZATIONS STUDIED

The study team's analysis of the per capita costs of providing health services coverage was constrained by a lack of data. In addition, the different provider personnel mixes, the diverse social characteristics of the populations served, and the remote locations of the facilities providing care all make direct comparisons of the costs of the programs exceedingly difficult. Bearing this in mind, however, it is still of interest to compare the limited cost data that are available, if for no other reason than to suggest an avenue for further analysis.

The only cost data the study team was able to obtain on organization-based arrangements are from the ANACAFE-supported ACOGUA clinics and AGROSALUD's Finca Panama. The average cost per person covered at the ACOGUA clinics, if indeed they cover 60,000 people, is Q2.07, compared with Q10.47 for the AGROSALUD health care establishment. However, as noted previously, the AGROSALUD figure is overstated, since no migrants being served by AGROSALUD are included in the denominator. Any comparison between AGROSALUD's costs and those of ANACAFE affiliates must also take into consideration the fact that AGROSALUD provides more services and a different mix of services. No cost or coverage data were available from CCF, making comparisons with this organization impossible.

Few cost data were available from individual or other single-site providers. The cost per person attended in 1977 under the Ascoli program was about US \$8.80.

III. RECOMMENDATIONS ON THE DESIGN AND IMPLEMENTATION OF AN EXTENSION OF CARE STRATEGY

A number of general recommendations for the design and implementation of a strategy to extend health services on the South Coast emerge from this study.

a. The HCF/LAC study team's specific goal was to fulfill a request to investigate the potential of private sector alternatives for supporting an extension of health care on the South Coast of Guatemala. One should not assume from this, however, that using the private sector is necessarily the preferred solution to the problem of how best to extend health care in this region. The study team's first recommendation is that a comparative analysis of the three major alternatives for extending health care -- IGSS, MSPYAS, and the private sector organizations selected for this study -- be undertaken.

b. The study did not determine to what extent members of the target population turn to traditional, non-Western providers for their health care, although there are indications that this behavior may be widespread (e.g., Cosminsky and Scrimshaw 1980; Burki 1988). Neither did it determine to what extent traditional cultural values such as independence, privacy, and the isolation of women affect utilization of modern health care providers. The effect of traditional behaviors on the current health status of the target population is unknown. An analysis of these behaviors would be a useful adjunct to plans for the extension of modern health care in the region.

c. The study team recommends that any extension of health care effort involving private sector actors draw on several different providers and delivery mechanisms rather than on a single existing arrangement. This report has shown that at least three private organizations, each with the potential to expand its present health services, already exist on the South Coast. In addition, several individual providers and single-site efforts also provide potentially interesting models. Of the entities described here as case studies (the most likely candidates, judged on the basis of a criterion-based ranking system developed for this study), no single organization or provider has as yet developed a model so superior as to warrant pursuing it exclusively. The study team can envision any one or even all of them, however, as part of an eventual extension of care effort.

d. In the event that an international organization provides financial support for the extension of health care

through the private sector on the South Coast of Guatemala, a single, independent, probably newly-created umbrella organization should be designated to implement and monitor the efforts of the various entities involved, and to coordinate these entities with each other and with public sector organizations. In this way, duplication of effort can be avoided and cross-fertilization fostered by the exchange of ideas and information on costs, service mix, utilization, etc. The umbrella organization should be composed of both public and private sector representatives, including, as a minimum, representatives of MSPYAS, IGSS, and the private organizations identified in this report. Among its functions should be announcing the availability of funds, drawing up guidelines for applications, developing criteria by which to judge requests, awarding grants and/or revolving fund loans, monitoring the program's performance, and providing technical assistance to improve the quality and coverage of services at affordably low costs. The umbrella organization should guide the program to self-sufficiency within five years.

e. Whether to emphasize preventive or curative care constitutes a real dilemma for private sector health initiatives. Curative care is highly visible, and patient demand for it is strong. Environmental health and other preventive activities, by contrast, may be of lower priority among beneficiaries, may require changes in lifestyle that beneficiaries may resent and/or resist, and may be associated with relatively lumpy capital expenditure requirements -- all of which may make a preventive care orientation difficult to implement. However, enacting preventive measures can obviate the need for much curative care in the long run. According to the World Bank (1986:111), "population, nutrition, and health care problems are intimately related, and their solution requires that they are tackled in an integrated way, as parts of a development package." The study team agrees, and recommends that any effort to extend health care to South Coast agro-export workers through the private sector adopt a broad-spectrum approach incorporating, e.g., nutrition education, family planning, mental health, immunization programs, and environmental sanitation as well as curative services. Of the three major private organizations analyzed for this report, two -- the Christian Children's Fund and AGROSALUD -- already include a range of activities, as do the Ascoli and Ingenio Pantaleon individual-effort models.

f. Because of growing social awareness in Guatemala, the possibility now exists for the development of healthy competition among private sector organizations based on the fulfillment of social responsibilities. Such competition

would be far more likely to develop if the Government were to consider putting into place some structure of incentives -- particularly monetary incentives, such as partial tax write-offs for monies spent on health care -- to encourage organizations to act on their new perceptions of social obligation. The success of the Hilario Galindo private hospital, the undertaking of a local benefactor, is illustrative of the desirability of encouraging social awareness and philanthropy. Such benefactors may be few and far between, but another model for the development of health services based on perceptions of social obligation is also available: one finquero donated land and a building for a MSPYAS facility, and a local action committee then successfully petitioned the MSPYAS to staff, equip, and operate the facility.

g. If the recent increase in (labor-intensive) cotton production continues on the South Coast, the need for additional health services in the area will be correspondingly even greater than at present. However, the need for labor for cotton production -- as well as for other agro-export products -- is not only seasonal but also cyclical, in response to fluctuations in prices on the world market. This suggests that a flexible approach to health services delivery on the South Coast will be required. Health services facilities must be able to expand and contract their levels of service provision, in order to accommodate the heavy influx of migrant workers at certain times of the agricultural year and to serve unemployed workers during the off-season or when demand for labor is cyclically depressed.

h. Of the three different groups of agricultural workers present on South Coast farms, colonos, many of whom already have access to finca-based health services, are probably the best served by health care delivery organizations at present. In view of this, and also in view of the fact that colonos are far fewer in number than either cuadrilleros or voluntarios, the latter two groups (and their dependents) should be the initial focus of an extension of care effort in the region.

i. Whatever the focus of a future extension of care program, discrimination against cuadrilleros and voluntarios should be expressly forbidden in projects participating in the program. The access of these laborers to health services varies; equal access is already characteristic of CCF and AGROSALUD services, but the same cannot be said for many other private providers in the South Coast. ANACAFE participating programs, for instance, discriminate against them, charging higher consultation fees and, in the case of

ARECCO, not providing them with free medicines as it does affiliates. Hilario Galindo Hospital charges all patients except its own finca's colonos, but has a sliding fee schedule; presumably, indigent cuadrilleros and voluntarios are charged relatively little. It should be noted that those providers who do treat migrants and day laborers make no special arrangements to do so, and confront no overwhelming problems as a result.

j. Working through agricultural organizations is undoubtedly the best way to reach the greatest numbers of cuadrilleros, voluntarios, and their dependents. When actual implementation of an extension of care program begins, it is recommended that its sponsors work as closely as possible with the Guatemalan Association of Agriculture (AGA), with ANACAFE and its regional affiliates, and with other national agricultural producer associations (sugarcane, cotton, etc.).

k. The responsible and effective participation of the users of health services -- through the payment of reasonable user fees and/or through other active forms of contribution, such as community participation in the organization, management and other support of health services projects -- should be required of all existing and future health care programs. This requirement would encourage users' self-reliance as well as their efficient use of services. The poverty of much of the target population, however, severely restricts the amount of funding that can be generated from user fees. A combination of user fees and financial support from finqueros is therefore considered to be the most sustainable long-term financing arrangement for health services. In marketing this idea to finqueros, the return that such an undertaking is likely to earn -- whether it is organized through their trade organizations or through philanthropic organizations they may be encouraged to develop -- should be emphasized.

l. Since there is evidence that private sector health services are expanding on the South Coast even as public sector services are decreasing in accessibility and effectiveness, the study team recommends that IGSS, as it pursues its intention to expand its MCH and general sickness programs to agricultural workers on the South Coast, consider an indirect rather than a direct services delivery model. Using private health care organizations to deliver services, instead of relying on existing Social Security facilities or facilities to be constructed in the future, is not common in Latin America, although this system is used in several countries, including Brazil (Zschock 1986). In addition to multi-site health services associated with large

organizations, some of the individual or other single-site efforts described in Chapter Three of this report could be brought into such a program, under the umbrella organization suggested earlier. This approach might help to allay finqueros' concerns that their mandatory contributions to IGSS exceed the value of the services provided to their workers through IGSS facilities. The initial thrust of such an effort should be the enrollment of large, labor-intensive fincas.

m. Ideally, all fincas employing more than 500 agricultural workers during peak seasons should provide on-site health services. Smaller fincas should form consortiums either to (a) place health services delivery sites at locations equidistant from all consortium members, and moreover to provide transportation to these sites; or (b) arrange for health services delivery on an outreach basis (perhaps using the ANACAFE Jornadas program as a preliminary model). Finca-based health services, as in the AGROSALUD model, undoubtedly help to alleviate the problem of workers' lack of access to services. However, this leaves an access problem for the dependents of those workers who do not reside on fincas, as well as for non-resident workers while they are away from the workplace. To alleviate this problem, the study team recommends that any future support for the development of finca-based health services be made conditional upon the inclusion of care for dependents of employed workers, whether they reside on or off the finca. Specific arrangements by which non-resident beneficiaries could be transported to and from finca-based health services delivery centers should also be incorporated in plans for such services.

n. The dearth of food crops in a region primarily growing export crops is a continuing problem on the South Coast. The nutrition of agro-export workers and their dependents would be improved if more land were made available for food crops, and a more plentiful supply of these foods would help to keep prices down for those who must purchase them. As a step toward alleviating malnutrition in South Coast departments, the Government might consider mandating that farm owners provide their voluntarios and non-landed colonos with small garden plots. Municipalities might also make (communal) garden lands available to non-landed farm workers.

o. Finally, the study team has developed a weighted rank-ordering of South Coast departments, based on current need for expanded health services as reflected in the numbers of persons per health care provider in each department and on the number of sick persons attended per

1,000 inhabitants. This "intervention priority ranking," presented in Table II.13, conveys the study team's recommendations for which among the six South Coast departments are most needy in terms of their current access to health services. According to study team calculations, the department of San Marcos is most urgently in need of expanded health services, followed by Suchitepequez. Escuintla and Retalhuleu are virtually tied for third neediest department, and are followed by Santa Rosa and Quetzaltenango.

* * * * *

In sum, the expansion of health services on the South Coast of Guatemala should be a multifaceted effort, in order to respond most effectively not only to the urgent health needs of the target population but also to the very legitimate interests -- social, economic, political -- of the various organizations, both public and private, that would necessarily be involved. For national organizations interested in enhancing their image as contributors to social welfare, an expansion of presently-existing MCH and preventive care efforts would be the most effective way to achieve this goal. The economic interests of private agricultural organizations would be best served by an enhanced social welfare orientation, while local, regional and national political considerations would be well served by the formation of linkages among various health care delivery agencies. The study team recommends that these general goals be pursued in concert.

FOOTNOTES

1. The South Coast consists of all or parts of the departments (provinces) of Santa Rosa, Escuintla, Suchitepequez, Retalhuleu, Quetzaltenango, and San Marcos (see Note 11).
2. The USAID-funded project under which this study was done has produced analyses of private sector health care financing alternatives in Peru and Bolivia (Solari et al. 1987; Rosenthal et al. 1988), which may be useful for comparative purposes.
3. For the codebook for this database, see Guatemala Project 1987, Doc. G. Copies, on floppy disks, are available from HCF/LAC, as ASCII raw data or SPSS System files.
4. More general than the health-specific Plan Operativo, the Diagnosticos primarily focus on the socioeconomic situation, particularly Government-provided social services.
5. Guatemala is notorious for its use of large quantities of insecticides and pesticides, reported to be the highest levels of application in the world.
6. One manzana = 0.699 hectares or 1.727 acres.
7. "Cash crops," as the term is used in this report, are bananas, cattle, cotton, coffee, cardamom, and sugar. "Food crops" are narrowly defined as corn, beans, wheat, and rice.
8. The institution of repartimiento was later termed mandamiento. See McCreery 1983:740.
9. One caballeria = 64 manzanas (see also Note 6).
10. In 1980, the minimum wage for Guatemalan agricultural workers was increased from Q1.08 (at the time, equal to US \$1.08) to Q3.20 (US \$3.20) per day.
11. We have defined the South Coast as being comprised of only portions of most of the six departments. Large parts of San Marcos and Quetzaltenango, in particular, are excluded from this study, but are included in the table. The data for San Marcos are probably biased downward from what they would be if we had data only for the southernmost municipios. The northern half to two-thirds of the department, which is poorer and overwhelmingly Indian, is not of immediate

interest to this study. The Quetzaltenango data are also biased, although in the opposite direction: they include the second largest urban area in the country, the city of Quetzaltenango, which is the location of most of the department's MSPYAS, IGSS, and private sector resources (see Guatemala Project 1987, Doc. A).

12. The sample results discussed below have been expanded to reflect national totals.

13. "Professional fees" includes payments for physician consultations, examinations, and operations; professional dental care services; and payments to "other professionals." "Medical services" includes illness and accident insurance, hospitalization, laboratory analyses and services, x-rays, vaccinations, cobalt treatments, and "others." Medications include products of on-going use (including alcohol, cotton, analgesics, penicillin, sulfa compounds, iodine, milk of magnesia, vitamins, and "others"), and prescription drugs.

14. See Appendix A for a detailed description of the methodology employed in selecting the entities described here.

15. All Guatemalan coffee sold internationally must pass through -- in effect, be sold to -- ANACAFE, so that ANACAFE may monitor Guatemala's compliance with its ICA-assigned quota.

16. A total of Q400,000 is allocated for "Contributions to Institutions"; a footnote explains that this support is for four functioning health center programs and eight that are to be developed, for a total of 12, each with an annual ANACAFE supporting contribution of Q25,000. This, however, totals Q300,000; not Q400,000. The balance is unexplained.

17. A national coffee association, Asociacion Experimental de Cafe (AEC), whose membership overlaps that of AGROSALUD, is often associated with AGROSALUD. AEC owns approximately 50 fincas, 21 of which are AGROSALUD affiliates. In addition, both groups are made up almost exclusively of North Americans and Europeans (mainly Germans), which makes them highly visible in Guatemala. Although the associates of AGROSALUD are also members of AEC, and the President of AGROSALUD's Board of Directors is the Secretary of AEC, the two groups are organizationally independent.

18. Or Medicines sans Frontiers. Most non-affiliates probably resort to services provided by this organization, which began serving the town of Guadalupe less than a year ago. The organization places heavy emphasis on the use of

health promoters. However, it has evidently had some problems; it began with six promoters and now has only one. The finca owners think distrust of the organization's foreign (mainly French) doctors has created an acceptance problem.

19. The money is placed in the local project's bank account in Guatemala City.

20. In the early 1970s, a rural mobile health program was introduced in Guatemala through MSPYAS, but quickly disintegrated after USAID funding ended. Moreover, that project apparently had no discernable impact on MSPYAS health services systems (see Boostrum 1987).

21. These workers are not colonos in the usual sense, since they receive a set wage and employer-employee relations are not characterized by traditional patron-client ties.

22. The following information was obtained in an interview with Mario Salazar of La Seguridad, S.A.

23. This assumes that the total ANACAFE Social Action Program budget, net of the Jornadas sub-program, is spread evenly across the 12 health centers clinics to be supported.

24. Admittedly, the adverse impact of the staffing shortage is probably lessened by the role played by the ANACAFE Accounting Department and by the managerial and monitoring functions that are no doubt exercised by the service arrangements' sponsoring regional associations or community health committees.

25. This suggestion cannot be applied indiscriminantly. Workers on non-participating fincas, and those voluntarios and landless laborers who cannot afford to pay standard fees, should (at the discretion of the individual provider) be allowed to pay less, or be exonerated from payment.

26. AGROSALUD does appear willing to expand its services to the target population. During 1987, the number of fincas participating in the program increased from 17 to 21.

27. This is the maximum: it overstates the average because it does not include coverage of migrants, on whom the study team has no data.

28. For example, reported morbidity statistics suggest great need for an eye clinic.

29. Given the age distribution of the Guatemalan population, particularly in rural areas, this approach may not yield a mix of beneficiaries significantly different from other programs that are not so restricted.

30. It should be noted, however, that the study team has no data on the level of effort invested in domestic vis-a-vis foreign sponsorship/fund raising.

31. This problem has been recognized by the Central Office, and changes are now being introduced.

TECHNICAL NOTE

CRITERIA FOR SELECTION OF CASE STUDIES

For two related reasons, the study team decided that only organizations or individual practitioners already providing health care on the South Coast of Guatemala would be considered as candidates for case study for this report. First, the provision of health care to agricultural and especially to migrant workers involves certain special requirements, which currently-operational organizations were assumed to have met. Second, speculating about the possible development of presently non-existent programs would add to the complexity and uncertainty of the case study effort.

A. Scoring Criteria

The following selection criteria were developed (see Table A.1):

1. Willingness to serve the target population. Since all of the organizations considered were extant, all manifested some commitment to serving the target population, but their degree of commitment was unequal. Some had developed health care programs that specifically targeted agricultural workers and were actually involved in programmatic efforts on the regional or national level (e.g., ANACAFE; AGROSALUD). These organizations were judged to be the most committed to the target population, and hence were accorded the highest score on this criterion, a 2 (see Section B and Tables A.1 and 2 for scoring methodology and total scores).

Other organizations offered less specifically-targeted services, sometimes including agricultural workers and their families in services provided to the general population. These organizations' efforts were often quite limited, directed toward mostly non-agricultural populations in South Coast towns and lacking a regional scope; health clinics sponsored by Catholic or other denominations and medical services organized by local Lions or Rotary Clubs are examples. These types of organizations were regarded as the least committed to the target population, and were consequently scored 0.5 on this criterion. Organizations and individuals whose activities included the development of contractual arrangements (more often verbal than written)

with plantation owners, for the purpose of providing health services to farm workers on a periodic basis, were regarded as intermediate cases, and were given a score of 1 on the criterion.

2. Willingness to grow. This criterion was designed to take into account not only a provider's level of effort and commitment to the target population but also its plans for expansion or replication. In scoring, organizations were weighted more heavily than individuals, on the assumption that individuals can maximize their provision of services only within given time constraints, while organizations have a greater possibility for growth.

For both organizations and individual providers, it was also assumed, in using this criterion, that growth was not limited by inadequate demand for services in the South Coast. While this second assumption is not unfounded, it is important to explore its implications. Given existing health conditions, the present health care market, and the widely recognized need for additional health services in the area, the assumption that demand was or would be adequate might seem questionable. It might also seem that this assumption was predicated on another: that the perceived need for additional services could be transformed into effective demand. This process would require some changes in the South Coast health care marketplace.

The introduction of changes in the marketplace (at least in the short term) would likely require either some form of state intervention or some significant change in the operations of a large, private-sector, probably non-profit actor. At the time of the fieldwork on which this report is based, the Guatemalan Government was planning to expand medical coverage to South Coast agricultural workers through its Social Security Institute (IGSS). It is important to note that private sector health care providers were highly enthusiastic about the potential, inherent in this plan, that they might form links with the state health care apparatus (see Chapter One, Section IV).

The study team thus considered possible state intervention in the local health care marketplace, in the form of an extension of IGSS coverage, to be the single most important factor in predicting the potential for growth of private sector providers. Although some private sector social consciousness has recently emerged, this may be short-term, and thus cannot be relied upon to motivate economic participation in the proposed program beyond the next few years. At present, there exists a window of opportunity to extend care, but because this window is a

product of political exigencies it may be short-lived. In a few years, considerations of financial viability and sustainability will probably play a relatively more important role.

Assuming incipient change in the market, the importance of effective demand as a factor constraining the health service delivery efforts of private sector organizations can be discounted (although it is not suggested that all areas of the South Coast have the same levels of unmet need; intra-regional areas can be prioritized, and indeed the major purpose of the municipio-specific database developed for this report is to make it possible to begin this task). It was assumed that growth in health services delivery programs would be limited by internal organizational goals and resources -- in other words, that there was enough unmet need to warrant the expansion of health services programs, and the only constraint on effectively addressing that unsatisfied demand was the willingness or ability of private sector entities to do so.

3. Managerial capacity. The probability that a private sector health care provision arrangement might successfully expand and/or replicate its health services program so as to extend coverage might be constrained by a lack of managerial capacity to deal with particular problems. For example, since the physical environment from which migrant workers come is very different from that of the South Coast, the target population presents a somewhat unusual mix of illnesses and therefore of needed services. In addition, extending coverage implies providing more health services to more people. Such qualitative and quantitative considerations may require quantitative and qualitative changes in management.

4. Acceptability to finqueros. Particularly in the case of agricultural workers who reside permanently on the plantations where they work, but also in the case of some migrant workers, plantation owners have significant if not absolute control over workers' access to health services. The importance of finqueros' influence is in large part a product of the social organization of Guatemalan plantations. These are generally isolated, self-contained enclaves, a configuration often gives rise to a rather parochial world view.

If health care services are unavailable on a plantation, word of mouth, tradition, and experience are the most common ways in which workers learn about, and pattern their use of, nearby health care providers. Still, finqueros have considerable leeway to influence or discourage the access of

workers to health services. This is perhaps most evident in their widely varying responses to the requirement that plantations maintain a first aid station, or botiquin (IGSS requires that a botiquin be maintained in all businesses employing workers under conditions where accidents might occur). What constitutes an appropriate first aid station is left to the finquero. It may be only "a small section of a shelf in a plantation office where are located a few aspirin, an empty or half-filled bottle or rubbing alcohol, and a roll of long unsterile gauze;" it may be a US style first-aid kit, or it may be a whole room, in which significant or token medical supplies are kept and distributed (Pansini 1980:6).

In light of plantation social organization and the degree to which finqueros influence their workers' lives, finqueros' willingness to commit themselves, in some degree or another, to the extension of care to agricultural workers is a basic requirement for long-term success. Indeed, without active finquero endorsement and support, the private sector extension of health care to agricultural workers is unlikely to be financially successful in the long run. It was therefore assumed that for both political and economic reasons specific private sector alternatives would have to be acceptable to the area's finqueros.

The general opposition of South Coast finqueros to a proposal that mandatory participation in the IGSS maternal and child health and general sickness programs be extended to the South Coast makes it likely that finqueros would find a private sector alternative to this attractive. However, finquero acceptance of any particular alternative would be conditioned by cost and control considerations. Four permutations of these two considerations constituted the basis for scoring health care arrangements on this criterion (see Table A.1).

5. Long-term economic viability. If the effort to extend health care on the South Coast is to prove successful, it must have sustainable funding. In developing a scoring methodology for this criterion, the type of funding was considered to be more important than the socioeconomic status of potential donors or the potential magnitude of funding. User fees were regarded as more desirable than individual donations, based on the rationale that a broad base of support (as opposed to support from individuals or small groups) is associated with greater stability. A group directly benefitting from a health care arrangement is more apt to be committed personally to it over time than would any individual -- for example, a finquero.

Reliance on the donations of concerned humanitarians was judged to be somewhat more tenuous than the financial support of individual finqueros, and considerably more tenuous than the support of associations of finqueros. Most donations for health care in Guatemala are made by foreigners, and these are generally for programmatic efforts more comprehensive than health care alone. Foreign donors' physical distance from Guatemala, and their consequent lack of personal contacts with their beneficiaries, were viewed as impediments to donors' becoming permanently committed to their beneficiaries; in times of economic hardship, it is relatively easy for donors to discontinue support of distant and generally impersonal causes.

Finqueros, too, may be motivated by humanitarian concerns, but they may be prompted by purely pragmatic considerations as well. Healthier workers can mean more efficient production. Especially in the case of plantations with large colono populations, financial support to develop health programs may thus be viewed as a sound economic investment. It may also be seen as a prudent political initiative: by providing support for such programs, a finquero is likely to improve his social image, thereby enhancing his political acceptability and position.

It is difficult to distinguish among finquero expenditures on health as investments in agricultural output, social image, or humanitarianism, but it is important to recognize that each has different implications. Business investments are probably less subject to variations in commitment than humanitarian and especially purely political investments. Thus, in marketing the extension of health care to agricultural workers, the overall return that such an undertaking is likely to earn finqueros should be emphasized.

B. Operationalizing the Criteria: Scoring

The five scoring criteria were assigned equal weights, since all were felt to be of equal importance in assessing the likelihood that a particular health care arrangement would become a vehicle for extending care to agricultural workers on the South Coast. Table A.2 shows the scores assigned to specific private sector health care organizations. Each organization's scores for each of the five criteria were developed in discussions among the study team. The "Total Score" column served as the basis for ranking the importance of each organization as a case study.

C. Organization-Based Arrangements vs. Individual Providers: Differences in Criteria

It was felt that using the same criteria for organization-based, multi-site arrangements and individual efforts would be inappropriate. Specifically, using "willingness to grow" and "managerial capacity" to score individual efforts would systematically bias selection in favor of organizations.

1. "Willingness to grow." This criterion assesses willingness to develop more services, for which individual providers have a limited capability. No matter how committed they may be, or how interested in expanding the proportion of their services provided to agricultural workers, individual providers are limited to whatever increase in coverage would result from allocating all of their professional efforts to this population.

The overall impact on South Coast agro-export workers of any individual provider is, of course, negligible. To rely on many individual providers was deemed virtually unworkable; moreover, interest in pursuing such an approach appeared relatively small, compared to interest in using some existing or future organizational structure. Rather than dismiss all individual provider efforts from consideration, however, some were reviewed -- depending upon their probability of developing or becoming part of a supra-individual "umbrella" organization.

Thus, in assessing the individual provider criteria, the study team opted to delete the "willingness to grow" criterion. In its place, a sixth criterion was introduced: "the probability that an individual provider would develop an organizational structure." This criterion was considered important enough to be weighted differently from the others. The team assigned this criterion a weight equal to that of all other considerations combined. The value of this criterion was therefore set at six.

2. The managerial capacity problem. The third criterion, managerial capacity, was also dropped from the individual efforts' selection criteria. The need to be concerned with managerial capability in single-person or other small efforts is questionable, vis-a-vis organization-based (and especially multi-site) efforts. In addition, there are often significant qualitative and quantitative differences in the managerial concerns of these two categories of arrangements. The limited amount of information on which these initial assessments were made further underscored these concerns.

Although managerial capacity is unquestionably of major relevance, it was felt that this consideration would be better addressed in two less direct, less biased ways. First, it would be reflected in the sixth criterion, "the probability that an individual effort would develop an organizational structure" for the purpose of extending health care service to the South Coast. Second, managerial capacity could better be considered after the selection process. The case studies of individual efforts, therefore, represent an initial attempt to gauge track records.

After a number of alternate approaches were considered, the study team jointly decided to employ the two overlapping yet distinct sets of ranking criteria described above.

3. Other considerations. Although the approach chosen -- to discard the "willingness to grow" and "managerial capacity" criteria and add the "probability of developing an organizational structure" criterion when evaluating individual efforts -- seemed an appropriate modification, two problems remained. First, if the managerial capability of individual efforts is ignored, one risks selecting inappropriate individual provider efforts for some future "umbrella" organization. The effectiveness of a future organization -- possibly even its long-term viability -- might thus be undermined. But this assumes that a future organization would fail to change the individual effort and to protect itself from its shortcomings. It is more likely that an organization would restructure individual provider efforts.

The second risk of not explicitly assessing the managerial capacity of individual efforts is the possibility of overlooking efforts that presently have effective managers. Overlooking effective management could result in underestimating the potential viability and impact of a future umbrella organization. It is not unrealistic to assume, however, that management capability would emerge in the event that an umbrella organization were created. Table A.3 delineates the results of selection criteria for individual providers.

4. Scoring methodology for sixth criterion (see Table A.3). A score of zero on the "probability of developing an organizational structure" criterion indicates that a given individual provider would never be able to develop or partake in a common organizational structure. At the other extreme, a value of six means that it is certain that the provider in question would develop such a structure. The score assigned to each entity is relative; each entity is

ranked against all others. The assignment of scores admittedly entailed some speculation, due to limited information. To minimize the uncertainty involved in speculating about as yet undeveloped structures, the scoring was based solely on those existing characteristics of the entities involved that were thought to effect their predisposition for developing such supra-individual organizational structures.

a. Church-affiliated clinics received the lowest scores on this criterion. Non-Catholic clinics were scored lower than Catholic clinics since the latter, associated with a monolithic structure, are less subject to inter-denominational discord, and thus have a greater probability of developing some common administration. But in both instances the assigned scores are low, since church-affiliated clinics are small and relatively restricted in resources, scopes of interest, and commitment.

b. The Lions and Rotary clubs were assigned the next lowest scores. Clearly, there exists potential for such groups to join together for health services management purposes, since affiliates shares a common organizational base. However, this potential was considered to be low, since these civic groups are locally organized, and each chapter's activities are the products of its own design and resources. Moreover, only a very few chapters are involved in health care services.

c. Some private physicians are contracted by plantations and agricultural processing plants that have their own health services, while others operate independently. The likelihood that either type of physician would develop some organizational structure to extend health care services to agricultural workers was assessed as equal. The assignment of these scores was largely predicated on the altered incentives that would result from IGSS's plan to extend care, and the assumption that this plan will be brought to fruition in some form, either via the direct provision of services by IGSS to newly-covered agricultural workers or by contracting private providers to do so.

An analysis was performed to determine the sensitivity of the results to using the alternate set of criteria and weights for individual efforts. Applying only the first, fourth and fifth criteria ("willingness to serve the target population," "acceptability to finqueros," and "long-term economic viability") to these arrangements, and weighting them equally, resulted in the ranking presented in Table A.3.

D. Significance of Applying Two Different Sets of Criteria

Sensitivity analysis was also conducted to ascertain the significance of the new, sixth criterion, "probability of developing an organizational structure," and its relatively greater assigned weight. Consistent with the rationale for developing the criterion, it was deemed inappropriate to apply the fourth and fifth criteria ("acceptability to finqueros" and "long-term economic viability"). The rankings of the individual efforts, based on the first, fourth and fifth criteria ("willingness to serve," "acceptability to finqueros," and "long-term economic viability") are presented in Table A.4. The rankings of the adopted strategy are presented for comparison. With two inconsequential exceptions, the rankings are identical.

Table A.4 shows that the sixth criterion, "probability of developing an organizational structure," does not introduce a markedly different pattern of variability across the seven categories from that of the first, fourth and fifth criteria. By extension, it may be inferred that giving the sixth criterion a weight equal to that of the other three criteria combined had little effect on the final rankings.

TABLE TN.1

**CRITERIA FOR SELECTION OF PRIVATE SECTOR HEALTH CARE
ARRANGEMENTS AS CASE STUDIES**

Note: The relevant criteria for ranking organization-based, multi-site health care delivery mechanisms are #1, #2, #3, #4, #5. The relevant criteria for ranking individual provider/ isolated efforts' health care delivery mechanisms are: #1, #3, #4, #6.

1. WILLINGNESS TO SERVE THE TARGET POPULATION

- 0: no rural presence or service
- 1: urban-based, but formal agreements to serve agricultural workers
- 2: rural-based, serving primarily the agricultural population (urban areas are defined so as to include a cabecera municipal if its population is greater than 2000 or if it is a cabecera departamental)

2. WILLINGNESS TO GROW

- 0: no plans or undemonstrated commitment to grow
- 0.5: individuals with commitment but limited capacity to expand
- 1: organizations with a verbal commitment, but with limited evidence of that commitment (i.e., engaged in only limited program)
- 2: organizations with active expansion programs

3. ACCEPTABILITY TO FINQUEROS

- 0: little or no control, high cost
- 1: little or no control, low cost
- 1.5: substantial control, high cost
- 2: substantial control, low costs

4. LONG-TERM ECONOMIC VIABILITY

- 0: voluntary contributions or charity
- 0.5: voluntary contributions or charity and individual users' fees
- 1: individual financier (finquero) and no user fees
- 1.5: individual financier (finquero) with user fees
organizational backing/financing without user fees
- 2: organizational backing/financing with user fees

5. MANAGERIAL CAPACITY

- 0: poor management: no policies, little information, weak structure
- 1: intermediate: some policies, information, and/or structure
- 2: good management: explicit policies and practices regarding regular activities and/or financial reports, standardized accounting practices, management information systems

6. PROBABILITY OF AN INDIVIDUAL PROVIDER DEVELOPING A STRUCTURE CAPABLE OF ADMINISTERING AT LEAST TWO SUCH ARRANGEMENTS.

- 0: an impossibility; the probability is 0.
- 1:
- 2: (This is a continuum based on perceived relative probabilities; see text for details)
- 3:
- 4:
- 5: an absolute certainty; the probability is 1.

TABLE TN.2

SCORING AND RANKINGS OF PRIVATE SECTOR ORGANIZATIONS

ORGANIZATION	C R I T E R I A					TOTAL SCORE	RANK
	#1	#2	#3	#4	#5		
ANACAFE	2	2	2	2	1	9.0	1
AGROSALUD	2	1	2	2	1	8.0	2
Christian Children's Fund	1	2	1.25	0.75	2	7.0	3
Vision Mundial	0.5	2	0.75	0.5	2	5.75	4
Project HOPE	0.5	2	1	0	2	5.5	5
Caritas	0.5	2	1	0.25	1	4.75	6
Red Cross	0	0	1	0.5	1	2.5	7

TABLE TN.3

SCORING AND RANKINGS OF INDIVIDUAL PROVIDER AND ISOLATED EFFORTS*

ENTITY	C R I T E R I A				TOTAL SCORE	RANK
	#1	#4	#5	#6		
Fincas and Processing Plants With Their Own Services	2	2	2	4.5	10.5	1
Private Physicians	1	2	1.5	4.5	9.0	2**
Hospitals and Clinics	1	1.5	1.5	5	9.0	2**
Rotary Club- Sponsored Clinics	0.5	1.5	0.5	2	4.5	3**
Lions Club- Sponsored Clinics	0.5	1.5	0.5	2	4.5	3**
Catholic Church- Sponsored Clinics	1	1	0	1	3	4
Other Church- Sponsored Clinics	0.5	1	0.5	0.5	2.5	5

*The intermediate scores of 1.5 on Criterion #4 for the Rotary and Lions Club Clinics are intended to reflect the fact that these are disparate groups of individuals, not as unified or as monolithic as, for example, an all-finquero group would be. As such, they are subject to more controversy, conflict, and compromise, and thus have less control. The 1.5 score on Criterion #4 for hospitals and clinics is intended to reflect the relatively more difficult task, vis-a-vis private physicians, of remaining viable in the long term, because of their relatively higher costs.

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TABLE TN.4

**SENSITIVITY ANALYSIS
OF THE INDIVIDUAL PROVIDER/ISOLATED EFFORTS' RANKINGS
TO THE INTRODUCTION OF CRITERION #6
AND ITS GREATER RELATIVE WEIGHT**

ENTITY	SIMULATED CRITERIA			SIMULATION		ACTUAL	
	#1	#4	#5	TOTAL SCORE	RANK	SCORE	RANK
Fincas and Processing Plants With Their Own Services	2	2	2	6	1	10.5	1
Private Physicians	1	2	1.5	4.5	2	9.0	2*
Hospitals and Clinics	1	1.5	1.5	4	3	9.0	2*
Rotary Club- Sponsored Clinics	0.5	1.5	0.5	2.5	4*	4.5	3*
Lions Club- Sponsored Clinics	0.5	1.5	0.5	2.5	4*	4.5	3*
Catholic Church- Sponsored Clinics	1	1	0	2	5*	3.0	4
Other Church- Sponsored Clinics	0.5	1	0.5	2	5*	2.5	5

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